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Status Yields and Trends of Nutrients and Sediment and Methods of Analysis for the Nontidal Data-Collection Programs, Chesapeake Bay Basin, 1985-96

Open-File Report 98-17



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by Michael J. Langland, Robert E. Edwards, and Linda C. Darrell

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Lemoyne, Pennsylvania
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ABSTRACT

Data from more than 200 sites in nontidal portions of the Chesapeake Bay were compiled to document annual nutrient and sediment loads and trends for the period 1985 through 1996 as part of the 1997 Reevaluation of the Chesapeake Bay Program goal of reducing nutrient loads 40 percent by the year 2000. Annual loads were estimated by use of the Minimum Variance Unbiased Estimator (MVUE) model at 95 sites with continuous streamflow data. Trends were estimated by use of either the MVUE or the Seasonal Kendall test at 202 sites and are presented in tables in this report. Trends analyzed in nutrient and sediment concentrations were reported as non-streamflow adjusted and streamflow adjusted if possible. Mean yields from the MVUE model and median concentrations from the Seasonal Kendall test were calculated to help facilitate comparisons between basins.

INTRODUCTION

In 1987, the Governors of Pennsylvania, Maryland, and Virginia and the mayor of the District of Columbia signed the Chesapeake Bay Agreement. This agreement called for a 40-percent reduction in the amount of nutrients reaching the Chesapeake Bay by the year 2000. Results from the U.S. Environmental Protection Agency (USEPA) Chesapeake Bay Model indicated improvements in water quality in the Bay sufficient to support living resources could be achieved if the 40-percent nutrient-reduction goal was met. Individual nutrient-reduction goals were established for the major rivers delivering nutrients to the Bay. Progress toward these reduction goals is reevaluated every 5 years (since 1987) by compiling and analyzing water-quality and living-resource data and publishing results in Chesapeake Bay Program progress and reevaluation reports. The 1997 reevaluation effort was to determine if the goals are on target and achievable and determine any changes in water quality and living resources in response to nutrient reduction strategies (NRS) in the Chesapeake Bay Basin.

Two programs, the River Input and Nontidal Synthesis Programs, provide information from the nontidal areas of the Bay. Through the River Input Program, water-quality data is collected, trends in concentration are estimated, and annual loads are estimated at nine stations near the Fall Line¹ (fig. 1). This is done annually by the U.S. Geological Survey (USGS) in cooperation with the Maryland Department of Natural Resources (MdDNR), Virginia Department of Environmental Quality (VaDEQ), and the Metropolitan Washington Council of Governments (WashCOG). Two reports, Zynjuk and Feit (1995) and Johnson and Belval (1998), describe the results of the River Input Program.

¹ The "Fall Line" refers to a distinct change in slope generally occurring in a line running southwest to northeast through the Chesapeake Bay Basin. This line generally represents the limit of the tidal areas and tends to coincide where the harder crystalline rocks of the Piedmont Physiographic Province and softer unconsolidated rocks of the Coastal Plain Physiographic Province overlap.

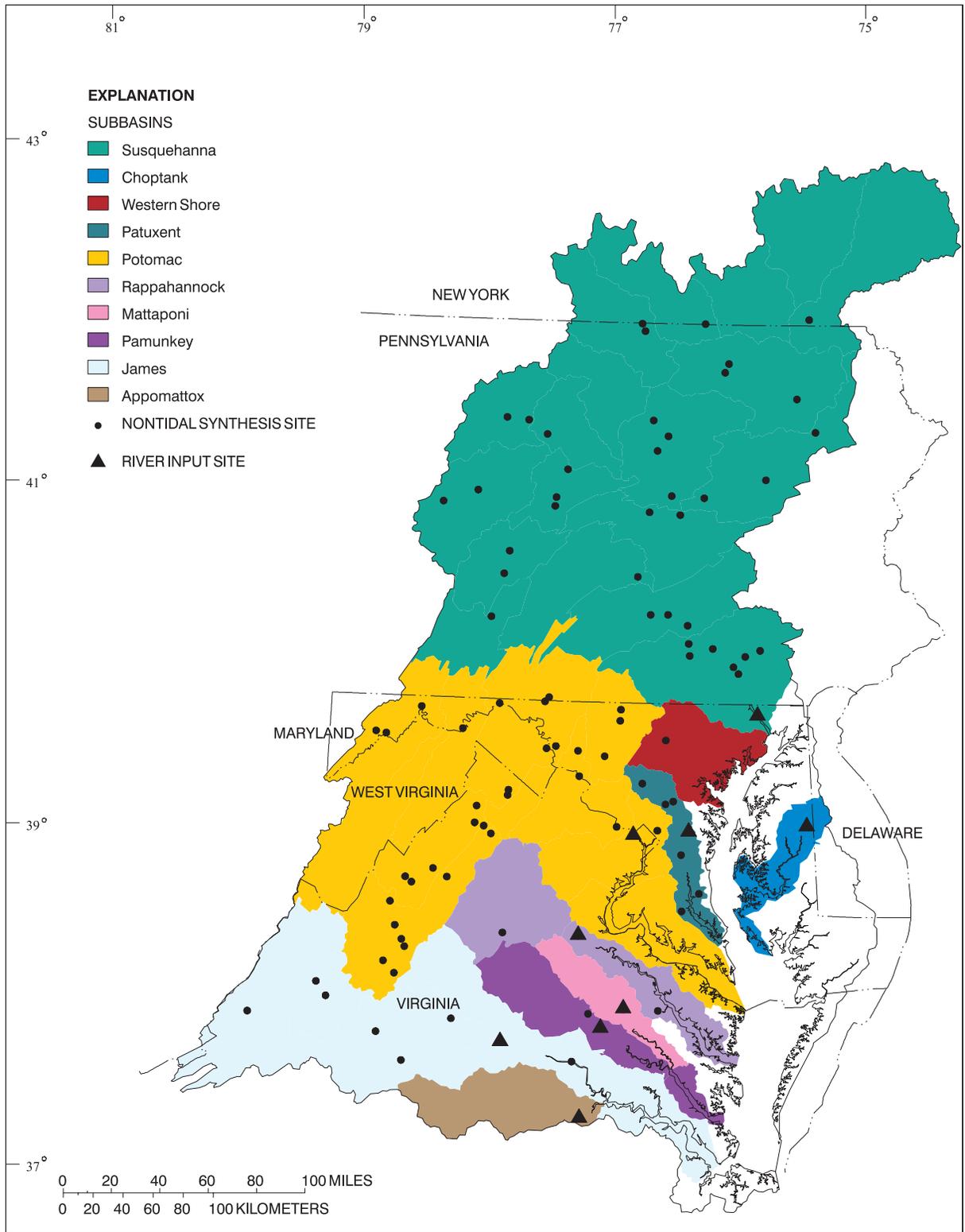


Figure 1. Nine River Input Program sites and 86 Nontidal Synthesis Program sites used for the 1997 reevaluation of loadsites in the Chesapeake Bay Basin.

Currently, through the Nontidal Synthesis Program, water-quality data from 1,329 sites upstream of the Fall Line are synthesized in a single database. The database is comprised of water-quality and streamflow data from sites with a minimum of 3 consecutive years of samples collected between 1972 and 1996. Although water-quality data were collected on a routine basis (usually monthly) at many sites, most of these sites do not have the continuous streamflow record necessary to compute annual loads. In general, water-quality data are not updated nor are estimates of loads and trends completed annually. For the 1997 Reevaluation, water-quality data were used to estimate annual loads and trends at 86 sites in the Nontidal Synthesis Program (fig. 1). Also, as part of the program, at 23 of the 86 sites, the USGS will retrieve concentration data, compute trends in concentrations and loads, and estimate annual loads each year until 2002. Concentration data are retrieved and appended to the database for all current sites in the Nontidal Synthesis Program every 5 years in time for the reevaluations. New sites are added to the database if the site has at least 12 samples collected over 3 continuous years and at least 1 sample from each season (spring, summer, fall, winter).

PURPOSE

For sites in the River Input and Nontidal Synthesis Programs in the Chesapeake Bay Basin, this report (1) documents the methods used to estimate status and trends in concentration and loading data for the 1997 Reevaluation of the nutrient-reduction strategy, (2) presents tabled nutrient and sediment load data, and (3) presents tabled trends in water quality from 1985, when nutrient-reduction strategies were initially implemented in nontidal areas of the Chesapeake Bay Basin, through 1996. Data from this report will be included with water-quality and biological data from the tidal portions of the Bay in the 1997 Chesapeake Bay Program Reevaluation technical report. Annual load data used to compute annual yields is available from the USGS Pennsylvania District and can be obtained by accessing the Pennsylvania District Homepage at <http://www.pah2o.er.usgs.gov/> and fill out the "Questions" form.

DATA SET CONSTRUCTION

The following section describes the sources of the water-quality and streamflow data, selection of constituents for estimating annual loads and trends, procedures used with censored (data analysis reported below detection limit) data, record length, and procedure for estimating missing constituents.

Data Sources and Preparation

Water-quality concentration and streamflow data were retrieved and compiled into one database from two federal agencies—the USGS, the USEPA—and three state agencies—Pennsylvania Department of Environmental Protection (PaDEP), MdDNR, and VaDEQ. Additional water-quality data were retrieved from the Susquehanna River Basin Commission (SRBC), the Interstate Commission on the Potomac River Basin (ICPRB), and WashCOG. This effort was undertaken to update and extend the time period of the nontidal water-quality database through 1996. Water-quality data previously were compiled and annual loads were estimated for nutrient and sediment from 1972 through 1992 by Langland and others (1995). Site identification numbers, the test analysis type, latitude and longitude, and site name are presented for the 9 River Input Program sites (table 1, at back of report) and the remaining 193 sites in the Nontidal Synthesis Program analyzed as part of the 1997 Chesapeake Bay Program reevaluation (table 2, at back of report). Concentration data obtained from the various sources for inclusion in the nontidal database were quality assured by use of a SAS program that identified suspect remark codes and missing dates and/or times associated with the sample. A cursory visual examination of the data was also done.

Constituents

A total of 36 physical, biological, and chemical water-quality constituents presented in table 3 (at back of report) were retrieved and updated in the database. These constituents included 14 nutrient species, suspended sediment, and total suspended solids. Continuous daily streamflow was retrieved from the USGS water database. The updated nontidal database and the USGS streamflow database provided the input data files for running either the USGS Minimum Variance Unbiased Estimator (MVUE) Model (Cohn and others, 1989), which produced annual loads and streamflow-adjusted trends in concentration, or the Seasonal Kendall test, which produced streamflow-adjusted and non-streamflow-adjusted trends in concentration.

Constituents tested by use of the MVUE model were total nitrogen (TN), dissolved (filtered) kjeldahl nitrogen (TKNf), total (whole) kjeldahl nitrogen (TKNw), total ammonia (TNH3), dissolved ammonia (DNH3), total or dissolved nitrate (NO3), total or dissolved nitrite plus nitrate (NO23), total phosphorus (TP), dissolved phosphorus (DP), dissolved inorganic phosphorus (DIP), suspended sediment (SED), and total suspended solids (TSS).

Constituents tested by use of the Seasonal Kendall trend test included total nitrogen (TN), total nitrate (NO3) or total nitrite plus nitrate (NO23), total phosphorus (TP), dissolved inorganic phosphorus (DIP), suspended sediment (SED), and total suspended solids (TSS).

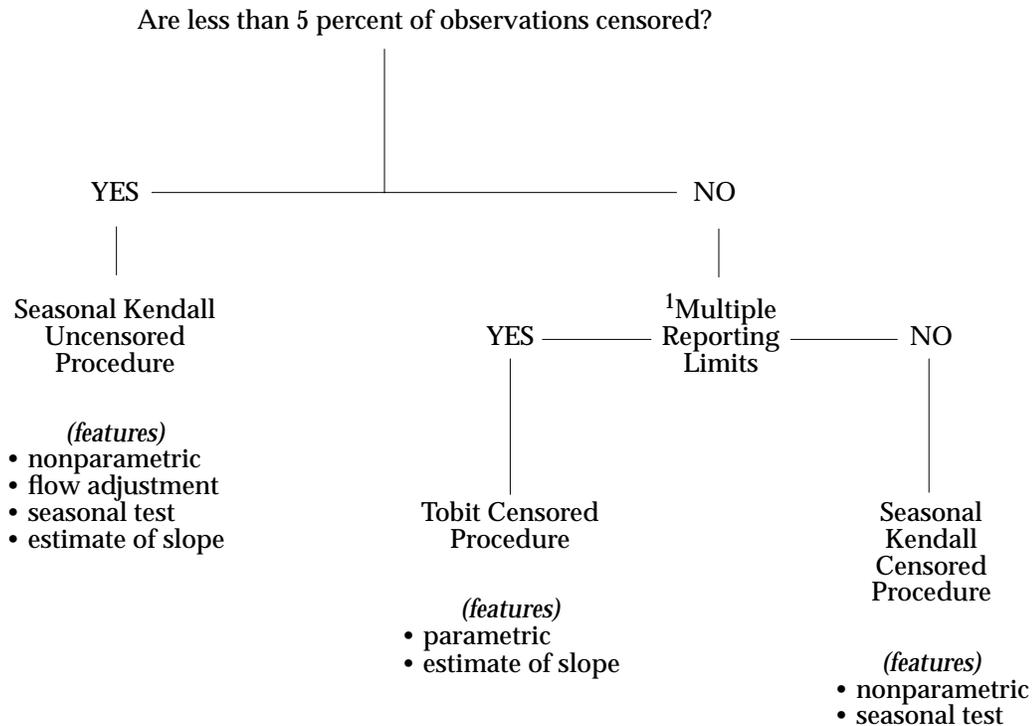
Constituent Estimation

In some data sets, individual records were missing for some constituents. When possible, missing constituents were calculated by use of the various reported species of the constituent. If total nitrogen was missing, an estimated value was obtained by adding total kjeldahl nitrogen (total organic plus total ammonia) and total nitrite plus nitrate nitrogen. If total nitrite plus nitrate nitrogen was missing, the sum of the total nitrite nitrogen and total nitrate nitrogen was used if available. If more than one of the nitrogen species used in calculating total nitrogen was below the detection limit, the estimated value was not determined.

Detection Limits

The presence of a large number of censored values in a data set can adversely affect the estimation of trend slope by not properly calculating a median concentration and correcting the data because of the variation in streamflow. In the MVUE model, values were assigned to the censored data by use of a statistical-based distribution. Cohn and others (1989) describe the use of a Quasi Maximum Likelihood Estimate (QMLE) of the moments of the log normal population from type I censored samples as the method used to assign values to the detection limits.

The following decision tree was presented to the Data Analysis Work Group (DAWG), a workgroup of the Monitoring Subcommittee of the Chesapeake Bay Program, and approved for use with the Seasonal Kendall test for trend. This decision tree is based on current USGS computer programs (Schertz and others, 1991) and work by Helsel and Hirsh (1992).



¹See text for additional explanations.

For the nontidal stations, censored values were assigned a concentration of one half of the detection limit if the censored data were less than 5 percent of the record. In these instances, streamflow adjustment was used if streamflow data were available and the Seasonal Kendall slope estimate and the magnitude (percentage change over time) will be reported. If the data set has between 5 and 20 percent censored data, a single detection limit was used for running the test. The maximum detection limit in the time series was selected as the detection limit to use in the test. All values observed below the maximum detection limit were considered tied and set equal to the maximum detection limit. In these instances, the magnitude of the trend was not reported and streamflow-corrected procedures were not used. For data sets where more than 20 percent of the time-series data is censored, results from the Seasonal Kendall trend test were not reported.

Record Length

For trend results to be most useful for the 1997 Reevaluation, the time series would ideally begin in January 1985 and end in December 1996. Shorter time-series data were acceptable if they met certain criteria. For both the MVUE model and the Seasonal Kendall trend test, this criteria includes a data set containing a minimum of 5 years and 50 monthly samples or 5 years and 20 quarterly samples. The data set must contain instantaneous or daily streamflows for flow correction. Priority dates for the data set are any 5 year or greater time period starting between January 1985 and January 1989 and continuing through 1996.

STREAMFLOW ADJUSTMENT

In tidal areas of the Chesapeake Bay Basin, 10 different streamflow models were evaluated by members of the DAWG to determine the most appropriate lag times (delay in streamflow) and transformations of streamflow. The delay, or lagtime, is the amount of time needed for streamflow to travel from nontidal to tidal areas of the Bay Basin. Because lag times are not critical to virtually all the nontidal areas, the possibility of using a different non-linear streamflow adjustment model existed.

The DAWG agreed to use the LOcally WEighted Scatterplot Smoothing (LOWESS) Procedure to streamflow adjust concentrations for trend testing by use of the Seasonal Kendall test in the nontidal (above the fall line) portion of the Chesapeake Bay. The LOWESS Procedure (Cleveland, 1979) uses distance and residual weighting functions with weighted least squares to minimize the influence of outliers in fitting a smooth (non-linear) line to the data. The smoothness factor (f) varies from 0 to 1, is specified by the user, and usually ranges between 0.3 and 0.7; an increase in f corresponds to a smoother line. The USGS completed a nationwide study (Lanfear and Alexander, 1990) in which more than 50,000 trend tests were performed at nearly 3,000 stations for more than 200 constituents. This study indicated that an f value of 0.5 gave a reasonably good fit to the data without removing important features of the concentration-streamflow relation or producing very abrupt changes in local slope and found this to be appropriate for the non-conservative constituents of concern in the Chesapeake Bay.

STATUS

To facilitate comparison of current water-quality conditions between basins, either a 3-year mean yield (MVUE) or 3-year median concentration (Seasonal Kendall) was calculated for all possible constituents from 139 of the 202 sites presented in this report. Mean yields and median concentrations were reported only where the data record started no later than 1989 and did not end prior to 1994.

Yield

The status of current annual loads and yields using the MVUE was assessed for different constituents at 32 sites—9 from the River Input Program and 23 sites upstream of the River Input sites, a subset of the Nontidal Synthesis Program. This assessment was based on a 3-year mean yield (referred to as status yield) for the years 1994, 1995, and 1996 or the last 3 years of record if 1994-96 was not available. The status yield was determined as follows:

- compile all status yield data by station and constituent
- determine the 5th and 95th percentile for each constituent
- subtract the 95 percentile value from each status yield for each constituent—(a)
- subtract the 5th percentile from the 95th percentile values for each constituent—(b)
- divide the result from (a) by the result from (b) and multiply by 100.

The above procedure transforms the status yields from each basin and constituent into percentages between 0 and 100. The percentages were subtracted from 100 to allow a simple comparison between basins, because the lower the percentage, the lower the yield. Status yields and percentages for the 32 sites are presented in table 4 (at back of report).

Concentration

The status of current water-quality conditions using the Seasonal Kendall test was determined by site and constituent at an additional 107 non-MVUE sites. This status concentration was based on the median concentration for the period 1994-96 or the last 3 years of record if 1994-96 was not available and based on analysis of all non-streamflow adjusted concentrations at the site. Non-streamflow adjusted and streamflow adjusted (if data were available) results are presented in table 5 (at back of report).

TRENDS

Two tests, the MVUE model and the Seasonal Kendall test, were used to estimate trends. The MVUE model was used where water-quality and daily streamflow data existed to compute trends and annual loads. The Seasonal Kendall test was used where daily streamflow did not exist or the MVUE model could not calibrate and estimate a trend because of either incomplete water-quality data or streamflow files.

Minimum Variance Unbiased Estimator (MVUE)

Streamflow adjusted trends and statistics were estimated for the period 1985 through 1996 for the 9 River Input Program sites and 23 sites upstream of the River Input sites (table 4, at back of report). The results in table 4 are corrected to account for streamflow and seasonality. Statistics include probability (p) and slope (b) for all constituents. Where p is less than 0.05 (indicating a significant trend), the trend direction and magnitude (percentage change in trend) for the time period are always given. The magnitude and slope are re-transformed from log space. The magnitude for the period is determined from the equation $(e^{(B3 \times t)} - 1) \times 100$, where e^{\wedge} is the anti-log of the natural log, B3 is the DECTIME regression coefficient from the MVUE model, and t is the number of years for the time period examined. The slope is determined from $(e^{\wedge} B3) - 1$. Trend results for an additional 65 sites, part of the Nontidal Synthesis Program, from other areas of the Bay Basin of varying dates are presented in table 6 (at back of report).

Seasonal Kendall

Trend statistics are presented for the uncorrected monthly median concentrations and streamflow-corrected concentrations (if available) in table 4. For the uncorrected concentrations, statistics include the probability (p) and slope (b) for all constituents. Where p was significant (less than 0.01 for non-streamflow-adjusted trends and less than 0.05 for streamflow-adjusted trends), the trend direction, the base median (BM), period of record median (POR), status median, magnitude using the DAWG method (percentage change BM), and magnitude using the Sen estimate (percentage change POR) were included (Helsel and Hirsch, 1992). The BM is defined as the median of the monthly medians for the first 24 months of the data record. The POR is defined as the median of the monthly medians for the entire time series. The magnitude according to the DAWG method is defined as b times the number of years of data times 100 divided by BM. The magnitude using the Theil slope estimate (Helsel and Hirsch, 1992) is defined as b divided by POR times 100.

For the streamflow-adjusted concentrations, the same statistics were presented as listed above for the uncorrected concentrations. However, streamflow correction produces residuals from a concentration-streamflow relation and must be transformed back to "real" space to determine values that are meaningful. Therefore, the streamflow-adjusted BM was determined by adding the POR to each residual. Likewise, the streamflow-adjusted POR was determined by adding the uncorrected POR to each residual. The streamflow-adjusted BM and POR were then used to calculate the magnitudes of trend. Because of a lack of streamflow data at many sites, results for streamflow correction from the Seasonal Kendall test are limited.

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- Zynjuk, L.D., and Feit, B.L., 1995, Chesapeake Bay River Input Monitoring Level 1 data summary report 1994: Tidewater Ecosystem Assessment, Maryland Department of Natural Resources Administrative Report, 57 p.

Table 1. Water-quality site identification numbers, latitude and longitude, and site names for the nine River Input Program sites in Maryland and Virginia.

[All annual loads and trends at each site were estimated by use of the U.S. Geological Survey Minimum Variance Unbiased Estimator (MVUE) model (Cohn and others, 1989)]

Water-quality site identification number	Latitude	Longitude	Site name
<u>Maryland</u>			
01491000	385950	0754710	CHOPTANK RIVER NEAR GREENSBORO, MD
01578310	393928	0761029	SUSQUEHANNA RIVER AT CONOWINGO, MD
01594440	385721	0764136	PATUXENT RIVER NEAR BOWIE, MD
¹ 01646580	385546	0770701	POTOMAC RIVER AT CHAIN BRIDGE
<u>Virginia</u>			
01668000	381920	0773105	RAPPAHANNOCK RIVER NEAR FREDERICKSBURG, VA
01673000	374603	0771957	PAMUNKEY RIVER NEAR HANOVER, VA
01674500	375316	0770948	MATTAPONI RIVER NEAR BEULAHVILLE, VA
02035000	374015	0780510	JAMES RIVER AT CARTERSVILLE, VA
02041650	371330	0772832	APPOMATTOX RIVER AT MATOACA, VA

¹ Streamflow data from 01646580 and water-quality data from the Metropolitan Washington D.C. Council of Governments station PR01.

