
CHESAPEAKE BAY WATERSHED MODEL APPLICATION AND CALCULATION OF NUTRIENT AND SEDIMENT LOADINGS

Appendix I: Model Operations Manual

A Report of the
Chesapeake Bay Program
Modeling Subcommittee
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Appendix Summary

Appendix I discusses the Chesapeake Bay Phase IV Watershed Model operating procedures. The Phase IV Watershed Model is a comprehensive package for simulation of watershed hydrology and water quality based on the Hydrological Simulation Program - FORTRAN (HSPF) code. The Phase IV Watershed Model allows the integrated simulation of land and soil contaminant runoff processes with instream hydraulic and sediment-chemical interaction. The Phase IV Watershed Model partitions the Chesapeake Bay into 86 segments. Each segment is divided in ten land uses and load sources which are: high tillage, low tillage, hayland, pasture, forest, pervious urban, impervious urban, animal waste, atmospheric deposition, and point sources. The model generates daily nonpoint source edge-of-stream (EOS) nutrient loads for each land use on a unit area basis and daily nutrient loads delivered to the bay. The simulation of the entire Chesapeake Bay Basin necessitates the run of 29 separate input decks. Each input deck, as it is currently designed, can simulate up to 3 segments of the basin. The simulation time is 12 years and spans from January, 1984 to December, 1995.

Each model run produces a history of the runoff flow rate, nutrient and sediment loads and concentrations, along with a history of water quantity and quality at any designated point in the watershed. The Chesapeake Bay Watershed Model generates edge-of-stream loads for the land uses simulated, as well as nutrient concentrations and loads in each segment.

This document, and other Chesapeake Bay Program modeling documents, can be found on the Modeling Subcommittee web page: <http://www.chesapeakebay.net/bayprogram/pol/mdsc/model.htm>

List of Phase IV Watershed Model Reference Appendices

- Appendix A Phase IV Chesapeake Bay Watershed Model Hydrology Calibration Results
- Appendix B Phase IV Chesapeake Bay Watershed Model Water Quality Calibration
- Appendix C Phase IV Chesapeake Bay Watershed Model Nonpoint Source Simulation
- Appendix D Phase IV Chesapeake Bay Watershed Model Precipitation and Meteorological Data Development and Atmospheric Nutrient Deposition
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- Appendix G Observed Water Quality Data Used for Calibration, A Simulation of Regression Loads, and a Confirmation Scenario of the Phase IV Chesapeake Bay Watershed Model
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Acronym Index

Acronym	Term
AU	Animal Unit
AWMSL	Animal Waste Management System (livestock)
AWMSP	Animal Waste Management System (poultry)
BF	Buffer Forested
BG	Buffer Grassed (on agricultural land)
BMP	Best Management Practice
CBP	Chesapeake Bay Program
CBPLU	Chesapeake Bay Program Land Use
CC	Cover Crop
CIMS	Chesapeake Information Management System
CRES	Federal Conservation Reporting and Evaluation System
CRP	Conservation Reserve Program
CSO	Combined Sewer Overflow
CT	Conservation Tillage
CTIC	Conservation Technology Information Center
ESC	Erosion and Sediment Control
ESWM	Enhanced Stormwater Management
FC	Forest Conservation
FCA	Forest Conservation Act (Maryland)
FHP	Forest Harvesting Practice
FSA	Farm Services Agency
GIS	Geographic Information System
HSPF	Hydrologic Simulation Program FORTRAN
MSDF	Marine Sewage Disposal Facility
NCRI	National Center for Resource Information
NMPI	Nutrient Management Plan Implementation
NRCS	National Resources Conservation Service
OSWMS	On-site Wastewater Management System
RC	Runoff Control
RHEL	Retirement of Highly Erodible Land
SC	Septic Connection
SCWQP	Soil Conservation and Water Quality Plan
SCWQPI	Soil Conservation and Water Quality Plan Implementation
SD	Septic Denitrification
SP	Septic Pumping
SPWF	Stream Protection With Fencing
SPWO	Stream Protection Without Fencing
SWCD	Soil & Water Conservation District
SWM	Stormwater Management
SWMC	Stormwater Management Conversion
SWMR	Stormwater Management Retrofit
TN	Total Nitrogen
TPLANT	Tree Planting
TP	Total Phosphorous
TSWG	Tributary Strategy Workgroup
UNM	Urban Nutrient Management
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
WDM	Watershed Data Management
WSM	Watershed Model

Section I.1 WATERSHED MODEL OPERATIONS MANUAL

The Chesapeake Bay Phase IV Watershed Model is based on the Hydrologic Simulation Program FORTRAN (HSPF) Model-Version 11 (Johanson et al., 1980). An HSPF simulation requires two types of input files: (1) the user control input (UCI) file which contains simulation time and output control information, hydrological and nutrient dynamic module control, initialization, parameterization, linkages between land and water, and specific nutrient loading information, and (2) the water data management (WDM) file which is a binary file containing input time series data for meteorological and precipitation, atmospheric deposition, and point sources. Output can also be stored in the WDM for retrieval by a separate UCI or other program files. It is also used to pass information downstream from simulations using separate UCIs for upstream and downstream reaches. The Phase IV Watershed Model is a collection of UCI and WDM files. Usually, several UCI files and one WDM file are the basic run files for a basin such as the Potomac.

Phase IV Watershed Model scenarios may involve changes in land use, septic loads, manure loads to pasture, linkage parameters representing the effects of structural BMPs, fertilizer loads to cropland, point source loads, atmospheric deposition loads, and the input data, or any combination of these, usually within the UCI files. The Phase IV Watershed Model operates within a system of FORTRAN programs and UNIX scripts which automate the process of modifying the UCI files. In general, the system works by reading an HSPF UCI file and generating a second file that is identical to the first except for specific changes that are incorporated into the new file. A file containing data formatted specifically for the FORTRAN executable controls the changes. The running of the executable and the copying of data files is controlled by a small UNIX script which is called recursively for all UCI files by a separate UNIX script.

The above method relies on codes, scripts, and data structures that were developed specifically for the Phase IV Watershed Model. The programs are not structured to read general HSPF files, only those that have input sections in a particular order and have a certain internal nomenclature. Use of the system decreases file modification time from approximately 100 to 250 employee-hours per Phase IV Watershed Model scenario down to 1 employee-hour per Phase IV Watershed Model scenario and eliminates typing errors, but it presupposes familiarity with UNIX, FORTRAN, and HSPF. Use of the system for the Phase IV Watershed Model requires careful implementation and a good understanding of the Watershed Modeling system. Use of these programs on other projects would, in addition, require extensive coding and data structure changes.

After a Phase IV Watershed Model simulation of land uses is completed, the concentration of nutrients in the riverbed is adjusted according to the adjacent and upstream edge-of-stream loads relative to the Phase IV Watershed Model Reference Scenario. Adjustment of bed concentrations of nutrients relative to edge-of-stream loads ensures that nutrients delivered to the Bay from the scour of the river bed during high flows are in equilibrium with nutrient loads delivered from land uses. To determine this adjustment, FORTRAN programs are applied to the Phase IV Watershed Model output to obtain a data set that can be used by SAS. These data sets are then processed into edge-of-stream loads and bed adjustment factors by the SAS post-

processor. After adjustment, Phase IV Watershed Model simulations are rerun in order to obtain delivered loads. These loads are then processed using a combination of SAS and spreadsheet applications to arrive at the final delivered loads.

Section I.1.1 Non-Standard HSPF11.1 Practices in Phase IV

HSPF Version 11.1 is used for Phase IV Watershed Model simulations with a few modifications to standard procedures. This document is not intended to be an HSPF manual, so the UCI files will not be explained in detail here, only the procedures that are not specifically mentioned in the manual will be explained below. For further information on HSPF Version 11.1 UCI files see Bicknell, et.al. (1996).

Section I.1.1.1 Onsite Wastewater Management System Inclusion

Simulation of OSWMSs in HSPF is implicitly modeled and is directly loaded as an edge-of-stream load. Septic system loading is a constant nutrient source throughout the year. OSWMS loads are estimated for any scenario year based on the ratio of population in the scenario year to the population in 1990, the base year of the OSWMS data set (Maizel, et.al., 1995). The septic system time series WDM is a time series with a unit of 1 for every day of the simulation and is multiplied in the UCI file by the daily load in pounds per day. This eliminates the need for developing multiple septic system WDMs and allows more rapid, flexible generation of septic system input loads. For each Phase IV Watershed Model scenario, the UCI septic multiplier is replaced with the estimated daily septic system input load specific to the year simulated.

Section I.1.1.2 Atmospheric Deposition To Impervious Land

The simulation of wet fall atmospheric deposition is an improvement in HSPF 11 over HSPF 10. Wetfall deposition on impervious land is simulated with estimated atmospheric deposition nitrate and ammonia concentrations in separate WDM files. When rain fall occurs, the nitrate and ammonia concentrations are multiplied against the precipitation volume of each hourly time step. Dry deposition of atmospheric nitrate is simulated by applying a daily nitrate load in the QUAL-INPUT section of the IMPLND input.

Section I.1.1.3 Using Concentrations To Derive The Load

The standard method of retrieving loads from HSPF is to output them directly. However, these output loads underestimate phytoplankton leaving the reach, and hence underestimate organic nutrients because HPSF assumes that a certain amount of phytoplankton will remain in the reach. Therefore, the program subtracts that amount from the output load, implying that the concentration in the water leaving a particular reach is less than that concentration generally found in the reach. Since the Phase IV Watershed Model is calibrated to observations of chlorophyll concentrations at the discharge of a reach, the Phase IV Watershed Model

simulations calculate products of the simulation concentrations of chlorophyll and the volume of the water discharged from the reach to simulate the phytoplankton derived portion of the total organic load.

Section I.1.1.4 Changing The Concentration Of Nutrients Sorbed To Sediment

HSPF assumes that scoured sediment detached from the reach bed during high flows has a certain user-defined nutrient concentration sorbed to it, which then becomes available for desorption in the water column and advection as a dissolved or particulate nutrient. Using the assumption that a watershed that has a lower nutrient load will have lower nutrient concentrations in the bed sediments, a method for lowering these concentrations based on the upstream loads relative to the Phase IV Watershed Model Reference Scenario load was developed. The method forms a ratio of the edge-of-stream loads of a particular scenario with the edge-of-stream loads of the Reference Scenario. The ratio formed is then applied to increase or decrease the bed nutrient concentrations.

Section I.1.2 Procedure for Changing UCI Files and Creating the Watershed Model Reference Scenario from Calibration.

The Phase IV Watershed Model Reference Scenario is based on 1985 land use, BMPs, point source loads, septic system loads, animal numbers, etc. and the application of hourly simulated hydrology of the 1984-1987 period, the CBP average hydrology year. The Phase IV Watershed Model calibration is based on data that varies yearly for point source data and septic system loads, daily for atmospheric deposition, and uses constant 1990 land use data.

For the calibration period, the base year 1990 Chesapeake Bay Program land use data set (see Appendix E) is used. For the Phase IV Watershed Model Reference Scenario, land use data was changed to 1985 using the land use and pasture change program (Attachment A). Loading to pasture was also changed using the same program according to 1985 beef cattle numbers, and the 1985 pastureland land use values. Septic loads were also set at the 1985 levels.

The MASS-LINK section of the UCI file was reworked so that each land use had its own specific MASS-LINK. The MASS-LINK section determines how land simulation export variables are applied to riverine simulation input variables. Phase IV Watershed Model scenarios involving BMP efficiencies necessitate that each land use have its own MASS-LINK so that they can be individually modified. The MASS-LINK section is modified using a FORTRAN program (see Attachment B). A new WDM was produced with only 1985 point sources repeated for all years instead of the year-by-year changes in point source used in the calibration scenario. The new WDM also removed the tropical storm that affected the James and Potomac basins during the first two weeks of November 1985. This storm is estimated to have a return frequency of 100 years and the Chesapeake Bay Program Modeling Subcommittee determined that it was not characteristic of an average hydrology, and that it should not be included in comparative Phase IV Watershed Model scenarios.

The resultant Phase IV Watershed Model Reference Scenario UCI file is used as a base for all other Phase IV Watershed Model scenarios. The procedures laid out in the following sections assume that a user would be beginning from the Phase IV Watershed Model Reference Scenario UCI files.

Section I.1.3 Creating Watershed Model Scenario UCI Files From The Watershed Model Reference Scenario

Several types of changes are made to Phase IV Watershed Model Reference Scenario UCI files to develop a Phase IV Watershed Model scenario. The Special Actions (SPEC-ACTIONS) section contains instructions for loading fertilizer onto cropland and previous urban and manure onto cropland and pasture. The fertilizer inputs to cropland are reduced to simulate nutrient management and manure loads to pasture are changed to simulate changing animal populations and pasture acreage. The SCHEMATIC section is changed to reflect the new land use. The MASS-LINKS section for each individual land use is multiplied by a pass-through efficiency determined by an aggregation of BMPs for that specific land use. Adding factors to the External Sources (EXT SOURCES) section changes point sources and septic system parameters.

All UCI file change programs are designed to read a specified UCI file and generate a new file with updated data or parameters according to a watershed-wide data file specific to each scenario. The new file is then renamed to the original UCI file name.

As described above, land use and pasture are changed with a FORTRAN program (Attachment A). This program reads the INGRP section of the original UCI file to determine the Phase IV Watershed Model segments covered by the file. It then reads land use and semi-daily load to pasture from the data file. The original UCI file is copied into the modified UCI file except where these data are substituted as necessary for the original data.

The nutrient management program modifies the Special Actions according to load data in the original file and fertilizer percentages in the data file (See Attachment C). The fertilizer percentages are the average fertilizer application per acre under the current scenario divided by the original fertilizer per acre application. As with the land use program the INGRP is checked to determine the Phase IV Watershed Model segments in the UCI file and information from the data file for each Phase IV Watershed Model segment is read and stored. For each special action, the program determines the type of action. If it is an application of fertilizer, the Phase IV Watershed Model segment, land use, and application amount is read. The application is multiplied by the percentage from the data file and the line is re-written with the new application in the modified UCI file. This program also changes the WDM file specification to the correct scenario. Special caution must be used with this program since running it twice on the same UCI file will result in the square of the desired effect.

The mass link change program (See Attachment D) is similar to the nutrient management program except it deals with the MASS-LINK section instead of the SPEC-ACTIONS. After the beginning of the UCI file and data file are read to determine the mass link factors specific to that scenario, the program copies the original file to the modified file until it reaches the mass link

section. For each mass link, the Phase IV Watershed Model segment and land use are determined and percentages are found for nitrogen, phosphorus, and sediment. Each line within a mass link is read to determine the nature of the target and if any factor is already applied. If no factor is there, the factor is assumed to be 1.0. The existing factors are multiplied by percentages according to the Phase IV Watershed Model segment, land use, and target before rewriting the line. As with the nutrient management program, the mass link program must only be run once with each file.

Point source and septic load data are changed in the files that have reaches by modifying the EXT SOURCES section (See Attachment E). After the Phase IV Watershed Model segments are determined and point source and septic factors are read from the data files, the original file is copied to the modified file until a point source or septic line is detected. The line is read to determine the Phase IV Watershed Model segment and target and the appropriate factor is inserted. In the case of septic, the WDM contains a value of 1 for every day for each Phase IV Watershed Model segment. The program inserts the daily-attenuated nitrate load in pounds per day into the line. Point sources in the WDM are the original 1985 point sources. The factors in the data file are found by dividing the Watershed Model segment specific point source load for the current scenario by the 1985 point source load.

Atmospheric deposition scenarios are based on previous Phase IV Watershed Model scenarios. Changes in atmospheric deposition are accomplished in one of two ways. If the Phase IV Watershed Model scenario is a scoping scenario without atmospheric deposition, the EXT SOURCES section is modified in much the same way as for point sources. Using the same type of program, the inputs from the WDM are multiplied by zero. For all other cases, input reductions are supplied to the Chesapeake Bay Program on a seasonal basis. These are incorporated into the WDMs using a UNIX script that, using commands and calling several FORTRAN programs, reads the UCI file, corrects for data overlap, modifies the original WDM or makes new WDMs as necessary, and modifies the UCI to accept the new WDMs. In addition to WDM changes, changes are made in the UCI. The simulation of the atmospheric deposition of dry nitrate to impervious land is accomplished using a daily load that is specified in the UCI. This load must be multiplied by an average reduction again using a FORTRAN program (Attachment F).

Section I.1.3.1 Creating Data Structures

Each program referenced above requires that data be available for input in a specified format. For ease of use, this format was set at eight-character columns, which is the default text export column size for most spreadsheets, including Microsoft's Excel. Since this guide is intended for internal and external use, both the general data structure and specific Chesapeake Bay Program data files will be discussed for each data type. All files listed here are either on the file system of spot.ann.epa.gov under the directory /work/dpi/phase4a/excel_processing/ or on the Chesapeake Bay Program LAN under f:\user\shared\modeling\. The two file systems will be referred to hereafter as spot: or LAN, respectively. Any words in *Italics* in the following section are general placeholders for specific scenario names.

For scenarios that do not involve a change in land, the land use and pasture change program uses a text export of the last worksheet of the land use on the stored under LAN:land_use\YEARv.xls. In progress-type scenarios, land use change information is supplied by the Bay Agreement Signatory States or by Federal BMP tracking databases for the non-signatory states . This information must be incorporated into the land use. This is done using a spreadsheet such as spot:scenario/lu2sc_st.. The manure acres and the total load to pasture per Watershed Model segment from beef cattle are set by an analysis of the agricultural census. Changing the pasture acreage alters the loading rate. Care must be taken to assure that the land use year being used accurately reflects the correct manure acres and total pasture loading for that year. Yearly pasture loading is found in f:\user\shared\modeling\land_use\ma_all.xls. Yearly manure acres are found in f:\user\shared\modeling\man_acre.xls. The program accepts them in the following order, eight characters per column: Phase IV Watershed Model segment, forest, conventional till, conservation till, pasture, pervious urban, hay, manure, impervious urban, {blank column}, {blank column}, ammonia to pasture, organic nitrogen to pasture. An example is found in Attachment A.

Reductions of fertilizer are specified on a Phase IV Watershed Model segment and land use basis. The file is in the eight-column format with Phase IV Watershed Model segment in the first column, followed by fertilizer percentages for nitrogen conventional tillage, conservation tillage, and Hay. The fifth column is no longer used. Columns six through eight repeat the above land uses for phosphorus. The calculation of these is part of the Phase IV Watershed Model scenario load calculation file (spot:scenario/nmml_sc.xls). These values are calculated as a percentage of the limit of technology reduction proportional to the amount of land use in nutrient management. For scenarios involving a change in atmospheric deposition, the limit of technology reduction in fertilizer decreases as the atmospheric load decreases. The new limit of technology can be found in spot:z_nutman/nut_man_XXX_atdep.xls. An example of the final data file can be found in Attachment C.

State and Federal BMP tracking data are aggregated and combined by a process detailed in Section 2 of this Appendix. BMPs, which are not reductions in input loads, are implemented in the Phase IV Watershed Model based on their assumed percentage nutrient reduction efficiency. Once these aggregated BMP factors are produced for each state and Phase IV Watershed Model segment, they are aggregated again by segment for use in the Phase IV Watershed Model. These BMPs are incorporated into the Phase IV Watershed Model by modifying the MASS-LINKS, which are the linkages between the land and water. These data files are stored in spot:scenario/mls_sc.xls. A sample of the data file can be found in Attachment D. The program accepts a 25-column data input file. The first column is the Phase IV Watershed Model segment, the next eight columns are the nitrogen factors for the eight land uses in the same order as the land use and pasture data file. The next eight is the same order for phosphorus, with the final eight columns for sediment.

Daily septic loads estimated for years through 2020 can be found in f:\user\shared\modeling\septic\sep_load.xls. In scenarios involving septic BMPs these must be modified before use. The modified versions are found in the mass link files spot:scenario/mls_sc.xls. The Chesapeake Bay Program Point Source Team supplies point

source data for each Phase IV Watershed Model scenario. At the time of this publication, the most recent files were located in f:\shared\modeling\pointsrc\fact9_12\. Factors for each constituent versus the base case given in a file that must then be manipulated to have the factors in the correct order. The order, again in eight-column format is: Watershed Model segment, flow, ammonia, nitrate, phosphate, heat, organic nitrogen, and organic phosphorus. Since flow entering through point source has no default temperature, heat must be supplied as a quantity to avoid adding water with zero heat. Assuming that the temperature of the flow from point source doesn't change from scenario to scenario, the flow factors can be copied into the heat column, reducing the BTUs of point sources proportional to point source flow. Samples of both of these files can be found in Attachment E.