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation

[MVUE, annual loads and trends estimated by use of the minimum variance unbiased estimator model; SK, trends estimated by use of the Seasonal Kendall test; italic indicates sampling location change]

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
<u>Pennsylvania</u>				
01503000	420207	0754812	SUSQUEHANNA RIVER AT CONKLIN NY	MVUE
01531500	414555	0762628	SUSQUEHANNA RIVER AT TOWANDA, PA	MVUE
01518700	415709	0770656	TIOGA RIVER AT TIOGA JUNCTION, PA	MVUE
01520000	415948	0770825	COWANESQUE RIVER NR LAWRENCEVILLE, PA	MVUE
01532005	414245	0762815	TOWANDA CREEK AT MONROETON, PA	MVUE
01540500	405729	0763710	SUSQUEHANNA RIVER AT DANVILLE, PA	MVUE
01553500	405803	0765236	WEST BRANCH SUSQUEHANNA RIVER AT LEWISBURG, PA	MVUE
01567000	402842	0770746	JUNIATA RIVER AT NEWPORT, PA.	MVUE
01576000	400316	0763152	SUSQUEHANNA RIVER AT MARIETTA, PA	MVUE
01576520	400251	0760943	MUDDY RUN AT WEAVERTOWN, PA.	MVUE
01576540	400036	0761639	MILL CREEK AT ESHELMAN MILL ROAD NEAR LYNDON, PA	MVUE
01576754	395647	0762205	CONESTOGA RIVER AT CONESTOGA, PA	MVUE
WQN0201	400316	0763152	SUSQUEHANNA RIVER-SR0462 COLUMBIA-WRIGHTSVILLE BR	MVUE
WQN0202	401527	0765312	SUSQUEHANNA RIVER-WALNUT ST BR-HARRISBURG	MVUE
WQN0203	405115	0764821	SUSQUEHANNA RIVER-VETERANS MEMORIAL BR-SUNBURY	MVUE
WQN0204	395339	0762134	PEQUEA CREEK-T408 BR NR COLEMANVILLE-MARTIC TWP	MVUE
WQN0206	400319	0763133	CHICKIES CREEK-SR0441 BR NR MARIETTA-E.DONEGAL	SK
WQN0207	400037	0764237	CODORUS CREEK-SR1012 BR (MUNDIS MILL)-MANCHESTER	MVUE
WQN0210	400452	0764307	W CONEWAGO CREEK-SR0181 BR-E.MANCHESTER TWP	MVUE
WQN0211	401128	0764352	SWATARA CREEK-SR0441 (PA RTE 441) BR-MIDDLETOWN	MVUE
WQN0213	401531	0770439	CONODOGUINET CREEK-SR1009 BR-SILVER SPRING TWP	MVUE
WQN0214	402842	0770746	JUNIATA RIVER-SR0034 BR-NEWPORT	MVUE
WQN0217	403633	0780811	LITTLE JUNIATA RIVER-SR0045 BR-SPRUCE CREEK TWP	MVUE
WQN0224	402834	0781039	JUNIATA/FRANKSTWN BR-ABDN R&RBR SR2013-WOOBURY	MVUE
WQN0228	404629	0765211	MIDDLE CREEK-SR0011 BR (OLD RTES 11&15)-PENN TWP	SK
WQN0229	405201	0770255	PENNS CREEK-SR0104 BR AT VILLAGE OF PENNS CREEK	MVUE
WQN0231	395741	0762158	CONESTOGA CREEK-T561 IRON BRIDGE NR ROCK HILL	MVUE
WQN0240	401638	0765700	CONODOGUINET CREEK-SR0011 BR NR MOUTH-W FAIRVIEW	SK
WQN0243	402249	0770456	SHERMAN CREEK-SR2002 (LR50014) BR-PENN TWP	MVUE
WQN0245	403141	0772332	TUSCARORA CREEK-SR0075 (PA RTE 75) BR-PORT ROYAL	SK
WQN0252	402554	0782130	JUNIATA/BEAVERDAM BR-2000' UPSTR FR MOUTH	SK
WQN0301	405729	0763610	SUSQUEHANNA RIVER-SR0054 BR-DANVILLE	MVUE
WQN0302	411119	0760513	SUSQUEHANNA RIVER-BR EAST OF US RTE 11-NEWPORT	MVUE
WQN0305	414555	0762628	SUSQUEHANNA RIVER-SR0006 BR-TOWANDA	MVUE
WQN0306	415748	0754433	SUSQUEHANNA RIVER-SR0011 BR NR GREAT BEND	MVUE
WQN0309	410250	0761312	NESSCOPECK CREEK-SR3015 (LR40017) BR-NESSCOPECK	SK
WQN0310	410417	0760802	WAPWALLOPEN CREEK-SR0239 BR-CONYNGHAM TWP	MVUE
WQN0313	412133	0754441	LACKAWANNA RIVER-BRIDGE ST BR-OLD FORGE	MVUE
WQN0317	413329	0755342	TUNKHANNOCK CREEK-SR0006 BR-TUNKHANNOCK TWP	MVUE

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
WQN0318	414225	0762906	TOWANDA CREEK-SR3006 (LR08193) BR NR MONROETON	MVUE
WQN0319	415430	0770747	BRIDGE ON RT 667	MVUE
WQN0330	412038	0754713	LACKAWANNA RIVER NEAR PITTSTON	
WQN0332	415656	0763103	CHEMUNG RVR-SR0199 (LR08066) BR-ATHENS TWP	MVUE
WQN0401	405802	0765245	W BR SUSQUEHANNA RVR-SR0045 BR-LEWISBURG	MVUE
WQN0402	411344	0770109	W BR SUSQUEHANNA RVR-MAYNARD ST BR-S WMSPT	MVUE
WQN0406	405349	0784038	W BR SUSQUEHANNA RVR-T418 BR AT BOWER-GREEWOOD	MVUE
WQN0408	411931	0765443	LOYALSOCK CRK-SR0973 BR NR LOYALSOCKVILLE	MVUE
WQN0409	412506	0770159	LYCOMING CRK-T840 BR AT CAMP SUSQUE	MVUE
WQN0413	405831	0774435	BALD EAGLE CRK-SR1003 BR AT CURTIN-BOGGS	MVUE
WQN0419	411909	0780452	SINNEMAING/FRST FORK-SR0120 BR NR SINNEMAHOING	MVUE
WQN0420	412448	0781150	SINNEMAING/DRFTWD BR-SR3002 BR AT STERLING RUN	MVUE
WQN0422	405909	0782422	CLEARFIELD CRK-SR0153 BR-BOGGS TWP	MVUE
WQN0423	410429	0773532	BEECH CRK-SR0150 BR AT BEECH CREEK	MVUE
WQN0427	410429	0765221	WHITE DEER CRK-SR0015 BR AT WHITE DEER	SK
WQN0428	412722	0764124	LOYALSOCK CRK-SR0087 BR NORTH OF HILLSGROVE	SK
WQN0429	411834	0772145	LITTLE PINE CRK-SR0044 BR AT WATERVILLE	SK
WQN0430	414415	0772550	PINE CRK-OFF SR0362 AT MOUTH OF DARLING RUN	SK
WQN0433	410431	0772840	FISHING CRK-SR2004 2ND BR UP FR CEDAR SPRINGS	SK
WQN0434	411910	0775225	KETTLE CRK-OFF SR4001-LEIDY TWP	MVUE
WQN0439	412002	0780810	SINNEMAING/BENNETTS-T343 BR NR CASTLE GARDEN	SK
WQN0501	394431	0774741	CONOCOCHEAGUE CRK-0.5 MILE DN FR PA/MD BORDER	MVUE
<u>Maryland</u>				
01591000	391418	0770323	PATUXENT R NR UNITY, MD	MVUE
01594000	390806	0764858	L PATUXENT R AT SAVAGE, MD	MVUE
01594526	384850	0764450	WESTERN B AT UPPER MARLBORO, MD	MVUE
01594526	384852	0764452	WESTERN B AT UPPER MARLBORO, MD	MVUE
01594670	383502	0763620	HUNTING C NR HUNTINGTOWN, MD	MVUE
01594710	382837	0764408	KILLPECK C AT HUNTERSVILLE, MD	MVUE
01613000	394149	0781039	POTOMAC RIVER AT HANCOCK, MD	MVUE
01618000	392604	0774807	POTOMAC R AT SHEPHERDSTOWN, WV	MVUE
01614500	394257	0774928	CONOCOCHEAGUE C AT FAIRVIEW, MD	MVUE
01638500	391625	0773235	POTOMAC R AT POINT OF ROCKS, MD	MVUE
01639500	393645	0771410	BIG PIPE C AT BRUCEVILLE, MD	MVUE
01639000	394043	0771406	MONOCACY R AT BRIDGEPORT, MD	MVUE
ANA0082	385619	0765637	ANACOSTIA RIVER BRIDGE ON BLADENSBURG RD	SK
ANA0082	385619	0765638	AT BRIDGE ON BLADENSBURG ROAD	SK
ANT0044	392700	0774352	ANTIETAM CR AT GAG STA BEL BURN. BR NR SHARP.	MVUE
ANT0044	392700	0774355	AT GAGING STA. JUST BELOW BURNSIDE BRIDG	MVUE
ANT0203	393539	0774240	AT BRIDGE ON POFFENBERGER RD. NEAR FUNKS	SK
ANT0203	393541	0774239	ANTIETAM CR. AT BR. ON POFFENBURGER RD.	SK
ANT0366	394256	0773631	AT GAGING STA. WEST OF MD. RT.60 AT ROCK	SK
ANT0366	394259	0773627	ANTIETAM CR. GAG. ST. W.OF RT. 60 AT ROC. FOR	SK
BDK0000	394012	0784728	BRADDOCK RUN ABOVE MOUTH NEAR JCT US40	SK

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
BDK0000	394014	0784732	BRADDOCK RUN US 40 AND BRADDOCK ST. BR.	SK
BPC0035	393642	0771419	BRIDGE ON MARYLAND ROUTE 194 USGS GAGING	MVUE
BPC0035	393644	0771413	BIG PIPE BRIDGE ON BIGGS FORD RD	MVUE
CAC0031	391953	0773450	NEAR MOUTH AT BRIDGE ON MD. RT. 464	SK
CAC0031	391956	0773446	CATOCTIN CR NR MOUTH AT BR ON MD RT 464	SK
CAC0148	392532	0773333	AT BRIDGE ON MD. RT. 17 AT GAGING STATIO	MVUE
CAC0148	392539	0773321	CATOCTIN CR NR BR ON MD RT 17 AT GAG STA	MVUE
CHO0626	385949	0754712	AT RED BRIDGES NEAR SEWELL MILLS	MVUE
CHO0626	385950	0754710	CHOPTANK R. AT RED BR. NEAR SEWELL MILLS	MVUE
CJB0005	385824	0770857	CABIN JOHN AT BRIDGE ON MACARTHUR BLVD	SK
CON0005	393609	0774919	CONOCOCHIEGUE CREEK AT MD 68 BRIDGE	SK
CON0005	393610	0774919	MD. 68 BRIDGE	SK
CON0180	394256	0774931	AT GAGING STA. 0.7 MILES ABOVE BR.,FAIRV	MVUE
CON0180	394259	0774933	CONOCO. CR. GAG. ST. 0.7M. AB. BR. ON FAIR.RD	MVUE
DER0015	393723	0760951	DEER CREEK BRIDGE ON STAFFORD BRIDGE RD.	SK
DER0015	393723	0760954	BRIDGE ON STAFFORD BRIDGE ROAD	SK
GEO0009	392936	0790242	ON RIGHT BANK AT FRANKLIN	MVUE
GEO0009	392939	0790242	GEORGES CREEK AT FRANK.1 M.NORTH OF WESTPRT.	MVUE
GUN0125	392531	0763145	AT BRIDGE ON CROMWELL BRIDGE RD.	SK
GUN0125	392532	0763543	GUNPOWDER FALLS BRID.ON CROMWELL BRI.ROAD	SK
GUN0258	393259	0763810	GUNPOWDER FALLS 4 END OF GLENCO RD. OLD BR.CR	SK
GUN0258	393301	0763810	END OF GLENCOE ROAD AT OLD BRIDGE CROSS	SK
GUN0476	394120	0764651	BRIDGE AT GUNPOWDER ROAD	SK
GUN0476	394121	0764649	GUNPOWDER FALLS BRID.AT GUNPOWDER ROAD	SK
GWN0115	392046	0764404	AT BRIDGE ON ESSEX ROAD IN VILLA NOVA	SK
GWN0115	392050	0764403	GWYNNS FALLS AT BR. ON ESSEX RD.IN VALLA NOVA	SK
JON0184	392332	0763942	JONES FALLS NEAR BRIDGE FALLS RD. RT. 25	SK
JON0184	392345	0763946	NEAR BRIDGE ON FALLS RD (MD. RT.25) AT S	SK
MAT0078	383518	0770708	MATTAWOMAN CR. BRIDGE ON MD. ROUTE	SK
MON0020	391617	0772630	MONACACY R.BRIDGE ON MD.ROUTE 28	SK
MON0020	391617	0772631	BRIDGE ON MARYLAND ROUTE 28	SK
MON0155	391759	0772134	BRIDGE ON REELS MILL ROAD	MVUE
MON0155	392310	0772251	MONOCACY RIVER BRIDGE ON REELS MILL ROAD	MVUE
MON0269	392848	0772323	BRIDGE ON BIGGS FORD ROAD	SK
MON0269	392849	0772319	MONOCACY RIVER BRIDGE ON BIGGS FORD ROAD	SK
MON0528	394043	0771407	BRIDGEPORT BRIDGE ON MD ROUTE 140 USGS G	MVUE
MON0528	394045	0771406	MONOCACY RI AT BRIDGEPORT BR ON MD RT 97 GAG	MVUE
NBP0023	393050	0795009	TOLL BRIDGE AT OLDTOWN	SK
NBP0023	393214	0783645	NORTH BRANCH POTOMAC TOLL BR. AT OLDTOWN	SK
NBP0103	393227	0784403	WEST OF MOORES HOLLOW RD. AND ROUTE 51	SK
NBP0103	393456	0784354	WEST OF INTERSECTION OF MOORESHOLLOW ROA	SK
NBP0461	392636	0790139	NORTH BRANCH POTOMAC AT BRIDGE ON RT.220	SK
NBP0461	392641	0785819	AT BRIDGE ON U.S. RT. 220	SK
NBP0534	392841	0790410	N.BRA.POT.R.AT BLOOM. UPST.OF CONF./SAVA. R.	SK

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
NBP0534	392844	0790406	NORTH BRANCH AT BLOOMINGTON UPSTM OF CON	SK
NPA0165	393000	0765257	BRIDGE AT MD ROUTE 91 NEAR GAGE	MVUE
NPA0165	393014	0765309	NORTH BRANCH PATAPSCO BRI.AT.MD RT.91 GAGE	MVUE
PAT0176	391303	0764220	AT BRIDGE ON WASHINGTON BOULEVARD (US.	SK
PAT0176	391305	0764224	PATAPSCO R.AT BRI.ON WASHINGTON BLVD.US RT1	SK
PAT0285	391836	0764737	PATAPSCO R. AT BR. ON RT. 99 NR. HOLLO. GAGE	SK
PAT0285	391844	0764733	AT BRIDGE ON MD. RT. 99 NEAR HOLLOFIELD	SK
PIS0033	384153	0765913	RTE 210 CROSSING	SK
PIS0033	384154	0765913	PISCATAWAY CR. BRIDGE ON MD. RTE. 210	SK
POT1471	390915	0773118	AT EASTERN TERMINUS OF WHITES FERRY	SK
POT1471	390916	0773118	POTOMAC R. TERMINUS OF WHITES FERRY	SK
POT1472	390919	0773121	POTOMAC RIVER WEST. TERM. OF WHITE FER.	SK
POT1595	391624	0773238	AT BRIDGE ON U.S. RT. 15 NEAR POINTOF RO	MVUE
POT1595	391624	0773738	POTOMAC R. E END OF BIRD., U.S. RT. 15	MVUE
POT1596	391619	0773253	POTOMAC RIVER/VA SIDE POINT OF ROCKS./US	SK
POT1596	391619	0773753	POTOMAC RIVER VA SIDE POINT OF ROCKS	SK
POT1830	392605	0774811	AT GAGING STA. BELOW BRIDGE ON MD. RT. 3	MVUE
POT1830	392606	0774804	POTOMAC RIVER AT GAG. STA. BE. BR. ON RT. 34	MVUE
POT2386	394149	0781036	AT GAGING STATION 0.5 MILE BELOW BR./RT.	MVUE
POT2386	394154	0781057	POTOMAC R. AT GAG STA 0.5M BEL BR ON RT 522	MVUE
POT2766	393218	0782717	AT BRIDGE ON MD. RT. 51 NEAR PAW PAW W.	MVUE
POT2766	393717	0782718	POTOMAC R. BR. ON RT 51 NR PAW PAW W VA.	MVUE
PR01	385546	0770701	POTOMAC RIVER/CHAIN BRIDGE	MVUE
PXT0603	385719	0764140	AT BRIDGE ON US RT. 50	MVUE
PXT0603	385721	0764136	PATUXENT R. MD RT 50 BRIDGE,USGS GAG NO 59440	MVUE
PXT0809	390700	0765231	PAT.R.AT GAG.STN. BELOW THE ROCKY GORGE DAM	MVUE
PXT0972	391418	0770322	PAT.R.AT BRIDGE ON MD.RT.97 NR UNITY GAGE	SK
PXT0972	391421	0770323	AT BRIDGE ON MD. RT. 97 NEAR UNITY GAGE	SK
RCM0111	385934	0770348	ROCKHOLD CR. 1.5 MILES AB. MOUTH OF CR.	SK
SAV0000	392847	0790410	SAVAGE RIVER AT MD RT. 135	MVUE
SAV0000	392849	0790406	SAVAGE RIVER AT MD135	MVUE
SEN0008	390446	0772024	SENECA CR. BRIDGE ON MD. ROUTE 112	SK
SUS0109	393921	0761031	AT CONOWINGO DAM GAGING STATION USGS-	MVUE
SUS0109	393921	0761033	LOWER SUSQUEHANNA AT CONO DAM STATION	MVUE
TOW0030	393310	0783313	AT GAGE NEAR BRIDGE ON OLDTOWN RD. USGS-	SK
WIL0013	393941	0784650	GAGING STATION DWNSTM FROM CONFLUEW/BRAD	MVUE
WIL0013	393944	0784645	WILLS CR. GAG. ST. DOWNST. FR. CONFL/BRAD.RUN	MVUE
WXT0045	384851	0764504	MIDSTR.AT.WAT.ST.,UPPER MAR.	SK
<i>Virginia</i>				
01625000	381542	0785144	MIDDLE RIVER NEAR GROTTOS, VA	MVUE
01627500	381307	0785013	SOUTH RIVER AT HARRISTON, VA	MVUE
01629500	383846	0783206	SOUTH FORK SHENANDOAH RIVER NEAR LURAY, VA	MVUE
01631000	385450	0781240	S F SHENANDOAH RIVER AT FRONT ROYAL, VA	MVUE
01669000	375237	0765403	PISCATAWAY CREEK NEAR TAPPAHANNOCK, VA	MVUE

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
02037500	373155	0772605	JAMES RIVER AT RICHMOND, VA	MVUE
1AABR000.78	391045	0780510	APPROX 0.2 MILES ABOVE RT.7 BRIDGE	MVUE
1ABRB002.15	390248	0772558	RT. 7 BRIDGE	SK
1ABRU020.12	384650	0774023	RT. 29/211 ABOVE LAKE	SK
1ABUL010.28	384811	0772659	RT. 28 PRINCE WILLIAM/FAIRFAX COUNTY	SK
1ACAX004.57	391518	0773436	ROUTE 663	SK
1ACHO003.65	383112	0772142	RT. 1 BRIDGE(PRINCE WILLIAM-STAFFORD CO. LINE)	SK
1ADIF000.86	385833	0771446	ROUTE 193 BRIDGE	MVUE
1AGOO002.38	390508	0773041	ROUTE BRIDGE	SK
1AGOO022.44	390048	0774201	RT. 734 BRIDGE	SK
1AHPR003.87	385740	0772552	DULLES AIRPORT ACCESS ROAD - LOUDOUN CO.	SK
1AOPE025.10	391443	0780227	RT. 672 BRIDGE	SK
1AOPE036.13	390852	0780526	RT. 655 BRIDGE (FREDERICK COUNTY)	MVUE
1APIM000.15	385610	0770710	RT. 120 BRIDGE (UNDER CHAIN BRIDGE), GLEBE RD.	SK
1AQUA004.46	383356	0771945	RT. 1 (BUSINESS) BRIDGE	SK
1ASOT001.44	384518	0774027	ROUTE 215 BRIDGE	SK
1ASUG004.42	390047	0772209	RT. 7 BRIDGE	SK
1ATUS000.37	390503	0773101	ROUTE 653 BRIDGE	SK
1BCDR013.29	390440	0781934	ROUTE 628 BRIDGE	MVUE
1BCRO000.43	385717	0781126	RIVERTON CORP. BRIDGE	SK
1BCST012.32	380743	0785941	ROUTE 794 BRIDGE (AUGUSTA COUNTY)	MVUE
1BHKS000.96	384230	0782721	ROUTE 648 BRIDGE BELOW LURAY	SK
1BLEW002.91	380958	0790014	APPROX. 0.3 MILES BELOW RT. 275 BRIDGE	SK
1BLNV001.22	383624	0784813	100 FT DOWNSTREAM OF RT 786 BRIDGE AT GAGING STA	MVUE
1BMDD005.81	382912	0785738	RT 726 BRIDGE AT GAGING STATION (ROCKINGHAM CO)	MVUE
1BMDL001.83	381543	0785144	ROUTE 769 BRIDGE	MVUE
1BMDL036.08	381437	0790208	ROUTE 742 BRIDGE	SK
1BNFS000.57	385658	0781154	APPROX. 0.1 MILE BELOW RT. 340/522 BRIDGE	SK
1BNFS010.34	385836	0782013	RT. 55 BRIDGE WARREN/SHENANDOAH COUNTY	MVUE
1BNFS093.53	383814	0785109	ROUTE 259 BRIDGE	MVUE
1BNTH014.08	382041	0785500	RT. 693 AT QUARRY DOWNSTREAM FROM GAGING STATION	MVUE
1BPSG001.36	385732	0781600	RT. 55 BRIDGE	MVUE
1BSMT004.60	384138	0783836	RT. 620 BRIDGE	MVUE
1BSSF003.56	385449	0781236	RT. 619 BRIDGE AT GAGING STATION	MVUE
1BSSF054.20	383845	0783206	RT. 211 BRIDGE, E OF NEW MARKET	MVUE
1BSSF100.10	381846	0784613	RT. 708 BRIDGE	SK
1BSTH007.80	381307	0785015	RT. 778 AT HARRISONBURG	MVUE
1BSTH027.85	380326	0785429	ROUTE 664 BRIDGE - CITY OF WAYNESBORO	MVUE
1BSTY001.22	384915	0783402	RT. 11 BRIDGE	SK
2-ALM000.42	373023	0772444	RT. 5 BRIDGE	SK
2-APP012.79	371357	0772504	RT. 36 BRIDGE	SK
2-APP016.38	371331	0772835	ROUTE 600 BRIDGE (CHESTERFIELD COUNTY)	MVUE
2-APP050.23	372117	0775106	RT. 360 GOODES BRIDGE	SK
2-APP118.04	372004	0782803	RT.15 BRIDGE W OF FARMVILLE (PRINCE EDWARD CO.)	SK

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
2-BCC004.71	380410	0795350	RT. 39 AT GAGING STATION	SK
2-BLP000.79	381143	0793414	RT. 614 BRIDGE	SK
2-BUF002.10	373635	0785521	RT. 657 AT GAGING STATION	SK
2-CFP004.67	375914	0792940	DOWNSTREAM OF RT. 42 BRIDGE	MVUE
2-CHK032.77	372544	0770220	RT. 155 BRIDGE	SK
2-CHK076.59	374202	0773049	RT. 625 BRIDGE	SK
2-CRE002.37	375805	0795510	RT. 605 BRIDGE	SK
2-FAC000.85	372623	0772620	RT. 1 BRIDGE	SK
2-HRD011.57	384845	0782718	RT. 637 BRIDGE	SK
2-JKS000.38	374718	0794652	RT. 727 IRON GATE	SK
2-JKS023.61	374719	0800003	JACKSON RIVER AT COVINGTON GAGE CITY PARK	MVUE
2-JKS058.60	380233	0795255	ROUTE 603 AT GAGING STATION - BATH COUNTY	SK
2-JMS117.35	373341	0773237	RT. 147 BRIDGE	MVUE
2-JMS157.28	374013	0780513	RT. 45 BRIDGE AT CARTERSVILLE	SK
2-JMS189.31	374751	0782747	DOWNSTREAM APPROX 0.2 MILE BELOW RT. 20 BRIDGE	MVUE
2-JMS229.14	373211	0784939	RT. 60 AT BENT CREEK	MVUE
2-JMS258.54	372420	0790850	RT. 29	SK
2-JMS275.75	373048	0791954	BELOW BIG ISLAND	SK
2-JMS282.28	373528	0792251	RT. 501 BRIDGE, SE OF GLASGOW	SK
2-LAF000.00	365342	0761953	BUOY 2-BETWEEN TANNER PT & LAMBERTS PT(MOUTH)	SK
2-MCM005.12	380609	0783535	RT. 614 BRIDGE, W OF CHARLOTTESVILLE	SK
2-MRY000.46	373754	0792638	RT. 130 BRIDGE AT GLASGOW	SK
2-MRY014.78	374508	0792332	RT. 60 AT BEN SALEM WAYSIDE	SK
2-MRY038.10	375412	0792500	DOWNSTREAM OF RT. 39 BR. N OF ROCKBRIDGE BATHS	MVUE
2-PNY005.29	374209	0790139	RT. 151 BRIDGE AT GAGING STATION NELSON/AMHERST	MVUE
2-RKF000.19	374357	0783854	RT. 626 BRIDGE	SK
2-RRN002.19	380517	0782448	RT. 649 BRIDGE	SK
2-RRS003.12	380605	0782744	USTREAM OF RT. 29 BRIDGE	SK
2-RVN001.64	374553	0781105	UPSTREAM OF RT 6 BRIDGE AT COLUMBIA	SK
2-RVN015.97	375129	0781601	PSTREAM OF RT. 15 BRIDGE - FLUVANNA COUNTY	SK
2-SFT004.92	371658	0772443	RT. 1 BRIDGE	SK
2-TYE000.30	373832	0784844	RT. 626 BRIDGE, ABOVE CONFL. WITH JAMES RIVER	SK
2-UPM003.53	373655	0772626	RT. 1 BRIDGE (BROOK ROAD)	SK
3-PIS009.24	375238	0765404	20 M UPSTREAM FROM RT 691 BRIDGE (ESSEX COUNTY)	MVUE
3-RAP006.53	382135	0774110	RT. 610 BRIDGE	SK
3-ROB001.90	381930	0780544	ROUTE 614 BRIDGE	MVUE
3-RPP110.57	381912	0772818	ROUTE 1, FREDERICKBURG	SK
3-RPP147.10	383148	0774850	RT. 15/29 BRIDGE CULPEPER/FAUQUIER CO.	SK
8-MPN054.17	375302	0770954	RT. 628 BRIDGE	SK
8-MPN094.79	380337	0772305	RT. 605 BRIDGE	SK
8-NAR005.42	375100	0772541	STA.1 - RT. 30 BR (MORRIS BRIDGE)	MVUE
8-PCT002.29	375720	0772205	RT. 601 BRIDGE	SK
8-PMK082.34	374604	0771956	RT. 614 BRIDGE	MVUE

Table 2. Water-quality site identification numbers, latitude and longitude, site names, and type of analysis used to estimate loads or trends for 202 data sets representing 193 sites from the Nontidal Synthesis Program used in the 1997 Chesapeake Bay Program reevaluation—Continued

Water-quality site identification number	Latitude	Longitude	Site name	Analysis type
8-SAR001.11	374800	0773802	RT. 738 BRIDGE	SK
8-YRK011.14	371730	0763413	BUOY 34	SK
ST01	384139	0771706	OCCOQUAN DAM	SK
ST10	384219	0772646	LAKE JACKSON (OCCOQUAN R. NEAR MANASSAS)	SK
ST30	384456	0773350	BROAD RUN NEAR BRISTOW	SK
ST40	384559	0772452	YATES FORD	SK
ST45	384812	0772659	YORKSHIRE	SK
ST50	384916	0772757	CUB RUN NEAR BULL RUN	SK
ST60	385321	0773414	BULL RUN NEAR CATHARPIN	SK
ST70	384650	0774022	BROAD RUN AT BUCKLAND	SK
<u>Washington, D.C.</u>				
A7	385730	0765600	NE BRANCH AT RIVERDALE R.	MVUE
GOO238	390456	0773033	GOOSE CREEK	SK
PIM15	385549	0770706	PIMMIT RUN	SK
QUA446	383356	0771945	QUANTICO CREEK	SK

Table 3. List of constituents contained in U.S. Geological Survey nontidal water-quality database, 1972-96

[ft³/sec, cubic feet per second; mg/L, milligrams per liter; µg/L, micrograms per liter

Constituent code	Data description
STCID	Station number
SNAME	Station name
AGENCY	Collection agency code
DATE	Date of sample collection
TIME	Time of sample collection
LAT	Latitude
LONG	Longitude
HUC	Hydrologic unit code
00010	Water temperature in degrees Celsius
00060	Daily mean discharge, in ft ³ /sec
00061	Instantaneous discharge, in ft ³ /sec
00065	Stream stage, in feet
00076	Turbidity
00095	Specific conductance in micromhos per centimeter
00300	Dissolved oxygen in mg/L
00400	pH, in units
00410	Total alkalinity as CaCO ₃ , in mg/L
00530	Total suspended solids at 105 degrees Celsius, in mg/L
00600	Total nitrogen as N, in mg/L
00608	Dissolved ammonia as N, in mg/L
00610	Total ammonia as N, in mg/L
00613	Dissolved nitrite as N, in mg/L
00615	Total nitrite as N, in mg/L
00618	Dissolved nitrate as N, in mg/L
00620	Total nitrate as N, in mg/L
00623	Dissolved ammonia plus organic nitrogen as N, in mg/L
00625	Total ammonia plus organic nitrogen as N, in mg/L
00630	Total nitrate plus nitrite as N, in mg/L
00631	Dissolved nitrate plus nitrite as N, in mg/L
00665	Total phosphorus as P, in mg/L
00666	Dissolved phosphorus as P, in mg/L
00671	Dissolved inorganic phosphorus as P, in mg/L
00680	Total organic carbon as C, in mg/L
00681	Dissolved organic carbon as C, in mg/L
00900	Hardness as CaCO ₃ , in mg/L
00915	Dissolved calcium as Ca, in mg/L
00925	Dissolved magnesium as Mg, in mg/L
00930	Dissolved sodium as Na, in mg/L
00935	Dissolved potassium as K, in mg/L
00940	Dissolved chlorine as Cl, in mg/L
00945	Dissolved sulfate as SO ₄ , in mg/L
00955	Silica as SiO ₂ , in mg/L
32211	Chlorophyll a, in µg/L
32231	Chlorophyll b, in µg/L
32232	Chlorophyll c, in µg/L
49954	Algal dry mass
80154	Total suspended sediment, in mg/L

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by streamflow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model (Cohn and others, 1989)

Agency - USGS, U.S. Geological Survey; SRBC, Susquehanna River Basin Commission; PaDEP, Pennsylvania Department of Environmental Protection; MdDNR, Maryland Department of Natural Resources; VaDEQ, Virginia Department of Environmental Quality; WashCOG, Metropolitan Washington Council of Governments.

Parameters - 00530, total suspended solids (TSS); 00600, total nitrogen (TN); 00608, dissolved ammonia (DNH₄); 00610, total ammonia (TNH₄); 00618, dissolved nitrate (DNO₃); 00620, total nitrate (TNO₃); 00623, dissolved ammonia plus organic nitrogen (DKJD); 00625, total ammonia plus organic nitrogen (TKJD); 00630, total nitrite plus nitrate nitrogen (TNO₃₂); 00631, dissolved nitrite plus nitrate nitrogen (DNO₃₂); 00665, total phosphorus (TP); 00666, dissolved phosphorus (DP); 00671, dissolved inorganic phosphorus (DIP); and 80154, suspended sediment (SED).

Statistics - dectime coefficient, one of the modeled regression coefficients; p-value, measure of significance of regressor; b, regression slope; direction, up or down; percentage change, change for indicated time period; status yield, mean of last 3 years annual yields; percentage yield, each status yield divided by mean status yield for all sites with same constituent, ranges from 0-100 percent, the lower the percentage yield, the lower the status yield; shaded areas are significant at 95-percent confidence level; --, not applicable or insufficient data]

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield	
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change			
<u>Susquehanna River Basin</u>												
<u>01531500 - Susquehanna River at Towanda, Pa.</u>												
01531500	WQN0305	PaDEP	00530	1985-96	-0.0320	0.2394	-0.0315	Down	-34	460	73	
01531500	01531500	SRBC	00600	1989-96	-.0434	.0000	-.0425	Down	-29	6.4	19	
01531500	01531500	SRBC/USGS	00608	1985-96	-.0624	.0001	-.0605	Down	-56	.24	13	
01531500	WQN0305	PaDEP	00610	1985-96	-.1261	.0000	-.1185	Down	-78	.21	17	
01531500	01531500	SRBC/USGS	00610	1985-96	-.0092	.5626	-.0092	Down	-11	.36	37	
01531500	WQN0305	PaDEP	00620	1985-96	-.0181	.0259	-.0179	Down	-20	3.7	17	
01531500	01531500	SRBC/USGS	00623	1985-96	-.0293	.0134	-.0291	Down	-32	1.9	28	
01531500	01531500	SRBC/USGS	00625	1985-96	-.0603	.0000	-.0585	Down	-54	2.7	36	
01531500	WQN0305	PaDEP	00630	1985-96	-.0178	.0236	-.0176	Down	-19	3.8	13	
01531500	01531500	SRBC	00630	1989-96	-.0227	.0090	-.0227	Down	-17	3.9	13	
01531500	WQN0305	PaDEP	00665	1985-96	-.0406	.0000	-.0398	Down	-39	.44	18	
01531500	01531500	SRBC	00665	1989-96	.0281	.8295	.0028	Up	2.3	.58	26	
01531500	01531500	SRBC	00666	1989-96	-.0692	.0000	-.0669	Down	-56	.15	9.7	
01531500	01531500	SRBC	00671	1989-96	-.1418	.0000	-.1322	Down	-68	.03	1.2	
01531500	01531500	SRBC	80154	1989-96	.0277	.2511	.0260	Up	23	860	45	

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>01540500 - Susquehanna River at Danville, Pa</u>											
01540500	01540500	SRBC	00600	1985-96	-0.0305	0.0000	-0.0300	Down	-31	7.1	22
01540500	01540500	SRBC	00608	1985-96	-.0981	.0000	-.0934	Down	-69	.24	13
01540500	WQN0301	PaDEP	00610	1985-96	-.0447	.0087	-.0437	Down	-42	.31	31
01540500	01540500	SRBC	00610	1985-96	-.0594	.0000	-.0577	Down	-51	.37	39
01540500	WQN030	PaDEP	00620	1985-96	-.0007	.5887	-.0070	Down	-8.9	4.1	20
01540500	01540500	SRBC	00623	1985-96	-.0570	.0000	-.0554	Down	-50	1.8	26
01540500	01540500	SRBC	00625	1985-96	-.0640	.0000	-.0620	Down	-54	2.8	38
01540500	WQN030	PaDEP	00630	1985-96	-.0077	.5414	-.0077	Down	-9.7	4.2	15
01540500	01540500	SRBC	00630	1985-96	-.0100	.0638	-.0100	Down	-11	4.4	16
01540500	WQN0301	PaDEP	00665	1985-96	-.0537	.0000	-.0523	Down	-48	.65	30
01540500	01540500	SRBC	00665	1985-96	-.0260	.0038	-.0257	Down	-27	.62	28
01540500	01540500	SRBC	00666	1985-96	-.0572	.0000	-.0556	Down	-50	.13	7.8
01540500	01540500	SRBC	00671	1985-96	-.0914	.0000	-.0873	Down	-67	.03	1.2
01540500	01540500	SRBC	80154	1985-96	-.0406	.0014	-.0398	Down	-39	620	31
<u>01553500 - West Branch Susquehanna River at Lewisburg, Pa.</u>											
01553500	WQN0401	PaDEP	00530	1985-96	-.0214	.4754	-.0212	Down	-25	170	25
01553500	01553500	SRBC	00600	1985-96	-.0133	.0065	-.0132	Down	-15	7.1	22
01553500	01553500	SRBC	00608	1985-96	-.0267	.0186	-.0263	Down	-27	.26	15
01553500	WQN0401	PaDEP	00610	1985-96	-.0571	.0000	-.0555	Down	-50	.20	16
01553500	01553500	SRBC	00610	1985-96	-.0182	.1139	-.0180	Down	-21	.32	32
01553500	WQN0401	PaDEP	00620	1985-96	.0042	.3188	.0042	Up	5.7	4.2	20
01553500	01553500	SRBC	00623	1985-96	-.0554	.0000	-.0539	Down	-49	1.5	19
01553500	01553500	SRBC	00625	1985-96	-.0716	.0000	-.0691	Down	-58	2.3	29
01553500	WQN0401	PaDEP	00630	1985-96	.0045	.3251	.0045	Up	6.1	4.2	14
01553500	01553500	SRBC	00630	1985-96	.0138	.0002	.0139	Up	18	4.7	17
01553500	WQN0401	PaDEP	00665	1985-96	-.0361	.0357	-.0355	Down	-35	.51	22
01553500	01553500	SRBC	00665	1985-96	-.0109	.3278	-.0108	Down	-12	.42	17
01553500	01553500	SRBC	00666	1985-96	-.0755	.0000	-.0727	Down	-60	.10	4.9
01553500	01553500	SRBC	00671	1985-96	-.1003	.0000	-.0954	Down	-70	.02	.0
01553500	01553500	SRBC	80154	1985-96	.0067	.6622	.0067	Up	8.4	550	28

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>01567000 - Juniata River at Newport, Pa.</u>											
01567000	WQN0214	PaDEP	00530	1985-96	-0.0082	0.8076	-0.0082	Down	-10	70.0	8.9
01567000	01567000	SRBC	00600	1985-96	-.0256	.0000	-.0253	Down	-26	9.5	32
01567000	01567000	SRBC	00608	1985-96	-.0686	.0000	-.0663	Down	-56	.18	7.8
01567000	WQN0214	PaDEP	00610	1985-96	-.0831	.0000	-.0797	Down	-63	.21	17
01567000	01567000	SRBC	00610	1985-96	-.0568	.0000	-.0552	Down	-49	.22	19
01567000	WQN0214	PaDEP	00620	1985-96	.0075	.4362	.0075	Up	10	7.0	37
01567000	01567000	SRBC	00623	1985-96	-.0656	.0000	-.0635	Down	-54	1.5	17
01567000	01567000	SRBC	00625	1985-96	-.0873	.0000	-.0836	Down	-65	2.1	26
01567000	WQN0214	PaDEP	00630	1985-96	.0056	.5254	.0058	Up	8.0	7.0	28
01567000	01567000	SRBC	00630	1985-96	-.0032	.4806	-.0032	Down	-3.8	7.6	31
01567000	WQN0214	PaDEP	00665	1985-96	-.1097	.0000	-.1039	Down	-73	.28	9.2
01567000	01567000	SRBC	00665	1985-96	-.0589	.0000	-.0572	Down	-51	.41	17
01567000	01567000	SRBC	00666	1985-96	-.0587	.0000	-.0570	Down	-51	.18	13
01567000	01567000	SRBC	00671	1985-96	-.1282	.0000	-.1203	Down	-78	.07	6.1
01567000	01567000	SRBC	80154	1985-96	-.0761	.0000	-.0733	Down	-60	270	13
<u>01576000 - Susquehanna River at Marietta, Pa.</u>											
01576000	WQN0201	PaDEP	00530	1985-96	-.0651	.0186	-.0630	Down	-54	560	90
01576000	01576000	SRBC	00600	1987-96	-.0295	.0000	-.0316	Down	-28	9.6	32
01576000	01576000	SRBC	00608	1987-96	-.0467	.0000	-.0456	Down	-37	.29	42
01576000	WQN0201	PaDEP	00608	1988-96	-.0743	.2657	-.0716	Down	-53	.57	18
01576000	01576000	SRBC	00610	1987-96	-.0286	.0047	-.0282	Down	-25	.37	67
01576000	WQN0201	PaDEP	00610	1988-96	-.0293	.1477	-.0289	Down	-32	.58	39
01576000	WQN0201	PaDEP	00620	1988-96	-.0213	.2250	-.0211	Down	-25	6.5	34
01576000	01576000	SRBC	00623	1987-96	-.0784	.0000	-.0754	Down	-54	1.5	53
01576000	WQN0201	PaDEP	00623	1988-96	.0244	.4163	.0247	Up	28	2.9	17
01576000	01576000	SRBC	00625	1987-96	-.0907	.0000	-.0867	Down	-60	2.6	34
01576000	01576000	SRBC	00630	1987-96	.0016	.5176	.0029	Up	2.9	7.0	26
01576000	WQN0201	PaDEP	00630	1988-96	-.0142	.3189	-.0141	Down	-17	6.5	29
01576000	WQN0201	PaDEP	00665	1985-96	-.0541	.0000	-.0527	Down	-48	.68	32
01576000	01576000	SRBC	00665	1987-96	-.0358	.0001	-.0363	Down	-31	.61	28
01576000	01576000	SRBC	00666	1987-96	-.0595	.0000	-.0578	Down	-45	.14	8.7
01576000	WQN0201	PaDEP	00666	1988-96	-.1306	.0000	-.1224	Down	-69	.14	8.7
01576000	01576000	SRBC	00671	1987-96	-.0407	.0291	-.0452	Down	-37	.03	.0
01576000	WQN0201	PaDEP	00671	1988-96	-.1675	.0008	-.1542	Down	-78	.02	1.2
01576000	01576000	SRBC	80154	1987-96	-.0572	.0000	-.0556	Down	-36	500	25

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
01576754 - Conestoga River at Conestoga, Pa.											
01576754	WQN0231	PaDEP	00530	1985-96	-0.0516	0.0297	-0.0503	Down	-46	350	54
01576754	01576754	SRBC	00600	1985-96	-.0175	.0000	-.0173	Down	-19	42	100
01576754	01576754	SRBC	00608	1985-96	-.0769	.0000	-.0740	Down	-60	1.3	100
01576754	WQN0231	PaDEP	00610	1985-96	-.0807	.0096	-.0775	Down	-56	.91	100
01576754	01576754	SRBC	00610	1985-96	-.0698	.0000	-.0674	Down	-57	1.5	100
01576754	WQN0231	PaDEP	00620	1985-96	-.0255	.2333	-.0252	Down	-23	40	100
01576754	01576754	SRBC	00623	1985-96	-.0434	.0000	-.0425	Down	-41	5.1	100
01576754	01576754	SRBC	00625	1985-96	-.0763	.0000	-.0735	Down	-60	7.7	100
01576754	WQN0231	PaDEP	00630	1985-96	-.0242	.1970	-.0239	Down	-22	39	100
01576754	01576754	SRBC	00630	1985-96	.0054	.0618	.0054	Up	6.7	35	100
01576754	WQN0231	PaDEP	00665	1985-96	-.0648	.0000	-.0627	Down	-49	1.6	82
01576754	01576754	SRBC	00665	1985-96	-.0188	.0053	-.0186	Down	-20	3.5	100
01576754	WQN0231	PaDEP	00666	1985-96	-.1019	.0000	-.0969	Down	-65	.64	57
01576754	01576754	SRBC	00666	1985-96	-.0476	.0000	-.0465	Down	-44	1.0	94
01576754	01576754	SRBC	00671	1985-96	-.0967	.0000	-.0922	Down	-69	.55	39
01576754	WQN0231	PaDEP	00671	1985-96	-.2662	.0000	-.2337	Down	-94	.34	65
01576754	01576754	SRBC	80154	1985-96	-.0368	.0002	-.0361	Down	-36	1,600	85
*01578310 - Susquehanna River at Conowingo, Md.											
01578310	SUS0109	MdDNR	00530	1991-96	.0163	.6946	.0164	Up	12	190	29
01578310	SUS0109	MdDNR	00600	1991-96	.0202	.1380	.0204	Up	16	10	34
01578310	01578310	USGS	00600	1985-96	-.0153	.0000	-.0165	Down	-18	9.5	32
01578310	SUS0109	MdDNR	00608	1991-96	-.0496	.2606	-.0484	Down	-30	.38	26
01578310	01578310	USGS	00608	1985-96	-.0222	.0142	-.0242	Down	-27	.43	30
01578310	SUS0109	MdDNR	00618	1991-96	.0064	.7363	.0064	Up	4.7	6.9	30
01578310	01578310	USGS	00618	1985-96	.0043	.3527	.0043	Up	5.9	7.3	32
01578310	01578310	USGS	00623	1985-96	-.0949	.0000	-.0914	Down	-71	1.2	11
01578310	SUS0109	MdDNR	00625	1991-96	-.0142	.5161	-.0141	Down	-9.8	2.7	35
01578310	01578310	USGS	00625	1985-96	-.0678	.0000	-.0749	Down	-61	2.2	28
01578310	01578310	USGS	00630	1985-96	.0075	.0638	.0075	Up	10	7.5	30
01578310	SUS0109	MdDNR	00630	1991-96	.0394	.0298	.0402	Up	33	7.3	43
01578310	01578310	USGS	00631	1985-96	.0075	.0352	.0092	Up	13	7.3	43
01578310	SUS0109	MdDNR	00665	1991-96	-.0392	.2753	-.0384	Down	-25	.42	62
01578310	01578310	USGS	00665	1985-96	-.0542	.0000	-.0611	Down	-53	.30	10
01578310	01578310	USGS	00666	1985-96	-.0623	.0000	-.0640	Down	-55	.08	2.9
01578310	01578310	USGS	00671	1985-96	.0166	.0470	-.0287	Down	-29	.08	7.4
01578310	01578310	USGS	80154	1985-96	.0031	.6429	.0030	Up	4.0	250	11

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
Eastern Shore - Maryland											
*01491000 - Choptank River near Greensboro, Md.											
01491000	CHO0626	MdDNR	00530	1985-96	0.0523	0.0342	0.0537	Up	100	110	15
01491000	CHO0626	MdDNR	00600	1985-96	-.0073	.0385	-.0073	Down	-9.2	8.6	28
01491000	01491000	USGS	00600	1985-96	-.0073	.0251	-.0086	Down	-11	8.6	28
01491000	CHO0626	MdDNR	00608	1985-96	.0089	.6151	.0089	Up	12	.40	27
01491000	01491000	USGS	00608	1985-96	-.0063	.7428	-.0044	Down	-5.6	.42	29
01491000	CHO0626	MdDNR	00618	1985-96	.0287	.0001	.0291	Up	46	5.8	25
01491000	01491000	USGS	00618	1985-96	.0292	.0000	.0296	Up	47	5.5	24
01491000	01491000	USGS	00623	1985-96	-.0580	.0000	-.0571	Down	-53	2.2	36
01491000	CHO0626	MdDNR	00625	1985-96	-.0219	.0304	-.0217	Down	-25	3.8	55
01491000	01491000	USGS	00625	1985-96	-.0543	.0000	-.0634	Down	-54	3.2	44
01491000	01491000	USGS	00630	1985-96	.0217	.0000	.0219	Up	33	5.4	20
01491000	CHO0626	MdDNR	00630	1991-96	-.0044	.7583	-.0044	Down	-3.1	5.4	21
01491000	01491000	USGS	00631	1985-96	.0220	.0000	.0268	Up	37	5.4	25
01491000	CHO0626	MdDNR	00665	1985-96	-.0167	.2593	-.0166	Down	-20	.53	24
01491000	01491000	USGS	00665	1985-96	-.0164	.0181	-.0240	Down	-25	.50	22
01491000	01491000	USGS	00666	1985-96	.0362	.0003	.0377	Up	62	.25	19
01491000	01491000	USGS	00671	1985-96	.0496	.1656	.0203	Up	27	.19	21
01491000	01491000	USGS	80154	1985-96	-.0476	.0001	-.0455	Down	-43	110	3.7
01586000 - North Branch Patapsco River at Cedarhurst, Md. - No DIP results available											
01586000	NPA0165	MdDNR	00530	1985-96	.0015	.9502	.0015	Up	1.8	--	--
01586000	NPA0165	MdDNR	00600	1985-96	.0225	.0000	.0228	Up	31	20	75
01586000	NPA0165	MdDNR	00608	1985-96	-.0753	.0000	-.0725	Down	-60	3.7	76
01586000	NPA0165	MdDNR	00618	1985-96	.0309	.0000	.0314	Up	45	16	76
01586000	NPA0165	MdDNR	00625	1985-96	-.0586	.0000	-.0569	Down	-50	5.0	75
01586000	NPA0165	MdDNR	00630	1991-96	.0326	.0089	.0331	Up	22	17	77
01586000	NPA0165	MdDNR	00665	1985-96	-.0948	.0000	-.0904	Down	-68	4.2	100

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>Patuxant River Basin</u>											
<u>01591000 - Patuxant River near Unity, Md.</u>											
01591000	0159100	USGS	00530	1985-96	0.0426	0.1395	0.0435	Up	67	--	--
01591000	PXT0972	MdDNR	00530	1985-96	.0214	.3059	.0216	Up	29	--	--
01591000	01591000	USGS	00600	1985-96	-.0120	.1152	-.0119	Down	-16	14	50
01591000	PXT0972	MdDNR	00600	1985-96	.0014	.7666	.0014	Up	1.7	13	46
01591000	PXT0972	MdDNR	00608	1985-96	-.0564	.0029	-.0548	Down	-49	.34	22
01591000	01591000	USGS	00608	1985-95	-.0293	.1061	-.0289	Down	-32	.30	19
01591000	PXT0972	MdDNR	00618	1985-96	.0170	.0012	.0171	Up	23	10	46
01591000	01591000	USGS	00618	1985-95	.0052	.3731	.0052	Up	7.1	9.8	45
01591000	01591000	USGS	00623	1985-95	-.0882	.0000	-.0844	Down	-62	1.0	5.6
01591000	01591000	USGS	00625	1985-95	-.0716	.0000	-.0691	Down	-54	2.2	28
01591000	PXT0972	MdDNR	00625	1985-96	-.0457	.0002	-.0447	Down	-42	2.2	26
01591000	01591000	USGS	00631	1985-95	.0043	.4127	.0043	Up	5.9	9.5	63
01591000	01591000	USGS	00665	1985-95	-.1434	.0000	-.1336	Down	-79	.48	21
01591000	PXT0972	MdDNR	00665	1985-96	-.0666	.0005	-.0644	Down	-55	.60	28
01591000	01591000	USGS	00666	1985-95	-.1792	.0000	-.1641	Down	-86	.10	4.8
01591000	01591000	USGS	00671	1985-95	.0070	.6751	.0070	Up	8.8	.10	9.8
01591000	01591000	USGS	80154	1985-95	-.0585	.1713	-.0568	Down	-50	--	--
<u>01592500 - Patuxant River near Laurel, Md. - No NO or NO23 result available</u>											
01592500	PXT0809	MdDNR	00530	1985-96	.0518	.0129	.0532	Up	86	29	2.2
01592500	PXT0809	MdDNR	00600	1985-96	.0107	.0505	.0108	Up	14	5.2	13
01592500	PXT0809	MdDNR	00608	1985-96	.0736	.0009	.0764	Up	140	.35	23
01592500	PXT0809	MdDNR	00618	1985-96	.0021	.7972	-.0021	Down	-2.7	2.8	10
01592500	PXT0809	MdDNR	00625	1985-96	.0112	.3237	.0113	Up	14	1.9	22
01592500	PXT0809	MdDNR	00665	1985-96	-.0056	.7567	-.0056	Down	-6.5	.12	.0