Section I.1.3.2 Scripting Of UCI Change and Chesapeake Bay Phase IV Watershed Model Scenarios

All FORTRAN programs that modify UCI files are run from small script files called by aliases. These aliases are invoked from script files that change large groups of files at once. UCI files that contain reaches are modified differently from those that do not, so there are two basic UCI change scripts which are modified to reflect the scenario and the change being made. Since UCI files for the Conowingo are different in character from the rest of the basin, these files are changed using unique scripts. After all changes have been made, working files are returned to their original names and all working files are removed.

After all changes have been made, each basin can be run with a script that will run each file and move the output to the correct location. All files must be run three times. The first two Watershed Model scenarios generate the standard Chesapeake Bay Watershed Model Scenario output. These Watershed Model scenarios are eight years in length and have the 100-year storm of November 1985 removed from the rainfall input. The first Watershed Model Scenario generates the edge-of-stream loads that are used to determine the bed concentration adjustments. The second Watershed Model Scenario generates the final delivered loads used to create the transport factors. The third Watershed Model Scenario uses the UCI files with adjusted bed concentration and generates the twelve-year loads with the 100-year storm for use in the Chesapeake Bay Water Quality Model.

Section I.1.3.3 Scripts for Atmospheric Deposition Reduction Watershed Model Scenarios

Percentage reductions in atmospheric deposition predicted by the Regional Acid Deposition Model (RADM) are used within Phase IV Watershed Model scenarios. These percentage reductions are supplied for each Phase IV Watershed Model segment and are different for warm and cold seasons. Atmospheric deposition data are entered as time series values into a Watershed Data Management (WDM) file within the Phase IV Watershed Model. The UCI provides for adjusting these values in the WDM by a constant factor, but not for factors that are time dependent. Therefore, the WDM must be changed for each Phase IV Watershed Model scenario that involves changing atmospheric deposition on a seasonal basis. These Phase IV

Watershed Model scenarios make use of special UNIX scripts and FORTRAN programs that modify the WDM during Phase IV Watershed Model scenarios.

The following tasks are all performed automatically using the script found in Attachment K-1. The generic script is inserted into the script files listed in Attachment I and run separately for each UCI file. First, all previous working files are removed and the main UCI and a template file called `get_ts_temp` (Attachment K-2) are copied to the working directory. A FORTRAN program (Attachment K-3) is then used to combine these files into a UCI called `make_atdep_pltgen.inp`. When this UCI is run with HSPF, it creates an ASCII data files for each Phase IV Watershed Model segment in the main UCI. These data files contain the hourly atmospheric deposition for wet ammonia deposition and wet and dry nitrate/nitrite deposition. These data files are read by a FORTRAN program (Attachment K-4) and each nitrate/nitrite value is multiplied by the correct seasonal factor for the Phase IV Watershed Model segment and month according to the data files specific to the Phase IV Watershed Model scenario. Examples of these files can be seen in Attachment F-2. The program then outputs new ASCII files with the modified data. Once these changes are made, the new data files are loaded back into the WDM by means of a UCI that is created from the UCI that extracted the data. This modified UCI, named `put_atdep_pltgen.inp`, is created using the program in Attachment K-5. Finally, the script runs this UCI with the Phase IV Watershed Model to complete the WDM modification.

A problem arises when two or more Phase IV Watershed Model segments in the same UCI share the same atmospheric deposition time series. If this is the case, a conflict has arisen in that the atmospheric deposition will no longer be equal after the multiplication by the seasonal reduction coefficients. The resolution of this conflict is to create a new WDM for each Phase IV Watershed Model segment that stores only atmospheric deposition. For those UCIs in which a conflict is found the program in attachment K-3 creates a file named 'conflict' that stores the Phase IV Watershed Model segments and the new WDM numbers. Once it is determined that there is a conflict, the new WDMs must be created and the main UCI modified to point to the correct WDMs. The main UCI, which is already in the working directory and named 'temp_uci', is modified using the 'conflict' file and the FORTRAN program contained in Attachment K-6. This creates a file named 'wtemp_uci' that then replaces the original main UCI in the input directories. The script then copies a new blank WDM for each Phase IV Watershed Model segment into the working directory to store the modified atmospheric deposition time series. Finally, a modified version of the program in Attachment K-5 (Attachment K-7) creates the `put_atdep_pltgen.inp` UCI that is then run with HSPF to load the new WDMs with the modified atmospheric deposition data.

Section I.1.4 Step-by-Step Instructions for the Chesapeake Bay Phase IV Watershed Model Scenarios

The following section gives detailed instructions on running a Chesapeake Bay Phase IV Watershed Model scenario. This information is relevant only to the Chesapeake Bay Program and must be adapted for applications outside of the Bay Program. Using this guide, a user familiar with spreadsheets, UNIX, and the input data should be able to perform and trouble-shoot a Phase IV Watershed Model scenario.

Section I.1.4.1 Directory Structure

An understanding of the directory structure is necessary for using the scripts described below. All of the Phase IV files are stored under the directory `/work/dpi/phase4a/`. The first level below describes the function of the files. The directories are `inputs/`, `outputs/`, `scripts/`, and `util/`. For all except the `util/` directory, the second level refers to the major basin. The major basins are Susquehanna, Potomac, James, and Coast. The Potomac directories include the Rappahannock and the Patuxent. The James directories include the Appomattox and the York. The coast directories include the Patapsco, Choptank, and Nanticoke rivers and all Phase IV Watershed Model segments below the fall line. The next level below the major basin refers to the individual scenario. Any levels below the scenario level refer to a sub-basin, although these are not always used. In the `util/` directory, the two sub-directories of note are `bin/` and `src1/`. The subdirectory `bin/` contains the executable, data, and script files that affect the UCI file changes. The subdirectory `src1/` contains the source code for all of these executables.

Section I.1.4.2 Step 1: Moving And Creating Input Files

Two scripts are used to create the directory structure and copy the input files into place. These can be seen in `/work/dpi/phase4a/util/z6_brute_force_scenario_input_copy.com` and `/work/dpi/phase4a/util/z3_make_scenario_subdir.com`. The user must modify both of these files by setting the variable `'scen'` to the new Phase IV Watershed Model Scenario. The user must also select a Phase IV Watershed Model scenario to be copied from in the `z6_brute_force_scenario_input_copy.com` by setting the variable `'oldscen.'` In almost all cases, the `'oldscen'` should be used as the Phase IV Watershed Model Reference Scenario, known as *s01ref*. The code names of all Phase IV Watershed Model scenarios can be found in the file `/work/dpi/phase4a/util/scenario`.

Section I.1.4.3 Step 2: Changing UCI Files

The UCI files are changed using a script that calls each of the UCI file change programs in turn, moves the created files to their correct locations and then deletes the other working files. This script must be modified for each Phase IV Watershed Model scenario using the directions found in the first few lines. The file is named `/work/dpi/phase4a/inputs/abc_mv_kill.com` and can be seen in Attachment H. It is also necessary to change the name of the WDM used in each input file to the WDM appropriate for the current Phase IV Watershed Model scenario. This is accomplished most easily by using the UNIX script `/work/dpi/phase4a/inputs/ed_wdm_line.com` and the script `/work/dpi/phase4a/inputs/ed_wdm_line.edp`. Samples of these two files can be found in Attachment H. Both files must be modified for the current Phase IV Watershed Model scenario.

Section I.1.4.4 Step 3: First Phase IV Watershed Model Scenario

After the UCI files are made, they are run for the first time to find edge-of-stream loads. The first script file checks to make sure that all UCI files are set to run through the end of 1991. It then runs all of the UCIs in turn, moving the output to the correct location at the end of each Phase IV Watershed Model scenario. The third section uses the output files from each land use to create the sXX_p4.eos files, where XX is the Phase IV Watershed Model segment. These files are then copied to the /work/dpi/phase4a/outputs/eos_ppoc/scenario/ directory and the script file /work/dpi/phase4a/outputs/eos_ppoc/all.com is run to generate the file eos.prn. This file contains the four-year average loads of total nitrogen and total phosphorus for each land use and Phase IV Watershed Model segment. The generation of the eos.prn file uses a FORTRAN program found in Attachment J. Finally, the script collects the date and last line of all of the echo files for this run, generating a file called all_scenario_echs. A visual check of this file will show whether the Phase IV Watershed Model scenario was successful or not. The last line of each echo file should read 'End of Job' and the dates of the files should be consistent with the time of the Phase IV Watershed Model scenario. The scripts are found in /work/dpi/phase4a/scripts/ and are called sXXrun1.com, where XX is the Phase IV Watershed Model scenario number. A sample script for the first run can be found in Attachment I.

Section I.1.4.5 Step 4: Adjustment Of Bed Concentration

As mentioned above, the Chesapeake Bay Phase IV Watershed Model adjusts the concentration of adsorbed ammonia and phosphate in the bed sediment of the free-flowing rivers. This adjustment is proportional to the change in edge-of-stream loading from all upstream sources for each particular reach Phase IV Watershed Model segment. These factors can be determined by comparing the Phase IV Watershed Model Reference Scenario edge-of-stream loads to those of the current Phase IV Watershed Model scenario. The first run script file generates the eos.prn file for each Phase IV Watershed Model scenario. This file must be used in a spreadsheet to find the bed concentration adjustment. A typical spreadsheet is found in /work/dpi/phase4a/excel_processing/scenario/ with the name bed_scenario.xls. This file requires the input of the eos.prn, land use, mass link factors, point source factors, and septic loading. All of this information should be found in files in the same directory or in standard Phase IV Watershed Model data file locations. This is the same type of information that is used to create the data files for the UCI file change programs detailed above. After the bed concentration adjustment data file is created, the UCIs are recreated with new concentration values using the FORTRAN program in Attachment G.

Section I.1.4.6 Step 5: Second Phase IV Watershed Model Scenario

After the final UCIs are made in the step 3, the second Phase IV Watershed Model scenario is performed using the scripts found in /work/dpi/phase4a/scripts/ called s??run2.com, where ?? is the Phase IV Watershed Model scenario number. A sample script for the second Phase IV Watershed Model scenario can be found in Attachment I. The second Phase IV Watershed

Model scenario only applies to those Phase IV Watershed Model segments that have reaches since the only difference is the bed concentration. The script first simulates all of the above fall line segments and moves the output to the correct location. It then calls another FORTRAN program (found in Attachment J) which uses the in-stream concentration files to determine the loads for each reach that are delivered to the next downstream reach or to the Bay. These values are stored in files named s??_p4.load_tf. As with the edge-of-stream files, these are copied to the directory /work/dpi/phase4a/outputs/load_pproc/scenario/ and combined using the script file /work/dpi/phase4a/outputs/load_pproc/all_loads.com to create the file tloads.prn. Finally, the script generates a file called all_scenario_echs_tf which, similarly to the first run, can be visually inspected for completion of the second Phase IV Watershed Model scenario.

Section I.1.4.7 Step 6: Phase IV Watershed Model Delivery Factors

To determine the loads delivered to the Chesapeake Bay from each source within each Phase IV Watershed Model segment, delivery factors must be developed which give the fraction of the total load entering any particular Phase IV Watershed Model segment containing a river that reaches the Bay. These delivery factors are determined using a spreadsheet, the tloads.prn file mentioned above and the total edge-of-stream loads. The total edge-of-stream loads can be found in the bed concentration file mentioned above but they do not include sediment. The preferred method is the use of the post-processed edge-of-stream loads by Phase IV Watershed Model segment.

The spreadsheet will be in the /work/dpi/phase4a/excel_processing/scenario/ directory and be called df_scenario.xls. It will automatically calculate the delivery factors given the correct input from the other two files. The file tloads.prn for the current scenario can be used as produced without modification. The post-processed edge-of-stream loads require more processing. After the initial post-processing is finished, files will be placed in /work/dpi/phase4a/tables/scenario/ that have the nomenclature convention m03##s?.lss. The ## is the table number and the ?? is the Phase IV Watershed Model scenario number. The edge-of-stream loads can be obtained directly from these files or, using the executable grab03.out (that is found one directory above), these files can be combined to form a more useful version. The delivery factors are automatically calculated.

Section I.1.4.8 Step 7: Third Phase IV Watershed Model Scenario

This Chesapeake Bay Phase IV Watershed Model scenario is a twelve-year simulation that applies a nutrient load to the Chesapeake Bay Water Quality Model. This third Phase IV Watershed Model scenario uses the adjusted bed concentrations of the second Phase IV Watershed Model scenario but simulates for twelve years instead of the previously mentioned eight-year simulation. The precipitation data include the November 1985 storm that was removed from the regular Phase IV Watershed Model scenarios. Also, the loads from the below fall line Phase IV Watershed Model segments have organic and particulate phosphorus separated. This Phase IV Watershed Model scenario is more economic in output, since only the delivered load files need be retained. The scripts, inputs, and outputs are all stored in parallel

directories of the first two Phase IV Watershed Model scenarios under ccscripts, ccinputs, and ccoutputs. The third Phase IV Watershed Model scenario script files, which can be found in /work/dpi/phase4a/ccscripts/ follow the naming conventions of the other scripts. They first copy the input files in inputs/ to the new directories under ccinputs/ and change the Phase IV Watershed Model Scenario time to run through the end of 1996. Next they change the UCI line directing HSPF to look under /work/dpi/phase4a/ccwdm/ rather /work/dpi/phase4a/wdm for the location of the WDM. The run section of the script file is like the previous Phase IV Watershed Model scenarios except that only the files describing load that is delivered to the Water Quality Model are kept, with the rest deleted. After all files are run once, the script then takes the below fall line UCI files and generates similar UCIs that will output particulate rather than organic phosphorus. The script then runs these files, whose names include the word ‘ppar’ to generate the final outputs. At the end of the script, the echo files are again checked for completion. The file generated is called all_< i>scenario_ccechs. A sample of a third Phase IV Watershed Model scenario script file can be seen in Attachment I.

Section I.1.5 Transport and Delivery Factors Used for Interpreting Phase IV Watershed Model Output

Transport and delivery factors are an accounting system for allocating fall line nutrient loads to all upstream sources. These factors do not exist in the Phase IV Watershed Model. Rather, they are calculated from the edge-of-stream and delivered load outputs. Transport factors are assigned per Phase IV Watershed Model segment and measure transport efficiency from one Phase IV Watershed Model segment to the next downstream segment. Delivery factors measure the transport efficiency from one Phase IV Watershed Model segment to the fall line. A delivery factor for a particular Phase IV Watershed Model segment can be calculated by multiplying the transport factor for that segment by the transport factors for all downstream segments. For use as an accounting system, delivery factors must satisfy the requirement that the fall line load for a particular river must equal the sum of all upstream edge-of-stream loads times their respective delivery factors:

$$\sum_{computation_unit} Win \cdot DF = \sum_{computation_unit} Wout \tag{1}$$

Or: for any unit for which a delivery factor is computed:

$$DF = \frac{\sum Wout}{\sum Win} \tag{2}$$

The size of a computational unit depends on the major mechanism being captured in the delivery factor. The mass balance equation for a modeled substance in a riverine system is:

$$\frac{d(Vc)}{dt} = Win - Wout - \rho cA + Wscour - kcV \quad (3)$$

At steady state this becomes

$$Wout = Win - \rho cA + Wscour - kcV \quad (4)$$

Using this equation with equation (2), one can write a delivery factor equation as:

$$DF = 1 - \frac{\rho cA - Wscour + kcV}{Win} \quad (5)$$

For the case of total phosphorus, there is no removal mechanism i.e. ($kcV=0$). The bed interaction ($\rho cA - Wscour$) for phosphorous is a randomly distributed variable depending on the magnitude of flow. In the long term, settling will approximately equal scour, so that the long term delivery factor for phosphorus is theoretically one. Therefore, the distance from the source to the fall line is not significant. However, over the short term, the bed interaction is not zero and, given the constraint of equation (1), we apply equation (2) over the entire basin. This method gives a delivery factor for phosphorus that is identical for each segment in a basin and renders transport factors for phosphorus meaningless.

For the case of total nitrogen, the removal term (kcV) represents denitrification. This means that the distance from the source to the fall line is significant. Equation (2) is applied over each segment to determine the individual transport factors that are then multiplied by downstream transport factors to arrive at individual delivery factors for each segment.

Delivery factors change in different scenarios as the simulated river chemistry changes. Delivery factors for the Tributary Strategy Scenario are shown in Table I.1.1.

Table I.1.1 Chesapeake Bay Tributary Strategy Phase IV Watershed Model Scenario Total Nitrogen (TN), Total Phosphorous (TP) and Sediment Delivery Factors

Drainage Basin	Phase IV Watershed Model Segment	TN Load Delivery Factor	TP Load Delivery Factor	Sediment Load Delivery Factor
Susquehanna River	10	0.6029	0.4847	0.6659
	20	0.6132	0.4847	0.6659
	30	0.7568	0.4847	0.6659
	40	0.8202	0.4847	0.6659
	50	0.5429	0.4847	0.6659
	60	0.6823	0.4847	0.6659
	70	0.8135	0.4847	0.6659
	80	0.8999	0.4847	0.6659
	90	0.6285	0.4847	0.6659
	100	0.6990	0.4847	0.6659
	110	0.9220	0.4847	0.6659
	120	0.9462	0.4847	0.6659
	140	0.9819	0.4847	0.6659
	700	0.7378	0.4847	0.6659
710	0.9412	0.4847	0.6659	
720	0.7474	0.4847	0.6659	
Patuxent River	330	0.2909	0.5787	0.5472
	340	0.8601	0.5787	0.5472
	500	1.0000	1.0000	1.0000
	990	1.0000	1.0000	1.0000
Potomac River	160	0.6338	1.0166	4.2715
	170	0.6450	1.0166	4.2715
	175	0.7918	1.0166	4.2715
	180	0.9152	1.0166	4.2715
	190	0.4862	1.0166	4.2715
	200	0.7359	1.0166	4.2715
	210	0.7812	1.0166	4.2715
	220	0.9204	1.0166	4.2715
	730	0.7318	1.0166	4.2715
	740	0.8379	1.0166	4.2715
	750	0.6070	1.0166	4.2715
	540	1.0000	1.0000	1.0000
	550	1.0000	1.0000	1.0000

Drainage Basin	Phase IV Watershed Model Segment	TN Load Delivery Factor	TP Load Delivery Factor	Sediment Load Delivery Factor
Potomac River (continued)	890	1.0000	1.0000	1.0000
	900	1.0000	1.0000	1.0000
	910	1.0000	1.0000	1.0000
	920	1.0000	1.0000	1.0000
	970	1.0000	1.0000	1.0000
	980	1.0000	1.0000	1.0000
Rappahannock River	230	0.6347	0.7795	1.5870
	560	1.0000	1.0000	1.0000
York River	235	0.5362	0.6466	0.7721
	240	0.6005	0.6466	0.7721
	250	0.0891	0.4123	0.6711
	260	0.5956	0.4123	0.6711
	590	1.0000	1.0000	1.0000
James River	265	0.0832	0.9452	5.2621
	270	0.2505	0.9452	5.2621
	280	0.5738	0.9452	5.2621
	290	0.7802	0.9452	5.2621
	300	0.5946	0.7313	0.2633
	310	0.8396	0.7313	0.2633
	600	1.0000	1.0000	1.0000
	610	1.0000	1.0000	1.0000
	620	1.0000	1.0000	1.0000
	630	1.0000	1.0000	1.0000
Eastern Shore Of Maryland	370	1.0000	1.0000	1.0000
	380	1.0000	1.0000	1.0000
	390	1.0000	1.0000	1.0000
	400	1.0000	1.0000	1.0000
	410	1.0000	1.0000	1.0000
	420	1.0000	1.0000	1.0000
	430	1.0000	1.0000	1.0000
	450	1.0000	1.0000	1.0000
	770	0.7400	0.7957	0.9493
	780	0.7124	0.8673	1.1342

Drainage Basin	Phase IV Watershed Model Segment	TN Load Delivery Factor	TP Load Delivery Factor	Sediment Load Delivery Factor
Eastern Shore Of Maryland (continued)	800	1.0000	1.0000	1.0000
	810	1.0000	1.0000	1.0000
	820	1.0000	1.0000	1.0000
	830	1.0000	1.0000	1.0000
	840	1.0000	1.0000	1.0000
Western Shore Of Maryland	470	1.0000	1.0000	1.0000
	480	1.0000	1.0000	1.0000
	490	1.0000	1.0000	1.0000
	500	1.0000	1.0000	1.0000
	510	1.0000	1.0000	1.0000
	760	0.9149	0.9311	0.5792
	850	1.0000	1.0000	1.0000
	860	1.0000	1.0000	1.0000
	870	1.0000	1.0000	1.0000
	880	1.0000	1.0000	1.0000
Eastern Shore Of Virginia	440	1.0000	1.0000	1.0000
Western Shore Of Virginia	580	1.0000	1.0000	1.0000
	930	1.0000	1.0000	1.0000
	940	1.0000	1.0000	1.0000
	950	1.0000	1.0000	1.0000
	960	1.0000	1.0000	1.0000
	650***	0.0000	0.0000	0.0000
*** these loads do not enter the Bay but are associated with the drinking water supply to Baltimore City. The flows and nutrient loads ultimately are accounted for in the Phase IV Watershed Model as discharges from the Back River and Patapsco sewage plants				

Section I.2 METHODOLOGY OF AGGREGATING AND DISAGGREGATING DATA FOR USE WITHIN THE CHESAPEAKE BAY PHASE IV WATERSHED MODEL

Given the large amount of input data required by the Chesapeake Bay Phase IV Watershed Model and the various ways that the Phase IV Watershed Model scenario output is analyzed to evaluate the nutrient reduction progress of the Chesapeake Bay basin jurisdictions, various methods are used to aggregate and disaggregate data for use within the Phase IV Watershed Model. The following describes these methods.

Section I.2.1 Aggregating BMP Data

Within the Chesapeake Bay Phase IV Watershed Model , BMPs can be applied in two ways. Certain types of nonpoint source BMPs (i.e. nutrient management and atmospheric deposition) are simulated as a reduction in Phase IV Watershed Model input parameter loads. Others are simulated as percentage reductions in nutrient and suspended sediment export from the land. For a single land use, the reduction in Phase IV Watershed Model input parameter loads must be aggregated by state and Phase IV Watershed Model segment using the method described below.

The Chesapeake Bay Phase IV Watershed Model simulates one acre of land for each land use in a Phase IV Watershed Model segment. When multiple BMPs are implemented on the same land use, they may be implemented on physically separate acres or they may be implemented on the same area. When several BMPs are implemented on an individual land use, percent reductions have to be combined in some manner to reflect the amount of nutrient export reduction being obtained with these BMPs. BMPs that cannot be applied to the same land are additive in their nutrient reduction capabilities. That is, the reduction efficiencies of the BMPs can be added together. On the other hand, some BMPs are consecutive in the effects. For these BMPs, implementing one BMP reduces the nutrients available for subsequent BMPs implemented on or effecting the same acres of a particular land use. In essence, these BMPs are multiplicative in their nutrient reduction effects. The methodologies used to make these aggregate BMP calculations are presented below.

An example of BMPs with additive efficiencies is streambank protection with fencing and streambank protection without fencing. These BMPs would be implemented on separate reaches of a streambank, so their efficiencies should be added, since their effects are mutually exclusive of each other. The aggregate efficiencies of these BMPs can be calculated (Equation 6) by summing the nutrient reduction efficiencies of each BMP.

$$\epsilon_{agg} = \sum \left[\epsilon_i \left(\frac{\text{acres implemented}}{\text{total acres in land use}} \right) \right] \quad (6)$$

where

- ϵ_{agg} = aggregate efficiency for additive BMPs
- \sum = summation of the number of BMPs
- ϵ_i = efficiency of BMP i

It cannot be automatically assumed that all BMPs, which are applied to the same land use, are mutually exclusive. For example, a cover crop and conservation planning can be applied to the same acre of cropland. Many types of BMPs can be applied to the same land use and are multiplicative (Equation 7). The method for aggregating these types of BMPs must take into account not only the efficiency of each BMP and its implemented fraction of total land, but also the overlap of two or more BMPs. Since there is no information available on which BMPs are implemented on which specific acres, the equations presented below assume random implementation. That is, the chance of any particular acre containing a particular BMP is equal to the implementation fraction of that BMP. Where the implementation fraction is equal to the acreage of BMP divided by the total acreage of that land use, the chance of any particular acre containing two BMPs is equal to the product of their respective implementation fractions,

$$e_{multi} = 1 - \prod_{i=1}^n \left(1 - e_i \frac{L_i}{L_T} \right) \quad (7)$$

where:

e_{multi} = aggregate efficiencies for multiplicative BMPs

e_i = efficiency of BMP i

\prod = product symbol

n = total number of BMPs

L_i = acreage in BMP i

L_T = total acreage in land use.

The reasoning behind the above equation is most clear in the case of n=2. Expanding the above equation gives Equation 8:

$$e_{multi} = 1 - \left(1 - e_1 \frac{L_1}{L_T} \right) \left(1 - e_2 \frac{L_2}{L_T} \right) \quad (8)$$

further calculations yield Equations 9 and 10:

$$e_{multi} = 1 - \left[1 - e_1 \frac{L_1}{L_T} - e_2 \frac{L_2}{L_T} + e_1 e_2 \frac{L_1 L_2}{L_T^2} \right] \quad (9)$$

or

$$e_{multi} = e_1 \frac{L_1}{L_T} + e_2 \frac{L_2}{L_T} - e_1 e_2 \frac{L_1 L_2}{L_T^2} \quad (10)$$

That is, the multiplicative efficiency is the sum of the efficiencies minus the cross efficiency times the probability of their intersection. To combine aggregate and multiplicative efficiencies from these two methods, first sum all aggregate efficiencies by Equation (6) then aggregate the result(s) with multiplicative efficiencies from Equation (7).

With the exception of nutrient management, all pervious and impervious urban BMPs are mutually exclusive and additive. For conventional tillage, conservation tillage, hay, and pasture, the only additive BMPs are different types of buffers (forest/grass), including streambank protection. Animal waste management systems for poultry and livestock are mutually exclusive. The livestock BMP has an estimated nutrient reduction efficiency of 75 percent and the poultry have an estimated reduction efficiency of 14 percent. Within the Phase IV Watershed Model, runoff control can only take place on installed waste management systems for livestock and add an additional 10 percent bringing the total efficiency percentage to 85 percent (Note: Even though livestock management systems and runoff control are not exclusive, they are often coincident and the above efficiencies are estimates the effectiveness of coincident implementation as determined by the signatory states (see Appendix H)).

Section I.2.2 Splitting Edge-of-Stream (Land Use) Loads Between States Within a Model Segment

Within a Phase IV Watershed Model segment, states that share a land use must be treated equally in regard to Phase IV Watershed Model input and therefore have the same Phase IV Watershed Model output load per acre. This causes complications in determining the value of the Phase IV Watershed Model delivered loads from any particular state when BMPs are applied differentially.

Most BMPs are given a nutrient reduction factor (based on assumptions of the Chesapeake Bay Program Nutrient Subcommittee’s Tributary Strategy Workgroup) which are aggregated by Phase IV Watershed Model segment and applied internally to reduce the loads to the riverine module. They are also applied externally to Phase IV Watershed Model output edge-of-stream loads to produce the final reported Phase IV Watershed Model edge-of-stream loads. These types of reductions do not cause a complication since the reduction factors can be reported by states within a Phase IV Watershed Model segment before being aggregated for use within the Phase IV Watershed Model.

Nutrient management reductions are simulated rather than assumed by reducing the input of fertilizer to cropland. The effect of nutrient management must be determined on a Phase IV Watershed Model segment and Phase IV Watershed Model scenario basis, and then allocated to each individual state depending on the relative amount of nutrient management occurring in that state and Phase IV Watershed Model segment.

The method used to distribute nutrient load values among different states within a single Phase IV Watershed Model segment must meet the following three requirements:

1. nutrient loads must be distributed equitably
2. a state with no nutrient management must get no credit i.e. the per acre load must equal the Phase IV Watershed Model Reference Scenario per acre load or:

$$W_i = LU_{pr_i} \times EOS_{ref} \tag{11}$$

where:

W_i = progress load for state i
 LU_{pr_i} = progress land use in state i
 EOS_{ref} = edge-of-stream loads in pounds/acre in Reference Scenario

3. the sum of all state loads must equal the total Phase IV Watershed Model segment load
 i.e.

$$\sum_1^{states} W_i = LU_{pr} \times EOS_{pr} \quad (12)$$

where:

LU_{pr} = land use for Phase IV Watershed Model Progress Scenario within a given Phase IV Watershed Model segment
 EOS_{pr} = edge-of-stream loads in pounds/acre in progress scenario before mass link factors applied

The development of these three criteria follow the formulations presented below: The effect of nutrient management on nutrient loads within a given Phase IV Watershed Model segment can be calculated by

$$(EOS_{ref} - EOS_{pr}) \times LU_{pr} \quad (13)$$

The total effect of nutrient management on loads for a state (total nutrient management per Phase IV Watershed Model segment times the ratio of nutrient management acres per state and nutrient management acres per Phase IV Watershed Model segment) can be calculated by

$$\frac{NM_i}{NM_T} \times (EOS_{ref} - EOS_{pr}) \times LU_{pr} \quad (14)$$

where:

NM_i = nutrient management acres in state i
 NM_T = nutrient management acres in a Phase IV Watershed Model segment

State load without considering nutrient management can be calculated by:

$$LU_{pr_i} \times EOS_{ref} \quad (15)$$

The nutrient load from a state, considering nutrient management is equal to the state load without nutrient management (Equation 15) minus the effect of nutrient management (Equation 14):

$$(LU_{pr_i} \times EOS_{ref}) - \left[\frac{NM_i}{NM_T} \times (EOS_{ref} - EOS_{pr}) \times LU_{pr} \right] \quad (16)$$

Requirement 1 is met in the development of Equation 14. When $NM_i = 0$ equation (14) goes to zero and equation (16) is reduced to equation (15) which is identical to equation (11), therefore requirement 2 is met. The 3rd requirement can be tested by summing equation (16) over all states:

$$\sum_1^{states} (LU_{pr_i} \times EOS_{ref}) - \left[\frac{NM_i}{NM_T} \times (EOS_{ref} - EOS_{pr}) \times LU_{pr} \right] \quad (17)$$

pulling constants in front of summation provides

$$EOS_{ref} \sum_1^{states} (LU_{pr_i}) - [(EOS_{ref} - EOS_{pr}) \times LU_{pr}] \sum_1^{states} \left(\frac{NM_i}{NM_T} \right) \quad (18)$$

and realizing that

$$\sum_1^{states} (LU_{pr_i}) = LU_{pr} \text{ and } \sum_1^{states} \left(\frac{NM_i}{NM_T} \right) = 1 \quad (19)$$

one could conclude that

$$EOS_{ref}LU_{pr} - EOS_{ref}LU_{pr} + EOS_{pr}LU_{pr} = EOS_{pr}LU_{pr} \quad (20)$$

and given these three proofs, all of the requirements are met.

Section I.2.3 Splitting Atmospheric Deposition Loads Between States Within a Phase IV Watershed Model Segment

Since atmospheric deposition is also a change of loading to the land, it must be considered when determining the effect of nutrient management. If the above methodology of splitting edge-of-stream loads between states within a Phase IV Watershed Model segment is used relative to atmospheric deposition loads, the effect of decreased atmospheric deposition will be factored in as an effect of nutrient management, and the benefits realized will be inappropriately divided according to the acreage under nutrient management within each state in a Phase IV Watershed

Model segment. The methodology used to split atmospheric deposition loads between states within a Phase IV Watershed Model segment is presented below.

Equation (16) above gives the load attributed to a state as the total Phase IV Watershed Model Reference Scenario load minus the differential-loading rate attributable to that state. From this we can calculate the Phase IV Watershed Model load attributable to the air reduction, which is the difference between the Phase IV Watershed Model Progress Scenario edge-of-stream loads (EOS_{pr}) and the Phase IV Watershed Model Air Scenario edge-of-stream loads (EOS_{air}) multiplied by the Phase IV Watershed Model Progress Scenario land use within states. This is shown by equation (21).

$$(EOS_{pr} - EOS_{air}) \times LU_{pr_i} \quad (21)$$

where:

$$EOS_{air} = \text{edge-of-stream loads in pounds/acre from atmospheric deposition}$$

Using equation (21) with equation (16) gives:

$$(LU_{pr_i} \times EOS_{ref}) - \left[\frac{NM_i}{NM_T} \times (EOS_{ref} - EOS_{pr}) \times LU_{pr} \right] - [(EOS_{pr} - EOS_{air}) \times LU_{pr_i}] \quad (22)$$

Equation (22) still satisfies the requirements described above:

The rationale for fulfillment of requirement (1) and (2) are the same as previously mentioned.

Requirement (3): keeping the left-hand side of equation (20) and adding the summation of the final term of equation (22) gives:

$$EOS_{ref}LU_{pr} - EOS_{ref}LU_{pr} + EOS_{pr}LU_{pr} - (EOS_{pr} - EOS_{air}) \sum_1^{\text{states}} (LU_{pr_i}) \quad (23)$$

grouping and solving allows for the sum of all state loads to equal the total Phase IV Watershed Model segment load and therefore requirement (3) is met.

$$\begin{aligned} & (EOS_{ref}LU_{pr} - EOS_{ref}LU_{pr}) + (EOS_{pr}LU_{pr} - EOS_{pr}LU_{pr}) \\ & + (EOS_{air} \times LU_{pr}) = EOS_{air} \times LU_{pr} \end{aligned} \quad (24)$$

Section I.3 The Chesapeake Bay Phase IV Watershed Model Output Post-Processor

The post-processor is used to summarize daily Chesapeake Bay Phase IV Watershed Model output to average annual values (1984-1987) and to combine summarized output with external data sources. Many different products are generated using the post-processor. Currently, these include the following:

Pound per acre loading (m23) tables: These tables summarize the four year average (1984-87) pound per acre loading rates originating from the different land use types (forest, high till, low till, pasture, pervious urban, hay, manure and impervious urban.) They do not include septic, point source or atmospheric deposition loads.

Standard edge-of-stream loading (m03) tables: These tables summarize the four year average (1984-87) total loads originating from the different land use types as well as from septic, point source, and atmospheric deposition. For scenarios that include BMP reduction factors, the standard edge-of-stream tables reflect these reductions. For atmospheric deposition scenarios, deposition to water bodies is reduced accordingly.

Total edge-of-stream loading (m43) tables: These tables present the grand total load for each Phase IV Watershed Model segment summing all land use types, septic, point sources, and atmospheric deposition to water surfaces.

Bed concentration reduction (R30) factors: These tables contain factors for each Phase IV Watershed Model segment representing the ratio of the scenario load for a given Phase IV Watershed Model segment to the Phase IV Watershed Model Reference Scenario load for that same Phase IV Watershed Model segment. Two tables are generated, one containing factors for total nitrogen and one containing factors for total phosphorus.

Delivered edge-of-stream loading (m53) tables: These tables summarize the four year average (1984-87) total loads originating from different land use types as well as from septic, point source and atmospheric deposition, all delivered to the fall line. The Phase IV Watershed Model Reference Scenario delivery factors are applied to all scenarios. Delivery factors for below fall line Phase IV Watershed Model segments are equal to one.

Below fall line total edge-of-stream summary: This is a delimited ASCII file that provides a summary of the annual below fall line edge-of-stream loads for the years 1984 through 1991.

Edge-of-stream loading (m63) tables by state: These tables summarize the four year average (1984-1987) loads for each land use, septic, point source, and atmospheric deposition for segments and states. Thus, segment 10, which is in parts of both New York and Pennsylvania, is split between the two states (2010 – New York, 3010 – PA). These tables also apply BMP factor reductions broken out by state.

Transported edge-of-stream loading (m73) tables by state: These tables summarize the four year average (1984-87) total loads originating from different land use types as well as from septic, point source and atmospheric deposition, all delivered to the fall line. The Phase IV Watershed Model Reference Scenario delivery factors are applied to all scenarios. Delivery factors for below fall line Phase IV Watershed Model segments are equal to one. These tables were broken out by state as in the m63 tables.

The steps taken and products generated in each stage of the post-processing procedure are depicted graphically in Table I.3.1.

Table I.3.1 Post-Processing Flow Chart

Daily Watershed Model output files (pounds/acre)		SUN
↓ daily2monthly.exe		
Monthly Watershed Model output files (pounds/acre)		
↓ c03_calc_organic_np.exe ↓ c05_calc_urbanloads.exe ↓ c07_calc_animalwaste.exe ↓ c09_calc_onp_pervimperv.exe		
Calculated monthly output files (pounds/acre)		
↓ e01_combine_allmonthly.com		
Basin grouping of all monthly files (pounds/acre)		ALPHA
↓ a01_read_potm_monthly.sas		
Basin grouping of all monthly files (pounds/acre -SAS database)		
. m23_lbperac.sas →	generate pound/acre load tables	
↓ a02_calc_potm_annual.sas		
Annual Model output, bring in land use and septic data (pounds/Watershed Model segment)		
↓ a03_calc_potm_totals.sas		
Total Model output by land use and parameter, bring in point source and atmospheric deposition data (pounds/Watershed Model segment)		
↓ a06_eos_factors.sas (for selected scenarios)		
Model output with BMP reduction factors applied (pounds/Watershed Model segment)		
. bfl_annual.sas →	generate bfl load summary	
. m03_region_xreport.sas →	generate standard eos tables	
. r30_bed_conc.sas →	generate bed concentration reduction factors	
. m43_seg_total.sas →	generate total only tables	
↓ a07_trans_factors.sas		
Apply Watershed Model Reference Scenario delivery factors		
↓ m53_region_xreport.sas		
Generate delivered load tables		

Section I.4 Setting up the Post-Processor for New Phase IV Watershed Model Scenarios

When a new Phase IV Watershed Model scenario is completed, post-processing files must be set up in order to process the new Phase IV Watershed Model Scenario output. This includes setting up the post-processor for the SUN and the ALPHA.

Section I.4.1 Post-Processor Set-up on the SUN

The .com files for each basin grouping are specific to that basin grouping. When setting up a scenario, copy all of the .com files from the s01ref/postproc/ area for a given basin to the postproc area for the new scenario. Unless the output is to be handled differently (as with the Forest Phase IV Watershed Model Scenario where there are additional output files) the .com files do not need to be modified once they are copied.

Section I.4.2 Post-Processor Set-up on the ALPHA

1. Begin by finding a disk that has sufficient space to accommodate the data and table files that will be generated by the scenario (generally, about 200,000 blocks are needed per scenario.)
2. Create SAS and data directories following the standard tree structure (*disk_name:[root_directory].postproc.phase4.sas.scenario_name*.)
3. Add aliases to the file USERDISK:[WHOM.LOGIN]P4_SYMBOLS.COM. Aliases are generally structured as p4s##s for the SAS directory and p4s##d for the data directory where ## is the scenario number.
4. Once the directories are set up, copy all of the .com and .dat files from a similarly processed Phase IV Watershed Model scenario. In other words, for a Phase IV Watershed Model scenario that requires BMP factors to be applied to the edge-of-stream loads, copy the .com and .dat files from the 1991 Progress, 1996 Progress or Tributary Strategy Phase IV Watershed Model scenarios. Otherwise, copy these files from the Phase IV Watershed Model Reference Scenario. The Phase IV Watershed Model Reference Scenario will not have the bed concentration reduction factor .com and .dat files, since no factors are calculated from the Phase IV Watershed Model Reference Scenario. Also copy the below fall line summary program from the data area of the Phase IV Watershed Model Reference Scenario.
5. The only modification that must be made to the .com files is to change the local directory, which is specified at the top of the file. Modify all .com files to reflect their new location.
6. The .dat files must be modified to reflect the new Phase IV Watershed Model scenario name, the location of the input data and the desired location of the output data, and the name and location of all new external data files.

7. Once these modifications have been made, begin establishing the external data sets prior to processing the Phase IV Watershed Model scenario. Directions on how to establish each of the new external data sets were given in section III A above.

Section I.5 Check External Data Sets

Once the post-processor is set up, external data sets need to be checked. These external data sources consist of the following:

- Land use;
- Point source loads;
- Atmospheric deposition loads;
- Septic system loads;
- Best management practice reduction factors (used to date in the Tributary Strategy and Progress Phase IV Watershed Model scenarios only); and
- Delivery factors (Phase IV Watershed Model Reference Scenario delivery factors are applied to all Phase IV Watershed Model edge-of-stream loads).

These external data sets need to be updated with changes made for a given Phase IV Watershed Model scenario. Comparisons need to be made between the creation date of the original data source and the creation date of the data being read by the post-processor. If the original data source has been modified more recently than the data in the post-processor, then the data in the post-processor should be updated to ensure consistency between what is being used in the Phase IV Watershed Model scenario and what is being used in the post-processor. Specific information on how to update each data type follows.

Section I.5.1 Land Use

The original land use data used by the Chesapeake Bay Program Office Modeling Team to update the SCHEMATIC section of the input decks are located on the LAN in the following directory:

F:\WORK\DPI\PHASE4A\UTIL\BIN

The files are 8 column fixed width files (*.prn) FILES named after the year of data that they contain as follows: lu_XXXXm.xls (where XXXX is the year of data) and are in Microsoft Excel spreadsheet format (i.e. lu_1996m.xls contains the 1996 land use with manure acres).

To update the land use data read by the post-processor:

- a. Import the appropriate land use spreadsheet into Microsoft Access.
- b. Delete any extraneous columns or rows. The columns remaining should be limited to the following eleven categories: Phase IV Watershed Model segment number, forest acres, high till acres, low till acres, pasture acres, pervious urban acres, hayland acres, manure

acres, impervious urban acres, water acres and total acres. The rows remaining should be limited to a single header row that identifies the contents of each column and the rows of data.