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<i>*01594440 - Patuxant River near Bowie, Md.</i>											
01594440	PXT0603	MdDNR	00530	1985-96	-0.0430	0.0000	-0.0421	Down	-43	230	35
01594440	01594440	USGS	00600	1985-96	-.0716	.0000	-.0679	Down	-60	8.5	24
01594440	PXT0603	MdDNR	00600	1985-96	-.0825	.0000	-.0792	Down	-66	7.7	27
01594440	01594440	USGS	00608	1985-96	-.1069	.0000	-.1085	Down	-78	.91	51
01594440	PXT0603	MdDNR	00608	1985-96	-.1285	.0000	-.1206	Down	-82	.67	72
01594440	01594440	USGS	00618	1985-96	-.0525	.0000	-.0511	Down	-50	3.9	22
01594440	PXT0603	MdDNR	00618	1985-96	-.0960	.0000	-.0915	Down	-72	5.1	16
01594440	01594440	USGS	00623	1985-96	-.0921	.0000	-.0887	Down	-70	1.9	29
01594440	01594440	USGS	00625	1985-96	-.0888	.0000	-.0891	Down	-70	3.7	39
01594440	PXT0603	MdDNR	00625	1985-96	-.0853	.0000	-.0818	Down	-68	2.9	52
01594440	01594440	USGS	00630	1985-96	-.0684	.0000	-.0661	Down	-60	4.8	17
01594440	PXT0603	MdDNR	00630	1991-96	-.1228	.0000	-.1156	Down	-60	4.8	18
01594440	01594440	USGS	00631	1985-96	-.0672	.0000	-.0567	Down	-53	4.8	19
01594440	01594440	USGS	00665	1985-96	-.1104	.0000	-.1117	Down	-78	.61	26
01594440	PXT0603	MdDNR	00665	1985-96	-.1177	.0000	-.1110	Down	-79	.58	28
01594440	01594440	USGS	00666	1985-96	-.1007	.0000	-.1082	Down	-77	.25	12
01594440	PXT0603	MdDNR	00666	1985-96	-.0672	.0000	-.0650	Down	-59	.17	19
01594440	01594440	USGS	00671	1985-96	-.0620	.0000	-.0750	Down	-64	.18	20
01594440	01594440	USGS	80154	1985-96	-.0814	.0000	-.0766	Down	-64	290	13
<u>Potomac River Basin - Maryland</u>											
<i>01599000 - Georges Creek near Franklin, Md. - TSS, NO or NO23, or DIP results available</i>											
01599000	GEO0009	MdDNR	00530	1985-96	.0123	.5389	.0124	Up	18	250	38
01599000	GEO0009	MdDNR	00600	1985-96	-.0337	.0000	-.0331	Down	-33	6.8	20
01599000	GEO0009	MdDNR	00608	1985-96	-.1217	.0000	-.1146	Down	-77	.63	48
01599000	GEO0009	MdDNR	00625	1985-96	-.0401	.0000	-.0393	Down	-38	2.3	30
01599000	GEO0009	MdDNR	00665	1985-96	-.0464	.0117	-.0453	Down	-43	.37	14
<i>01613000 - Potomac River at Hancock, Md. -No TSS, NO or NO23, or DIP results available</i>											
01613000	POT2386	MdDNR	00530	1985-96	.0166	.4651	.0167	Up	25	280	43
01613000	POT2386	MdDNR	00600	1985-96	-.0331	.0000	-.0326	Down	-33	5.3	14
01613000	POT2386	MdDNR	00608	1985-96	-.0248	.1123	-.0245	Down	-28	.19	8.8
01613000	POT2386	MdDNR	00618	1985-96	.0043	.6923	.0043	Up	5.9	3.8	15
01613000	POT2386	MdDNR	00625	1985-96	-.0579	.0000	-.0563	Down	-50	1.9	22
01613000	POT2386	MdDNR	00665	1985-96	-.0475	.0164	-.0464	Down	-43	.42	17

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>01614500 - Conococheague Creek at Fairview, Md. - No DIP results available</u>											
01614500	CON0180	MdDNR	00530	1985-96	-0.0179	0.4552	-0.0177	Down	19	400	64
01614500	CON0180	MdDNR	00600	1985-96	-.0060	.1580	-.0066	Down	-6.9	24	90
01614500	CON0180	MdDNR	00608	1985-96	-.0445	.0164	-.0435	Down	-41	.30	18
01614500	CON0180	MdDNR	00618	1985-96	.0143	.0504	.0144	Up	19	20	94
01614500	CON0180	MdDNR	00625	1985-96	-.0530	.0000	-.0516	Down	-47	5.5	83
01614500	CON0180	MdDNR	00665	1985-96	-.0379	.0024	-.0372	Down	-36	.83	41
<u>01638500 - Potomac River at Point of Rocks, Md. -No DIP results available</u>											
01638500	POT1595	MdDNR	00530	1985-96	.0187	.3864	.0189	Up	25	420	66
01638500	POT1595	MdDNR	00600	1985-96	-.0071	.2464	-.0071	Down	-8.2	9.5	68
01638500	POT1595	MdDNR	00608	1985-96	-.0517	.0018	-.0504	Down	-46	.29	83
01638500	POT1595	MdDNR	00618	1985-96	.0218	.0038	.0220	Up	30	6.8	70
01638500	POT1595	MdDNR	00625	1985-96	-.0408	.0051	-.0400	Down	-39	3.0	58
01638500	POT1595	MdDNR	00665	1985-96	-.0464	.0014	-.0453	Down	-43	.96	52
<u>*01646580 - Potomac River at Chain Bridge, Md.</u>											
01646580	PR01	WashCOG	00600	1985-96	.0037	.1705	.0037	Up	4.9	12	43
01646580	PR01	WashCOG	00608	1985-96	-.0300	.0017	-.0297	Down	-32	.27	15
01646580	PR01	WashCOG	00623	1985-96	-.0555	.0000	-.0540	Down	-51	1.6	20
01646580	PR01	WashCOG	00625	1985-96	-.0515	.0000	-.0529	Down	-51	3.5	49
01646580	PR01	WashCOG	00631	1985-96	.0444	.0000	.0454	Up	78	9.1	59
01646580	PR01	WashCOG	00665	1985-96	-.0582	.0000	-.0565	Down	-53	.90	45
01646580	PR01	WashCOG	00666	1985-96	-.0684	.0000	-.0661	Down	-59	.23	18
01646580	PR01	WashCOG	00671	1985-96	-.0366	.0000	-.0359	Down	-38	.18	21
01646580	PR01	WashCOG	80154	1985-96	-.0866	.0001	-.0830	Down	-68	750	39
Potomac River - Virginia											
<u>01625000 - Middle Creek near Grottoes, Va.</u>											
01625000	1BMDL001.83	VaDEQ	00530	1985-96	-.0646	.0019	-.0626	Down	-54	210	32
01625000	1BMDL001.83	VaDEQ	00600	1985-96	.0063	.3480	.0063	Up	8.9	5.0	13
01625000	1BMDL001.83	VaDEQ	00610	1985-96	-.0298	.2647	-.0294	Down	-32	.19	15
01625000	1BMDL001.83	VaDEQ	00620	1985-96	.0086	.1602	.0086	Up	12	3.5	16
01625000	1BMDL001.83	VaDEQ	00625	1985-96	.0093	.4597	-.0093	Down	-12	1.2	11
01625000	1BMDL001.83	VaDEQ	00630	1985-96	.0113	.3642	.0114	Up	17	4.2	15
01625000	1BMDL001.83	VaDEQ	00665	1985-96	-.0780	.0000	-.0750	Down	-61	.28	9.2
01625000	1BMDL001.83	VaDEQ	00671	1985-96	-.1260	.0000	-.1184	Down	-78	.17	18

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>01631000 - S. Fork Shenandoah River near Front Royal, Va. - No DIP results available</u>											
01631000	1BSSF003.56	VaDEQ	00530	1985-96	-0.0612	0.0045	-0.0594	Down	-52	170	26
01631000	1BSSF003.56	VaDEQ	00600	1985-96	-.0063	.5585	-.0063	Down	-7.3	5.6	15
01631000	1BSSF003.56	VaDEQ	00610	1985-96	-.0801	.0004	-.0770	Down	-62	.19	15
01631000	1BSSF003.56	VaDEQ	00620	1985-96	.0232	.0484	.0235	Up	32	4.6	23
01631000	1BSSF003.56	VaDEQ	00625	1985-96	-.0559	.0000	-.0544	Down	-49	1.5	15
01631000	1BSSF003.56	VaDEQ	00630	1985-96	.0279	.0472	.0283	Up	40	4.5	16
01631000	1BSSF003.56	VaDEQ	00665	1985-96	-.0601	.0003	-.0583	Down	-51	.50	22
<u>01634000 - N. Fork Shenandoah River near Strasburg, Va. - No DIP results available</u>											
01634000	1BNFS010.34	VaDEQ	00530	1985-95	-.0389	.1870	.0382	Up	-35	--	--
01634000	1BNFS010.34	VaDEQ	00600	1985-95	.0338	.0002	.0344	Up	45	6.9	79
01634000	1BNFS010.34	VaDEQ	00610	1985-95	-.0363	.2962	-.0356	Down	-33	.23	20
01634000	1BNFS010.34	VaDEQ	00620	1985-95	.0658	.0000	.0680	Up	110	6.3	32
01634000	1BNFS010.34	VaDEQ	00625	1985-95	-.0165	.1506	-.0164	Down	-17	1.6	17
01634000	1BNFS010.34	VaDEQ	00665	1985-95	-.0020	.8736	-.0020	Down	-2.2	.36	14
<u>01634500 - Cedar Creek near Winchester, Va. - No TP, or DIP results available</u>											
01634500	1BCDR013.29	VaDEQ	00530	1985-96	-.0118	.5962	-.0117	Down	-13	54	6.2
01634500	1BCDR013.29	VaDEQ	00600	1985-96	.0085	.2391	.0085	Up	11	2.2	1.1
01634500	1BCDR013.29	VaDEQ	00620	1985-96	.0159	.0867	.0160	Up	21	1.5	4.2
01634500	1BCDR013.29	VaDEQ	00625	1985-96	-.0123	.3116	-.0122	Down	-14	.75	3.2
<u>Rappahanock River</u>											
<u>01664000 - Rappahanock River At Remington, Va</u>											
01664000	3-RPP147.10	VaDEQ	00530	1885-96	-.0212	.1466	-.0210	Down	-22	1,400	100
01664000	3-RPP147.10	VaDEQ	00600	1885-96	.0030	.7373	.0030	Up	4.1	5.0	18
01664000	3-RPP147.10	VaDEQ	00620	1885-96	.0203	.1651	.0205	Up	31	2.6	15
01664000	3-RPP147.10	VaDEQ	00625	1885-96	.0184	.2071	-.0182	Down	-22	2.5	23
01664000	3-RPP147.10	VaDEQ	00630	1885-96	.0216	.1070	.0218	Up	33	2.7	7.5
01664000	3-RPP147.10	VaDEQ	00665	1885-96	-.0065	.3753	-.0065	Down	-8.2	.72	65
01664000	3-RPP147.10	VaDEQ	00671	1885-96	.0035	.8955	.0035	Up	4.7	.18	20
<u>01666500 - Robinson River near Locust Dale, Va. - No DIP results available</u>											
01666500	3-ROB001.90	VaDEQ	00530	1985-96	.0212	.2460	.0214	Up	29	--	--
01666500	3-ROB001.90	VaDEQ	00600	1985-96	.0119	.3198	.0120	Up	15	7.2	22
01666500	3-ROB001.90	VaDEQ	00610	1985-96	-.0533	.2078	-.0519	Down	-47	--	--
01666500	3-ROB001.90	VaDEQ	00620	1985-96	-.0008	.9118	-.0008	Down	-1.0	3.0	14
01666500	3-ROB001.90	VaDEQ	00625	1985-96	.0109	.4027	.0110	Up	14	5.7	87
01666500	3-ROB001.90	VaDEQ	00630	1985-96	.0159	.2786	.0160	Up	21	3.5	11
01666500	3-ROB001.90	VaDEQ	00665	1985-96	-.0039	.8446	-.0039	Down	-4.6	.81	40

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>*01668000 - Rappahannock River near Fredericksburg, Va.</u>											
01668000	01668000	USGS	00530	1989-96	-0.1047	0.0000	-0.0994	Down	-59	1,200	100
01668000	01668000	USGS	00600	1989-96	-.0355	.0000	-.0349	Down	-26	6.2	18
01668000	01668000	USGS	00631	1989-96	-.0300	.0614	-.0266	Down	-21	2.9	2.0
01668000	01668000	USGS	00665	1989-96	-.0593	.0001	-.0576	Down	-40	1.5	78
01668000	01668000	USGS	00666	1989-96	.0788	.0000	.0820	Up	110	.18	13
01668000	01668000	USGS	00671	1989-96	.0094	.4426	.0094	Up	8.0	.10	11
<u>York River</u>											
<u>01671020 - North Anna River at Hart Corner near Doswell, Va. - No DIP results available</u>											
01671020	8-NAR005.42	VaDEQ	00530	1985-95	-.0303	.0774	-.0303	Down	-29	48	5.0
01671020	8-NAR005.42	VaDEQ	00600	1985-95	.0191	.0803	.0193	Up	23	1.9	.0
01671020	8-NAR005.42	VaDEQ	00610	1985-95	-.0287	.9948	-.0283	Down	-27	.09	.1
01671020	8-NAR005.42	VaDEQ	00620	1985-95	-.0088	.4725	-.0088	Down	-9.2	.52	.0
01671020	8-NAR005.42	VaDEQ	00625	1985-95	.0266	.0385	.0270	Up	34	1.3	13
01671020	8-NAR005.42	VaDEQ	00630	1985-95	.0015	.8756	.0015	Up	1.7	.57	.0
01671020	8-NAR005.42	VaDEQ	00665	1985-95	-.0561	.4023	-.0545	Down	-46	.13	.1
<u>*01673000 - Pamunkey River near Hanover, Va.</u>											
01673000	01673000	USGS	00530	1990-96	-.0014	.9484	-.0014	Down	-1.2	150	13
01673000	8-PMK082.34	VaDEQ	00530	1985-96	.0512	.0046	.0052	Up	97	160	24
01673000	01673000	USGS	00600	1990-96	-.0051	.4712	-.0051	Down	-4.2	2.9	3.7
01673000	8-PMK082.34	VaDEQ	00600	1985-96	-.0360	.0687	-.0354	Down	-38	1.7	.0
01673000	8-PMK082.34	VaDEQ	00608	1985-96	-.1012	.0000	-.0962	Down	-74	.11	1.8
01673000	8-PMK082.34	VaDEQ	00610	1985-96	-.0930	.0011	-.0888	Down	-71	.15	9.3
01673000	8-PMK082.34	VaDEQ	00618	1985-96	.0272	.0047	.0276	Up	43	1.1	2.0
01673000	01673000	USGS	00618	1989-96	-.0114	.4347	-.0113	Down	-10	.92	1.3
01673000	8-PMK082.34	VaDEQ	00620	1985-96	-.0018	.8994	-.0018	Down	-2.4	1.2	.40
01673000	8-PMK082.34	VaDEQ	00625	1985-96	-.0039	.6236	-.0039	Down	-5.0	2.1	26
01673000	01673000	USGS	00631	1990-96	.0242	.0074	.0245	Up	20	.99	.0
01673000	01673000	USGS	00665	1990-96	-.0024	.8390	-.0024	Down	-2.0	.33	12
01673000	8-PMK082.34	VaDEQ	00665	1985-96	-.0050	.6913	-.0500	Down	-6.4	.48	21
01673000	01673000	USGS	00666	1990-96	.1373	.0000	.1472	Up	220	.12	7.1
01673000	8-PMK082.34	VaDEQ	00666	1985-96	.1007	.0000	.1059	Up	280	.24	18
01673000	01673000	USGS	00671	1990-96	.0552	.0000	.0568	Up	51	.07	6.7
01673000	8-PMK082.34	VaDEQ	00671	1985-96	-.0210	.0347	-.0208	Down	-24	.10	9.8

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<i>*01674500 - Mattaponi River near Beulahville, Va.</i>											
01674500	01674500	USGS	00530	1990-96	0.0031	0.8955	0.0031	Up	2.6	38	3.6
01674500	01674500	USGS	00600	1990-96	-.0237	.0005	-.0234	Down	-16	2.0	.0
01674500	01674500	USGS	00631	1990-96	-.0602	.0000	-.0584	Down	-35	.42	.0
01674500	01674500	USGS	00665	1990-96	-.0276	.0102	-.0272	Down	-18	.20	4.6
01674500	01674500	USGS	00671	1990-96	.0298	.0265	.0302	Up	24	.05	4.3
<u>James River</u>											
<i>02013100 - Jackson River below Dunlap Creek at Covington, Va. - No DIP results available</i>											
02013100	2-JKS023.61	VaDEQ	00530	1985-96	.0068	.6346	.0068	Up	8.5	69	8.8
02013100	2-JKS023.61	VaDEQ	00600	1985-96	.0244	.0002	.0247	Up	31	2.8	3.4
02013100	2-JKS023.61	VaDEQ	00620	1985-96	.0178	.0929	.0180	Up	24	1.1	2.2
02013100	2-JKS023.61	VaDEQ	00625	1985-96	.0314	.0002	.0319	Up	46	2.2	27
02013100	2-JKS023.61	VaDEQ	00665	1985-96	-.1251	.0000	-.1176	Down	-78	1.8	95
<i>02021500 - Maury River at Rockbridge Baths, Va. - No DIP results available</i>											
02021500	2-MRY038.10	VaDEQ	00530	1985-95	-.0504	.0521	-.0492	Down	-42	270	41
02021500	2-MRY038.10	VaDEQ	00600	1985-95	-.0211	.0164	-.0209	Down	-21	1.5	.0
02021500	2-MRY038.10	VaDEQ	00620	1985-95	-.0523	.0014	-.0510	Down	-44	.65	.0
02021500	2-MRY038.10	VaDEQ	00625	1985-95	.0114	.3606	.0115	Up	14	.87	5.2
02021500	2-MRY038.10	VaDEQ	00665	1985-95	-.0049	.4142	-.0049	Down	-5.2	.55	12
<i>02026000 - James River at Bent Creek, Va. - No DIP results available</i>											
02026000	2-JMS229.14	VaDEQ	00530	1985-95	.0503	.0141	.0516	Up	74	130	18
02026000	2-JMS229.14	VaDEQ	00600	1985-95	.0120	.1304	.0121	Up	14	2.9	.0
02026000	2-JMS229.14	VaDEQ	00620	1985-95	-.0327	.0129	-.0322	Down	-30	1.3	3.4
02026000	2-JMS229.14	VaDEQ	00625	1985-95	.0494	.0000	.0506	Up	72	1.5	1.6
02026000	2-JMS229.14	VaDEQ	00665	1985-95	-.0357	.0063	-.0351	Down	-32	.55	24
<i>*02035000 - James River at Cartersville, Va.</i>											
02035000	02035000	USGS	05300	1989-96	-.0284	.0952	-.0280	Down	-24	490	77
02035000	02035000	USGS	00600	1989-96	-.0141	.0742	-.0140	Down	-12	3.6	1.9
02035000	02035000	USGS	00631	1989-96	-.0155	.0851	-.0154	Down	-14	1.2	.0
02035000	02035000	USGS	00665	1989-96	-.0555	.0000	-.0540	Down	-41	.80	39
02035000	02035000	USGS	00671	1989-96	-.0899	.0000	-.0860	Down	-57	.18	20

Table 4. Statistical data and yields for 9 River Input Program sites and 23 Nontidal Program Synthesis sites listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model—Continued

Streamflow site identification number	Load site identification number	Agency	Constituent code	Time period of trend	Statistics from MVUE for dectime coefficient					Status yield (pounds per acre)	Percentage yield
					Dectime coefficient	p-value	slope (b)	Direction of trend	Percentage change		
<u>02037500 - James River at Richmond, Va. - No DIP results available</u>											
02037500	2-JMS117.35	VaDEQ	00530	1985-95	-0.0028	0.8888	-0.0028	Down	-3.0	680	100
02037500	2-JMS117.35	VaDEQ	00600	1985-95	-.1087	.0659	-.0185	Down	-19	2.5	2.3
02037500	2-JMS117.35	VaDEQ	00610	1985-95	-.0883	.0000	-.0845	Down	-62	.24	21
02037500	2-JMS117.35	VaDEQ	00620	1985-95	-.0728	.0033	-.0702	Down	-55	1.0	1.6
02037500	2-JMS117.35	VaDEQ	00625	1985-95	.0074	.4999	.0074	Up	10	2.9	39
02037500	2-JMS117.35	VaDEQ	00630	1985-95	-.0681	.0000	-.0658	Down	-53	.87	.0
02037500	2-JMS117.35	VaDEQ	00665	1985-95	-.0883	.0000	-.0845	Down	-62	.51	22
<u>*02041650 - Appotmattox River at Matoaca, Va.</u>											
02041650	02041650	USGS	00530	1990-96	.0118	.4128	.0118	Up	9.0	54	5.3
02041650	02041650	USGS	00600	1990-96	-.0035	.6493	-.0035	Down	-2.9	2.1	.1
02041650	2-APP016.38	VaDEQ	00608	1989-96	-.1004	.0000	-.0955	Down	-60	.12	2.7
02041650	2-APP016.38	VaDEQ	00625	1989-96	.0274	.0342	.0278	Up	29	1.7	19
02041650	02041650	USGS	00631	1990-96	-.0109	.4712	-.0109	Down	-8.0	.59	.0
02041650	2-APP016.38	VaDEQ	00665	1988-96	.0252	.1463	.0255	Up	26	.23	6.3
02041650	02041650	USGS	00665	1990-96	.0252	.0878	.0197	Up	16	.23	6.3
02041650	02041650	USGS	00666	1990-96	.1947	.0000	.1685	Up	280	.10	4.8
02041650	2-APP016.38	VaDEQ	00671	1988-96	.0250	.1416	.0253	Up	26	.06	4.9
02041650	02041650	USGS	00671	1990-96	.0250	.0123	.0332	Up	28	.50	59

* Denotes River Input Program site.

Table 5. Seasonal Kendall trend results for selected sites and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996
 [POR, period of record median; Base median (BM), median for the first 24 months of record; status median, median for the last 36 months of record; Season, M- monthly, B- bimonthly, Q- quarterly; p-value, value of significance; percentage change, trend expressed as a percent based on the length of the time period tested, the slope, and original period of record median and base median; --, no data; n/a, not applicable because more than 20 percent of data values exceeded the detection limit; shaded areas represent significant trends at 90-percent confidence level for unadjusted concentrations and 95-percent confidence level for streamflow-adjusted concentrations]

Site identification number	Number of samples	Unadjusted for streamflow concentration										Streamflow-adjusted concentration						
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Per-centage change (POR median)	Per-centage change (BM)	Per-centage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Per-centage change (POR median)	Per-centage change (BM)
<u>Pennsylvania</u>																		
<u>Total Nitrogen</u>																		
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<u>Total Nitrate</u>																		
WQN0206	117	10	11	10	Q	0.8048	-0.0300	-3.6	-3.2	0.0	10	--	10	--	--	--	--	--
WQN0228	115	1.3	1.2	1.4	Q	.0147	.0333	30	34	.0	1.3	--	--	--	--	--	--	--
WQN0240	137	3.9	4.2	3.	M	.2588	-.0280	-8.6	-8.0	.0	4.1	4.3	4.1	--	--	--	--	--
WQN0245	118	1.0	1.1	1.0	Q	.3225	.0140	16	15	.0	.90	--	--	--	--	--	--	--
WQN0252	140	1.8	2.4	1.8	M	.2277	.0150	10	7.4	.0	--	--	--	--	--	--	--	--
WQN0309	116	1.0	.84	.96	Q	.0899	.0200	23	29	.0	--	--	--	--	--	--	--	--
WQN0427	118	.09	.12	.09	Q	.3516	-.0025	--	--	15	<.08	--	.08	--	--	--	--	--
WQN0428	115	.42	.44	.54	Q	.1180	.0075	21	20	.0	.40	--	.43	--	--	--	--	--
WQN0429	141	.42	.28	.38	M	.0005	.0094	27	40	.0	.47	--	.40	--	--	--	--	--
WQN0430	140	.59	.58	.62	M	.4039	.0044	9.0	9.2	.0	.61	--	.64	--	--	--	--	--
WQN0433	120	1.2	1.7	2.0	M	.2468	.0134	8.3	9.2	.0	2.1	--	2.1	--	--	--	--	--
WQN0439	115	.22	.26	.20	Q	.0005	-.0100	-55	-46	.0	.23	--	.21	--	--	--	--	--
<u>Total Phosphorus</u>																		
WQN0206	117	.12	.17	.09	Q	.0055	-.0067	-5.6	-3.9	.0	.12	--	.12	--	--	--	--	--
WQN0228	115	.06	.08	.06	Q	.0532	-.0028	-4.8	-3.6	.0	.06	--	--	--	--	--	--	--
WQN0240	137	.07	.08	.07	M	.0600	-.0012	-1.8	-1.6	.0	.07	.08	.07	--	--	--	--	--
WQN0245	118	.03	.05	.03	Q	.1168	--	.00	.00	.0	.03	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration						
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)
WQN0252	140	.27	0.66	0.18	M	0.0000	-0.0375	-14	-5.6	0.0	--	--	--	--	--	--	--
WQN0309	116	.08	.16	.08	Q	.0070	-.0050	-6.2	-3.1	.0	--	--	--	--	--	--	--
WQN0427	119	.03	.04	<.020	Q	.0041	-.0028	--	--	15	--	--	--	--	--	--	--
WQN0428	114	.02	.03	.02	Q	.0422	--	n/a	n/a	28	--	--	--	--	--	--	--
WQN0429	141	.02	.03	.02	M	.0000	-.0010	-60	-40	4.3	--	--	--	--	--	--	--
WQN0430	140	.06	.09	.05	M	.0000	-.0057	-100	-76	.72	0.06	--	0.06	--	--	--	--
WQN0433	120	.03	.05	.03	M	.0001	-.0014	-57	-34	2.5	.03	--	.03	--	--	--	--
WQN0439	115	<.02	.03	.02	Q	.0191	--	n/a	n/a	28	--	--	--	--	--	--	--
<u>Total Nitrate plus Nitrite</u>																	
WQN0206	117	10	11	10	Q	.8876	-.0271	-3.2	-3.0	.0	10	--	10	--	--	--	--
WQN0228	115	1.3	1.2	1.4	Q	.0285	.0300	27	30	2.1	1.3	--	--	--	--	--	--
WQN0240	137	3.9	4.2	3.6	M	.1904	-.0254	-7.8	-7.3	.0	4.1	4.4	4.1	--	--	--	--
WQN0245	118	1.1	1.1	1.0	Q	1.000	--	--	--	13	<.90	--	--	--	--	--	--
WQN0252	140	1.8	2.6	1.8	M	.5458	.0075	4.9	3.5	.0	--	--	--	--	--	--	--
WQN0309	116	1.0	.86	.97	Q	1.000	.0000	--	--	17	--	--	--	--	--	--	--
WQN0427	118	<.09	<.12	<.09	Q	.2466	--	n/a	n/a	72	<.10	--	.10	--	--	--	--
WQN0428	115	<.43	.44	<.55	Q	.0480	--	n/a	n/a	83	<.42	--	.45	--	--	--	--
WQN0429	141	<.42	<.29	.38	M	--	.0000	n/a	n/a	79	<.48	--	<.41	--	--	--	--
WQN0430	140	.60	.60	.62	M	.5808	--	n/a	n/a	32	<.63	--	.64	--	--	--	--
WQN0433	120	<1.9	<1.7	2.0	M	.5447	--	n/a	n/a	27	2.1	--	2.1	--	--	--	--
WQN0439	115	.22	<.26	<.20	Q	--	.0000	n/a	n/a	87	.23	--	<.21	--	--	--	--
<u>Maryland</u>																	
<u>Total Nitrogen</u>																	
ANA0082	121	1.6	1.9	1.7	M	.4031	-.0129	-9.4	-8.2	.0	--	--	--	--	--	--	--
ANT0203	119	6.5	6.4	6.1	M	.0391	-.0500	-9.2	-9.3	.0	--	--	--	--	--	--	--
ANT0366	113	5.4	5.3	5.3	M	.6334	-.0100	-2.3	-2.3	.0	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
BDK0000	115	0.70	0.59	0.60	M	0.3435	-0.0125	-21	-25	0.0	--	--	--	--	--	--	--	--	
CAC0031	119	2.4	2.9	2.1	M	.0323	-.0508	-25	-21	.0	--	--	--	--	--	--	--	--	
CHO0626	114	1.8	1.6	1.7	M	.5726	.0071	4.8	5.2	.0	--	--	--	--	--	--	--	--	
CJB0005	119	1.8	1.5	1.8	M	.0524	.0300	20	23	.0	--	--	--	--	--	--	--	--	
CON0005	115	5.0	5.0	4.9	M	.4696	-.0343	-8.3	-8.3	.0	--	--	--	--	--	--	--	--	
DER0015	123	3.6	3.4	3.6	M	.0370	.0262	8.6	9.2	.0	--	--	--	--	--	--	--	--	
GUN0125	123	1.8	1.6	1.8	M	.0100	.0000	.0	.0	.0	--	--	--	--	--	--	--	--	
GUN0258	125	2.6	2.5	2.7	M	.0654	.0200	8.8	9.5	.0	--	--	--	--	--	--	--	--	
GUN0476	125	3.3	3.1	3.3	M	.0492	.0250	9.0	9.1	.0	--	--	--	--	--	--	--	--	
GWN0115	124	2.0	2.0	2.0	M	.2057	-.0120	-7.2	-7.2	.0	--	--	--	--	--	--	--	--	
JON0184	125	2.1	1.9	2.1	M	.3137	.0100	5.6	6.1	.0	--	--	--	--	--	--	--	--	
MAT0078	203	.83	.82	.65	M	.0019	-.0195	-28	-28	.0	--	--	--	--	--	--	--	--	
MON0020	121	3.8	3.7	3.5	M	.1435	-.0300	-7.3	-9.7	.0	--	--	--	--	--	--	--	--	
MON0269	120	3.2	3.3	2.7	M	.0873	-.0500	-14	-18	.0	--	--	--	--	--	--	--	--	
MON0528	121	2.3	2.8	2.0	M	.0010	-.0967	-49	-41	.0	--	--	--	--	--	--	--	--	
NBP0023	111	1.4	1.4	1.2	M	.0408	-.0233	-19	-20	.0	--	--	--	--	--	--	--	--	
NBP0103	111	1.5	1.5	1.3	M	.0316	-.0230	-18	-19	.0	--	--	--	--	--	--	--	--	
NBP0461	116	1.3	1.4	1.1	M	.0003	-.0322	-29	-28	.0	--	--	--	--	--	--	--	--	
NBP0534	118	1.2	1.2	1.1	M	.0111	-.0171	-16	-17	.0	--	--	--	--	--	--	--	--	
PAT0176	124	2.6	2.2	2.6	M	.0014	.0500	23	27	.0	--	--	--	--	--	--	--	--	
PAT0285	123	3.0	2.5	3.0	M	.0008	.0467	18	22	.0	--	--	--	--	--	--	--	--	
PIS0033	199	1.1	1.2	1.0	M	.0179	-.0273	-29	-27	.0	--	--	--	--	--	--	--	--	
POT1471	123	2.4	2.4	2.3	M	.0576	-.0329	-16	-16	.0	--	--	--	--	--	--	--	--	
POT1472	117	1.8	2.0	1.7	M	.1709	-.0184	-12	-11	.0	--	--	--	--	--	--	--	--	
POT1596	121	1.9	2.0	1.7	M	.1057	-.0224	-14	-13	.0	--	--	--	--	--	--	--	--	
PXT0809	124	1.7	1.5	1.7	M	.0197	.0250	18	20	.0	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
RCM0111	118	1.8	1.6	1.7	M	0.7337	0.0017	1.1	1.2	0.0	--	--	--	--	--	--	--	--	
SEN0008	125	3.5	4.2	3.2	M	.0000	-.1000	-34	-34	.0	--	--	--	--	--	--	--	--	
TOW0030	115	.78	.82	.67	M	.0277	-.0212	-33	-31	.0	--	--	--	--	--	--	--	--	
WXT0045	209	.99	1.1	.99	M	.0736	-.0150	-18	-17	.0	--	--	--	--	--	--	--	--	
<u>Dissolved Nitrate</u>																			
ANA0082	125	.96	1.2	1.0	M	.7901	-.0035	-4.4	-3.6	.0	--	--	--	--	--	--	--	--	
ANT0203	127	5.6	4.7	5.7	M	.0012	.0855	18	22	.81	--	--	--	--	--	--	--	--	
ANT0366	119	4.4	3.7	4.8	M	.0001	.1050	28	34	.0	--	--	--	--	--	--	--	--	
BRB215	87	.67	.46	.68	Q	.6414	-.0125	-22	-32	2.8	--	--	--	--	--	--	--	--	
CAC0031	126	1.8	1.2	1.5	M	.5107	-.0142	-9.5	-14	.0	--	--	--	--	--	--	--	--	
CAX457	107	1.1	1.0	.94	M	.0673	-.0200	-21	-22	3.8	--	--	--	--	--	--	--	--	
CHO365	101	<.05	<.05	.04	B	.9369	--	n/a	n/a	45	--	--	--	--	--	--	--	--	
CON0005	126	4.3	3.7	4.3	M	.3220	.0262	7.3	8.5	.0	--	--	--	--	--	--	--	--	
DER0015	129	2.3	2.5	3.0	M	.0001	.0667	27	31	.0	--	--	--	--	--	--	--	--	
GUN0125	128	1.2	.93	1.3	M	.0064	.0300	30	38	.0	--	--	--	--	--	--	--	--	
GUN0258	128	2.2	1.8	2.3	M	.0000	.0500	27	33	.0	--	--	--	--	--	--	--	--	
GUN0476	131	2.8	2.5	2.9	M	.0001	.0475	20	37	.0	--	--	--	--	--	--	--	--	
GWN0115	127	1.6	1.4	1.6	M	.5070	.0067	5.0	5.8	.0	--	--	--	--	--	--	--	--	
JON0184	128	1.7	1.5	1.8	M	.0010	.0300	21	23	.0	--	--	--	--	--	--	--	--	
MAT0078	216	.10	.06	.13	M	1.000	--	.0	.0	.79	--	--	--	--	--	--	--	--	
MON0020	128	3.0	2.3	2.9	M	.1204	.0387	15	20	.0	--	--	--	--	--	--	--	--	
MON0269	127	2.4	1.9	2.3	M	.5622	.0120	6.0	9.6	.0	--	--	--	--	--	--	--	--	
MON0528	127	1.5	.93	1.4	M	.1862	-.0193	-15	-25	.0	--	--	--	--	--	--	--	--	
PAT0176	127	2.0	1.3	2.2	M	.0000	.0870	53	79	.0	--	--	--	--	--	--	--	--	
PAT0285	127	2.4	1.8	2.7	M	.0000	.0990	50	67	.0	--	--	--	--	--	--	--	--	
PIS0033	199	.41	.55	.39	M	.0040	-.0200	-58	-44	.0	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
POT1471	127	1.9	1.5	1.9	M	0.1044	0.0300	19	23	0.0	--	--	--	--	--	--	--	--	
POT1472	111	1.4	1.3	1.4	M	.2829	.0100	8.6	9.1	.0	--	--	--	--	--	--	--	--	
POT1596	127	1.3	1.1	1.3	M	.0501	.0180	16	20	.0	--	--	--	--	--	--	--	--	
PXT0809	126	.99	.90	.97	M	.3273	.0086	10	11	.0	--	--	--	--	--	--	--	--	
RCM0111	121	1.1	.67	1.2	M	.0577	.0177	20	32	.0	--	--	--	--	--	--	--	--	
SEN0008	128	3.0	3.8	2.9	M	.0000	-.0800	-32	-25	.0	--	--	--	--	--	--	--	--	
WXT0045	199	.37	.40	.41	M	.9156	--	.0	.0	.0	--	--	--	--	--	--	--	--	
<u>Total Phosphorus</u>																			
ANA0082	132	.05	.07	.04	M	.0164	-.0025	-60	-43	1.52	--	--	--	--	--	--	--	--	
ANT0203	127	.26	.36	.22	M	.0001	-.0143	-66	-48	.80	--	--	--	--	--	--	--	--	
ANT0366	124	.18	.26	.15	M	.0000	-.0111	-74	-51	.0	--	--	--	--	--	--	--	--	
BDK0000	123	.02	.04	<.01	M	.3677	--	--	--	14	--	--	--	--	--	--	--	--	
BRB215	96	<.10	<.10	<.10	M	.2457	--	n/a	n/a	39	--	--	--	--	--	--	--	--	
CAC0031	129	.10	.09	.09	M	.3722	--	.0	.0	.0	--	--	--	--	--	--	--	--	
CAX457	107	1.1	1.1	.94	M	.0673	-.0200	-21	-23	3.8	--	--	--	--	--	--	--	--	
CHO365	101	<.05	<.05	.04	B	.9369	--	n/a	n/a	45	--	--	--	--	--	--	--	--	
CHO626	127	.06	.06	.06	M	.3484	--	.0	.0	1.6	--	--	--	--	--	--	--	--	
CJB0005	125	.03	.04	.02	M	.0390	-.0012	-50	-38	3.2	--	--	--	--	--	--	--	--	
CON0005	130	.15	.15	.11	M	.0071	-.0044	-35	-35	.0	--	--	--	--	--	--	--	--	
DER0015	132	.04	.04	.04	M	.8917	--	.0	.0	.76	--	--	--	--	--	--	--	--	
GUN0125	133	.04	.05	.03	M	.0126	-.0017	-50	-40	3.0	--	--	--	--	--	--	--	--	
GUN0258	134	.03	.03	.02	M	.0536	--	.0	.0	3.7	--	--	--	--	--	--	--	--	
GUN0476	133	.04	.05	.03	M	.0000	-.0022	-67	-53	.0	--	--	--	--	--	--	--	--	
GWN0115	134	.03	.05	.02	M	.0003	-.0025	-100	-60	3.8	--	--	--	--	--	--	--	--	
JON0184	134	.03	.04	.02	M	.0652	-.0014	-57	-43	5.3	--	--	--	--	--	--	--	--	
MAT0078	225	.08	.08	.06	M	.0356	-.0012	-19	-18	.76	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
MON0020	135	0.16	0.16	0.18	M	0.4368	-0.0011	-8.2	-8.2	0.0	--	--	--	--	--	--	--	--	
MON0269	131	.11	.11	.11	M	.2742	-.0017	-18	-18	.0	--	--	--	--	--	--	--	--	
MON0528	131	.12	.17	.12	M	.0001	-.0050	-50	-35	.0	--	--	--	--	--	--	--	--	
NBP0023	127	.06	.08	.06	M	.0573	-.0014	28	20	.85	--	--	--	--	--	--	--	--	
NBP0103	123	.07	.08	.06	M	.1312	-.0014	-24	-21	.0	--	--	--	--	--	--	--	--	
NBP0461	131	.06	.07	.05	M	.4057	--	.0	.0	2.5	--	--	--	--	--	--	--	--	
NBP0534	135	.01	.02	.01	M	.2569	--	n/a	n/a	24	--	--	--	--	--	--	--	--	
PAT0176	133	.07	.10	.06	M	.0155	-.0027	-47	-33	.0	--	--	--	--	--	--	--	--	
PAT0285	134	.08	.11	.06	M	.0000	-.0050	-75	-55	.0	--	--	--	--	--	--	--	--	
PIS0033	213	.10	.08	.10	M	.8213	--	.0	.0	.0	--	--	--	--	--	--	--	--	
POT1471	129	.10	.12	.10	M	.0432	-.0029	-35	-29	.78	--	--	--	--	--	--	--	--	
POT1472	113	.07	.07	.05	M	.1184	-.0017	-28	-28	2.7	--	--	--	--	--	--	--	--	
POT1596	129	.08	.09	.07	M	.0079	-.0033	-50	-42	.79	--	--	--	--	--	--	--	--	
PXT0809	136	.04	.04	.030	M	.6745	--	.0	.0	3.7	--	--	--	--	--	--	--	--	
RCM0111	128	.06	.07	.05	M	.1287	--	.0	.0	.0	--	--	--	--	--	--	--	--	
SEN0008	131	.13	.19	.10	M	.0002	-.0057	-53	-31	.0	--	--	--	--	--	--	--	--	
TOW0030	125	.02	.03	.01	M	.3151	--	--	--	15	--	--	--	--	--	--	--	--	
WXT0045	210	.08	.08	.08	M	.2854	--	.0	.0	.0	--	--	--	--	--	--	--	--	
<u>Total Suspended Solids</u>																			
ANA0082	138	9.0	9.0	9.0	M	.3637	-.2000	-27	-27	2.9	--	--	--	--	--	--	--	--	
ANT0203	140	13	9.0	14	M	.0251	.5000	46	67	2.9	--	--	--	--	--	--	--	--	
ANT0366	131	13	13	13	M	.6075	.1667	15	15	.78	--	--	--	--	--	--	--	--	
BDK0000	133	6.0	10	6.0	M	.6774	--	--	--	6.9	--	--	--	--	--	--	--	--	
BRB215	101	15	9.5	200	M	.0000	.0700	--	--	9.1	--	--	--	--	--	--	--	--	
CAC0031	139	7.0	4.0	10	M	.0047	.4000	--	--	7.4	--	--	--	--	--	--	--	--	
CAX457	119	5.0	6.0	100	M	.0167	--	--	--	11	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
CHO365	107	9.0	7.0	62	B	0.0063	0.0150	--	--	6.6	--	--	--	--	--	--	--	--	
CHO0626	135	3.0	2.0	3.0	M	.0652	.1429	--	--	9.8	--	--	--	--	--	--	--	--	
CJB0005	131	4.0	2.0	5.0	M	.0024	.2500	--	--	12	--	--	--	--	--	--	--	--	
CON0005	138	8.0	8.0	7.0	M	.0838	.2500	--	--	5.2	--	--	--	--	--	--	--	--	
DER0015	140	5.0	3.0	5.0	M	.0001	.5000	--	--	11	--	--	--	--	--	--	--	--	
GUN0125	138	10	11	11	M	.6862	--	0.0	0.0	1.5	--	--	--	--	--	--	--	--	
GUN0258	139	5.0	4.0	6.0	M	.0012	.3333	--	--	14	--	--	--	--	--	--	--	--	
GUN0476	141	5.0	4.0	5.0	M	.1071	.1667	--	--	7.8	--	--	--	--	--	--	--	--	
GWN0115	139	6.0	7.0	5.5	M	.0100	--	.0	.0	5.1	--	--	--	--	--	--	--	--	
JON0184	139	5.0	6.0	5.5	M	.9663	--	--	--	7.2	--	--	--	--	--	--	--	--	
MAT0078	235	6.0	4.5	9.0	M	.0222	.2857	57	76	3.7	--	--	--	--	--	--	--	--	
MON0020	142	11	7.0	26	M	.0001	.0100	100	170	4.3	--	--	--	--	--	--	--	--	
MON0269	139	10	7.0	15	M	.0363	.4000	48	68	3.7	--	--	--	--	--	--	--	--	
MON0582	139	10	7.0	16	M	.1202	.3333	40	57	.0	--	--	--	--	--	--	--	--	
NBP0023	135	10	12	10	M	.9805	--	.0	.0	3.2	--	--	--	--	--	--	--	--	
NBP0103	128	8.0	10	10	M	.9420	--	.0	.0	4.8	--	--	--	--	--	--	--	--	
NBP0461	138	10	13	10	M	.3376	--	.0	.0	2.4	--	--	--	--	--	--	--	--	
NBP0534	129	6.0	12	6.0	M	.3926	--	--	--	8.6	--	--	--	--	--	--	--	--	
PAT0176	140	8.0	7.0	8.5	M	.2955	.1429	21	25	2.2	--	--	--	--	--	--	--	--	
PAT0285	139	10	8.0	10	M	.3861	.1429	17	21	.72	--	--	--	--	--	--	--	--	
PIS0033	220	8.0	6.0	9.0	M	.0171	.3333	50	67	3.0	--	--	--	--	--	--	--	--	
POT1471	141	13	14	19	M	.7542	--	.0	.0	2.2	--	--	--	--	--	--	--	--	
POT1472	123	9.0	6.0	9.0	M	.4598	.1429	19	28	2.5	--	--	--	--	--	--	--	--	
POT1596	141	8.0	8.0	9.5	M	.3093	.1250	19	19	4.4	--	--	--	--	--	--	--	--	
PXT0809	138	6.5	5.5	7.0	M	.1864	.1056	19	23	2.2	--	--	--	--	--	--	--	--	
RCM0111	134	7.0	6.0	10	M	.0557	.3333	57	67	2.2	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
SEN0008	141	6.0	5.0	8.0	M	0.0193	0.2857	--	--	9.4	--	--	--	--	--	--	--	--
TOW0030	130	6.0	6.0	6.0	M	.4573	--	--	--	12	--	--	--	--	--	--	--	--
WXT0045	215	7.0	9.0	6.0	M	.4591	-.1111	-19	-15	3.2	--	--	--	--	--	--	--	--
<u>Virginia</u>																		
<u>Total Nitrogen</u>																		
1ABRB002.15	101	1.3	1.1	1.4	M	.6497	.0000	.0	.0	6.0	--	--	--	--	--	--	--	--
1ABRU020.12	101	.89	.70	.96	Q	.06228	.0039	.4	.5	9.5	--	--	--	--	--	--	--	--
1ABUL010.28	108	4.2	5.4	5.0	B	.6992	-.0500	-1.2	-.9	4.6	--	--	--	--	--	--	--	--
1ACAX004.57	122	1.6	1.4	1.5	M	.1535	-.0100	-.6	-.7	3.3	--	--	--	--	--	--	--	--
1ACHO003.65	116	<.34	<.34	<.34	M	.5794	--	n/a	n/a	51	--	--	--	--	--	--	--	--
1AGOO002.38	130	1.8	2.4	1.4	M	.0000	-.0860	-4.7	-3.6	.8	--	--	--	--	--	--	--	--
1AGOO022.44	119	1.3	.90	1.3	M	.5961	-.0000	.0	.0	15	--	--	--	--	--	--	--	--
1AHPR003.87	76	1.4	1.0	1.4	Q	.2647	.0125	.9	1.2	.0	--	--	--	--	--	--	--	--
1AOPE025.10	109	3.3	2.9	3.2	M	.9284	-.0036	-.1	-.1	.9	--	--	--	--	--	--	--	--
1APIM000.15	122	1.9	1.2	2.2	M	.0000	.0712	3.8	5.8	1.6	--	--	--	--	--	--	--	--
1AQUA004.46	117	.28	.26	.28	M	.1244	--	n/a	n/a	55	--	--	--	--	--	--	--	--
1ASOT001.44	111	2.1	2.3	1.9	M	.8878	-.0100	-.5	-.4	.9	--	--	--	--	--	--	--	--
1ASUG004.42	84	1.3	1.0	1.5	Q	.0271	.0556	4.2	5.5	.0	--	--	--	--	--	--	--	--
1ATUS000.37	80	5.9	6.9	3.5	Q	.0271	-.2844	-4.8	-4.1	2.3	--	--	--	--	--	--	--	--
1BCRO000.43	74	1.3	1.3	1.1	B	.0744	-.0305	-2.2	-2.3	2.0	--	--	--	--	--	--	--	--
1BHKS000.96	108	1.6	1.4	1.7	M	.0026	.0322	2.0	2.3	3.7	--	--	--	--	--	--	--	--
1BLEW002.91	107	<2.0	<2.1	1.8	M	.1435	-.0000	.0	.0	9.7	--	--	--	--	--	--	--	--
1BMDL036.08	114	1.0	<.95	1.0	M	.2418	-.0000	.0	.0	10	--	--	--	--	--	--	--	--
1BNFS000.57	111	1.6	1.3	1.8	M	.0002	.0562	3.4	4.3	6.5	--	--	--	--	--	--	--	--
1BSSF100.10	106	2.2	2.5	2.1	M	.0103	-.0425	-1.9	-1.7	1.0	--	--	--	--	--	--	--	--
1BSTY001.22	116	2.6	2.1	2.8	M	.0000	.1300	5.0	6.3	3.6	--	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
2-ALM000.42	103	1.6	2.4	1.6	Q	0.5852	0.0215	1.3	0.90	0.0	--	--	--	--	--	--	--	--	
2-APP012.79	129	.59	<.55	.63	M	.0371	.010	1.7	1.8	3.9	--	--	--	--	--	--	--	--	
2-APP050.23	126	.56	.55	.62	M	.0026	.0166	3.0	3.0	1.6	--	--	--	--	--	--	--	--	
2-APP118.04	98	.39	.35	.46	B	.2537	.0084	2.1	2.4	5.0	--	--	--	--	--	--	--	--	
2-BCC004.71	102	<.31	.36	<.30	M	.7479	-.0000	n/a	n/a	35	--	--	--	--	--	--	--	--	
2-BLP000.79	103	.29	<.21	.28	M	.2537	.0000	n/a	n/a	31	--	--	--	--	--	--	--	--	
2-BUF002.10	106	<.38	<.40	<.28	M	.7003	.0000	.0	.0	15	--	--	--	--	--	--	--	--	
2-CHK032.77	126	.64	<.55	<.64	M	--	--	n/a	n/a	52	--	--	--	--	--	--	--	--	
2-CHK076.59	126	2.5	2.0	3.9	M	.0000	.1537	6.2	7.7	2.5	--	--	--	--	--	--	--	--	
2-CRE002.37	100	.48	<.46	<.57	M	.1537	--	n/a	n/a	23	--	--	--	--	--	--	--	--	
2-FAC000.85	76	.73	.64	.84	Q	.0024	-.0240	3.3	3.8	.0	--	--	--	--	--	--	--	--	
2-HRD011.57	105	.49	.47	.49	M	.0217	.1000	.0	.0	11	--	--	--	--	--	--	--	--	
2-JKS000.38	127	.57	.56	.50	M	.7575	.1000	.0	.0	6.3	--	--	--	--	--	--	--	--	
2-JKS058.60	101	.29	.26	.32	M	.1045	--	n/a	n/a	35	--	--	--	--	--	--	--	--	
2-JMS189.31	103	.53	.56	.46	M	.5527	-.0000	.0	.0	9.1	--	--	--	--	--	--	--	--	
2-JMS258.54	128	.60	.50	.59	M	.0503	.0125	2.1	2.5	2.3	--	--	--	--	--	--	--	--	
2-JMS275.75	129	<.54	.47	.49	M	.0705	.0000	.0	.0	19	--	--	--	--	--	--	--	--	
2-JMS282.28	130	.48	.40	<.44	M	.3143	--	n/a	n/a	23	--	--	--	--	--	--	--	--	
2-LAF000.00	116	.78	.80	.74	M	--	--	n/a	n/a	26	--	--	--	--	--	--	--	--	
2-MCM005.12	109	.64	.74	.60	M	.4372	-.0000	.0	.00	6.6	--	--	--	--	--	--	--	--	
2-MRY000.46	111	.61	.54	<.56	M	.8313	-.0020	-.33	-.37	3.8	--	--	--	--	--	--	--	--	
2-MRY014.78	110	.54	.45	<.48	M	1.000	.0000	.0	.0	9.5	--	--	--	--	--	--	--	--	
2-RKF000.19	105	<.25	<.29	<.22	M	.2081	.0000	n/a	n/a	47	--	--	--	--	--	--	--	--	
2-RRN002.19	111	.44	<.38	.44	M	.0362	.0000	.0	.0	17	--	--	--	--	--	--	--	--	
2-RRS003.12	108	<.64	.59	<.64	M	.0060	.0000	.00	.0	6.5	--	--	--	--	--	--	--	--	
2-RVN001.64	110	.83	.89	.85	M	.4941	.0066	.80	.75	1.9	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
2-RVN015.97	106	0.93	1.0	0.91	M	0.0123	-0.0170	-1.8	-1.7	0.97	--	--	--	--	--	--	--	--	
2-SFT004.92	80	.55	.47	.55	Q	.5833	-.0000	n/a	n/a	22	--	--	--	--	--	--	--	--	
2-TYE000.30	107	.28	.30	<.24	M	--	.0000	n/a	n/a	45	--	--	--	--	--	--	--	--	
2-UPM003.53	97	1.4	1.3	1.6	Q	.2286	.0222	1.5	1.7	.0	--	--	--	--	--	--	--	--	
3-RAP006.53	117	.87	.84	.82	B	.5613	.0000	.0	.0	7.8	--	--	--	--	--	--	--	--	
3-RPP147.10	123	<.68	.66	.62	M	.9732	.0000	.0	.0	9.9	--	--	--	--	--	--	--	--	
8-MPN094.79	109	.47	<.45	.51	B	--	.0000	n/a	n/a	28	--	--	--	--	--	--	--	--	
8-PCT002.29	108	.57	.55	.60	B	.0340	.0000	.0	.0	9.4	--	--	--	--	--	--	--	--	
8-SAR001.11	127	.60	.54	.62	M	.2833	.0000	.0	.0	6.5	--	--	--	--	--	--	--	--	
<u>Dissolved Nitrate</u>																			
2-JMS157.28	365	.28	.28	.23	M	.5573	-.0024	-10	-10	1.7	--	--	--	--	--	--	--	--	
3-RPP110.57	352	.56	.35	.46	B	.7744	--	n/a	n/a	13	--	--	--	--	--	--	--	--	
8-MPN054.17	310	.14	.10	.13	M	.9778	--	.0	.0	2.6	--	--	--	--	--	--	--	--	
8-YRK011.14	171	<.05	<.05	.02	M	.9313	--	n/a	n/a	52	--	--	--	--	--	--	--	--	
GOO2380	111	1.7	1.4	1.1	M	.0014	-.0550	-48	-47	.0	--	--	--	--	--	--	--	--	
PIM1500	107	1.6	.90	1.9	B	.0049	.0638	49	85	1.7	--	--	--	--	--	--	--	--	
QUA4460	101	<.04	<.05	<.04	B	.9332	--	n/a	n/a	48	--	--	--	--	--	--	--	--	
ST01	482	.89	.85	1.0	M	.0000	.0367	49	52	.72	0.90	0.89	1.0	M	0.0000	0.0355	47	48	
ST10	409	.26	.25	.44	M	.1357	.0080	37	38	2.2	.15	.22	.13	--	--	--	--	--	
ST30	503	.36	.42	.44	M	.8610	--	.0	.0	3.7	.37	.36	.39	M	.5112	-.0038	-12	-13	
ST40	541	4.2	4.9	3.3	M	.0038	-.1200	-34	-29	.0	4.2	4.9	3.2	M	.0000	.1813	51	44	
ST45	510	4.8	6.7	3.2	M	.0047	-.2033	-51	-36	.0	4.8	6.7	3.1	M	.0000	.2474	62	44	
ST50	538	.46	.41	.60	M	.0012	.0243	63	71	.0	.47	.41	.58	M	.1703	.0069	18	20	
ST60	514	.19	.14	.19	M	.2402	.0020	13	16	8.0	.27	.28	.31	M	.0200	--	.0	.0	
ST70	605	.56	.46	.62	M	.0004	.0144	31	38	5.8	.59	.50	.63	M	.3543	.0037	7.4	8.9	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
Total Nitrate																		
1ABRB002.15	102	0.68	0.49	0.74	M	0.3762	0.0133	24	33	5.9	--	--	--	--	--	--	--	--
1ABRU020.12	102	.56	.51	.55	Q	.6550	.0038	8.2	9.0	4.8	--	--	--	--	--	--	--	--
1ABUL010.28	112	3.8	4.50	4.3	M	.2189	-.1100	-35	-29	2.7	--	--	--	--	--	--	--	--
1ACAX004.57	123	1.1	1.1	.98	M	.1175	-.0160	-17	-18	3.3	--	--	--	--	--	--	--	--
1ACHO003.65	116	<.05	<.05	.04	M	.8170	--	n/a	n/a	50	--	--	--	--	--	--	--	--
1AGOO002.38	130	1.3	1.6	1.0	M	.0006	-.0425	-38	-32	.0	--	--	--	--	--	--	--	--
1AGOO022.44	122	.88	.52	.88	M	.3867	.0072	--	--	12	--	--	--	--	--	--	--	--
1AHPR003.87	77	.83	.42	.85	Q	.3211	.0175	25	50	.0	--	--	--	--	--	--	--	--
1AOPE025.10	110	2.8	2.2	2.8	M	.2374	.0300	13	16	.93	--	--	--	--	--	--	--	--
1APIM000.15	122	1.5	.90	1.9	M	.0000	.0754	61	100	1.6	--	--	--	--	--	--	--	--
1AQUA004.46	117	<.04	<.05	.04	M	.4634	--	n/a	n/a	53	--	--	--	--	--	--	--	--
1ASOT001.44	111	1.0	1.5	1.1	M	.7561	-.0075	-8.8	-5.9	.90	--	--	--	--	--	--	--	--
1ASUG004.42	84	.84	.52	.99	Q	.0050	.0511	73	120	.0	--	--	--	--	--	--	--	--
1ATUS000.37	81	3.1	2.7	2.6	Q	1.000	-.0112	-4.4	-4.9	2.3	--	--	--	--	--	--	--	--
1BCRO000.43	77	1.0	.90	.80	B	.0618	-.0300	-35	-50	.0	--	--	--	--	--	--	--	--
1BHKS000.96	111	1.3	1.2	1.3	M	.0139	.0310	29	32	.0	--	--	--	--	--	--	--	--
1BLEW002.91	109	1.7	1.8	1.7	M	.0598	-.0167	-12	-11	.95	--	--	--	--	--	--	--	--
1BMDL036.08	116	.82	.70	.82	M	.0738	.0133	20	23	.0	--	--	--	--	--	--	--	--
1BNFS000.57	114	1.3	.79	1.4	M	.0000	.0610	--	--	6.3	--	--	--	--	--	--	--	--
1BSSF100.10	110	1.9	1.9	1.9	M	.5785	-.0083	-5.4	-5.3	.0	--	--	--	--	--	--	--	--
1BSTY001.22	117	2.3	1.6	2.7	M	.0000	.1461	76	110	.88	--	--	--	--	--	--	--	--
2-ALM000.42	106	1.1	.98	1.2	Q	.0259	.0260	29	32	.0	--	--	--	--	--	--	--	--
2-APP012.79	132	.16	.16	.16	M	.2909	.0017	12	12	3.8	--	--	--	--	--	--	--	--
2-APP050.23	128	.23	.23	.25	M	.0415	.0033	17	17	1.6	--	--	--	--	--	--	--	--
2-APP118.04	100	.16	.15	.17	M	.0210	.0041	30	33	2.0	--	--	--	--	--	--	--	--
2-BCC004.71	104	.20	.26	.19	M	.1518	-.0033	--	--	8.1	--	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
2-BLP000.79	105	0.16	0.11	0.17	M	0.4467	--	--	--	9.0	--	--	--	--	--	--	--	--
2-BUF002.10	108	.19	.23	.15	M	.1391	-0.0025	--	--	8.6	--	--	--	--	--	--	--	--
2-CHK032.77	128	<.05	<.05	.04	M	.1205	--	--	--	52	--	--	--	--	--	--	--	--
2-CHK076.59	128	1.7	1.5	3.0	M	.0015	.1083	77	85	2.4	--	--	--	--	--	--	--	--
2-CRE002.37	102	.34	.36	.44	M	.0388	.0100	35	33	2.1	--	--	--	--	--	--	--	--
2-FAC000.85	79	.24	.21	.30	Q	.0170	.0110	55	63	.0	--	--	--	--	--	--	--	--
2-HRD011.57	107	.28	.29	.25	M	.0656	.0056	24	23	1.9	--	--	--	--	--	--	--	--
2-JKS000.38	129	.21	.23	.18	M	.3989	-0.0025	-14	-13	6.2	--	--	--	--	--	--	--	--
2-JKS058.60	103	.17	.10	.19	M	.5769	--	--	--	14	--	--	--	--	--	--	--	--
2-JMS189.31	105	.27	.34	.21	M	.4271	-0.0033	-15	-12	5.0	--	--	--	--	--	--	--	--
2-JMS258.54	130	.25	.22	.24	M	.7149	.0012	5.6	6.5	.77	--	--	--	--	--	--	--	--
2-JMS275.75	131	.18	.18	.18	M	.9630	--	--	--	18	--	--	--	--	--	--	--	--
2-JMS282.28	132	.20	.19	.20	M	.9815	--	--	--	19	--	--	--	--	--	--	--	--
2-LAF000.00	118	.10	.08	.08	M	.1030	-0.0033	--	--	26	--	--	--	--	--	--	--	--
2-MCM005.12	111	.37	.47	.34	M	.4328	-0.0035	-11	-9	2.8	--	--	--	--	--	--	--	--
2-MRY000.46	113	.36	.27	.29	M	.6161	-0.0032	-10	-11	.93	--	--	--	--	--	--	--	--
2-MRY014.78	111	.35	.30	.28	M	.6928	.0025	8.5	10	2.8	--	--	--	--	--	--	--	--
2-RKF000.19	107	.09	.07	.08	M	.0590	--	--	--	27	--	--	--	--	--	--	--	--
2-RRN002.19	113	.23	.23	.22	M	.0784	.0056	--	--	10	--	--	--	--	--	--	--	--
2-RRS003.12	110	.280	.17	.29	M	.0000	.0134	58	95	2.8	--	--	--	--	--	--	--	--
2-RVN001.64	112	.51	.55	.53	M	.5612	.0033	7.8	7.3	.0	--	--	--	--	--	--	--	--
2-RVN015.97	108	.55	.54	.57	M	.7618	-0.0016	-3.6	-3.6	.0	--	--	--	--	--	--	--	--
2-SFT004.92	82	.09	.05	<.04	Q	.6378	--	--	--	22	--	--	--	--	--	--	--	--
2-TYE000.30	109	.12	.09	.06	M	.2036	--	--	--	30	--	--	--	--	--	--	--	--
2-UPM003.53	99	.77	.57	.82	B	.0854	.0180	28	38	.0	--	--	--	--	--	--	--	--
3-RAP006.53	120	.56	.36	.57	B	.0471	.0150	32	50	6.1	--	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
3-RPP147.10	124	0.43	0.37	0.41	M	0.1683	0.0028	1.2	1.4	4.9	--	--	--	--	--	--	--	--
8-MPN094.79	112	.07	.08	.00	M	.1903	--	--	--	27	--	--	--	--	--	--	--	--
8-PCT002.29	111	.10	.09	.11	M	.2015	--	--	--	11	--	--	--	--	--	--	--	--
8-SAR001.11	129	.20	.14	.21	M	.0344	.0050	--	--	6.4	--	--	--	--	--	--	--	--
<u>Total Nitrate plus Nitrite</u>																		
1ABRB002.15	102	.71	.55	.77	M	.2963	--	n/a	n/a	23	--	--	--	--	--	--	--	--
1ABRU020.12	102	<.57	<.52	<.57	Q	1.000	--	n/a	n/a	60	--	--	--	--	--	--	--	--
1ABUL010.28	111	3.7	<4.5	4.3	M	.7742	--	--	--	20	--	--	--	--	--	--	--	--
1ACAX004.57	123	1.1	1.1	1.0	M	.8744	--	n/a	n/a	46	--	--	--	--	--	--	--	--
1ACHO003.65	116	<.06	<.06	<.05	M	.1511	--	n/a	n/a	83	--	--	--	--	--	--	--	--
1AGOO002.38	130	<1.4	1.7	1.0	M	.0001	--	--	--	19	--	--	--	--	--	--	--	--
1AGOO022.44	120	<.90	<.53	.89	M	--	.0000	n/a	n/a	71	--	--	--	--	--	--	--	--
1AHPR003.87	77	<.89	.50	.92	Q	.2238	--	--	--	19	--	--	--	--	--	--	--	--
1AOPE025.10	110	2.8	2.3	2.8	M	.8026	--	--	--	18	--	--	--	--	--	--	--	--
1APIM000.15	122	<1.5	<.91	1.9	M	.8918	--	n/a	n/a	54	--	--	--	--	--	--	--	--
1AQUA004.46	117	<.06	<.06	<.05	M	.2153	--	n/a	n/a	87	--	--	--	--	--	--	--	--
1ASOT001.44	111	1.1	1.6	1.2	M	.3004	--	--	--	13	--	--	--	--	--	--	--	--
1ASUG004.42	84	<.86	<.53	1.0	Q	--	.0000	n/a	n/a	26	--	--	--	--	--	--	--	--
1ATUS000.37	81	3.5	2.9	2.7	Q	.9682	--	--	--	12	--	--	--	--	--	--	--	--
1BCRO000.43	77	1.0	<.91	<.81	B	1.000	.0000	n/a	n/a	39	--	--	--	--	--	--	--	--
1BHKS000.96	111	<1.3	1.2	<1.3	M	1.000	--	n/a	n/a	29	--	--	--	--	--	--	--	--
1BLEW002.91	109	<1.7	<1.8	<1.7	M	1.000	.0000	n/a	n/a	30	--	--	--	--	--	--	--	--
1BMDL036.08	116	<.83	<.71	.85	M	1.000	.0000	n/a	n/a	61	--	--	--	--	--	--	--	--
1BNFS000.57	114	1.3	.80	1.5	M	.2927	--	n/a	n/a	33	--	--	--	--	--	--	--	--
1BSSF100.10	110	1.9	1.9	1.9	M	.8149	--	--	--	8.3	--	--	--	--	--	--	--	--
1BSTY001.22	117	<2.3	1.6	<2.7	M	.2684	--	n/a	n/a	26	--	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
2-ALM000.42	106	<1.1	1.0	1.2	Q	0.2599	--	n/a	n/a	32	--	--	--	--	--	--	--	--
2-APP012.79	131	.17	<.17	.19	M	.1637	--	n/a	n/a	54	--	--	--	--	--	--	--	--
2-APP050.23	128	<.25	<.25	<.26	M	.2254	--	n/a	n/a	54	--	--	--	--	--	--	--	--
2-APP118.04	100	<.17	<.16	<.18	M	.1203	--	n/a	n/a	64	--	--	--	--	--	--	--	--
2-BCC004.71	104	<.21	<.29	<.21	M	.9020	--	n/a	n/a	83	--	--	--	--	--	--	--	--
2-BLP000.79	105	.17	<.12	<.18	M	.0343	--	n/a	n/a	83	--	--	--	--	--	--	--	--
2-BUF002.10	108	<.20	<.24	.16	M	--	0.0000	n/a	n/a	73	--	--	--	--	--	--	--	--
2-CHK032.77	128	<.06	<.060	<.06	M	.8744	--	n/a	n/a	85	--	--	--	--	--	--	--	--
2-CHK076.59	128	1.7	1.5	3.1	M	.8425	--	--	--	13	--	--	--	--	--	--	--	--
2-CRE002.37	102	<.35	<.37	<.45	M	--	.0000	n/a	n/a	78	--	--	--	--	--	--	--	--
2-FAC000.85	79	.25	<.22	.31	Q	.1191	--	n/a	n/a	47	--	--	--	--	--	--	--	--
2-HRD011.57	107	<.29	<.30	<.26	M	--	.0000	n/a	n/a	70	--	--	--	--	--	--	--	--
2-JKS000.38	129	.23	.24	.21	M	.5240	--	n/a	n/a	38	--	--	--	--	--	--	--	--
2-JKS058.60	103	<.18	<.11	<.20	M	.1344	--	n/a	n/a	81	--	--	--	--	--	--	--	--
2-JMS189.31	105	.29	<.35	<.22	M	.7173	--	n/a	n/a	63	--	--	--	--	--	--	--	--
2-JMS258.54	130	.27	.23	<.25	M	1.000	.0000	n/a	n/a	40	--	--	--	--	--	--	--	--
2-JMS275.75	131	<.19	.19	<.19	M	1.000	--	n/a	n/a	58	--	--	--	--	--	--	--	--
2-JMS282.28	132	<.21	<.20	<.21	M	.1547	--	n/a	n/a	69	--	--	--	--	--	--	--	--
2-LAF000.00	118	.12	.09	.10	M	--	.0000	n/a	n/a	37	--	--	--	--	--	--	--	--
2-MCM005.12	111	<.38	<.48	.35	M	.9167	--	n/a	n/a	56	--	--	--	--	--	--	--	--
2-MRY000.46	113	<.37	.28	.31	M	1.000	--	n/a	n/a	48	--	--	--	--	--	--	--	--
2-MRY014.78	111	.36	<.31	.31	M	.1904	--	n/a	n/a	48	--	--	--	--	--	--	--	--
2-RKF000.19	107	<.10	<.08	<.09	M	.1955	--	n/a	n/a	85	--	--	--	--	--	--	--	--
2-RRN002.19	113	<.24	<.24	<.23	M	1.000	.0000	n/a	n/a	64	--	--	--	--	--	--	--	--
2-RRS003.12	110	<.29	<.18	.31	M	.2730	--	n/a	n/a	46	--	--	--	--	--	--	--	--
2-RVN001.64	112	.53	.58	<.55	M	.0466	--	n/a	n/a	37	--	--	--	--	--	--	--	--