- c. Export the spreadsheet as a caret-delimited text file.
- d. Transfer the delimited file to the following directory on the ALPHA: RDBDISK:[CBWMODEL .POSTPROC.PHASE4.DATA.S2.P4LANDUSE]. This directory contains .dat files (delimited text files) and SAS programs, .log and .lis files which list Phase IV Watershed Model scenarios completed to date. The SAS programs read in the delimited data, split Phase IV Watershed Model segment 960 into Phase IV Watershed Model segments 960 and 965 and output the resulting data into a SAS database.
- e. Before running the land use program, check to be sure that the order in which the data are being read in and assigned matches the order in which the data appear in the delimited file.
- f. After running the SAS program, check the log file for errors and look at the lis file to verify that the data were read in correctly.
- g. When the program runs successfully, copy the resulting SAS database up one directory to RDBDISK:[CBWMODEL .POSTPROC.PHASE4.DATA.S2]. This directory contains, among other things, the land use SAS databases and a series of land use SAS fragments. The post-processor reads the SAS fragment which in turn identifies the land use SAS database to be used in the scenario.
- h. Make sure that the SAS fragment read by the post-processor is present and that it points to the correct land use database.
- i. Run `split_s(XX)_(scenario)lu.sas` to run state split land use data set. Follow the directions above for existing scenarios.

If you are establishing a new land use database for a scenario that has not yet been run, follow the steps outlined above to generate a caret delimited text file and transfer that file to the ALPHA (steps a through d). Then:

- e. Copy the SAS program that reads land use from the Phase IV Watershed Model Reference Scenario.
- f. Modify the program to read in the appropriate delimited file, to read the columns in the appropriate order, and to output the data to the appropriately named SAS database.
- g. Generate the new SAS database.
- h. Copy the new database up one directory.
- i. Copy the SAS fragment from the Phase IV Watershed Model Reference Scenario.
- j. Modify the new SAS fragment to call the new SAS database.

Section I.5.2 Point Source Loads

The post-processor reads the point source and atmospheric deposition loads from a single data set that contains both the point source and atmospheric deposition loads. The databases are developed separately and concatenated into a single database that is read by the post-processor.

The point source data are developed and maintained by the Chesapeake Bay Program point source team.

For the Phase IV Watershed Model Reference Scenario, the data are delivered to the Chesapeake Bay Program Office Modeling Team in two fixed format files, one for above fall line point sources and one for below fall line point sources, that contain monthly loads on a facility basis with each facility assigned to a Phase IV Watershed Model segment. The files are located on the LAN in the following directory: F:\SHARED\MODEL ING\POINTSRC and are called FACLD#A.TXT and FACLD#B.TXT where the # is a number representing the version of the point source data. The latest version of the data should be used. The facility-level data are then aggregated to the Phase IV Watershed Model segment level by the Chesapeake Bay Program Office Modeling Team and put into a format that is read into the Watershed Data Management files (WDMs) used by the Phase IV Watershed Model. This format consists of individual files for each point source parameter (FLOW, BOD, DO, NO3, NH3, ORGN, PO4 and ORGP) and for above and below fall line point sources. The files are maintained on the CRAY in a series of subdirectories located in the directory /work/dpi/phase4a/refdat/ptsrc/. The subdirectories correspond to the date on which the data were received, so that multiple versions of the point source data are maintained and the latest version can be used. The /work/dpi/phase4a/refdat/ptsrc/scripts subdirectory contains a program called g20_combine_ptsrc.com that combines the individual files into a single file that is then transferred to the ALPHA and placed in the directory VOLUME:[WSM.POSTPROC.PHASE4.DATA.S2.PT SRC]. This directory contains a program called P03_PSREAD.SAS that reads in the file generated on the CRAY, calculates annual values for each Phase IV Watershed Model segment, drops the data for all years except 1985, assigns the 1985 data to all of the other years of the Phase IV Watershed Model simulation, and applies reduction factors to the point sources in Phase IV Watershed Model segment 550 which contains the Occoquan Reservoir. The resulting database must then be combined with the atmospheric deposition database using the program c03_combine.sas and copied into one directory where it is read by the post-processor.

For the Forest Phase IV Watershed Model Scenario, a special program called S02_FORES_PS.SAS was written that splits out the Phase IV Watershed Model Reference Scenario point sources by signatory and non-signatory boundaries. The signatory point sources are then set to zero while the non-signatory point sources are maintained.

For all other Phase IV Watershed Model scenarios, the point source team provides the Chesapeake Bay Program Office Modeling Team with Microsoft Excel spreadsheets that contain the ratio of the scenario point sources to the Phase IV Watershed Model Reference Scenario point sources. The spreadsheets are located in the F:\SHARED\MODEL ING\POINTSRC directory and are named after the scenario to which they should be applied. Factors broken out by state and Phase IV Watershed Model segment are located in the directories F:\SHARED\MODEL ING\POINTSRC\FACTORS and F:\SHARED\MODEL ING\POINTSRC\FACTORS2. To update the point source factors:

- a. Read the appropriate spreadsheet into Microsoft Access and output it as a caret-delimited text file.

- b. Transfer the delimited file to the ALPHA and place it in the following directory: RDBDISK:[CBWMODEL .POSTPROC.PHASE4.DATA.S2.P4PTSRC].
- c. Verify that the SAS program for the scenario in question is reading the point source factors in the same order in which they are found in the delimited file.
- d. Run the SAS program for the scenario in question. The SAS programs in this directory read in the point source factors, read in the Phase IV Watershed Model Reference Scenario point source loads from the SAS database containing point source and atmospheric deposition loads, multiplies the Phase IV Watershed Model Reference Scenario loads by the factors, appends the updated point source loads to the existing atmospheric deposition data and outputs the resulting data to a new SAS database named for the Phase IV Watershed Model Scenario.
- e. Check that the program has run successfully by looking for errors in the log file and checking the values in the lis file.
- f. Once the program has run successfully, copy the new database up one directory where it will be read by the post-processor.
- g. Run spl_s(XX)_(scenario)_ps.sas to generate state split point source/atmospheric deposition data.

If you are establishing a new point source database for a Phase IV Watershed Model scenario that has not yet been completed, follow the steps outlined above to generate a caret delimited text file and transfer that file to the ALPHA (steps a and b). Then:

- c. Copy the SAS program the point source factors from a scenario that has already been completed
- d. Modify the program to read in the appropriate delimited file, to read the columns in the appropriate order, and to output the data to the appropriately named SAS database
- e. Generate the new SAS database, checking that the programs were successful.
- f. Copy the new database up one directory.

Section I.5.3 Atmospheric Deposition Loads

The Chesapeake Bay Program Office Modeling Team in coordination with the Chesapeake Bay Program Air Quality Subcommittee developed the atmospheric deposition data. The data are broken out into wet and dry deposition and processed into a format that is read into the WDMs. This format consists of an individual file for each precipitation Phase IV Watershed Model segment for daily wet deposition and of a single file for annual dry deposition of NO₃, for a total of 45 files in all. The files are maintained on the CRAY in the directory /work/dpi/phase4a/refdat/atmdep/96oct/. The /postproc subdirectory in the same area contains a series of three command files called a03_d2monthindeck.com, a05_calcmnthly.com and e01_combine_allmonthly.com that use some of the same programs used in the post-processor. The first command file creates a file called daily2monthly.dat that serves as an input deck for the second program by listing all of the files that need to be summarized from daily to monthly. The second command file uses the dat file just created and creates monthly versions of each file listed in the dat file. The final command file combines all of the monthly files into a single file called atmdep_monload.dat. The atmdep_monload.dat and the dry deposition file are then transferred

to the ALPHA and placed in the directory VOLUME:[WSM.POSTPROC.PHASE4.DATA.S2.P4PTSRC]. This directory contains a program called a03_read_atmdep.sas that reads in the two files, summarizes the monthly wet deposition values to annual values, sums the wet and dry deposition, assigns the data for each precipitation Phase IV Watershed Model segment to the appropriate Phase IV Watershed Model segments, brings in the water acres for each Phase IV Watershed Model segment to calculate the Phase IV Watershed Model segment load and applies reduction factors to the atmospheric deposition load to Phase IV Watershed Model segment 550 which contains the Occoquan Reservoir. The resulting SAS database must then be combined with the point source database using the program c03_combine.sas and the combination must be copied up one directory where it will be read by the post-processor. In summary, to incorporate the Phase IV Watershed Model Reference Scenario atmospheric deposition loads into the post-processor, the following steps were taken:

- a. The daily wet and annual dry deposition data were obtained from the Chesapeake Bay Program Office Modeling Team
- b. The daily loads were summarized to monthly and combined into a single file.
- c. The monthly wet and annual dry loading files were transferred to the ALPHA and placed in the directory VOLUME:[WSM.POSTPROC.PHASE4.DATA.S2.P4PTSRC].
- d. The files are read in further summarized, multiplied through by water acres and output into a SAS data set using the program a03_read_atmdep.sas.
- e. The atmospheric deposition and point source data are combined into a single SAS data set using the program c03_combine.sas.
- f. The combined data set is copied up one directory where it will be read by the post-processor.

The No Atmospheric Deposition Scenario requires modification to the atmospheric deposition data. This was done in the data area for this scenario (MODEL1:[WSM.POSTPROC.PHASE4.DATA.S12NOAIR], shortcut p4s12d) in a subdirectory called ATMDEP. This subdirectory contains a program called a01_noair_atmdep.sas that takes the Phase IV Watershed Model Reference Scenario atmospheric deposition loads and sets the inorganic loads (NO₃ and NH₃) to zero. It is also important to note that the atmospheric deposition row in the post-processor output tables represents atmospheric deposition to water surfaces only. Atmospheric deposition to land surfaces are handled within the Phase IV Watershed Model and these loads are incorporated into the load from each land use type.

OTC and CAA scenarios require NO₃ to be reduced. This is done using modified SAS programs that normally reduce point source loads. These programs modify the point source/atmospheric deposition data in the data directory for a given scenario (MODEL1:[WSM.POSTPROC.PHASE4.DATA.scenario.ATMDEP]). The two programs run are (1) s(XX)_redux_atm.sas for the A series (segment processing), and (2) split_s(XX)_redux_atm.sas for the A series. Then copy the resulting SAS data bases up one directory.

Section I.5.4 Onsite Wastewater Management System Loads

The Chesapeake Bay Program Office Modeling Team has developed spreadsheets that contain attenuated septic system loads in pounds/day for each Phase IV Watershed Model segment for the years 1985, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 2000, 2005, 2010, 2015 and 2020. These spreadsheets are located on the LAN in the directory F:\USER\SHARED\MODELING\SEPTIC. These spreadsheet was imported into Microsoft Access, exported in caret-delimited format, transferred to the ALPHA and placed in the following directory: VOLUME:[WSM.POSTPROC.PHASE4.DATA.S2.SEPTIC]. The data file is called SEP_LOAD.TXT and is read by the program A03_SEPTIC_READ_SCENARIO.SAS. This program reads in all of the years of data in the delimited file, breaks Phase IV Watershed Model segment 960 into Phase IV Watershed Model segments 960 and 965, calculates annual values from the daily values, applies a reduction factor to the septic load in Phase IV Watershed Model segment 550 which contains the Occoquan Reservoir, and outputs a data set for the given year required for a Phase IV Watershed Model scenario (i.e. for the Phase IV Watershed Model Reference Scenario, a data set is created that contains the 1985 septic loads copied to all of the years of the simulation (1984 through 1991)). To output septic loads for a different scenario, the a03_septic_read_scenario.sas program must be modified to output a different year of data to a differently named data set. In summary, to create a septic data set for a given year of data:

- a. Edit the a03_septic_read_scenario.sas program to output the desired year of data. To do this, go to the bottom of the program. The final data step names the output file and selects the year of the data output. Change the file name and data year appropriately.
- b. Run the a03_septic_read_scenario.sas program. Check the log file for errors and the lis file to see that the values were read in and handled correctly.
- c. Copy the resulting data set up one directory where it will be read by the post-processor.
- d. Run split_s(XX)_(scenario)_septic.sas for state split septic data.

In some cases, as for the Tributary Scenario, the Chesapeake Bay Program Office Modeling Team may modify the original septic data to reflect anticipated reductions in the septic system loads due to nutrient controls. Check with whoever executed the Phase IV Watershed Model scenario to see if this is the case. If a new septic data set is created, a new program will have to be written to read the data. This new program should include the split of Phase IV Watershed Model segment 960 and the Occoquan reduction factors that are included in the a03_septic_read_scenario.sas program.

Section I.5.5 Best Management Practice Reduction Factors

Best management practice nutrient reduction factors are currently only applied in the Progress and Tributary Strategy Phase IV Watershed Model Scenarios. They represent nutrient reductions that are applied to the MASS-LINKS in the Phase IV Watershed Model, and are therefore reflected in the fall line loads, but not in the edge-of-stream output. To update the BMP factors:

- a. Obtain BMP factors from the Chesapeake Bay Program Office Modeling Team. They are generally obtained in a Microsoft Excel spreadsheet format.
- b. Import the BMP factors into Microsoft Access and export them to a caret delimited text file.
- c. Transfer the delimited file to the ALPHA. For Phase IV Watershed Model scenarios that have been processed previously, there will be a directory in the data area that contains a program to read in the factors and output them in a SAS data set. The program will be called SXX_READ_FACTORS.SAS where XX is the Phase IV Watershed Model scenario number. Shortcuts to the data areas are structured as p4sXXd where XX is the number of the Phase IV Watershed Model scenario (i.e. 03 for Progress 95). Once in the data area, there will be a subdirectory called SXXFACTORS where XX is again the number of the scenario. Place the delimited file in the appropriate factors subdirectory.
- d. Check to be sure that the SXX_READ_FACTORS.SAS program that reads the factors is reading them in the same order as they appear in the delimited file.
- e. Run the program. Check the .log file for errors and the .lis file to be sure that the factors were read correctly.
- f. When the program is completed, copy the resulting SAS data set up one directory level where it will be read by the post-processor.
- g. Run s(XX)_split_factors.sas to generate state split BMP reduction factors.

If you are establishing a factors database for a Phase IV Watershed Model scenario that has not been previously completed, follow the above procedure for steps a and b. Then create an SXXFACTORS in the scenarios data area and copy the SXX_READ_FACTORS.SAS from a Phase IV Watershed Model scenario that has previously been completed. Modify the program to work within the new directory, to read the new delimited file and to output a new factors SAS data set. Then follow steps c through f.

For the Progress and Tributary Strategy Phase IV Watershed Model Scenarios, the non-signatory edge-of-stream loading are read from the Phase IV Watershed Model Reference Scenario output and applied to the appropriate land use. In addition, the BMP factors are divided by Phase IV Watershed Model segment and state to reflect the differences between the rates of BMP implementation in the signatory and non-signatory states.

Section I.5.6 Delivery Factors

The Phase IV Watershed Model Reference Scenario delivery factors are applied to all scenario output in order to estimate the transport of loads from different point and non-point nutrient sources. Once the Phase IV Watershed Model Reference Scenario is finalized, the delivery factors should not require any further updates.

The delivery factors are calculated by the Chesapeake Bay Program Office Modeling Team and delivered in a spreadsheet format. Delivery factors are only calculated for above fall line Phase IV Watershed Model segments and are assumed equal to one for below fall line Phase IV Watershed Model segments. If delivery factors for suspended sediment are not provided, they

are assumed equal to the delivery factors for total phosphorus. Delivery factors for total nitrogen are calculated for each Phase IV Watershed Model segment while basin-wide delivery factors are calculated for total phosphorus (so that all Phase IV Watershed Model segments in the Susquehanna have the same delivery factor for total phosphorus, but a different factor from Phase IV Watershed Model segments in the Potomac, etc.)

To update the delivery factors:

- a. Obtain a Microsoft Excel spreadsheet with the latest delivery factors for total nitrogen, total phosphorous and total suspended sediment from the Chesapeake Bay Program Office Modeling Team. Add rows for the below fall line Phase IV Watershed Model segments with values equal to one.
- b. Import the spreadsheet into Microsoft Access and export it in a caret-delimited format.
- c. Transfer the delimited file to the ALPHA and place it in the directory VOLUME:[WSM.POSTPROC.PHASE4.DATA.S2.TRANSFACT].
- d. In this directory you will find a SAS program called S01_READ_FACTORS.SAS. Check to be sure that the program is reading in the data in the same order in which they appear in the delimited file.
- e. Run the S01_READ_FACTORS.SAS program. Check the log file for errors and the lis file to be sure that the factors have been read in correctly.
- f. Once the program is completed, copy the resulting SAS data set up one directory where it will be read by the post-processor.
- g. Follow the same set-up for state split D series using SAS program s(XX)_read_split.sas and copy SAS data base up one directory.

Now that all of the external data sets are in place, the post-processing run can begin.

Section I.6 Running the Post-Processor

The post-processor groups the Phase IV Watershed Model segments simulated by the Phase IV Watershed Model into four major basins as shown in Table I.6.1:

Table I.6.1 Major Basins and Reaches Contained in Phase IV Watershed Model Segments

Basin	Reach	Phase IV Watershed Model Segments
Susquehanna (susq):	Conowingo (conow)	120 140 720
	East Branch 1 (ebsus1)	10 20 700
	East Branch 2 (ebsus2)	30 40
	Juniata (junia)	90 100
	Lower Susquehanna (losus)	80 110 710
	West Branch Susquehanna	50 60 70

(wbsus)		
Potomac (potm)	Lower Potomac (lopot)	210 220 750
	Middle Potomac (midpot)	180 730 740
	Patuxent (patux)	330 340
	Rappahannock (rappa)	230
	Shenendoah (shena)	190 200
	Upper Potomac (uppot)	160 170 175
James (james)	Appomattox (appom)	300 310
	James 1 (james1)	265 270
	James 2 (james2)	280 290
	Mattaponi (matta)	235 240
	Pamunkey (pamun)	250 260
Coast (coast)	bfl1a	370 800 810
	bfl1b	380 390 400
	bfl1c	820 830 840
	bfl2	410 420 430 440
	bfl3a	450 850 870
	bfl3b	470 480 490
	bfl3c	510 860 890
	bfl4	500 880 990
	bfl5a	550 900 970
	bfl5b	540 910 920
	bfl6a	560 940 950
	bfl6b	580 930 980
	bfl7a	590 600 610
	bfl7b	620 630 960
	Choptank (choptank)	770
	Nanticoke (nanticoke)	780
Patapsco (patapsco)	760	

The Susquehanna, Potomac and James groupings consist entirely of Phase IV Watershed Model segments with reaches. The Coast grouping consist mainly of below fall line Phase IV Watershed Model segments that do not have reaches (their loads are assumed to drain directly into the tidal Bay) except for the Choptank, Nanticoke, and Patapsco rivers. Before running the post-processor on these four Phase IV Watershed Model segment groupings, all of the external data sets must be checked and updated where appropriate.

The Phase IV Watershed Model post-processor is run on two platforms:

- The Chesapeake Bay Program Office's SUN (UNIX)
- The Chesapeake Bay Program Office's ALPHA (Open VMS)

Before running the post-processor, the output files must be checked to make certain that they are of the correct size (daily output for eight years) and that all output files required by the post-processor are present (files with the extensions .fores, .hayla, .hitil, .imura, .lotil, .onp, .pastu, .purba, .sedim). For each basin, there should be an equal number of files of identical size for each extension. If the output files are not in order for a given Phase IV Watershed Model segment, the Chesapeake Bay Program Office Modeling Team member charged with running that Phase IV Watershed Model segment must be notified and the problem must be corrected before post-processing. The post-processing files are located in the directory /work/dpi/phase4a/outputs/[basin]/[scenario]/postproc for each basin and scenario (i.e. the Susquehanna basin post-processing files for the Phase IV Watershed Model Reference Scenario are located in the directory /work/dpi/phase4a/outputs/susq/s01ref/postproc.)

Section I.6.1 SUN Post-Processing Steps

- a. Run f01_list_files.com: This program will generate the file f02_filenames.lis, which lists the size and number of output files for each extension used in the post-processor. The Phase IV Watershed Model output files read by the post-processor are structured in what HSPF calls a “pltgen” format. Pltgen file types are identified by the file’s extension (fores = forest, hayla = hay, hitil = high till, imura = impervious urban and animal waste, lotil = low till, onp = organic nitrogen and phosphorus, pastu = pasture, purba = pervious urban, sedim = sediment). Table I.6.2 lists the standard structure of each type of pltgen file read by the post-processor.