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
2-RVN015.97	108	<0.56	0.58	0.60	M	0.1990	--	n/a	n/a	28	--	--	--	--	--	--	--	--	
2-SFT004.92	82	<.11	<.07	.07	Q	.6353	--	n/a	n/a	69	--	--	--	--	--	--	--	--	
2-TYE000.30	109	<.13	<.10	<.08	M	--	0.0000	n/a	n/a	86	--	--	--	--	--	--	--	--	
2-UPM003.53	99	.80	.60	.85	B	.4077	.0120	18	24	5.0	--	--	--	--	--	--	--	--	
3-RAP006.53	120	<.58	<.37	<.58	B	.1475	--	n/a	n/a	64	--	--	--	--	--	--	--	--	
3-RPP147.10	124	.44	<.38	<.42	M	.1547	--	n/a	n/a	69	--	--	--	--	--	--	--	--	
8-MPN094.79	112	<.08	<.09	<.07	M	--	.0000	n/a	n/a	83	--	--	--	--	--	--	--	--	
8-PCT002.29	111	<.11	<.10	.12	M	.6397	--	n/a	n/a	72	--	--	--	--	--	--	--	--	
8-SAR001.11	129	.21	.16	<.22	M	.1613	--	n/a	n/a	48	--	--	--	--	--	--	--	--	
<u>Total Phosphorus</u>																			
1ABRB002.15	101	.10	<.10	<.10	M	.5420	--	n/a	n/a	40	--	--	--	--	--	--	--	--	
1ABRU020.12	100	<.10	<.10	.10	Q	.0472	--	n/a	n/a	55	--	--	--	--	--	--	--	--	
1ABUL010.28	111	<.10	<.10	<.10	B	.2475	--	n/a	n/a	55	--	--	--	--	--	--	--	--	
1ACAX004.57	124	<.10	<.10	<.10	M	.2072	--	n/a	n/a	50	--	--	--	--	--	--	--	--	
1ACHO003.65	116	<.10	<.10	<.10	M	.2572	--	n/a	n/a	70	--	--	--	--	--	--	--	--	
1AGOO002.38	130	<.10	<.10	<.10	M	.0462	--	n/a	n/a	42	--	--	--	--	--	--	--	--	
1AGOO022.44	121	<.10	<.10	<.10	M	.0031	--	n/a	n/a	56	--	--	--	--	--	--	--	--	
1AHPR003.87	76	<.10	.10	<.10	Q	.0682	--	n/a	n/a	33	--	--	--	--	--	--	--	--	
1AOPE025.10	109	.30	.35	.20	M	.0000	-.0200	-80	-68	4.7	--	--	--	--	--	--	--	--	
1APIM000.15	122	<.10	<.10	<.10	M	.0370	--	n/a	n/a	62	--	--	--	--	--	--	--	--	
1AQUA004.46	117	<.10	<.10	<.10	M	1.000	--	n/a	n/a	73	--	--	--	--	--	--	--	--	
1ASOT001.44	112	<.10	.20	<.10	M	--	-.0167	--	--	14	--	--	--	--	--	--	--	--	
1ASUG004.42	84	<.10	<.10	<.10	Q	.0445	--	n/a	n/a	49	--	--	--	--	--	--	--	--	
1ATUS000.37	80	.20	.25	<.10	Q	.8016	--	--	--	19	--	--	--	--	--	--	--	--	
1BCRO000.43	74	<.10	<.10	<.10	B	.0008	--	n/a	n/a	50	--	--	--	--	--	--	--	--	
1BHKS000.96	109	<.10	.200	<.10	M	.1179	--	n/a	n/a	28	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
1BLEW002.91	106	<0.10	0.10	<0.10	M	0.0287	--	n/a	n/a	58	--	--	--	--	--	--	--	--	
1BMDL036.08	114	<.10	.10	<.10	M	.0878	--	n/a	n/a	62	--	--	--	--	--	--	--	--	
1BNFS000.57	110	.10	.10	<.10	M	.4673	--	n/a	n/a	49	--	--	--	--	--	--	--	--	
1BSSF100.10	107	.20	.20	<.10	M	.0001	--	--	--	16	--	--	--	--	--	--	--	--	
1BSTY001.22	116	.220	.20	.20	M	.0781	--	--	--	11	--	--	--	--	--	--	--	--	
2-ALM000.42	104	<.10	.20	.06	Q	.0316	--	n/a	n/a	35	--	--	--	--	--	--	--	--	
2-APP012.79	130	<.10	<.10	.04	M	.0117	--	n/a	n/a	36	--	--	--	--	--	--	--	--	
2-APP050.23	143	<.10	<.10	.05	M	.0000	--	n/a	n/a	26	--	--	--	--	--	--	--	--	
2-APP118.04	115	<.10	.10	.03	B	.0267	--	n/a	n/a	40	--	--	--	--	--	--	--	--	
2-BCC004.71	102	<.10	<.10	<.10	M	.2474	--	n/a	n/a	88	--	--	--	--	--	--	--	--	
2-BLP000.79	103	<.10	<.10	<.10	M	.2222	--	n/a	n/a	81	--	--	--	--	--	--	--	--	
2-BUF002.10	106	<.10	<.10	.10	M	.0833	--	n/a	n/a	54	--	--	--	--	--	--	--	--	
2-CHK032.77	125	<.10	<.10	.08	M	.0432	--	n/a	n/a	30	--	--	--	--	--	--	--	--	
2-CHK076.59	127	.10	<.10	.05	M	.0000	--	n/a	n/a	20	--	--	--	--	--	--	--	--	
2-CRE002.37	100	<.10	.10	<.10	M	.0022	--	n/a	n/a	47	--	--	--	--	--	--	--	--	
2-FAC000.85	76	<.10	.10	.04	Q	.0009	--	n/a	n/a	27	--	--	--	--	--	--	--	--	
2-HRD011.57	105	.10	<.10	<.10	M	.3379	--	n/a	n/a	66	--	--	--	--	--	--	--	--	
2-JKS000.38	127	.40	.90	.30	M	.0000	-0.0500	-150	-67	3.1	--	--	--	--	--	--	--	--	
2-JKS058.60	101	<.10	<.10	<.10	M	.4376	--	n/a	n/a	81	--	--	--	--	--	--	--	--	
2-JMS157.28	347	.14	.20	<.10	M	.0025	-.0075	-64	-45	4.3	--	--	--	--	--	--	--	--	
2-JMS189.31	103	.10	.20	<.10	M	.0063	--	--	--	19	--	--	--	--	--	--	--	--	
2-JMS258.54	129	.20	.20	.20	M	.0003	-.0111	--	--	16	--	--	--	--	--	--	--	--	
2-JMS275.75	130	.20	.40	.20	M	.0000	-.0167	--	--	12	--	--	--	--	--	--	--	--	
2-JMS282.28	130	.20	.35	<.10	M	.0000	-.0200	--	--	18	--	--	--	--	--	--	--	--	
2-LAF000.00	116	.10	.10	.10	M	.0016	--	n/a	n/a	23	--	--	--	--	--	--	--	--	
2-MCM005.12	109	<.10	<.10	<.10	M	.5172	--	n/a	n/a	59	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
2-MRY000.46	111	0.10	0.20	0.20	M	0.4348	--	--	--	19	--	--	--	--	--	--	--	--	
2-MRY014.78	111	.10	.10	<.10	M	.0330	--	n/a	n/a	70	--	--	--	--	--	--	--	--	
2-RKF000.19	105	<.10	<.10	<.10	M	.1383	--	n/a	n/a	75	--	--	--	--	--	--	--	--	
2-RRN002.19	111	<.10	<.10	<.10	M	.5788	--	n/a	n/a	65	--	--	--	--	--	--	--	--	
2-RRS003.12	108	<.10	.10	<.10	M	.7427	--	n/a	n/a	63	--	--	--	--	--	--	--	--	
2-RVN001.64	110	.10	.150	.10	M	.3883	--	n/a	n/a	25	--	--	--	--	--	--	--	--	
2-RVN015.97	106	<.10	.20	<.10	M	.0140	--	--	--	17	--	--	--	--	--	--	--	--	
2-SFT004.92	80	.10	<.10	.04	Q	.1492	--	n/a	n/a	47	--	--	--	--	--	--	--	--	
2-TYE000.30	108	.10	<.10	<.10	M	.2016	--	n/a	n/a	70	--	--	--	--	--	--	--	--	
2-UPM003.53	97	.10	<.10	.06	Q	.0113	--	--	--	20	--	--	--	--	--	--	--	--	
3-RAP006.53	117	.10	<.10	<.10	B	.6318	--	n/a	n/a	59	--	--	--	--	--	--	--	--	
3-RPP147.10	123	<.10	.10	<.10	M	.4319	--	n/a	n/a	67	--	--	--	--	--	--	--	--	
8-MPN094.79	109	<.10	<.10	<.10	B	.0012	--	n/a	n/a	59	--	--	--	--	--	--	--	--	
8-PCT002.29	108	.10	.10	<.10	B	.0027	--	n/a	n/a	31	--	--	--	--	--	--	--	--	
8-SAR001.11	127	.10	<.10	.06	M	.0000	-0.0001	--	--	19	--	--	--	--	--	--	--	--	
GOO2380	123	.10	<.10	<.10	M	.0859	--	n/a	n/a	34	--	--	--	--	--	--	--	--	
PIM1500	116	.10	<.10	<.10	M	.0130	--	n/a	n/a	50	--	--	--	--	--	--	--	--	
QUA4460	109	.10	<.10	<.10	B	.2044	--	n/a	n/a	59	--	--	--	--	--	--	--	--	
ST01	485	.03	.04	.03	M	.0157	-.0010	-40	-30	4.4	0.03	0.04	0.04	M	0.0019	-0.0015	-4.6	-4.2	
ST10	414	.05	.05	.05	M	.6663	--	.0	.0	.72	.04	.04	.05	--	--	--	--	--	
ST30	505	.03	.04	.04	M	.6078	--	--	--	10	.03	.03	<.03	M	.1739	-.0003	--	--	
ST40	547	.03	.03	.03	M	.5221	--	--	--	9.3	.02	.02	.03	M	.0938	--	--	--	
ST45	518	.03	.02	.04	M	.1469	--	--	--	8.7	.03	.02	.03	M	.0046	-.0002	--	--	
ST50	547	.04	.04	.04	M	.6625	--	.0	.0	4.4	.03	.03	.04	M	.0008	-.0015	-57	-60	
ST60	527	.03	.03	.03	M	.8812	--	--	--	11	.02	.02	<.02	M	.7757	--	--	--	
ST70	614	.02	.03	.03	M	1.000	--	--	--	19	.02	.02	<.02	M	.2883	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
<u>Dissolved Inorganic Phosphorus</u>																			
2-JMS157.28	393	0.05	0.13	0.05	M	--	-0.0100	-240	-92	0.75	--	--	--	--	--	--	--	--	
3-RPP110.57	352	.01	<.01	.01	B	0.5614	--	--	--	16	--	--	--	--	--	--	--	--	
8-MPN054.17	306	<.01	<.01	.02	M	.0148	--	n/a	n/a	20	--	--	--	--	--	--	--	--	
8-YRK011.14	169	.02	.01	.01	M	.9313	--	n/a	n/a	23	--	--	--	--	--	--	--	--	
CAX4570	100	.02	.02	.03	B	.8651	--	--	--	7.3	--	--	--	--	--	--	--	--	
CHO3650	88	<.01	<.01	<.01	B	.5680	--	n/a	n/a	34	--	--	--	--	--	--	--	--	
GOO2380	106	.03	.05	.03	M	.3360	--	n/a	n/a	3.8	--	--	--	--	--	--	--	--	
PIM1500	99	.01	.02	<.01	B	.7166	--	n/a	n/a	24	--	--	--	--	--	--	--	--	
QUA4460	90	.01	<.01	.01	B	.8150	--	n/a	n/a	28	--	--	--	--	--	--	--	--	
ST01	458	<.01	<.01	<.01	M	.4624	--	n/a	n/a	45	--	--	--	--	--	--	--	--	
ST10	401	.01	<.01	<.01	M	.3279	--	n/a	n/a	34	--	--	--	--	--	--	--	--	
ST30	488	<.01	<.01	<.01	M	.7372	--	n/a	n/a	47	--	--	--	--	--	--	--	--	
ST40	530	<.01	<.01	.02	M	.0921	--	n/a	n/a	36	--	--	--	--	--	--	--	--	
ST45	511	<.01	<.01	<.01	M	.1064	--	n/a	n/a	42	--	--	--	--	--	--	--	--	
ST50	536	.02	.02	.02	M	.9118	--	n/a	n/a	24	0.02	0.01	0.02	M	0.3706	--	n/a	n/a	
ST60	503	.01	<.01	<.01	M	.2636	--	n/a	n/a	54	--	--	--	--	--	--	--	--	
ST70	592	<.01	<.01	.01	M	.0003	--	n/a	n/a	48	--	--	--	--	--	--	--	--	
<u>Total Suspended Solids</u>																			
1ABRB002.15	109	11	9.5	13	M	.1390	.5278	--	--	11	--	--	--	--	--	--	--	--	
1ABRU020.12	102	<5.0	6.5	3.0	Q	1.000	--	n/a	n/a	35	--	--	--	--	--	--	--	--	
1ABUL010.28	113	6.0	<5.5	12	M	.3065	--	n/a	n/a	21	--	--	--	--	--	--	--	--	
1ACAX004.57	128	<5.0	6.0	6.0	M	.3655	--	n/a	n/a	23	--	--	--	--	--	--	--	--	
1ACHO003.65	117	7.0	7.0	7.0	M	.9562	--	--	--	9.5	--	--	--	--	--	--	--	--	
1AGOO002.38	135	7.0	7.0	8.0	M	.7105	--	--	--	18	--	--	--	--	--	--	--	--	
1AGOO022.44	124	<5.0	<5.0	4.0	M	.3504	--	n/a	n/a	43	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
1AHPR003.87	78	7.0	6.0	4.0	Q	0.7979	--	n/a	n/a	21	--	--	--	--	--	--	--	--	
1AOPE025.10	112	5.5	5.0	7.0	M	.2283	--	n/a	n/a	26	--	--	--	--	--	--	--	--	
1APIM000.15	120	<3.0	<5.0	<3.0	M	.0054	--	n/a	n/a	62	--	--	--	--	--	--	--	--	
1AQUA004.46	118	4.0	<5.0	<3.0	M	.0138	--	n/a	n/a	47	--	--	--	--	--	--	--	--	
1ASOT001.44	113	<5.0	<5.0	7.5	M	.0283	--	n/a	n/a	37	--	--	--	--	--	--	--	--	
1ASUG004.42	86	7.0	10	<3.5	Q	.1279	-0.2857	--	--	19	--	--	--	--	--	--	--	--	
1ATUS000.37	84	7.0	7.0	3.0	Q	.1598	-.2500	--	--	14	--	--	--	--	--	--	--	--	
1BCRO000.43	78	<5.0	7.0	5.5	B	.6575	--	n/a	n/a	31	--	--	--	--	--	--	--	--	
1BHKS000.96	113	4.0	<5.0	<3.0	M	.9412	--	n/a	n/a	52	--	--	--	--	--	--	--	--	
1BLEW002.91	111	7.0	8.5	7.0	M	.5292	--	n/a	n/a	22	--	--	--	--	--	--	--	--	
1BMDL036.08	117	7.0	6.0	7.0	M	1.000	--	n/a	n/a	27	--	--	--	--	--	--	--	--	
1BNFS000.57	117	<5.0	<5.0	4.5	M	.6470	--	n/a	n/a	32	--	--	--	--	--	--	--	--	
1BSSF100.10	114	7.0	11	7.0	M	.6745	--	n/a	n/a	21	--	--	--	--	--	--	--	--	
1BSTY001.22	116	4.0	<5.0	<3.0	M	1.000	.0000	n/a	n/a	60	--	--	--	--	--	--	--	--	
2-ALM000.42	108	<5.0	6.0	<4.0	B	.1570	--	n/a	n/a	31	--	--	--	--	--	--	--	--	
2-APP012.79	133	<5.0	<5.0	5.0	M	.3021	--	n/a	n/a	29	--	--	--	--	--	--	--	--	
2-APP050.23	132	13	12	16	M	.1514	.2500	23	25	6.2	--	--	--	--	--	--	--	--	
2-APP118.04	104	5.0	<5.0	7.0	M	.0481	--	n/a	n/a	24	--	--	--	--	--	--	--	--	
2-BCC004.71	106	<3.0	<5.0	<3.0	M	.5500	--	n/a	n/a	71	--	--	--	--	--	--	--	--	
2-BLP000.79	106	<3.0	5.0	<3.0	M	1.000	--	n/a	n/a	58	--	--	--	--	--	--	--	--	
2-BUF002.10	111	7.0	8.0	6.0	M	.7667	--	--	--	13	--	--	--	--	--	--	--	--	
2-CHK032.77	130	<5.0	<5.0	4.0	M	.1623	--	n/a	n/a	31	--	--	--	--	--	--	--	--	
2-CHK076.59	128	6.0	6.0	6.5	M	.4922	--	--	--	19	--	--	--	--	--	--	--	--	
2-CRE002.37	104	<5.0	5.0	3.0	M	.4221	--	n/a	n/a	35	--	--	--	--	--	--	--	--	
2-FAC000.85	83	<5.0	<5.0	6.0	Q	.1371	--	n/a	n/a	27	--	--	--	--	--	--	--	--	
2-HRD011.57	110	<5.0	<5.0	7.0	M	.0002	--	n/a	n/a	29	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration								
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	
2-JKS000.38	133	<5.0	<5.0	4.5	M	0.5094	--	n/a	n/a	26	--	--	--	--	--	--	--	--	
2-JKS058.60	104	<3.0	<5.0	<3.0	M	.8398	--	n/a	n/a	68	--	--	--	--	--	--	--	--	
2-JMS157.28	382	30	<5.0	13	M	.1001	--	n/a	n/a	27	--	--	--	--	--	--	--	--	
2-JMS189.31	107	<5.0	<5.0	6.0	M	.0454	--	n/a	n/a	34	--	--	--	--	--	--	--	--	
2-JMS258.54	133	7.0	7.0	6.0	M	.9250	--	n/a	n/a	21	--	--	--	--	--	--	--	--	
2-JMS275.75	133	6.0	7.0	7.0	M	.3523	--	--	--	14	--	--	--	--	--	--	--	--	
2-JMS282.28	135	5.0	<5.0	5.0	M	.0474	--	n/a	n/a	20	--	--	--	--	--	--	--	--	
2-LAF000.00	113	15	16	9.0	B	.0304	-0.7889	-63	-59	1.5	--	--	--	--	--	--	--	--	
2-MCM005.12	113	5.0	<5.0	7.0	M	.0029	.5000	n/a	n/a	24	--	--	--	--	--	--	--	--	
2-MRY000.46	112	<5.0	<5.0	5.0	M	.0389	--	n/a	n/a	30	--	--	--	--	--	--	--	--	
2-MRY014.78	113	<5.0	<5.0	<3.0	M	.4094	--	n/a	n/a	51	--	--	--	--	--	--	--	--	
2-RKF000.19	109	<5.0	<5.0	<3.0	M	.0103	--	n/a	n/a	52	--	--	--	--	--	--	--	--	
2-RRN002.19	114	<5.0	<5.0	7.0	M	.0266	--	n/a	n/a	32	--	--	--	--	--	--	--	--	
2-RRS003.12	112	6.5	7.0	7.0	M	.1128	--	--	--	14	--	--	--	--	--	--	--	--	
2-RVN001.64	111	6.0	<5.0	10	M	.0036	--	n/a	n/a	34	--	--	--	--	--	--	--	--	
2-RVN015.97	113	<5.0	<5.0	5.0	M	.0482	--	n/a	n/a	39	--	--	--	--	--	--	--	--	
2-SFT004.92	83	7.0	5.0	10	Q	.1152	.2500	--	--	16	--	--	--	--	--	--	--	--	
2-TYE000.30	111	<5.0	<5.0	<3.0	M	.7112	--	n/a	n/a	52	--	--	--	--	--	--	--	--	
2-UPM003.53	100	5.0	7.5	6.0	M	.5527	--	n/a	n/a	18	--	--	--	--	--	--	--	--	
3-RAP006.53	120	<5.0	<5.0	4.5	M	.0617	--	n/a	n/a	32	--	--	--	--	--	--	--	--	
3-RPP147.10	127	<5.0	<5.0	4.5	M	.2488	--	n/a	n/a	40	--	--	--	--	--	--	--	--	
8-MPN094.79	113	4.0	<5.0	<3.0	M	.7047	--	n/a	n/a	50	--	--	--	--	--	--	--	--	
8-PCT002.29	111	<5.0	<5.0	4.0	M	.4810	--	n/a	n/a	27	--	--	--	--	--	--	--	--	
8-SAR001.11	130	<5.0	<5.0	5.0	M	.1439	--	n/a	n/a	28	--	--	--	--	--	--	--	--	
GOO2380	125	8.0	7.0	10	M	.0000	2.000	--	--	9.8	--	--	--	--	--	--	--	--	
PIM1500	111	5.0	<5.0	140	M	.0008	--	n/a	n/a	22	--	--	--	--	--	--	--	--	