Table I.6.2 Structure of PLTGEN Files Used by the Post-Processor

pltgen extension	Mean	Contents	units
.fores .hayla .hitil .lotil .pastu .purba	1	surface flow	Inches
	2	surface NH ₄	Pounds/acre
	3	surface NO ₃	Pounds/acre
	4	surface PO ₄	Pounds/acre
	5	surface BOD	Pounds/acre
	6	subsurface flow	Inches
	7	subsurface NH ₄	pounds/acre
	8	subsurface NO ₃	pounds/acre
	9	subsurface PO ₄	pounds/acre
	10	subsurface BOD	pounds/acre
.imura	1	surface flow from impervious urban	inches
	2	surface NH ₄ from impervious urban	pounds/acre
	3	surface NO ₃ from impervious urban	pounds/acre

	4	surface PO ₄ from impervious urban	pounds/acre
	5	surface BOD from impervious urban	pounds/acre
	6	surface flow from manure acres	inches
	7	Blank	blank
	8	Blank	blank
	9	Blank	blank
	10	Blank	blank
.onp	1	ORGN from high till	pounds/acre
	2	ORGP from high till	pounds/acre
	3	ORGN from low till	pounds/acre
	4	ORGP from low till	pounds/acre
	5	ORGN from hay	pounds/acre
	6	ORGP from hay	pounds/acre
	7	ORGN from forest	pounds/acre
	8	ORGP from forest	pounds/acre
	9	ORGN from pasture	pounds/acre
	10	ORGN from pervious urban	pounds/acre
.sedim	1	sediment from forest	pounds/acre
	2	sediment from high till	pounds/acre
	3	sediment from low till	pounds/acre
	4	sediment from pasture	pounds/acre
	5	sediment from pervious urban	pounds/acre
	6	sediment from hay	pounds/acre
	7	Blank	blank
	8	Blank	blank
	9	Blank	blank
	10	Blank	blank

If you are post-processing the Phase IV Watershed Model Forest Scenario, there will also be a series of files with extensions ending in “ns” for the non-signatory states. There are 19 non-signatory Phase IV Watershed Model segments in all, two in the Susquehanna, six in the Potomac, one in the James and ten in Coast. Impervious land surfaces are not simulated in the signatory Phase IV Watershed Model segments in the Phase IV Watershed Model Forest Scenario. As a result, a “dummy” .imura file was generated that consists of six columns of zeros and was copied into the signatory Phase IV Watershed Model segment areas. There are dummy .imura files in each of the four basins’ root directories in the Phase IV Watershed Model Forest Scenario (/work/dpi/phase4a/outputs/[*basin*]/s02fores/). This is only done once, and the files are not overwritten with each new Phase IV Watershed Model simulation because the Phase IV Watershed Model does not generate them. Sometimes, however, a faulty .com file will overwrite the dummy imura file with some other pltgen. If you see a signatory .imura file with a creation date that matches that of the rest of the Phase IV Watershed Model output for a given Phase IV Watershed Model scenario, check it to be sure that it

is all zeros. If it is not, notify the person who executed the Phase IV Watershed Model scenario that some output is being misdirected. Do not simply overwrite the file with a fresh copy of the dummy file because the output might be needed elsewhere.

- b. vi f02_filenames.lis: Check f02_filenames.lis thoroughly to be sure that the output files are all present and of the correct size. If the output files are not in order for a given Phase IV Watershed Model segment, the Chesapeake Bay Program Office Modeling Team member charged with running that Phase IV Watershed Model segment must be notified and the problem must be corrected. If the output files are in order, proceed to step c.

When running the Phase IV Watershed Model Forest Scenario be sure to check that the .imura files contain zeros and that all of the non-signatory files are present.

- c. Run a03_d2monthindeck.com: This program generates the file daily2monthly.dat that will be used as an input deck in step e. The file daily2monthly.dat lists all of the output files that are to be summarized from daily to monthly by the post-processor, as well as how many columns are to be summarized. The top two lines of the file indicate the beginning and end years of the simulation, generally 1984 and 1991.
- d. vi daily2monthly.dat: Check that this file has been properly generated and includes all of the sub-basins and Phase IV Watershed Model segments to be processed. Do not alter this file.

When running the Phase IV Watershed Model Forest Scenario, check to be sure that all of the non-signatory files were captured in the daily2monthly.dat file.

- e. Run a05_calcmmonthly.com: The file daily2monthly.exe summarizes the daily output files into monthly output files and places the new monthly files in the directory /work/dpi/phase4a/outputs/[basin]/[scenario]/[sub-basin]/monthly (i.e. the monthly summary of Phase IV Watershed Model output from the calibration of the West Branch of the Susquehanna are located in the directory /work/dpi/phase4a/outputs/susq/calib/wbsus/monthly.) The monthly files are given the same name as the daily files from which they are created. Check the daily2monthly.log file for errors before continuing.
- f. Run f03_list_monthly_files.com: This program will generate the file f04_monthly_filenames.lis, which lists the size and number of summarized monthly output files for each extension.
- g. vi f04_monthly_filenames.lis: Check f04_monthly_filenames.lis thoroughly to be sure that the monthly files are all present and of the correct size. If the monthly files are in order, proceed to step h.
- h. Run a09_make_othermonthdecks.com: This program generates the files c03_calc_organic_np.dat, c05_calc_urbanloads.dat, c07_calc_animalwaste.dat and c09_calc_onp_pervimperv.dat which will be used as input decks in step j. Each file is

used as an input deck by a separate program. c03_calc_organic_np.dat specifies how the .fores, .hayla, .hitil, .lotil, .onp and .pastu files should be used to calculate orgn and orgp from BOD as well as the names of the files to which the results should be output. c05_calc_urbanloads.dat specifies how the .imura and .purba files should be used to calculate the total urban loads and that the results should be output to the .urbloads file. c07_calc_animalwaste.dat specifies the factors that are applied to the flow from manure acres to calculate the nh3, no3, orgn, po4 and orgp loads from this land use, as well as the output of the results to the .anwaste file. And finally, c09_calc_onp_pervimperv.dat specifies the columns of the .imura and .purba files that are to be used in the calculation of orgn and orgp from BOD, as well as the output of the results to the .onpip file. At the top of each file, several lines specifying the beginning and end months and years of the period are summarized.

If one wants to post-process the Phase IV Watershed Model Forest Scenario, there will be a second command file called b09_make_othermonthdecks.com that creates files analogous to the c03_calc_organic_np.dat, c05_calc_urbanloads.dat, c07_calc_animalwaste.dat and c09_calc_onp_pervimperv.dat files only they are called f03_calc_organic_np.dat, f05_calc_urbanloads.dat, f07_calc_animalwaste.dat and f09_calc_onp_pervimperv.dat. The output files listed in these input decks are the output from signatory Phase IV Watershed Model segments. The output files listed in the c*.dat files in the Phase IV Watershed Model Forest Scenario are the output files with extensions ending in "ns" for non-signatory. The non-signatory files are processed using the standard post-processing programs. The signatory files are processed using a series of executables analogous to the standard executables, but with the difference that no organic nitrogen is calculated from BOD, since the forest simulation calculates the entire organic nitrogen load within the Phase IV Watershed Model .

- i. vi c03_calc_organic_np.dat, c05_calc_urbanloads.dat, c07_calc_animalwaste.dat and c09_calc_onp_pervimperv.dat: Check that these files have been properly generated and include all of the sub-basins and Phase IV Watershed Model segments to be processed. Do not alter these files.

If you are processing the Phase IV Watershed Model Forest Scenario, vi f03_calc_organic_np.dat, f05_calc_urbanloads.dat, f07_calc_animalwaste.dat and f09_calc_onp_pervimperv.dat to check that these files have been properly generated and include all of the sub-basins and Phase IV Watershed Model segments to be processed. Do not alter these files.

- j. Run a11_calc_othermonthlyloads.com: This file calls the four programs that calculate the six additional monthly files (.anwaste, .onpip, .or1np, .or2np, .or3np and .urbloads). The c03_calc_organic_np.exe program calculates orgn and orgp from BOD ($\text{orgn}=0.050*\text{BOD}$ and $\text{orgp}=0.0055*\text{BOD}$), adds the calculated values to the simulated values contained in the .onp file and outputs the results to the .or1np, .or2np and .or3np files. The c05_calc_urbanloads.exe program adds the pervious and impervious urban loading rates (in pounds/acre) for surface and subsurface nh3, no3, po4, orgn and orgp and outputs the results to the .urbloads file. The post-processor does not use these results

because their calculation assumes a 50/50 split of pervious and impervious urban land, which is not accurate. The c07_calc_animalwaste.exe program calculates the loads from manure acres by multiplying the simulated flow from the .imura file by a conversion factor and the following concentrations:

- NH₄ = 40 mg/L
- NO₃ = 10 mg/L
- ORGN = 331 mg/L
- PO₄ = 10 mg/L
- ORGP = 19.2 mg/L

The output from these calculations is directed to the .anwaste file. The c09_calc_onp_pervimperv.exe program calculates ORGN and ORGP from BOD for the pervious and impervious urban land uses and directs the output to the .onpip file. For details on the structure of these calculated pltgen files and the method by which each mean is calculated, see Table I.6.3.

Table I.6.3 Structure of Calculated PLTGEN Files and Method Used for Mean Calculation

pltgen extension	mean	Contents	Units
.onpip	1	surface ORGN from pervious urban (= 0.050*surface BOD)	Pounds/acre
	2	surface ORGP from pervious urban (= 0.0055*surface BOD)	Pounds/acre
	3	subsurface ORGN from pervious urban (= 0.050*subsurface BOD)	Pounds/acre
	4	subsurface ORGP from pervious urban (= 0.0055*subsurface BOD)	Pounds/acre
	5	surface ORGN from impervious urban (= 0.050*surface BOD)	Pounds/acre
	6	surface ORGP from impervious urban (= 0.0055*surface BOD)	Pounds/acre
	7	Blank	Blank
	8	Blank	Blank
	9	Blank	Blank
	10	Blank	Blank
.or1np	1	surface ORGN from low till (= simulated surface ORGN + 0.050*surface BOD)	BOD/acre
	2	subsurface ORGN low till (= 0.050*subsurface BOD)	Pounds/acre
	3	surface ORGP from low till (= simulated surface ORGP + 0.0055*surface BOD)	Pounds/acre
	4	subsurface ORGP from low till (= 0.0055*subsurface BOD)	Pounds/acre
	5	surface ORGN from forest (= simulated surface ORGN)	Pounds/acre
	6	subsurface ORGN from forest (= simulated subsurface ORGN)	Pounds/acre
	7	surface ORGP from forest (= 0.0055*surface BOD)	Pounds/acre
	8	subsurface ORGP from forest (= 0.0055*subsurface BOD)	Pounds/acre
	9	surface ORGN from hay (= simulated surface ORGN + 0.050*surface BOD)	Pounds/acre
	10	subsurface ORGN from hay (= 0.050*subsurface BOD)	Pounds/acre
.or2np	1	surface ORGP from hay (= simulated surface ORGP + 0.0055*surface	Pounds/acre

		BOD)	
	2	subsurface ORGP from hay (= 0.0055*subsurface BOD)	Pounds/acre
	3	surface ORGN from high till (= simulated surface ORGN + 0.050*surface BOD)	Pounds/acre
	4	subsurface ORGN from high till (= 0.050*subsurface BOD)	Pounds/acre
	5	surface ORGP from high till (= simulated surface ORGP + 0.0055*surface BOD)	Pounds/acre
	6	subsurface ORGP from high till (= 0.050*subsurface BOD)	Pounds/acre
	7	surface ORGN from pasture (= simulated surface ORGN + 0.050*surface BOD)	Pounds/acre
	8	subsurface ORGN from pasture (= 0.050*subsurface BOD)	Pounds/acre
	9	surface ORGP from pasture (= 0.050*surface BOD)	Pounds/acre
	10	subsurface ORGP from pasture (= 0.050*subsurface BOD)	Pounds/acre
.or3np	1	surface ORGN from pervious urban (= simulated ORGN)	Pounds/acre
	2	subsurface ORGN from pervious urban (= 0)	Pounds/acre
	3	Blank	Blank
	4	Blank	Blank
	5	Blank	Blank
	6	Blank	Blank
	7	Blank	Blank
	8	Blank	Blank
	9	Blank	Blank
	10	Blank	Blank
.anwaste	1	surface NH ₄ from manure acres (= 40mg/L*simulated flow*conv. factor)	Pounds/acre
	2	surface NO ₃ from manure acres (= 10mg/L*simulated flow*conv. factor)	Pounds/acre
	3	surface ORGN from manure acres (= 331mg/L*simulated flow*conv. Factor)	Pounds/acre
	4	surface PO ₄ from manure acres (= 10mg/L*simulated flow*conv. factor)	Pounds/acre
	5	surface ORGP from manure acres (= 19.2mg/L*simulated flow*conv. Factor)	Pounds/acre
	6	Blank	Blank
	7	Blank	Blank
	8	Blank	Blank
	9	Blank	Blank
	10	Blank	Blank
.urbloads (this pltgen is created by the post-processor but is not used because it assumes a 50/50 split of pervious and impervious urban land)	1	surface NO ₃ from urban (perv + imperv)	Pounds/acre
	2	surface NH ₄ from urban (perv + imperv)	Pounds/acre

	3	surface PO ₄ from urban (perv + imperv)	Pounds/acre
	4	subsurface NO ₃ from urban (perv + imperv)	Pounds/acre
	5	subsurface NH ₄ from urban (perv + imperv)	Pounds/acre
	6	subsurface PO ₄ from urban (perv + imperv)	Pounds/acre
	7	surface ORGN from urban (perv + imperv)	Pounds/acre
	8	surface ORGP from urban (perv + imperv) surface ORGN from urban (perv + imperv)	Pounds/acre
	9	subsurface ORGN from urban (perv + imperv)	Pounds/acre
	10	subsurface ORGP from urban (perv + imperv)	Pounds/acre

If you are processing the Phase IV Watershed Model Forest Scenario, a similar set of files will be generated, but their extensions will all end with the letters “ns” for non-signatory, the values in the .imura files will have been set to zero, and no ORGN will be calculated from BOD. The programs that perform the calculations for the signatory Phase IV Watershed Model segments in the Phase IV Watershed Model Forest Scenario are called f03_calc_organic_np.exe, f05_calc_urbanloads.exe, f07_calc_animalwaste.exe, and f09_calc_onp_pervimperv.exe

- k. grep c03_calc_organic_np.log, c05_calc_urbanloads.log, c07_calc_animalwaste.log and c09_calc_onp_pervimperv.log for ERR: Check to be sure that c03_calc_organic_np.dat, c05_calc_urbanloads.dat, c07_calc_animalwaste.dat and c09_calc_onp_pervimperv.dat were used properly in the execution of a11_calc_othermonthlyloads.com.

When processing the Phase IV Watershed Model Forest Scenario, perform the same checks on the f03_calc_organic_np.log, f05_calc_urbanloads.log, f07_calc_animalwaste.log, and f09_calc_onp_pervimperv.log files.

- l. Run f05_list_calcd_files.com: This program will generate the file f06_filenames.lis, which lists the size and number of calculated monthly files for each extension.
- m. vi f06_filenames.lis: Check f06_filenames.lis thoroughly to be sure that the calculated monthly files are all present and of the correct size. If the calculated monthly files are in order, proceed to step n.

When processing the Phase IV Watershed Model Forest Scenario, check all of that all of the non-signatory files are present as well.

- n. Run e01_combine_allmonthly.com: This program will generate the file *[basin]_monload.dat* by combining all of the monthly files generated into a single file (i.e. the Susquehanna monthly loading file will be called susq_monload.dat) The *[basin]_monload.dat* file is then transferred to the ALPHA for further post-processing. A *[basin]_monload.dat* is generated for each of the four major basin groupings used by the post-processor: Susquehanna (susq), Potomac (potm), James (james) and Coast (coast).

Section I.6.2 ALPHA Post-Processing Steps

- a. Transfer the *[basin]_monload.dat* file generated on the SUN to the appropriate directory on CHESIE. Shortcuts are used to navigate from one Phase IV Watershed Model Forest Scenario to another. They are structured as p4s##s for the SAS directories and p4s##d or p4s##da, db, dc for the data directories where ## is the scenario number (i.e. 01 for Phase IV Watershed Model Reference Scenario). When space is limited, multiple data directories may need to be created. To check to see if this is the case for a given Phase IV Watershed Model scenario, type `sh sym p4s##*` at the \$ prompt. Transfer the *[basin]_monload.dat* to the appropriate directory.
- b. Before running the first program, check the input decks (named *[b]01_input.dat* as an input deck where *[b]* is the first letter of the basin being post-processed (i.e. *s01_input.dat* to post-process the Susquehanna basin, *p01_input.dat* to post-process the Potomac basin, etc.)) to be sure that they are pointing to the appropriate directory or directories for the input and output data.

When processing the Phase IV Watershed Model Forest Scenario, be sure that the `%let s02fores` option is set equal to "YES." This will allow the post-processor to read in the non-signatory files and assign them to new Phase IV Watershed Model segment numbers (their existing Phase IV Watershed Model segment number +1000) so that the signatory and non-signatory portions of a given Phase IV Watershed Model segment can be tracked separately.

- c. Run `a02readraw.com` using *[b]01_input.dat* as an input deck: This command file calls a SAS program called `a01_read_potm_monthly.sas` that reads the data from the *[basin]_monload.dat* file into a SAS data set. It also splits Phase IV Watershed Model segment 960 into two Phase IV Watershed Model segments, 960 and 965, one of which drains into the Bay (960) and the other into the James (965). Both 960 and 965 are assigned the same edge-of-stream pounds/acre loads. To run this program in batch mode, type:

```
sub15/param=[b]01_input.dat a02readraw
```

at the \$ prompt. To run it interactively, type:

```
@a02readraw [b]01_input.dat
```

For state split series, run `d02readraw.com` using *[b]11_input.dat* as an input deck.

- d. `tpu [b]01_input.log`: Check *[b]01_input.log* to be sure that no errors occurred. The most common error that occurs is that we run out of space on the disk to which the data sets are being written. If this is the case, purge down as many files as possible and if that does not provide sufficient space, look for a disk that has enough space and redirect the output to that disk. Be sure to track the location of any new data areas that are established by creating a shared alias that takes the user directly to that area and by following the standard directory tree structure (i.e. `disk_name:[root_directory].postproc.phase4.data.scenario_name`). If `a02readraw.com` was executed properly, proceed to step e. For state split, check *[b]11.input.log* for errors.

If the desired product of the post-processing run is tables presenting the pounds/acre loading rate for each Phase IV Watershed Model segment and land use, then the program that generates these tables may be run as soon as the a02readraw.com file has been run. The pounds/acre tables can also be generated after the rest of the post-processing sequence has been completed. A detailed description of how these tables are generated is presented below.

- e. Before running a03annual.com, check the [b]02_annual.dat input decks to be sure that they are pointing to the appropriate directory or directories for the input and output data. Also check that they are reading the right land use and septic databases from the correct directories.
- f. Run a03annual.com using [b]02_annual.dat as an input deck: This command file calls the a02_calc_potm_annual.sas program that calculates the annual totals of the monthly data contained in the SAS data set generated using a02readraw.com and brings in the land use and septic data sets . It is at this stage that the loads go from pounds/acre to pounds/ Phase IV Watershed Model segment. To run this program in batch mode, type:
sub15/param=[b]02_annual.dat a03annual
at the \$ prompt. To run it interactively, type:
@a03annual [b]02_annual.dat

For state split, run d03annual.com with [b]12.annual.dat as the input file.

- g. tpu [b]02_annual.log: Check [b]02_annual.log to be sure that no errors have occurred. If a03annual.com was executed properly, proceed to step h. Check [b]12.annual.log for state split series errors.
- h. Before running a04totals.com, check the [b]03_totals.dat input decks to be sure that they are pointing to the appropriate directory or directories for the input and output data. Also check that they are reading the right land use and septic databases from the correct directories.

When processing the Progress or Tributary scenarios, the BMP factors must be applied in a step before the totals are calculated. For these scenarios the next step is to run a04factors.com which calls the program a06_eos_factors.sas. Prior to running this, check the [b]03_factors.dat input decks to be sure that they are pointing to the appropriate directory or directories for the input and output data. Also check that they are reading the right BMP factor databases from the correct directories. Then run a04factors.com using [b]03_factors.dat as an input deck. This program applies the BMP factors to the load from each land use type. To run this program in batch mode, type

sub15/param=[b]03_factors.dat a04factors
at the \$ prompt. To run it interactively, type
@a04factors [b]03_factors.dat

For state split series, run d04factors.com with [b]13.factors.dat as the input deck.

Check *[b]03_factors.log* to be sure that no errors occurred. If *a04factors.com* was executed properly, check the *[b]04_totals.dat* input decks to be sure that they are pointing to the appropriate directory or directories for the input and output data. Also check that they are reading the right land use and septic databases from the correct directories. Then proceed to step i. Check *[b]13.factors.log* for errors in the state split series.