Table 5. Seasonal Kendall trend results for selected stations and constituents in the Nontidal Synthesis Program for calendar years 1985 through 1996—Continued

Site identification number	Number of samples	Unadjusted for streamflow concentration									Streamflow-adjusted concentration							
		Period of record median (POR)	Base median (BM)	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)	Percentage less than detection	Period of record median (POR)	Base median	Status median	Season	p-value	Slope (units/year)	Percentage change (POR median)	Percentage change (BM)
QUA4460	107	5.0	<5.0	56	B	0.0766	--	--	--	16	--	--	--	--	--	--	--	--
ST01	481	5.0	4.0	4.0	M	.8242	--	0.0	0.0	.01	5.0	4.0	4.0	M	0.1070	-0.0696	-17	-21
ST10	410	7.0	5.0	8.0	M	.0081	0.2000	34	48	.73	6.0	5.0	7.0	--	--	--	--	--
ST30	502	3.0	4.0	3.0	M	.8038	--	--	--	21	3.0	4.0	3.0	M	.0016	--	--	--
ST40	545	6.0	4.0	8.0	M	.0003	.4000	80	120	1.4	6.0	4.0	8.0	M	.6404	-.0520	-10	-16
ST45	512	6.0	5.0	7.0	M	.0543	.1833	37	44	.81	6.0	5.0	7.0	M	.2449	-.1921	-38	-46
ST50	545	6.0	5.0	10	M	.0123	.2500	50	60	2.1	6.0	5.0	10	M	.0906	-.1135	-23	-27
ST60	517	3.0	2.0	3.0	M	.0308	.1339	--	--	6.5	3.0	2.0	3.0	M	.0689	.0025	--	--
ST70	598	4.0	4.0	5.0	M	.1785	--	--	--	8.7	4.0	4.0	5.0	M	.4543	--	--	--

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by streamflow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model (Cohn and others, 1989)

[Agency - PaDEP, Pennsylvania Department of Environmental Protection; USGS, U.S. Geological Survey; MdDNR, Maryland Department of Natural Resources; WashCOG, Metropolitan Washington Council of Governments; VaDEQ, Virginia Department of Environmental Quality.

Constituents - 00530, total suspended solids; 00600, total nitrogen; 00608, dissolved ammonia; 00610, total ammonia; 00618, dissolved nitrate; 00620, total nitrate; 00623, dissolved ammonia plus organic nitrogen; 00625, total ammonia plus organic nitrogen; 00630, total nitrite plus nitrate nitrogen; 00631, dissolved nitrite plus nitrate nitrogen; 00665, total phosphorus; 00666, dissolved phosphorus; 00671, dissolved inorganic phosphorus.

Statistics - p-value, measure of significance of regressor; slope (b), regression slope; percentage change, change in load for indicated time period; shaded areas represent significant results at 95-percent confidence level]

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
Pennsylvania							
01503000	WQN0306	PaDEP	00610	1985-95	0.0014	-0.05	-48
01503000	WQN0306	PaDEP	00620	1985-95	.0802	-.02	-22
01503000	WQN0306	PaDEP	00630	1985-95	.1249	-.02	-20
01503000	WQN0306	PaDEP	00665	1985-95	.0008	-.03	-34
01518700	WQN0319	PaDEP	00530	1985-95	.1551	.08	130
01518700	WQN0319	PaDEP	00610	1985-95	.0001	-.06	-53
01518700	WQN0319	PaDEP	00620	1985-95	.5527	-.00	-6.0
01518700	WQN0319	PaDEP	00630	1985-95	.9893	.00	.20
01518700	WQN0319	PaDEP	00665	1985-95	.0003	-.05	-44
01520000	WQN0320	PaDEP	00530	1985-96	.1082	.08	170
01520000	WQN0320	PaDEP	00610	1985-96	.0037	-.06	-51
01520000	WQN0320	PaDEP	00620	1985-96	.7091	.00	6.1
01520000	WQN0320	PaDEP	00630	1985-96	.7274	.00	5.5
01520000	WQN0320	PaDEP	00665	1985-96	.8120	.00	4.4
01531000	WQN0332	PaDEP	00530	1988-96	.8673	.01	7.9
01531000	WQN0332	PaDEP	00600	1988-96	.0000	-.04	-41
01531000	WQN0332	PaDEP	00610	1988-96	.4772	-.02	-21
01531000	WQN0332	PaDEP	00620	1988-96	.6809	.01	10
01531000	WQN0332	PaDEP	00630	1988-96	.6632	.01	10
01531000	WQN0332	PaDEP	00665	1988-96	.2029	-.01	-14
01532000	WQN0318	PaDEP	00530	1985-96	.0870	.12	360
01532000	WQN0318	PaDEP	00610	1985-96	.0357	-.05	-48
01532000	WQN0318	PaDEP	00665	1985-96	.0010	-.05	-49
01534000	WQN0317	PaDEP	00530	1985-96	.8636	-.01	-14
01534000	WQN0317	PaDEP	00610	1985-96	.0012	-.06	-52
01534000	WQN0317	PaDEP	00620	1985-96	.0718	-.02	-18
01534000	WQN0317	PaDEP	00630	1985-96	.3555	-.01	-12
01534000	WQN0317	PaDEP	00665	1985-96	.0002	-.04	-41

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01536000	WQN0313	PaDEP	00530	1985-96	0.0011	-0.10	-74
01536000	WQN0313	PaDEP	00610	1985-96	.3547	-.02	-26
01536000	WQN0313	PaDEP	00620	1985-96	.8969	.00	1.5
01536000	WQN0313	PaDEP	00630	1985-96	.8985	.00	1.4
01536000	WQN0313	PaDEP	00665	1985-96	.0000	-.05	-44
01536500	WQN0302	PaDEP	00610	1985-95	.0000	-.10	-74
01536500	WQN0302	PaDEP	00620	1985-95	.0103	-.03	-36
01536500	WQN0302	PaDEP	00630	1985-95	.0030	-.04	-41
01536500	WQN0302	PaDEP	00665	1985-95	.0000	-.07	-62
01538000	WQN0310	PaDEP	00530	1988-94	.7931	.02	19
01538000	WQN0310	PaDEP	00610	1988-94	.0044	-.12	-68
01538000	WQN0310	PaDEP	00620	1988-94	.9472	-.00	-90
01538000	WQN0310	PaDEP	00630	1988-94	.7163	-.01	-6.5
01538000	WQN0310	PaDEP	00665	1988-94	.4555	-.02	-15
01541000	WQN0406	PaDEP	00530	1985-96	.2512	-.05	-49
01541000	WQN0406	PaDEP	00610	1985-96	.0108	-.04	-43
01541000	WQN0406	PaDEP	00620	1985-96	.0000	-.03	-34
01541000	WQN0406	PaDEP	00630	1985-96	.0007	-.03	-32
01541000	WQN0406	PaDEP	00665	1985-96	.0000	-.12	-80
01541500	WQN0422	PaDEP	00530	1988-95	.3848	-.04	-31
01541500	WQN0422	PaDEP	00610	1988-95	.0034	-.05	-36
01541500	WQN0422	PaDEP	00620	1988-95	.0009	-.04	-30
01541500	WQN0422	PaDEP	00630	1988-95	.9129	-.00	-2.5
01541500	WQN0422	PaDEP	00665	1988-95	.0079	-.04	-29
01543000	WQN0420	PaDEP	00530	1988-96	.0112	-.12	-71
01543000	WQN0420	PaDEP	00610	1988-96	.0047	-.06	-46
01543000	WQN0420	PaDEP	00620	1988-96	.4060	.01	16
01543000	WQN0420	PaDEP	00630	1988-96	.0014	.16	340
01543000	WQN0420	PaDEP	00665	1988-96	.0000	-.06	-47
01544000	WQN0419	PaDEP	00530	1988-96	.4115	.06	77
01544000	WQN0419	PaDEP	00610	1988-96	.0096	-.06	-46
01544000	WQN0419	PaDEP	00620	1988-96	.9197	-.00	-1.5
01544000	WQN0419	PaDEP	00665	1988-96	.0000	-.09	-60
01545000	WQN0434	PaDEP	00530	1988-96	.3807	-.06	-47
01545000	WQN0434	PaDEP	00610	1988-96	.0004	-.08	-56
01545000	WQN0434	PaDEP	00620	1988-96	.5991	.01	10
01545000	WQN0434	PaDEP	00665	1988-96	.0000	-.06	-47

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01546500	WQN0415	PaDEP	00530	1985-95	0.6963	-0.03	-26
01546500	WQN0415	PaDEP	00610	1985-95	.0000	-.10	-69
01546500	WQN0415	PaDEP	00620	1985-95	.0180	.01	15
01546500	WQN0415	PaDEP	00630	1985-95	.0290	.01	13
01546500	WQN0415	PaDEP	00665	1985-95	.0000	-.06	-53
01547200	WQN0413	PaDEP	00530	1985-96	.0317	-.12	-78
01547200	WQN0413	PaDEP	00610	1985-96	.0000	-.15	-86
01547200	WQN0413	PaDEP	00620	1985-96	.0230	.01	19
01547200	WQN0413	PaDEP	00630	1985-96	.0277	.01	18
01547200	WQN0413	PaDEP	00665	1985-96	.0000	-.09	-69
01547950	WQN0423	PaDEP	00530	1988-96	.0568	-.10	-67
01547950	WQN0423	PaDEP	00610	1988-96	.1377	-.04	-33
01547950	WQN0423	PaDEP	00620	1988-96	.9240	-.00	-1.5
01547950	WQN0423	PaDEP	00630	1988-96	.0955	.09	150
01550000	WQN0409	PaDEP	00530	1985-96	.9016	-.01	-9.5
01550000	WQN0409	PaDEP	00610	1985-96	.0057	-.05	-46
01550000	WQN0409	PaDEP	00620	1985-96	.0000	.04	55
01550000	WQN0409	PaDEP	00630	1985-96	.0500	.03	39
01550000	WQN0409	PaDEP	00665	1985-96	.0029	-.06	-51
01551500	WQN0402	PaDEP	00530	1985-96	.5594	.03	46
01551500	WQN0402	PaDEP	00610	1985-96	.9298	-.00	-1.3
01551500	WQN0402	PaDEP	00620	1985-96	.5378	.00	4.2
01551500	WQN0402	PaDEP	00630	1985-96	.0564	.01	18
01551500	WQN0402	PaDEP	00665	1985-96	.1659	-.03	-30
01552000	WQN0408	PaDEP	00530	1985-96	.2120	-.05	-44
01552000	WQN0408	PaDEP	00610	1985-96	.0000	-.08	-64
01552000	WQN0408	PaDEP	00620	1985-96	.0000	.04	65
01552000	WQN0408	PaDEP	00630	1985-96	.0222	.03	47
01552000	WQN0408	PaDEP	00665	1985-96	.0001	-.07	-58
01554000	WQN0203	PaDEP	00610	1985-95	.0014	-.06	-53
01554000	WQN0203	PaDEP	00620	1985-95	.4216	.01	8.3
01554000	WQN0203	PaDEP	00630	1985-95	.4304	.01	8.1
01554000	WQN0203	PaDEP	00665	1985-95	.0000	-.06	-54
01555000	WQN0229	PaDEP	00530	1988-96	.5886	-.03	-25
01555000	WQN0229	PaDEP	00610	1988-96	.0730	-.04	-35
01555000	WQN0229	PaDEP	00620	1988-96	.0238	-.02	-22
01555000	WQN0229	PaDEP	00630	1988-96	.0588	-.02	-20
01555000	WQN0229	PaDEP	00665	1988-96	.0238	-.04	-33

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01556000	WQN0224	PaDEP	00610	1985-95	0.0000	-0.14	-85
01556000	WQN0224	PaDEP	00620	1985-95	.0019	-.02	-24
01556000	WQN0224	PaDEP	00630	1985-95	.0001	-.03	-29
01556000	WQN0224	PaDEP	00665	1985-95	.0000	-.10	-75
01558000	WQN0217	PaDEP	00610	1985-95	.0000	-.12	-79
01558000	WQN0217	PaDEP	00620	1988-95	.3254	.01	6.9
01558000	WQN0217	PaDEP	00630	1985-95	.0931	-.01	-14
01558000	WQN0217	PaDEP	00665	1985-95	.0000	-.11	-79
01562000	WQN0223	PaDEP	00610	1985-95	.0000	-.14	-85
01562000	WQN0223	PaDEP	00620	1985-95	.3115	.01	8.6
01562000	WQN0223	PaDEP	00630	1985-95	.0632	.01	16
01562000	WQN0223	PaDEP	00665	1985-95	.0000	-.10	-74
01568000	WQN0243	PaDEP	00530	1988-96	.6464	-.02	-22
01568000	WQN0243	PaDEP	00610	1988-96	.6413	-.01	-11
01568000	WQN0243	PaDEP	00620	1988-96	.9363	-.00	-2.0
01568000	WQN0243	PaDEP	00630	1988-96	.1295	-.02	-21
01568000	WQN0243	PaDEP	00665	1988-96	.0534	-.03	-30
01570000	WQN0213	PaDEP	00530	1988-95	.8271	.01	13
01570000	WQN0213	PaDEP	00600	1989-94	.9232	.00	.80
01570000	WQN0213	PaDEP	00610	1988-95	.3852	-.04	-32
01570000	WQN0213	PaDEP	00620	1988-96	.4507	.01	7.1
01570000	WQN0213	PaDEP	00623	1989-94	.0296	-.06	-37
01570000	WQN0213	PaDEP	00625	1989-94	.8943	-.00	-3.5
01570000	WQN0213	PaDEP	00630	1988-95	.1138	.04	50
01570000	WQN0213	PaDEP	00665	1988-96	.0448	-.04	-34
01570000	WQN0213	PaDEP	00666	1989-94	.0047	-.08	-49
01570000	WQN0213	PaDEP	00671	1989-94	.0000	-.39	-98
01570500	01570500	USGS	00608	1985-96	.0000	-.07	-63
01570500	01570500	USGS	00631	1985-96	.0175	-.02	-24
01573560	WQN0211	PaDEP	00610	1985-95	.0000	-.10	-70
01573560	WQN0211	PaDEP	00620	1985-95	.8396	.00	1.3
01573560	WQN0211	PaDEP	00630	1985-95	.9167	.00	.70
01573560	WQN0211	PaDEP	00665	1985-95	.0000	-.06	-57
01574000	WQN0210	PaDEP	00610	1989-95	.8951	-.00	-4.3
01574000	WQN0210	PaDEP	00620	1985-95	.6299	-.01	-9.6
01574000	WQN0210	PaDEP	00630	1985-95	.6180	-.01	-9.6
01574000	WQN0210	PaDEP	00665	1985-95	.0000	-.07	-62

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01575500	WQN0207	PaDEP	00530	1985-94	0.0006	-0.11	-72
01575500	WQN0207	PaDEP	00610	1985-94	.0000	-.29	-98
01575500	WQN0207	PaDEP	00620	1988-96	.0000	.05	70
01575500	WQN0207	PaDEP	00630	1985-94	.0002	.06	90
01575500	WQN0207	PaDEP	00665	1988-96	.0000	-.10	-67
01576520	01576520	USGS	00530	1993-96	.0014	-.24	-76
01576520	01576520	USGS	00600	1993-96	.3584	-.01	-7.1
01576520	01576520	USGS	00608	1993-96	.4206	-.08	-36
01576520	01576520	USGS	00610	1993-96	.5903	.03	20
01576520	01576520	USGS	00620	1993-96	.8762	.00	2.1
01576520	01576520	USGS	00623	1993-96	.1238	-.13	-53
01576520	01576520	USGS	00625	1993-96	.6480	.02	14
01576520	01576520	USGS	00630	1993-96	.8368	.00	2.8
01576520	01576520	USGS	00665	1993-96	.7724	.02	9.1
01576520	01576520	USGS	00666	1993-96	.4897	-.05	-25
01576520	01576520	USGS	00671	1993-96	.1239	.27	250
01576540	01576540	USGS	00530	1993-96	.0000	-.31	-86
01576540	01576540	USGS	00600	1993-96	.0084	-.04	-19
01576540	01576540	USGS	00608	1993-96	.3432	-.08	-36
01576540	01576540	USGS	00610	1993-96	.0000	-.25	-78
01576540	01576540	USGS	00620	1993-96	.6038	-.01	-4.1
01576540	01576540	USGS	00623	1993-96	.9583	.00	2.2
01576540	01576540	USGS	00625	1993-96	.4150	.04	24
01576540	01576540	USGS	00630	1993-96	.6435	-.01	-3.7
01576540	01576540	USGS	00665	1993-96	.0786	.09	56
01576540	01576540	USGS	00666	1993-96	.7128	-.02	-12
01576540	01576540	USGS	00671	1993-96	.4869	.09	57
01576540	01576540	USGS	80154	1993-96	.0832	.29	290
01576787	WQN0204	PaDEP	00600	1993-94	.0115	-.08	-30
01576787	WQN0204	PaDEP	00620	1993-94	.0059	-.09	-31
01576787	WQN0204	PaDEP	00630	1993-94	.0057	-.09	-31
01576787	WQN0204	PaDEP	00665	1993-94	.0675	.21	120
01576787	WQN0204	PaDEP	00666	1993-94	.3483	.14	66
01614500	WQN0501	PaDEP	00530	1991-96	.2408	-.14	-68
01614500	WQN0501	PaDEP	00610	1991-96	.1934	-.07	-40
01614500	WQN0501	PaDEP	00620	1991-96	.0147	-.03	-21
01614500	WQN0501	PaDEP	00630	1991-96	.0142	-.03	-21
01614500	WQN0501	PaDEP	00665	1991-96	.0088	-.08	-44
<u>Maryland</u>							
01594000	01594000	USGS	00600	1988-95	.7784	-.00	-2.6
01594000	01594000	USGS	00618	1985-96	.4174	.01	9.6
01594526	01594526	USGS	00618	1985-95	.6713	-.02	-18
01594670	01594670	USGS	00600	1988-95	.0009	-.05	-36
01594670	01594670	USGS	00618	1988-94	.7000	-.01	-9.2

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01594710	01594710	USGS	00530	1985-96	0.0041	0.10	260
01594710	01594710	USGS	00600	1985-96	.9186	-.00	-1.8
01594710	01594710	USGS	00608	1985-96	.7346	.01	9.3
01594710	01594710	USGS	00618	1985-95	.3491	.01	18
01594710	01594710	USGS	00625	1985-96	.0195	-.04	-41
01594710	01594710	USGS	00631	1985-96	.2931	.01	20
01594710	01594710	USGS	00665	1985-96	.0050	-.06	-58
01594710	01594710	USGS	00671	1985-96	.2096	.02	28
01594710	01594710	USGS	80154	1985-96	.8591	.00	8.1
01597500	SAV0037	MdDNR	00530	1985-96	.1935	-.03	-36
01597500	SAV0037	MdDNR	00600	1985-96	.0000	-.04	-42
01597500	SAV0037	MdDNR	00608	1985-96	.2779	-.02	-22
01597500	SAV0037	MdDNR	00625	1985-96	.0019	-.04	-46
01597500	SAV0037	MdDNR	00665	1985-96	.0333	-.04	-45
01601500	WIL0013	MdDNR	00530	1991-96	.7897	.02	17
01601500	WIL0013	MdDNR	00600	1991-96	.0012	-.07	-40
01601500	WIL0013	MdDNR	00608	1991-96	.0265	.11	120
01601500	WIL0013	MdDNR	00625	1991-96	.0331	-.09	-49
01601500	WIL0013	MdDNR	00630	1991-96	.1956	-.06	-37
01601500	WIL0013	MdDNR	00665	1991-96	.9750	-.00	-1.9
01610000	POT2766	MdDNR	00530	1985-96	.1240	-.04	-38
01610000	POT2766	MdDNR	00600	1985-96	.1632	-.01	-14
01610000	POT2766	MdDNR	00608	1985-96	.0000	-.08	-68
01610000	POT2766	MdDNR	00625	1985-96	.0010	-.04	-39
01610000	POT2766	MdDNR	00630	1991-96	.9270	-.00	-2.9
01610000	POT2766	MdDNR	00665	1985-96	.0000	-.07	-61
01614500	01614500	USGS	00608	1993-96	.0021	-.21	-71
01614500	01614500	USGS	00618	1993-96	.0018	-.05	-26
01614500	01614500	USGS	00623	1993-96	.3243	-.04	-22
01614500	01614500	USGS	00625	1993-96	.5770	-.04	-18
01614500	CON0180	MdDNR	00630	1991-96	.0446	-.03	-18
01614500	01614500	USGS	00631	1993-96	.0013	-.05	-25
01614500	01614500	USGS	00665	1993-96	.2407	-.08	-36
01614500	01614500	USGS	00666	1993-96	.7530	-.02	-8.4
01614500	01614500	USGS	00671	1993-96	.0241	-.08	-37
01614500	01614500	USGS	80154	1993-96	.2364	-.11	-47

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01618000	POT1830	MdDNR	00608	1988-93	0.2820	0.06	54
01618000	POT1830	MdDNR	00618	1985-96	.1690	.02	38
01618000	POT1830	MdDNR	00625	1985-96	.0144	-.06	-56
01618000	POT1830	MdDNR	00665	1988-93	.5626	.02	18
01619500	ANT0044	MdDNR	00530	1985-96	.8516	-.00	-4.7
01619500	ANT0044	MdDNR	00600	1985-96	.2368	-.00	-5.7
01619500	ANT0044	MdDNR	00608	1985-96	.0000	-.08	-67
01619500	ANT0044	MdDNR	00618	1985-96	.0002	.02	32
01619500	ANT0044	MdDNR	00625	1985-96	.0000	-.07	-64
01619500	ANT0044	MdDNR	00630	1991-96	.0002	-.04	-25
01619500	ANT0044	MdDNR	00665	1985-96	.0002	-.03	-35
01637500	CAC0148	MdDNR	00530	1985-96	.0006	.10	240
01637500	CAC0148	MdDNR	00600	1985-96	.2480	-.01	-12
01637500	CAC0148	MdDNR	00608	1985-96	.2217	-.03	-29
01637500	CAC0148	MdDNR	00618	1985-96	.2069	.02	22
01637500	CAC0148	MdDNR	00625	1985-96	.0033	-.04	-41
01637500	CAC0148	MdDNR	00630	1991-96	.6306	.01	8.1
01637500	CAC0148	MdDNR	00665	1985-96	.0131	-.04	-38
01639000	MON0528	MdDNR	00600	1985-96	.0021	-.07	-61
01639000	01639000	USGS	00600	1990-96	.0021	-.07	-47
01639000	MON0528	MdDNR	00608	1985-96	.9498	.00	1.7
01639000	01639000	USGS	00608	1990-96	.9498	.00	1.2
01639000	01639000	USGS	00610	1990-96	.0074	-.14	-70
01639000	MON0528	MdDNR	00618	1985-96	.3235	-.02	-20
01639000	01639000	USGS	00618	1990-96	.3235	-.02	-14
01639000	01639000	USGS	00620	1990-96	.0647	-.06	-43
01639000	01639000	USGS	00623	1990-96	.0018	-.04	-29
01639000	MON0528	MdDNR	00625	1985-96	.0000	-.07	-61
01639000	01639000	USGS	00625	1990-96	.0000	-.07	-47
01639000	MON0528	MdDNR	00630	1991-96	.0132	.14	170
01639000	01639000	USGS	00631	1990-96	.8244	-.00	-3.2
01639000	01639000	USGS	00665	1990-96	.0294	.03	29
01639000	MON0528	MdDNR	00666	1985-96	.0223	.03	47
01639000	01639000	USGS	00666	1990-96	.0223	.03	30
01639000	01639000	USGS	80154	1990-96	.0377	.11	140
01639500	BPC0035	MdDNR	00530	1985-96	.5096	.02	24
01639500	BPC0035	MdDNR	00600	1985-96	.2489	-.00	-6.9
01639500	BPC0035	MdDNR	00608	1985-96	.0360	-.04	-41
01639500	BPC0035	MdDNR	00618	1985-96	.0000	.02	24
01639500	BPC0035	MdDNR	00625	1985-96	.0000	-.07	-62
01639500	BPC0035	MdDNR	00630	1991-96	.5932	-.01	-4.3
01639500	BPC0035	MdDNR	00665	1985-96	.0033	-.05	-48

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01643000	MON0155	MdDNR	00530	1985-96	0.7945	0.00	8.0
01643000	MON0155	MdDNR	00600	1985-96	.5386	.00	4.6
01643000	MON0155	MdDNR	00608	1985-96	.0000	-.18	-92
01643000	MON0155	MdDNR	00618	1985-96	.0000	.07	140
01643000	MON0155	MdDNR	00625	1985-96	.0000	-.07	-62
01643000	MON0155	MdDNR	00630	1991-96	.0675	-.02	-16
01643000	MON0155	MdDNR	00665	1985-96	.0636	-.02	-25
<u>Washington D.C.</u>							
01649500	A7	WashCOG	00530	1985-95	.0000	.17	600
01649500	A7	WashCOG	00608	1985-95	.2998	-.05	-46
01649500	A7	WashCOG	00625	1991-96	.9459	-.00	-3.3
01649500	A7	WashCOG	00631	1985-95	.6691	.01	12
01649500	A7	WashCOG	00665	1991-96	.7737	.04	25
01649500	A7	WashCOG	00671	1985-95	.0031	-.10	-73
<u>Virginia</u>							
01615000	1AOPE036.13	VaDEQ	00530	1991-96	.1272	-.13	-57
01615000	1AOPE036.13	VaDEQ	00600	1991-96	.3426	-.03	-18
01615000	1AOPE036.13	VaDEQ	00620	1991-96	.3573	-.03	-18
01615000	1AOPE036.13	VaDEQ	00625	1991-96	.0120	-.08	-39
01615000	1AOPE036.13	VaDEQ	00630	1991-96	.6672	-.02	-9.4
01616000	1AABR000.78	VaDEQ	00530	1985-96	.0001	-.13	-85
01616000	1AABR000.78	VaDEQ	00600	1985-93	.0000	-.10	-68
01616000	1AABR000.78	VaDEQ	00620	1985-96	.5674	-.01	-11
01616000	1AABR000.78	VaDEQ	00625	1985-96	.0000	-.26	-98
01616000	1AABR000.78	VaDEQ	00665	1985-96	.0000	-.33	-100
01621050	1BMDD005.81	VaDEQ	00530	1991-95	.4772	-.10	-45
01621050	1BMDD005.81	VaDEQ	00600	1991-95	.0736	-.05	-26
01621050	1BMDD005.81	VaDEQ	00620	1991-95	.9379	-.00	-1.7
01621050	1BMDD005.81	VaDEQ	00625	1991-95	.0283	-.24	-80
01621050	1BMDD005.81	VaDEQ	00630	1991-95	.6316	-.02	-9.6
01622000	1BNTH014.08	VaDEQ	00530	1991-96	.2425	-.08	-39
01622000	1BNTH014.08	VaDEQ	00600	1991-96	.7040	-.01	-8.7
01622000	1BNTH014.08	VaDEQ	00610	1991-96	.6772	.05	39
01622000	1BNTH014.08	VaDEQ	00620	1991-96	.7693	-.01	-7.0
01622000	1BNTH014.08	VaDEQ	00625	1991-96	.4515	-.03	-20
01622000	1BNTH014.08	VaDEQ	00630	1991-96	.5715	-.02	-14

Table 6. Statistical data for additional sites, dates, and constituents in the Nontidal Data Synthesis Program in the Chesapeake Bay Basin listed by flow site, load site, and data-collection agency using the Minimum Variance Unbiased Estimator (MVUE) model

Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01624800	1BCST012.32	VaDEQ	00530	1985-96	0.8845	0.00	5.3
01624800	1BCST012.32	VaDEQ	00600	1985-96	.1675	.01	12
01624800	1BCST012.32	VaDEQ	00610	1985-96	.0088	-.07	-64
01624800	1BCST012.32	VaDEQ	00620	1985-96	.2591	.01	8.7
01624800	1BCST012.32	VaDEQ	00625	1985-96	.7207	.00	7.0
01624800	1BCST012.32	VaDEQ	00630	1985-96	.0469	.01	18
01624800	1BCST012.32	VaDEQ	00665	1985-96	.0005	-.04	-41
01626000	1BSTH027.85	VaDEQ	00530	1985-95	.1055	-.03	-36
01626000	1BSTH027.85	VaDEQ	00600	1985-95	.3158	.01	17
01626000	1BSTH027.85	VaDEQ	00620	1985-95	.7332	.00	3.4
01626000	1BSTH027.85	VaDEQ	00625	1985-95	.6798	-.01	-8.6
01626000	1BSTH027.85	VaDEQ	00630	1985-95	.0488	.02	31
01626000	1BSTH027.85	VaDEQ	00665	1985-95	.0047	-.03	-36
01627500	1BSTH007.80	VaDEQ	00530	1985-95	.4366	-.01	-16
01627500	1BSTH007.80	VaDEQ	00600	1985-95	.0000	-.11	-78
01627500	1BSTH007.80	VaDEQ	00620	1985-95	.0000	-.08	-66
01627500	1BSTH007.80	VaDEQ	00625	1985-95	.0000	-.15	-88
01627500	1BSTH007.80	VaDEQ	00630	1985-95	.0000	-.10	-73
01627500	1BSTH007.80	VaDEQ	00665	1985-95	.0000	-.08	-68
01629500	1BSSF054.20	VaDEQ	00530	1985-96	.1192	-.03	-34
01629500	1BSSF054.20	VaDEQ	00600	1985-96	.1907	-.01	-11
01629500	1BSSF054.20	VaDEQ	00610	1985-96	.0000	-.09	-72
01629500	1BSSF054.20	VaDEQ	00620	1985-96	.0331	.01	20
01629500	1BSSF054.20	VaDEQ	00625	1985-96	.0000	-.06	-55
01629500	1BSSF054.20	VaDEQ	00630	1985-96	.2361	.01	11
01629500	1BSSF054.20	VaDEQ	00665	1985-96	.0000	-.04	-43
01632000	1BNFS093.53	VaDEQ	00530	1985-95	.3689	-.05	-49
01632000	1BNFS093.53	VaDEQ	00600	1985-95	.8613	.00	3.0
01632000	1BNFS093.53	VaDEQ	00620	1985-95	.0357	-.03	-32
01632000	1BNFS093.53	VaDEQ	00625	1985-95	.0020	-.04	-40
01632000	1BNFS093.53	VaDEQ	00630	1985-95	.2228	.04	69
01632000	1BNFS093.53	VaDEQ	00665	1985-95	.0597	-.03	-30
01632082	1BLNV001.22	VaDEQ	00530	1992-95	.1298	-.20	-60
01632082	1BLNV001.22	VaDEQ	00600	1992-95	.5864	-.02	-6.7
01632082	1BLNV001.22	VaDEQ	00610	1992-95	.2549	-.16	-51
01632082	1BLNV001.22	VaDEQ	00620	1992-95	.8385	.01	3.3
01632082	1BLNV001.22	VaDEQ	00625	1992-95	.2318	-.14	-46
01632082	1BLNV001.22	VaDEQ	00630	1992-95	.8609	-.00	-2.3

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Streamflow site identification number	Load site identification number	Agency	Constituent code	Dates of estimated annual calendar year loads	Statistics		
					p-value	Slope (b)	Percentage change
01632900	1BSMT004.60	VaDEQ	00530	1985-96	0.6052	-0.01	-15
01632900	1BSMT004.60	VaDEQ	00600	1985-96	.0473	.02	23
01632900	1BSMT004.60	VaDEQ	00610	1985-96	.3282	-.04	-41
01632900	1BSMT004.60	VaDEQ	00620	1985-96	.1057	.02	23
01632900	1BSMT004.60	VaDEQ	00625	1985-96	.4998	-.01	-9.5
01632900	1BSMT004.60	VaDEQ	00630	1985-96	.0524	.02	32
01632900	1BSMT004.60	VaDEQ	00665	1985-96	.5884	.01	8.3
01635500	1BPSG001.36	VaDEQ	00530	1985-95	.0060	-.09	-68
01635500	1BPSG001.36	VaDEQ	00600	1985-96	.0203	-.03	-30
01635500	1BPSG001.36	VaDEQ	00620	1985-95	.2367	-.04	-38
01635500	1BPSG001.36	VaDEQ	00625	1985-95	.0495	-.02	-25
01635500	1BPSG001.36	VaDEQ	00665	1985-95	.2174	-.01	-14
01646000	1ADIF000.86	VaDEQ	00530	1985-96	.0253	-.06	-56
01646000	1ADIF000.86	VaDEQ	00600	1985-96	.0002	.04	59
01646000	1ADIF000.86	VaDEQ	00610	1985-96	.0638	-.06	-55
01646000	1ADIF000.86	VaDEQ	00620	1985-96	.0000	.05	90
01646000	1ADIF000.86	VaDEQ	00625	1985-96	.9578	-.00	-90
01646000	1ADIF000.86	VaDEQ	00630	1985-96	.0001	.06	110
01646000	1ADIF000.86	VaDEQ	00665	1985-96	.2841	-.02	-23
01669000	3-PIS009.24	VaDEQ	00530	1991-96	.4288	.04	30
01669000	3-PIS009.24	VaDEQ	00600	1993-96	.6888	.01	5.5
01669000	3-PIS009.24	VaDEQ	00610	1991-96	.2259	-.06	-31
01669000	3-PIS009.24	VaDEQ	00620	1991-96	.5622	.04	28
01669000	3-PIS009.24	VaDEQ	00625	1991-96	.1874	.04	25
02020500	2-CFP004.67	VaDEQ	00530	1985-95	.0064	-.09	-71
02020500	2-CFP004.67	VaDEQ	00600	1985-95	.0875	-.02	-19
02020500	2-CFP004.67	VaDEQ	00620	1985-95	.7578	.00	6.3
02020500	2-CFP004.67	VaDEQ	00625	1985-95	.0056	-.04	-39
02027500	2-PNY005.29	VaDEQ	00530	1991-96	.4401	-.12	-54
02027500	2-PNY005.29	VaDEQ	00600	1991-96	.0298	-.07	-63
02027500	2-PNY005.29	VaDEQ	00620	1991-96	.1143	-.10	-47
02027500	2-PNY005.29	VaDEQ	00625	1991-96	.4341	-.04	-23
02029000	2-JMS189.31	VaDEQ	00530	1985-95	.2308	.02	36
02029000	2-JMS189.31	VaDEQ	00600	1985-95	.9973	-.00	-1.0
02029000	2-JMS189.31	VaDEQ	00610	1985-95	.0023	-.06	-55
02029000	2-JMS189.31	VaDEQ	00620	1985-95	.0025	-.05	-50
02029000	2-JMS189.31	VaDEQ	00625	1985-95	.0389	.02	35
02029000	2-JMS189.31	VaDEQ	00630	1985-95	.3840	-.03	-30
02029000	2-JMS189.31	VaDEQ	00665	1985-95	.0014	-.04	-43

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