- i. Run *a04totals.com* using *[b]03_totals.dat* as an input deck: This file calls the program *a03_calc_potm_totals.sas*, which calculates totals by parameter and land use type using the annual totals generated using *a03annual.com*. This program also brings in the point source and atmospheric deposition data sets. To run this program in batch mode, type
sub15/param=*[b]03_totals.dat* *a04totals*
at the \$ prompt. To run it interactively, type
@*a04totals [b]03_totals.dat*

For the state split series, run *d04totals.com* with *[b]14_totals.dat* as the input deck. When post-processing the Progress or Tributary Strategy Phase IV Watershed Model scenarios, the totals programs and input decks will be offset by one step due to the additional step of applying the BMP factors. So for these scenarios, you will be running *a05totals.com* using *[b]04_totals.dat* as an input deck. Both totals command files are calling the same SAS program to perform their calculations.

- j. tpu *[b]03_totals.log*: Check *[b]03_totals.log* to be sure that no errors occurred. If *a04totals.com* was executed properly, proceed to step k.

Check *[b]13_totals.log* for errors when running the state split series. When processing the Progress or Tributary Strategy Phase IV Watershed Model Scenarios, check *[b]04_totals.log* to be sure that no errors occurred.

At this point in the post-processing sequence, the following products can be generated:

- standard edge-of-stream tables,
- total edge-of-stream tables,
- bed concentration reduction factors and
- below fall line total edge-of-stream summary

A detailed description of how each of these products is generated is presented below.

- k. Before running *a06trans.com*, check the *[b]05_transported.dat* input decks to be sure that they are pointing to the correct input and output directories and that the data set containing the Phase IV Watershed Model Reference Scenario transport factors is correctly identified and located.
- l. Run *a06trans.com* using *[b]05_totals.dat* as an input deck: This file calls the program *a07_trans_factors.sas*, which applies the Phase IV Watershed Model Reference Scenario transport factors to the data sets generated by *a04totals.com*. To run this program in batch mode, type
sub15/param=*[b]05_transported.dat* *a06trans*

at the \$ prompt. To run it interactively, type
@a04trans [b]03_transported.dat

For the state split series, run d06trans.com with [b]15.transported.dat as the input deck.

- m. tpu [b]05_transported.log: Check [b]05_transported.log to be sure that no errors occurred.

Check [b]15.transported for errors when running the state split series.

At this point in the post-processing sequence, the delivered edge-of-stream tables can be generated. A detailed description of how each of these products is generated is presented below. Step m concludes the data processing steps of the post-processor. The remaining steps generate various products:

► Loading Tables

The pound per acre, standard edge-of-stream, total edge-of-stream and delivered edge-of-stream loads are generated using very similar programs and procedures. The programs used take the post-processed data sets and calculate a four year average (1984-1987). These data are displayed in a variety of formats and the procedure for generating standard edge-of-stream loading tables follows:

- a. Before running m03tbl2.com to generate the standard edge-of-stream loading tables, check the m03_input_deck.dat file to be sure that it is pointing to the appropriate directory or directories for input needs. Also check that it is reading in all of the basin data sets that are necessary to create the desired tables. If %let bigtbl0 is set equal to 4, then data will be read from all four basins. The m03_region_xreport.dat file can be used to specify the desired tables for generation by placing the ENDREPORTS lines below the desired tables. It may be desirable on occasion to generate tables only for a given basin. For the Susquehanna, this is fairly straightforward: set bigtbl0=1 in m03_input_deck.dat and place the ENDREPORTS after table 1 in m03_region_xreport.dat. To generate tables only for the James, the Coast data must also be read in because the James basin contains some below fall line Phase IV Watershed Model segments. As a result, bigtbl0 must be set equal to 2 and the James and Coast basins must be associated with bigtbl1 and bigtbl2 in m03_input_deck.dat, while in m03_region_xreport.dat the James table (table 6) must be moved to the top of the file and the ENDREPORTS lines must be placed beneath it. Minimizing the number of data sets being read by the table generating program can reduce Phase IV Watershed Model scenario run time substantially when tables are only desired for a few basins.
- b. Run m03tbl2.com using m03_input_deck.dat and m03_region_xreport.dat as input decks: m03tbl2.com calls the program m03_region_xreport.sas which generates the final tables in three formats: printer control language (.pcl), fixed column format (.lss) and ASCII (.lst). The files are named using the format m03[##][scenario].pcl (or .lss or .lst), where

[##] designates the table number (from _1 through 11) and [scenario] indicates the scenario being summarized (i.e. the file m03_3s01.pcl tabulates summary data on Phase IV Watershed Model segments within the Potomac basin for the Phase IV Watershed Model Reference Scenario) The final tables present the four year average edge-of-stream loads (1984-1987). To run this program in batch mode, type

```
sub15/param=m03_input_deck.dat m03tbl2
at the $ prompt. To run it interactively, type
@m03tbl2 m03_input_deck.dat
```

- c. tpu m03_input_deck.log: Check m03_input_deck.log for errors. If there are not any, the desired tables will be available in the Phase IV Watershed Model scenario's SAS directory.

A similar procedure is followed to generate the pound per acre, total edge-of-stream and transported edge-of-stream loading tables. To generate the pound per acre tables, run m23lbac.com with the m23_input_deck.dat and m23_report_list.dat input files. m23lbac.com calls the program m23_lbperac.sas, which calculates the four year average pound per acre loading rate for each parameter and land use type by Phase IV Watershed Model segment. To generate the total edge-of-stream loading tables, run m43segto.com with the m43_input_deck.dat and m43_seg_total.dat input files. m43segto.com calls the program m43_seg_total.sas, which selects only the grand total by parameter for each Phase IV Watershed Model segment and calculates the four year average total edge-of-stream loading. To generate the transported edge-of-stream loading tables, run m53tbl2.com with the m53_input_deck.dat and m53_region_xreport.dat input files. m53tbl2.com calls the program m53_region_xreport.sas, which calculates the four year average transported edge-of-stream loads for each parameter and land use type by Phase IV Watershed Model segment. To generate the edge-of-stream loads by state, run m63tbl2.com with m63_input_dck.dat and m63_region_xreport.dat as the input decks. Then generate the transported edge-of-stream loads by state by running m73tbl2.com with the input decks being m73_input.deck.dat and m73_region_xreport.dat.

► Bed Concentration Reduction Factors

- a. Before running r30bedconc.com to generate the bed concentration reduction factors, check the r30_input_deck.dat file to be sure that it is pointing to the appropriate Phase IV Watershed Model scenario directories. The r30_input_deck.dat has a section to specify the location of the Phase IV Watershed Model Reference scenario data sets and a second section to specify the location of the Phase IV Watershed Model scenario data sets used to generate these factors. The r30_bed_seg.dat file does not need to be modified. This file specifies what Phase IV Watershed Model segments are above stream of any given Phase IV Watershed Model segment. Above stream Phase IV Watershed Model segments are used in the calculation of bed concentration reduction factors for below stream Phase IV Watershed Model segments.
- b. Run r30bedconc.com using r30_input_deck.dat and r30_bed_seg.dat as input files: r30bedconc.com calls the program r30_bed_conc.sas, which calculates the bed concentration reduction factors for a given Phase IV Watershed Model scenario.

Reduction factors are calculated, per Phase IV Watershed Model segment, for all Phase IV Watershed Model segments with reaches. The reduction factors are calculated as the ratio of the sum of the edge-of-stream loads and the edge-of-stream loads for all Phase IV Watershed Model segments upstream of that Phase IV Watershed Model segment for a given Phase IV Watershed Model scenario. This is completed in order to sum the edge-of-stream loads for a given Phase IV Watershed Model segment and the edge-of-stream loads for all Phase IV Watershed Model segments upstream of that Phase IV Watershed Model segment for the Phase IV Watershed Model Reference Scenario. Reduction factors are calculated for total nitrogen and total phosphorous and are applied to the Phase IV Watershed Model scenario input deck reach simulation.

- c. tpu r30_input_deck.log: Check r30_input_deck.log for errors. If there are no errors, bed concentration reduction factor tables for total nitrogen and total phosphorous will be available in the scenario's SAS directory and will be named r30_tn.lst and r30_tp.lst respectively.

► Below Fall Line Edge-of-stream Summary

Part of the Phase IV Watershed Model documentation includes total loading tables for each basin which present annual loads for the years of the simulation (1984 through 1991) by parameter. All of the below fall line Phase IV Watershed Model segments are grouped together. To prepare this table, a delimited file is generated and transmitted to the Chesapeake Bay Program Office Modeling Team using a program called bfl_annual.sas which is located in the directory containing the Coast post-processing data sets for each Phase IV Watershed Model scenario. This program simply outputs the total load for each Phase IV Watershed Model segment and parameter into a delimited ASCII file called sXXann_b.txt, where XX is the Phase IV Watershed Model scenario number (i.e. s03ann_b.txt contains the annual Phase IV Watershed Model segment totals by parameter for the 1996 Phase IV Watershed Model Progress Scenario).

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Attachment A

A-1 Land Use and Pasture Fortran Program

A-2 Land Use and Pasture Data File

A-3 Land Use and Pasture Script File

A-1 Land Use and Pasture Change Fortran Program

```
PROGRAM LUSE
*****72*****72*****
***** LINE = VARIABLE USED TO STORE A LINE
***** FNAM = NAME OF THE FILE TO MODIFY
***** xLUSE(I,J)= ACRES OF LAND USE SEGMENT I LAND USE J
***** JJSEG(I) = NAME OF SEGMENT I
***** AMON(I) = AMMONIA APPLIED TO PASTURE FOR SEGMENT I
***** ORGN(I) = ORGANIC NITROGEN APPLIED TO PASTURE FOR SEGMENT
***** LTYPE = PERLND, IMPLND, OR RCHRES
***** TARGET = STORAGE FOR TARGET PORTION OF SCHEMATIC LINE

CHARACTER*9,AMON(3),ORGN(3)
CHARACTER*25,FNAM
DIMENSION xLUSE(3,8),JJSEG(3)
CHARACTER*90,LINE
CHARACTER*6,LTYPE
CHARACTER*17,TARGET

***** open old and new input files
READ*,FNAM
OPEN(11,FILE=FNAM,STATUS='OLD')
OPEN(13,FILE='n'//FNAM,STATUS='NEW')

***** read and write to INGRP
READ(11,'(A90)')LINE
DO WHILE (LINE(:9).NE.' INGRP')
CALL RITE(LINE)
READ(11,'(A90)')LINE
END DO

***** store segment numbers for this file in memory
I=0
DO WHILE (LINE(:9).NE.' END I')
CALL RITE(LINE)
READ(11,'(A90)')LINE
IF ((LINE(7:12).EQ.'RCHRES').OR.(LINE(7:10).EQ.'COPY')) THEN
BACKSPACE 11
I=I+1
READ(11,'(17X,I3)')JJSEG(I)
END IF
END DO

***** store number of segments in INBASN and get the land use and pasture
applications

INBASN=I
CALL GETLU(INBASN,JJSEG,xLUSE,AMON,ORGN)

***** correct for nonstandard segment numbering
DO 10 J=1,INBASN
IF (JJSEG(J).EQ.235) JJSEG(J)=230
IF (JJSEG(J).EQ.265) JJSEG(J)=260
IF (JJSEG(J).EQ.175) JJSEG(J)=180
```

```

10    CONTINUE

***** find pasture application and replace with correct pasture load
DO WHILE (LINE(:8).NE.'END SPEC')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
  IF ((LINE(3:8).EQ.'PERLND').AND.(LINE(11:11).EQ.'4')) THEN
    BACKSPACE 11
    READ(11,'(8X,I2)')JSEG
    DO 20 II = 1,INBASN
      IF (JSEG.EQ.(JJSEG(II)/10)) J=II
20    CONTINUE
    IF (LINE(44:47).EQ.'AMAD') LINE(62:70)=AMON(J)
    IF (LINE(44:47).EQ.'ORGN') LINE(62:70)=ORGN(J)
  END IF
END DO

***** search for schematic
DO WHILE (LINE(:9).NE.'SCHEMATIC')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
END DO
CALL RITE(LINE)

***** while in schematic, search for land uses and change to current
DO WHILE (LINE(:13).NE.'END SCHEMATIC')
100  CONTINUE
  READ(11,'(A90)')LINE
***** if not land use line just pass through to new file
  IF (ICMMNT(LINE).EQ.1.OR.
+    (LINE(:6).NE.'PERLND'.AND.LINE(:6).NE.'IMPLND')) THEN
    CALL RITE(LINE)
  ELSE

***** if land use line find the segment and land use associated and write to new
  file
  IF (LINE(:13).EQ.'END SCHEMATIC') GOTO 300
  READ(LINE,1000,ERR=100)LTYPE,JSEG,LUNUM,TARGET
  DO 200 II = 1,INBASN
    IF (JSEG.EQ.(JJSEG(II)/10)) J=II
200  CONTINUE
    I = LUNUM
    IF (LTYPE.EQ.'IMPLND') I = LUNUM +3
    WRITE(13,2000)LTYPE,JSEG,LUNUM,xLUSE(J,I),TARGET
  END IF
END DO
300  CONTINUE

***** close out
DO WHILE (LINE(:7).NE.'END RUN')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

999  CONTINUE

1000 FORMAT(A6,1X,I2,I1,33X,A17)

```

```

2000  FORMAT(A6,1X,I2,I1,16X,F10.0,7X,A17)
3000  FORMAT(A6,1X,I2,I1,16X,17X,A17)
      END

      SUBROUTINE GETLU(INBASN,JJSEG,xLUSE,AMON,ORGN)
*****
** This subroutine uses the file lu_???.prn to find **
** the land use acreages for each segment in the basin **
** The acreages are stored in xLUSE **
*****

      CHARACTER*9,AMON(3),ORGN(3)
      DIMENSION xLUSE(3,8),JJSEG(3)

      OPEN(99,FILE='lu_1996.prn',STATUS='OLD')
      DO 10 I=1,INBASN
      ISEGM=0
      DO WHILE (ISEGM.NE.JJSEG(I))
          READ(99,100)ISEGM
      END DO
      BACKSPACE 99
          READ(99,200) (xLUSE(I,J),J=1,8),AMON(I),ORGN(I)

      REWIND 99
10    CONTINUE
      CLOSE(99)

100   FORMAT(5X,I3)
200   FORMAT(8X,8F8.0,16X,2A8)

      END

```

```

SUBROUTINE RITE(LINE)
  CHARACTER*90,LINE
  IF (LINE(:37).EQ.' ' ) THEN
    WRITE(13,*)
    GOTO 2002
  END IF

  DO 1001 I=1,90
    IF (LINE(I:I).NE.' ') LAST = I
1001  CONTINUE

  WRITE(13,'(A)') LINE(:LAST)
2002  CONTINUE
  END

  FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '****' **
***** it returns 0 if not, 1 if yes *****
*****
  CHARACTER*90,LINE

  icMMNT = 0
  DO 10 I=1,88
    IF (LINE(I:I+3).EQ.'****') THEN
      icMMNT=1
    END IF
10  CONTINUE
  RETURN
  END

```

A-2 Land Use and Pasture Data File

		HITIL	LOTIL	PASTURE	PURBAN	HAYLAND	MANURE	IURBAN	WATER	TOTAL	Pld NH3	Pld ORN
999	FOREST											
10	1030311	141286	13462	173557	60036	228834	560.75	31709	11288	1691043	0.0425	0.0520
20	1875262	244841	12890	373334	97748	494100	1706.51	45905	30627	3176414	0.0477	0.0583
30	815071	64111	14022	161028	85753	198367	511.27	40792	20687	1400343	0.0434	0.0530
40	571435	125103	51598	52491	45575	67782	157.35	24828	12267	951237	0.0481	0.0588
50	752445	38268	6910	37011	17336	48071	87.26	7831	6471	914429	0.0435	0.0532
60	2288762	78436	60825	101775	32552	128767	375.90	15999	17915	2725407	0.0545	0.0666
70	527985	84676	62370	61045	18300	77265	236.40	9253	8174	849303	0.0553	0.0676
80	774542	164182	158937	112921	41884	157394	680.25	22806	26617	1459963	0.0800	0.0978
90	412307	25047	29845	50545	7986	60287	203.40	3059	10812	600090	0.0615	0.0752
100	1064972	111329	75127	102936	33732	137778	614.75	13350	7391	1547229	0.0752	0.0919
110	400488	172501	203746	94701	75337	125190	599.93	42227	17672	1132463	0.1380	0.1686
120	44259	26688	23263	12168	3565	16849	229.49	2051	2867	131938	0.3322	0.4061
140	66757	27341	41272	19011	1534	19060	143.42	746	10033	185897	0.1551	0.1895
160	653824	15266	9893	99444	23564	46238	128.07	11456	4795	864608	0.0370	0.0452
170	682746	12674	5088	192860	9575	39259	33.91	4998	2965	950198	0.0354	0.0432
175	644384	16104	11925	86195	6803	32700	115.81	3396	4164	805788	0.0477	0.0583
180	147859	23393	86631	69883	16521	51843	248.28	9874	3094	409346	0.0848	0.1037
190	527352	25385	56565	251845	61635	94831	304.62	17641	4772	1040330	0.0855	0.1045
200	473858	33535	57023	200685	43731	73897	235.03	11905	5899	900768	0.0801	0.0979
210	189483	35613	116323	74690	18495	65843	383.72	10243	1952	513026	0.0945	0.1155
220	226598	10640	101047	114778	68918	45122	83.57	35865	7525	610577	0.0613	0.0749
230	518789	42317	59725	248081	38935	108416	136.22	7346	3124	1026871	0.0756	0.0925
235	117924	10694	10967	12289	2634	8253	10.11	677	976	164424	0.0638	0.0779
240	144987	7364	41735	10668	4653	4029	4.28	1404	1033	215877	0.0381	0.0465
250	116295	12997	7358	37517	4633	19680	17.77	1221	14144	213864	0.0689	0.0842
260	292159	22616	41130	64376	11856	34240	24.52	3066	1903	471369	0.0558	0.0682
265	174067	365	709	35336	1932	7522	0.94	858	2612	223401	0.0232	0.0284
270	1459340	3243	15676	261779	47399	59302	88.90	19267	7300	1873394	0.0648	0.0792
280	1255376	26535	43973	341088	89989	127837	79.43	32874	14368	1932119	0.0545	0.0666
290	187292	16271	19540	50339	17723	24825	25.91	7695	5540	329249	0.0448	0.0548
300	468344	45767	54635	118876	17052	48582	81.79	6566	4294	764198	0.0453	0.0554
310	71072	12296	2765	7006	1172	2743	5.63	551	3532	101143	0.0442	0.0541
330	37643	4087	19876	12272	4036	4164	13.49	1496	1491	85080	0.0453	0.0553
340	57021	6018	12532	10230	28945	5844	14.58	16629	271	137505	0.0705	0.0862
370	9749	6297	12783	4640	368	3209	8.42	125	651	37831	0.0409	0.0500
380	75685	30839	131641	10021	4621	6671	61.01	1347	4292	265178	0.0963	0.1178
390	14854	12079	23293	1911	2214	1103	9.05	565	1500	57528	0.0830	0.1014
400	83684	85165	103179	9278	9123	4805	45.94	2727	3298	301304	0.0841	0.1028
410	212556	80078	131354	13199	13977	3800	87.94	4792	3361	463205	0.0741	0.0906
420	69490	27889	15510	4290	11563	652	25.17	5304	1860	136584	0.0415	0.0507
430	302636	50613	91200	10178	10574	2701	87.55	2597	7326	477912	0.0633	0.0774
440	90021	54689	38171	3062	9496	522	4.80	2495	6924	205385	0.0348	0.0425
450	184707	51282	92358	54925	24145	48832	281.10	11181	6513	474224	0.1070	0.1308
470	130647	23727	41251	32351	25422	18354	48.13	14014	5086	290899	0.0500	0.0611
480	14098	1530	2482	2163	32085	1128	6.10	24970	293	78756	0.1032	0.1261
490	31124	1665	4014	2940	32472	1544	6.44	23816	1679	99261	0.1188	0.1452
500	161676	39689	18107	31225	55415	7956	9.42	14735	5099	333911	0.0214	0.0262
510	13724	499	1189	831	8572	375	0.47	4112	975	30276	0.0750	0.0916
540	19735	2348	2802	2801	45269	421	6.77	29826	201	103410	0.1036	0.1266
550	167413	6129	32838	68897	63649	35026	37.79	23454	3091	400535	0.0594	0.0726
560	381134	117567	51347	23302	23981	10483	25.98	7907	9840	625586	0.1563	0.1911
580	27654	7005	2498	399	1897	67	0.49	263	1637	41420	0.1079	0.1318
590	375487	74208	67379	21108	21465	9804	28.07	8938	10233	588652	0.0716	0.0875
600	446048	83496	75684	36039	110266	12904	34.08	65917	23749	854137	0.0401	0.0490
610	77035	7150	15715	7453	31852	3085	4.55	15335	1008	158639	0.0682	0.0834
620	58651	19162	26638	4387	16642	390	13.54	8654	7034	141572	0.0625	0.0764
630	4626	757	908	69	6983	34	0.51	4298	562	18238	0.1802	0.2203
650	41793	11757	20209	11428	4776	9234	0.00	2168	2585	103950	0.0000	0.0000
700	87676	11560	319	20163	3157	28383	74.51	1890	1851	155073	0.0867	0.1059
710	37750	30873	31245	14936	8034	19290	209.20	4621	8062	155020	0.2551	0.3118
720	72297	65234	48550	27396	28782	40233	603.38	18768	1907	303770	0.3813	0.4660
730	131448	36846	47837	33042	12211	49598	280.60	6514	1079	318855	0.1368	0.1673
740	454577	25895	54715	217281	25967	78584	202.39	12854	5469	875545	0.0394	0.0482
750	36721	11627	30311	8271	3849	13563	41.27	2292	632	107307	0.1389	0.1698
760	34370	7321	13246	10626	4705	6161	69.27	2136	386	79021	0.1954	0.2388
770	30535	13224	22686	1807	1612	1280	12.27	182	56	71396	0.1350	0.1650
780	16489	6472	18580	1494	1516	498	9.93	355	0	45414	0.0824	0.1007

800	26536	4543	9211	3273	3180	2271	11.72	998	977	51001	0.0808	0.0988
810	30496	5905	53361	6918	1901	4896	31.74	713	3787	108009	0.0770	0.0941
820	6074	3680	8228	655	4127	379	4.73	1603	2113	26864	0.1167	0.1427
830	23303	17094	26142	2254	8718	1298	10.74	2867	5366	87052	0.0999	0.1222
840	193758	23778	34550	2700	4730	742	21.00	1184	15407	276872	0.0395	0.0482
850	27398	1453	4688	3195	10534	1879	15.12	4018	1752	54933	0.1497	0.1829
860	4429	513	832	723	24331	378	4.70	26103	1740	59053	0.2380	0.2909
870	9168	523	1245	871	8795	393	0.42	4515	1748	27257	0.0644	0.0787
880	61223	4796	7762	6221	20502	2279	1.43	9312	3355	115451	0.0380	0.0465
890	9565	351	3872	1996	22090	98	5.27	19519	648	58144	0.0956	0.1168
900	26245	947	1532	5841	66940	2352	1.37	37042	997	141898	0.0217	0.0265
910	72181	11294	1270	7530	46883	1836	3.91	18885	995	160878	0.0361	0.0442
920	229068	47268	22734	30628	38203	8402	22.64	9098	7875	393299	0.0293	0.0358
930	17415	7651	2471	644	1279	81	0.42	241	2018	31801	0.0496	0.0606
940	163492	45478	13485	8672	6981	2604	6.09	2880	7054	250653	0.0318	0.0388
950	21573	2749	1006	1686	18318	1105	0.00	13070	3535	63043	0.0187	0.0229
960	29549	4171	9626	548	56928	229	26.65	44573	8114	153765	0.2025	0.2475
970	27818	112	872	1148	3952	697	2.63	1882	249	36732	0.2035	0.2487
980	241184	54163	25735	14973	25673	6331	5.30	6621	9139	383823	0.0832	0.1017
990	9668	1600	1383	1062	3550	340	1.92	1272	2100	20978	0.0548	0.0670

A-3 Land Use and Pasture Script File

```
cp /work/dpi/phase4a/util/bin/lu_1985.prn .
```

```
/work/dpi/phase4a/util/bin/land_use_and_pasture_1985.exe
```

```
rm lu_1985.prn
```

Attachment B

B-1 MASS-LINK Update Fortran Program

B-2 MASS-LINK Data File Above Fall Line

B-3 MASS-LINK Data File Below Fall Line

B-4 MASS-LINK Data File Conowingo

B-5 MASS-LINK Update Script File

B-1 MASS-LINK Update Fortran Program

```
PROGRAM MLADD
*****72*****72*****
** VARIABLE NAMES *****

***** this program changes the mass links of above fall line basins
***** so that each land use has its own mass link
***** mass links are not shared between land uses or segments allowing
***** different factors to be applied to each to simulate BMPs
***** similar programs were used to change the below fall line and conowingo mass
links

CHARACTER*25,FNAM
DIMENSION JJSEG(3)
CHARACTER*90,LINE
CHARACTER*6,LTYPE
CHARACTER*50,TARGET

***** read in file name and open source file, data file, and target file
READ*,FNAM
OPEN(11,FILE=FNAM,STATUS='OLD')
DO 50 I = 1,22
    IF (FNAM(I:I).EQ.'_') LAST=I-1
50 CONTINUE

***** open data file and target file
OPEN(12,FILE='aflmasslinks',STATUS='OLD')
OPEN(13,FILE='ml'//FNAM,STATUS='NEW')

READ(11,'(A90)')LINE
***** read to ingrp
DO WHILE (LINE(:9).NE.' INGRP')
    CALL RITE(LINE)
    READ(11,'(A90)')LINE
END DO

***** find the number of segments and the segment numbers
I=0
DO WHILE (LINE(:9).NE.' END I')
    CALL RITE(LINE)
    READ(11,'(A90)')LINE
    IF ((LINE(7:12).EQ.'COPY ') .OR. (LINE(7:12).EQ.'RCHRES')) THEN
        BACKSPACE 11
        I=I+1
        READ(11,'(17X,I3)')JJSEG(I)
    END IF
END DO
INBASN=I
```

```

DO 10 J=1,INBASN
  IF (JJSEG(J).EQ.235) JJSEG(J)=230
  IF (JJSEG(J).EQ.265) JJSEG(J)=260
  IF (JJSEG(J).EQ.175) JJSEG(J)=180
10 CONTINUE

***** read to schematic
DO WHILE (LINE(:9).NE.'SCHEMATIC')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
END DO

DO WHILE (LINE(:6).NE.'PERLND')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
END DO
BACKSPACE 11
***** read land use type (eg PERLND), segment,
***** land use number (eg 1=FOREST), and the rest of the line
READ(11,1000)LTYPE,JSEG,LUNUM,TARGET
DO WHILE (LTYPE.NE.'RCHRES')
***** decide what land use to input
DO 200 II = 1,INBASN
  IF (JSEG.EQ.(JJSEG(II)/10)) J=II
200 CONTINUE
  I = LUNUM
  IF (LTYPE.EQ.'IMPLND') I = LUNUM +3

***** if not a reach write land use type, segment land use number,
***** target reach and then name the new mass link number the same as the segment
  IF (LUNUM.NE.0) WRITE(13,2000)LTYPE,JSEG,LUNUM,
+ TARGET(:47),JSEG,I
100 CONTINUE
  READ(11,'(A6)',ERR=100)LTYPE
  IF (LTYPE.EQ.'END SC') GOTO 222
  BACKSPACE 11
  READ(11,1000,ERR=100)LTYPE,JSEG,LUNUM,TARGET
END DO
222 CONTINUE

BACKSPACE 11

DO WHILE (LINE(:9).NE.'MASS-LINK')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

***** read to end of mass links, writing only RCHRES masslinks
DO WHILE (LINE(:9).NE.'END MASS-')
  READ(11,'(A90)')LINE

```

```

      IF (LINE(:6).EQ.'RCHRES') THEN
        DO WHILE (LINE(3:11).NE.'MASS-LINK')
          BACKSPACE 11
          BACKSPACE 11
          READ(11,'(A90)')LINE
        END DO
        CALL RITE(LINE)
        DO WHILE (LINE(3:11).NE.'END MASS-')
          READ(11,'(A90)')LINE
          CALL RITE(LINE)
        END DO
      END IF
    END DO

***** read in mass links from mass link file from unit 12
    DO 555 I = 1,INBASN
      READ(12,'(A90)')LINE
      DO WHILE (LINE(:9).NE.'END MASS-')
        IF ((LINE(3:11).EQ.'MASS-LINK').OR.
+         (LINE(3:11).EQ.'END MASS-')) THEN
          WRITE(13,'(A17,I2,A1)')LINE(:17),JJSEG(I)/10,LINE(20:20)
        ELSE
          CALL RITE(LINE)
        END IF
        READ(12,'(A90)')LINE
      END DO
      REWIND 12
555  CONTINUE
      CALL RITE(LINE)

      DO WHILE (LINE(:7).NE.'END RUN')
        READ(11,'(A90)')LINE
        CALL RITE(LINE)
      END DO

1000  FORMAT(A6,1X,I2,I1,A50)
2000  FORMAT(A6,1X,I2,I1,A47,I2,I1)
3000  FORMAT(A6,1X,I2,I1,16X,17X,A17)

      END

      SUBROUTINE RITE(LINE)
        CHARACTER*90,LINE
        IF (LINE(:37).EQ.' ' ) THEN
          WRITE(13,*)
          GOTO 2002
        END IF

        DO 1001 I=1,90
          IF (LINE(I:I).NE.' ') LAST = I
1001  CONTINUE

```

```
2002      WRITE(13,'(A)') LINE(:LAST)
          CONTINUE
          END
```

B-2 MASS-LINK Data File Above Fall Line

***** forest

```

MASS-LINK          1
<Srce>           <-Grp> <-Member-><--Mult-->   <Targ>           <-Grp> <-Member->  ***
<Name>           <Name> <Name> # #<-factor->   <Name>           <Name> <Name> # #  ***
PERLND           PWATER PERO          0.0833333   RCHRES           INFLOW IVOL
PERLND           SEDMNT SOSED    1    0.04       RCHRES           INFLOW ISED    1
PERLND           SEDMNT SOSED    1    0.69       RCHRES           INFLOW ISED    2
PERLND           SEDMNT SOSED    1    0.27       RCHRES           INFLOW ISED    3
PERLND           PWTGAS POHT          RCHRES           INFLOW IHEAT
PERLND           PWTGAS PODOXM        RCHRES           INFLOW OXIF    1

PERLND           NITR    PONO3          RCHRES           INFLOW NUIF1  1

PERLND           NITR    TSAMS    1          RCHRES           INFLOW NUIF1  2
PERLND           NITR    TSAMS    5          RCHRES           INFLOW NUIF1  2
PERLND           NITR    SSAMS    3          RCHRES           INFLOW NUIF1  2
PERLND           NITR    SEDN    2          0.70          RCHRES           INFLOW NUIF2  2 1
PERLND           NITR    SEDN    2          0.30          RCHRES           INFLOW NUIF2  3 1

PERLND           PQUAL  POQUAL  1          RCHRES           INFLOW NUIF1  4

PERLND           NITR    TSSLN    1          18.9          RCHRES           INFLOW OXIF    2
PERLND           NITR    TSSLN    5          18.9          RCHRES           INFLOW OXIF    2
PERLND           NITR    SSSLN    3          18.9          RCHRES           INFLOW OXIF    2
PERLND           NITR    SEDN    1          18.9          RCHRES           INFLOW OXIF    2

PERLND           NITR    TSSRN    1          RCHRES           INFLOW PKIF    3
PERLND           NITR    TSSRN    5          RCHRES           INFLOW PKIF    3
PERLND           NITR    SSSRN    3          RCHRES           INFLOW PKIF    3
PERLND           NITR    SEDN    3          RCHRES           INFLOW PKIF    3

PERLND           PQUAL  POQUAL  2          0.0037       RCHRES           INFLOW PKIF    4

PERLND           PQUAL  POQUAL  2          0.6          RCHRES           INFLOW PKIF    5
END MASS-LINK          1

```

***** hitil

```

MASS-LINK          2
<Srce>           <-Grp> <-Member-><--Mult-->   <Targ>           <-Grp> <-Member->  ***
<Name>           <Name> <Name> # #<-factor->   <Name>           <Name> <Name> # #  ***
PERLND           PWATER PERO          0.0833333   RCHRES           INFLOW IVOL

PERLND           SEDMNT SOSED    1    0.04       RCHRES           INFLOW ISED    1
PERLND           SEDMNT SOSED    1    0.69       RCHRES           INFLOW ISED    2
PERLND           SEDMNT SOSED    1    0.27       RCHRES           INFLOW ISED    3

PERLND           PWTGAS POHT          RCHRES           INFLOW IHEAT
PERLND           PWTGAS PODOXM        RCHRES           INFLOW OXIF    1

PERLND           NITR    PONO3          RCHRES           INFLOW NUIF1  1

PERLND           NITR    TSAMS    1          RCHRES           INFLOW NUIF1  2

```

PERLND	NITR	TSAMS	5		RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SSAMS	3		RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SEDN	2	0.70	RCHRES	INFLOW	NUIF2	2 1
PERLND	NITR	SEDN	2	0.30	RCHRES	INFLOW	NUIF2	3 1
PERLND	PHOS	TSP4S	1		RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	TSP4S	5		RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	SSP4S	3		RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	SEDP	2	.70	RCHRES	INFLOW	NUIF2	2 2
PERLND	PHOS	SEDP	2	.30	RCHRES	INFLOW	NUIF2	3 2
PERLND	PQUAL	POQUAL	1	0.30	RCHRES	INFLOW	OXIF	2
PERLND	PQUAL	POQUAL	1	0.037	RCHRES	INFLOW	PKIF	3
PERLND	NITR	SEDN	1		RCHRES	INFLOW	PKIF	3
PERLND	PHOS	SEDP	1		RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	1	0.0037	RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	1	0.6	RCHRES	INFLOW	PKIF	5
END MASS-LINK			2					

***** lotil

MASS-LINK			3						
<Srce>	<-Grp>	<-Member->	<--Mult-->		<Targ>	<-Grp>	<-Member->	***	
<Name>	<Name>	<Name>	#	#<-factor->	<Name>	<Name>	#	#	***
PERLND	PWATER	PERO		0.0833333	RCHRES	INFLOW	IVOL		
PERLND	SEDMNT	SOSED	1	0.04	RCHRES	INFLOW	ISED	1	
PERLND	SEDMNT	SOSED	1	0.69	RCHRES	INFLOW	ISED	2	
PERLND	SEDMNT	SOSED	1	0.27	RCHRES	INFLOW	ISED	3	
PERLND	PWTGAS	POHT			RCHRES	INFLOW	IHEAT		
PERLND	PWTGAS	PODOXM			RCHRES	INFLOW	OXIF	1	
PERLND	NITR	PONO3			RCHRES	INFLOW	NUIF1	1	
PERLND	NITR	TSAMS	1		RCHRES	INFLOW	NUIF1	2	
PERLND	NITR	TSAMS	5		RCHRES	INFLOW	NUIF1	2	
PERLND	NITR	SSAMS	3		RCHRES	INFLOW	NUIF1	2	
PERLND	NITR	SEDN	2	0.70	RCHRES	INFLOW	NUIF2	2 1	
PERLND	NITR	SEDN	2	0.30	RCHRES	INFLOW	NUIF2	3 1	
PERLND	PHOS	TSP4S	1		RCHRES	INFLOW	NUIF1	4	
PERLND	PHOS	TSP4S	5		RCHRES	INFLOW	NUIF1	4	
PERLND	PHOS	SSP4S	3		RCHRES	INFLOW	NUIF1	4	
PERLND	PHOS	SEDP	2	.70	RCHRES	INFLOW	NUIF2	2 2	
PERLND	PHOS	SEDP	2	.30	RCHRES	INFLOW	NUIF2	3 2	
PERLND	PQUAL	POQUAL	1	0.30	RCHRES	INFLOW	OXIF	2	
PERLND	PQUAL	POQUAL	1	0.037	RCHRES	INFLOW	PKIF	3	
PERLND	NITR	SEDN	1		RCHRES	INFLOW	PKIF	3	
PERLND	PHOS	SEDP	1		RCHRES	INFLOW	PKIF	4	
PERLND	PQUAL	POQUAL	1	0.0037	RCHRES	INFLOW	PKIF	4	
PERLND	PQUAL	POQUAL	1	0.6	RCHRES	INFLOW	PKIF	5	

END MASS-LINK 3

***** pasture

MASS-LINK 4

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name> #	#<-factor->	<Name>	<Name>	<Name> #	# ***
PERLND	PWATER	PERO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	SEDMNT	SOSED	1 0.04	RCHRES	INFLOW	ISED	1
PERLND	SEDMNT	SOSED	1 0.69	RCHRES	INFLOW	ISED	2
PERLND	SEDMNT	SOSED	1 0.27	RCHRES	INFLOW	ISED	3
PERLND	PWTGAS	POHT		RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	PODOXM		RCHRES	INFLOW	OXIF	1
PERLND	NITR	PONO3		RCHRES	INFLOW	NUIF1	1
PERLND	NITR	TSAMS	1	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	TSAMS	5	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SSAMS	3	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SEDN	2 0.70	RCHRES	INFLOW	NUIF2	2 1
PERLND	NITR	SEDN	2 0.30	RCHRES	INFLOW	NUIF2	3 1
PERLND	PQUAL	POQUAL	1	RCHRES	INFLOW	NUIF1	4
PERLND	PQUAL	POQUAL	2 0.037	RCHRES	INFLOW	PKIF	3
PERLND	PQUAL	POQUAL	2 0.0037	RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	2 0.6	RCHRES	INFLOW	PKIF	5
PERLND	PQUAL	POQUAL	2 0.3	RCHRES	INFLOW	OXIF	2

END MASS-LINK 4

***** P urban

MASS-LINK 5

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name> #	#<-factor->	<Name>	<Name>	<Name> #	# ***
PERLND	PWATER	PERO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	SEDMNT	SOSED	1 0.04	RCHRES	INFLOW	ISED	1
PERLND	SEDMNT	SOSED	1 0.69	RCHRES	INFLOW	ISED	2
PERLND	SEDMNT	SOSED	1 0.27	RCHRES	INFLOW	ISED	3
PERLND	PWTGAS	POHT		RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	PODOXM		RCHRES	INFLOW	OXIF	1
PERLND	NITR	PONO3		RCHRES	INFLOW	NUIF1	1
PERLND	NITR	TSAMS	1	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	TSAMS	5	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SSAMS	3	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SEDN	2 0.70	RCHRES	INFLOW	NUIF2	2 1
PERLND	NITR	SEDN	2 0.30	RCHRES	INFLOW	NUIF2	3 1
PERLND	PQUAL	POQUAL	1	RCHRES	INFLOW	NUIF1	4
PERLND	PQUAL	POQUAL	2 0.037	RCHRES	INFLOW	PKIF	3
PERLND	PQUAL	POQUAL	2 0.0037	RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	2 0.6	RCHRES	INFLOW	PKIF	5
PERLND	PQUAL	POQUAL	2 0.3	RCHRES	INFLOW	OXIF	2

END MASS-LINK 5

***** Hay

MASS-LINK 6

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->	<Name>	<Name>	<Name>	# # ***
PERLND	PWATER	PERO	0.0833333	RCHRES	INFLOW	IVOL	
PERLND	SEDMNT	SOSED	1 0.04	RCHRES	INFLOW	ISED	1
PERLND	SEDMNT	SOSED	1 0.69	RCHRES	INFLOW	ISED	2
PERLND	SEDMNT	SOSED	1 0.27	RCHRES	INFLOW	ISED	3
PERLND	PWTGAS	POHT		RCHRES	INFLOW	IHEAT	
PERLND	PWTGAS	PODOXM		RCHRES	INFLOW	OXIF	1
PERLND	NITR	PONO3		RCHRES	INFLOW	NUIF1	1
PERLND	NITR	TSAMS	1	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	TSAMS	5	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SSAMS	3	RCHRES	INFLOW	NUIF1	2
PERLND	NITR	SEDN	2 0.70	RCHRES	INFLOW	NUIF2	2 1
PERLND	NITR	SEDN	2 0.30	RCHRES	INFLOW	NUIF2	3 1
PERLND	PHOS	TSP4S	1	RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	TSP4S	5	RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	SSP4S	3	RCHRES	INFLOW	NUIF1	4
PERLND	PHOS	SEDP	2 .70	RCHRES	INFLOW	NUIF2	2 2
PERLND	PHOS	SEDP	2 .30	RCHRES	INFLOW	NUIF2	3 2
PERLND	PQUAL	POQUAL	1 0.30	RCHRES	INFLOW	OXIF	2
PERLND	PQUAL	POQUAL	1 0.037	RCHRES	INFLOW	PKIF	3
PERLND	NITR	SEDN	1	RCHRES	INFLOW	PKIF	3
PERLND	PHOS	SEDP	1	RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	1 0.0037	RCHRES	INFLOW	PKIF	4
PERLND	PQUAL	POQUAL	1 0.6	RCHRES	INFLOW	PKIF	5

END MASS-LINK 6

*****Animal Waste

MASS-LINK 7

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->	<Name>	<Name>	<Name>	# # ***
IMPLND	IWATER	SURO	0.0833333	RCHRES	INFLOW	IVOL	
IMPLND	IWTGAS	SOHT		RCHRES	INFLOW	IHEAT	
IMPLND	IWTGAS	SODOXM		RCHRES	INFLOW	OXIF	1
IMPLND	IWATER	SURO	9.040	RCHRES	INFLOW	NUIF1	2
IMPLND	IWATER	SURO	2.260	RCHRES	INFLOW	NUIF1	1
IMPLND	IWATER	SURO	2.260	RCHRES	INFLOW	NUIF1	4
IMPLND	IWATER	SURO	158.2	RCHRES	INFLOW	OXIF	2
IMPLND	IWATER	SURO	47.6	RCHRES	INFLOW	PKIF	5
IMPLND	IWATER	SURO	67.80	RCHRES	INFLOW	PKIF	3
IMPLND	IWATER	SURO	3.39	RCHRES	INFLOW	PKIF	4

END MASS-LINK 7

***** I urban

```
      MASS-LINK          8
<Srce>      <-Grp> <-Member-><--Mult-->      <Targ>      <-Grp> <-Member-> ***
<Name>      <Name> <Name> # #<-factor->      <Name>      <Name> <Name> # # ***
IMPLND      IWATER  SURO          0.0833333      RCHRES      INFLOW  IVOL
IMPLND      IWTGAS  SOHT              RCHRES      INFLOW  IHEAT
IMPLND      IWTGAS  SODOXM              RCHRES      INFLOW  OXIF    1
IMPLND      IQUAL   SOQUAL  1              RCHRES      INFLOW  NUIF1   2
IMPLND      IQUAL   SOQUAL  2              RCHRES      INFLOW  NUIF1   1
IMPLND      IQUAL   SOQUAL  3              RCHRES      INFLOW  NUIF1   4
IMPLND      IQUAL   SOQUAL  4      0.3        RCHRES      INFLOW  OXIF    2
IMPLND      IQUAL   SOQUAL  4      0.037      RCHRES      INFLOW  PKIF    3
IMPLND      IQUAL   SOQUAL  4      0.0037    RCHRES      INFLOW  PKIF    4
IMPLND      IQUAL   SOQUAL  4      0.6        RCHRES      INFLOW  PKIF    5
      END MASS-LINK          8
```

END MASS-LINK

B-3 MASS-LINK Data File Below Fall Line

```

****      FOREST
      MASS-LINK      1
<Srce>      <-Grp> <-Member-><--Mult-->      <Targ>      <-Grp> <-Member->  ***
<Name>      <Name> <Name> # #<-factor->      <Name>      <Name> <Name> # #  ***
PERLND      PWATER PERO      0.0833333      COPY      INPUT MEAN 1

PERLND      NITR   TSAMS 1      COPY      INPUT MEAN 2
PERLND      NITR   TSAMS 5      COPY      INPUT MEAN 2
PERLND      NITR   SSAMS 3      COPY      INPUT MEAN 2
PERLND      NITR   SEDN 2      COPY      INPUT MEAN 2

PERLND      NITR   PONO3      COPY      INPUT MEAN 3

PERLND      NITR   TSSRN 1      COPY      INPUT MEAN 4
PERLND      NITR   TSSRN 5      COPY      INPUT MEAN 4
PERLND      NITR   SSSLN 3      COPY      INPUT MEAN 4
PERLND      NITR   SEDN 3      COPY      INPUT MEAN 4

PERLND      PQUAL POQUAL 1      COPY      INPUT MEAN 5

PERLND      PQUAL POQUAL 2 0.0053      COPY      INPUT MEAN 6

PERLND      PQUAL POQUAL 2 0.60      COPY      INPUT MEAN 7

PERLND      PWTGAS PODOXM      COPY      INPUT MEAN 8

PERLND      PWTGAS POHT      COPY      INPUT MEAN 9

PERLND      SEDMNT SOSED 1      COPY      INPUT MEAN 10

      END MASS-LINK      1

****      HIGH TILL
      MASS-LINK      2
<Srce>      <-Grp> <-Member-><--Mult-->      <Targ>      <-Grp> <-Member->  ***
<Name>      <Name> <Name> # #<-factor->      <Name>      <Name> <Name> # #  ***
PERLND      PWATER PERO      0.0833333      COPY      INPUT MEAN 1

PERLND      NITR   TSAMS 1      COPY      INPUT MEAN 2
PERLND      NITR   TSAMS 5      COPY      INPUT MEAN 2
PERLND      NITR   SSAMS 3      COPY      INPUT MEAN 2
PERLND      NITR   SEDN 2      COPY      INPUT MEAN 2

PERLND      NITR   PONO3      COPY      INPUT MEAN 3

PERLND      PQUAL POQUAL 1 0.053      COPY      INPUT MEAN 4
PERLND      NITR   SEDN 2      COPY      INPUT MEAN 4
PERLND      NITR   SEDN 1      COPY      INPUT MEAN 4

PERLND      PHOS   TSP4S 1      COPY      INPUT MEAN 5
PERLND      PHOS   TSP4S 5      COPY      INPUT MEAN 5
PERLND      PHOS   SSP4S 3      COPY      INPUT MEAN 5

```

PERLND	PQUAL	POQUAL	1	0.0053	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	2	0.00	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	1	0.00	COPY	INPUT	MEAN	6
PERLND	PQUAL	POQUAL	1	0.60	COPY	INPUT	MEAN	7
PERLND	PWTGAS	PODOXM			COPY	INPUT	MEAN	8
PERLND	PWTGAS	POHT			COPY	INPUT	MEAN	9
PERLND	SEDMNT	SOSED	1		COPY	INPUT	MEAN	10
	END MASS-LINK	2						
****		LOWTILL CROPLAND						
	MASS-LINK	3						
<Srce>	<-Grp>	<-Member->	<--Mult-->		<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->		<Name>	<Name>	# #	***
PERLND	PWATER	PERO		0.0833333	COPY	INPUT	MEAN	1
PERLND	NITR	TSAMS	1		COPY	INPUT	MEAN	2
PERLND	NITR	TSAMS	5		COPY	INPUT	MEAN	2
PERLND	NITR	SSAMS	3		COPY	INPUT	MEAN	2
PERLND	NITR	SEDN	2		COPY	INPUT	MEAN	2
PERLND	NITR	PONO3			COPY	INPUT	MEAN	3
PERLND	PQUAL	POQUAL	1	0.053	COPY	INPUT	MEAN	4
PERLND	NITR	SEDN	2		COPY	INPUT	MEAN	4
PERLND	NITR	SEDN	1		COPY	INPUT	MEAN	4
PERLND	PHOS	TSP4S	1		COPY	INPUT	MEAN	5
PERLND	PHOS	TSP4S	5		COPY	INPUT	MEAN	5
PERLND	PHOS	SSP4S	3		COPY	INPUT	MEAN	5
PERLND	PQUAL	POQUAL	1	0.0053	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	2	0.00	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	1	0.00	COPY	INPUT	MEAN	6
PERLND	PQUAL	POQUAL	1	0.60	COPY	INPUT	MEAN	7
PERLND	PWTGAS	PODOXM			COPY	INPUT	MEAN	8
PERLND	PWTGAS	POHT			COPY	INPUT	MEAN	9
PERLND	SEDMNT	SOSED	1		COPY	INPUT	MEAN	10
	END MASS-LINK	3						
****		HAY						
	MASS-LINK	6						
<Srce>	<-Grp>	<-Member->	<--Mult-->		<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->		<Name>	<Name>	# #	***
PERLND	PWATER	PERO		0.0833333	COPY	INPUT	MEAN	1
PERLND	NITR	TSAMS	1		COPY	INPUT	MEAN	2
PERLND	NITR	TSAMS	5		COPY	INPUT	MEAN	2

PERLND	NITR	SSAMS	3		COPY	INPUT	MEAN	2
PERLND	NITR	SEDN	2		COPY	INPUT	MEAN	2
PERLND	NITR	PONO3			COPY	INPUT	MEAN	3
PERLND	PQUAL	POQUAL	1	0.053	COPY	INPUT	MEAN	4
PERLND	NITR	SEDN	2		COPY	INPUT	MEAN	4
PERLND	NITR	SEDN	1		COPY	INPUT	MEAN	4
PERLND	PHOS	TSP4S	1		COPY	INPUT	MEAN	5
PERLND	PHOS	TSP4S	5		COPY	INPUT	MEAN	5
PERLND	PHOS	SSP4S	3		COPY	INPUT	MEAN	5
PERLND	PQUAL	POQUAL	1	0.0053	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	2	0.00	COPY	INPUT	MEAN	6
PERLND	PHOS	SEDP	1	0.00	COPY	INPUT	MEAN	6
PERLND	PQUAL	POQUAL	1	0.60	COPY	INPUT	MEAN	7
PERLND	PWTGAS	PODOXM			COPY	INPUT	MEAN	8
PERLND	PWTGAS	POHT			COPY	INPUT	MEAN	9
PERLND	SEDMNT	SOSED	1		COPY	INPUT	MEAN	10
	END MASS-LINK		6					

**** ANIMAL WASTE

**** NH4 (40 MG/L * .226) = 9.04
 **** NO3 (10 MG/L * .226) = 2.26
 **** ORG N (300 MG/L * .226) = 67.8
 **** PO4 (10 MG/L * .226) = 2.26
 **** ORG P (60 MG/L * .226) = 13.6
 **** TOC (700 MG/L (BOD) * .602 * .226) = 95.1
 MASS-LINK 7

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->	<Name>	<Name>	<Name>	# # ***
IMPLND	IWATER	SURO	0.0833333	COPY	INPUT	MEAN	1
IMPLND	IWATER	SURO	9.04	COPY	INPUT	MEAN	2
IMPLND	IWATER	SURO	2.26	COPY	INPUT	MEAN	3
IMPLND	IWATER	SURO	67.8	COPY	INPUT	MEAN	4
IMPLND	IWATER	SURO	2.26	COPY	INPUT	MEAN	5
IMPLND	IWATER	SURO	3.39	COPY	INPUT	MEAN	6
IMPLND	IWATER	SURO	47.6	COPY	INPUT	MEAN	7
IMPLND	IWTGAS	SODOXM		COPY	INPUT	MEAN	8
IMPLND	IWTGAS	SOHT		COPY	INPUT	MEAN	9
	END MASS-LINK		7				

**** URBAN IMPERVIOUS

MASS-LINK 8

<Srce>	<-Grp>	<-Member->	<--Mult-->	<Targ>	<-Grp>	<-Member->	***
<Name>	<Name>	<Name>	# #<-factor->	<Name>	<Name>	<Name>	# # ***
IMPLND	IWATER	SURO	0.0833333	COPY	INPUT	MEAN	1
IMPLND	IQUAL	SOQUAL	1	COPY	INPUT	MEAN	2
IMPLND	IQUAL	SOQUAL	2	COPY	INPUT	MEAN	3

```

IMPLND    IQUAL    SOQUAL 4      0.053    COPY      INPUT    MEAN    4
IMPLND    IQUAL    SOQUAL 3          COPY      INPUT    MEAN    5
IMPLND    IQUAL    SOQUAL 4      0.0053   COPY      INPUT    MEAN    6
IMPLND    IQUAL    SOQUAL 4      0.60     COPY      INPUT    MEAN    7
IMPLND    IWTGAS   SODOXM          COPY      INPUT    MEAN    8
IMPLND    IWTGAS   SOHT          COPY      INPUT    MEAN    9
  END MASS-LINK      8

```

**** PASTURE

```

  MASS-LINK          4
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ****
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ****
PERLND      PWATER PERO          0.0833333 COPY      INPUT    MEAN    1

PERLND      NITR   TSAMS 1          COPY      INPUT    MEAN    2
PERLND      NITR   TSAMS 5          COPY      INPUT    MEAN    2
PERLND      NITR   SSAMS 3          COPY      INPUT    MEAN    2
PERLND      NITR   SEDN 2          COPY      INPUT    MEAN    2

PERLND      NITR   PONO3          COPY      INPUT    MEAN    3

PERLND      PQUAL  POQUAL 2      0.053    COPY      INPUT    MEAN    4
PERLND      NITR   SEDN 1          COPY      INPUT    MEAN    4

PERLND      PQUAL  POQUAL 1          COPY      INPUT    MEAN    5
PERLND      PQUAL  POQUAL 2      0.0053   COPY      INPUT    MEAN    6
PERLND      PQUAL  POQUAL 2      0.60     COPY      INPUT    MEAN    7
PERLND      PWTGAS PODOXM          COPY      INPUT    MEAN    8
PERLND      PWTGAS POHT          COPY      INPUT    MEAN    9

PERLND      SEDMNT SOSED 1          COPY      INPUT    MEAN   10
  END MASS-LINK      4

```

**** P.URBAN

```

  MASS-LINK          5
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ****
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ****
PERLND      PWATER PERO          0.0833333 COPY      INPUT    MEAN    1

PERLND      NITR   TSAMS 1          COPY      INPUT    MEAN    2
PERLND      NITR   TSAMS 5          COPY      INPUT    MEAN    2
PERLND      NITR   SSAMS 3          COPY      INPUT    MEAN    2
PERLND      NITR   SEDN 2          COPY      INPUT    MEAN    2

PERLND      NITR   PONO3          COPY      INPUT    MEAN    3

PERLND      PQUAL  POQUAL 2      0.053    COPY      INPUT    MEAN    4
PERLND      NITR   SEDN 1          COPY      INPUT    MEAN    4

```

PERLND	PQUAL	POQUAL	1		COPY	INPUT	MEAN	5
PERLND	PQUAL	POQUAL	2	0.0053	COPY	INPUT	MEAN	6
PERLND	PQUAL	POQUAL	2	0.60	COPY	INPUT	MEAN	7
PERLND	PWTGAS	PODOXM			COPY	INPUT	MEAN	8
PERLND	PWTGAS	POHT			COPY	INPUT	MEAN	9
PERLND	SEDMNT	SOSED	1		COPY	INPUT	MEAN	10
	END MASS-LINK		5					
END MASS-LINK								

B-4 MASS-LINK Data File Conowingo

*** COPY timeseries are following:
 *** 1=flow,2=sediment,3=heat,4=oxygen,5=nh3,6=no3,7=po4,8=bod,9=orgn,10=orgp
 *** assume all nh3, po4 = dissolved;
 *** sediment is distributed on input to reach
 *** toc is also done on input to reach

```

MASS-LINK          1
<Srce>           <-Grp> <-Member--><--Mult-->   <Targ>           <-Grp> <-Member--> ***
<Name>           <Name> <Name> # #<-factor-->   <Name>           <Name> <Name> # # ***
PERLND           PWATER PERO          0.0833333   COPY             INPUT MEAN  1
PERLND           SEDMNT SOSED          COPY             INPUT MEAN  2
PERLND           PWTGAS POHT          COPY             INPUT MEAN  3
PERLND           PWTGAS PODOXM        COPY             INPUT MEAN  4

PERLND           NITR   TSAMS  1          COPY             INPUT MEAN  5
PERLND           NITR   TSAMS  5          COPY             INPUT MEAN  5
PERLND           NITR   SSAMS  3          COPY             INPUT MEAN  5
PERLND           NITR   SEDN  2          COPY             INPUT MEAN  5

PERLND           NITR   PONO3          COPY             INPUT MEAN  6

PERLND           PQUAL  POQUAL  1          COPY             INPUT MEAN  7

PERLND           NITR   TSSLN  1          18.9            COPY             INPUT MEAN  8
PERLND           NITR   TSSLN  5          18.9            COPY             INPUT MEAN  8
PERLND           NITR   SSSLN  3          18.9            COPY             INPUT MEAN  8
PERLND           NITR   SEDN  1          18.9            COPY             INPUT MEAN  8

PERLND           NITR   TSSRN  1          COPY             INPUT MEAN  9
PERLND           NITR   TSSRN  5          COPY             INPUT MEAN  9
PERLND           NITR   SSSRN  3          COPY             INPUT MEAN  9
PERLND           NITR   SEDN  3          COPY             INPUT MEAN  9

PERLND           PQUAL  POQUAL  2          0.0037          COPY             INPUT MEAN 10
  END MASS-LINK          1
  
```

```

MASS-LINK          2
<Srce>           <-Grp> <-Member--><--Mult-->   <Targ>           <-Grp> <-Member--> ***
<Name>           <Name> <Name> # #<-factor-->   <Name>           <Name> <Name> # # ***
PERLND           PWATER PERO          0.0833333   COPY             INPUT MEAN  1
PERLND           SEDMNT SOSED          1            COPY             INPUT MEAN  2
PERLND           PWTGAS POHT          COPY             INPUT MEAN  3
PERLND           PWTGAS PODOXM        COPY             INPUT MEAN  4

PERLND           PQUAL  POQUAL  1          0.30            COPY             INPUT MEAN  8
PERLND           PQUAL  POQUAL  1          0.037           COPY             INPUT MEAN  9
PERLND           NITR   SEDN  1          COPY             INPUT MEAN  9
PERLND           PQUAL  POQUAL  1          0.0037          COPY             INPUT MEAN 10
  
```

```

PERLND      NITR      PONO3              COPY          INPUT  MEAN  6

PERLND      NITR      TSAMS  1              COPY          INPUT  MEAN  5
PERLND      NITR      TSAMS  5              COPY          INPUT  MEAN  5
PERLND      NITR      SSAMS  3              COPY          INPUT  MEAN  5
PERLND      NITR      SEDN   2              COPY          INPUT  MEAN  5

PERLND      PHOS      TSP4S  1              COPY          INPUT  MEAN  7
PERLND      PHOS      TSP4S  5              COPY          INPUT  MEAN  7
PERLND      PHOS      SSP4S  3              COPY          INPUT  MEAN  7
PERLND      PHOS      SEDP   2              COPY          INPUT  MEAN  7
  END MASS-LINK      2

  MASS-LINK      3
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ***
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ***
PERLND      PWATER  PERO          0.0833333  COPY          INPUT  MEAN  1
PERLND      SEDMNT  SOSED   1              COPY          INPUT  MEAN  2
PERLND      PWTGAS  POHT              COPY          INPUT  MEAN  3
PERLND      PWTGAS  PODOXM             COPY          INPUT  MEAN  4

PERLND      PQUAL   POQUAL  1          0.30        COPY          INPUT  MEAN  8
PERLND      PQUAL   POQUAL  1          0.037       COPY          INPUT  MEAN  9
PERLND      NITR    SEDN   1              COPY          INPUT  MEAN  9
PERLND      PQUAL   POQUAL  1          0.0037     COPY          INPUT  MEAN 10

PERLND      NITR      PONO3              COPY          INPUT  MEAN  6

PERLND      NITR      TSAMS  1              COPY          INPUT  MEAN  5
PERLND      NITR      TSAMS  5              COPY          INPUT  MEAN  5
PERLND      NITR      SSAMS  3              COPY          INPUT  MEAN  5
PERLND      NITR      SEDN   2              COPY          INPUT  MEAN  5

PERLND      PHOS      TSP4S  1              COPY          INPUT  MEAN  7
PERLND      PHOS      TSP4S  5              COPY          INPUT  MEAN  7
PERLND      PHOS      SSP4S  3              COPY          INPUT  MEAN  7
PERLND      PHOS      SEDP   2              COPY          INPUT  MEAN  7
  END MASS-LINK      3

  MASS-LINK      4
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ***
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ***
PERLND      PWATER  PERO          0.0833333  COPY          INPUT  MEAN  1
PERLND      SEDMNT  SOSED   1              COPY          INPUT  MEAN  2
PERLND      PWTGAS  POHT              COPY          INPUT  MEAN  3
PERLND      PWTGAS  PODOXM             COPY          INPUT  MEAN  4

PERLND      PQUAL   POQUAL  1              COPY          INPUT  MEAN  7
PERLND      PQUAL   POQUAL  2          0.30        COPY          INPUT  MEAN  8
PERLND      PQUAL   POQUAL  2          0.037       COPY          INPUT  MEAN  9
PERLND      NITR    SEDN   1              COPY          INPUT  MEAN  9
PERLND      PQUAL   POQUAL  2          0.0037     COPY          INPUT  MEAN 10

PERLND      NITR      PONO3              COPY          INPUT  MEAN  6

```

```

PERLND      NITR      TSAMS  1          COPY          INPUT  MEAN  5
PERLND      NITR      TSAMS  5          COPY          INPUT  MEAN  5
PERLND      NITR      SSAMS  3          COPY          INPUT  MEAN  5
PERLND      NITR      SEDN   2          COPY          INPUT  MEAN  5
  END MASS-LINK      4

```

```

MASS-LINK      5
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ***
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ***
PERLND      PWATER  PERO          0.0833333  COPY          INPUT  MEAN  1
PERLND      SEDMNT  SOSED   1          COPY          INPUT  MEAN  2
PERLND      PWTGAS  POHT          COPY          INPUT  MEAN  3
PERLND      PWTGAS  PODOXM         COPY          INPUT  MEAN  4

PERLND      PQUAL   POQUAL  1          COPY          INPUT  MEAN  7
PERLND      PQUAL   POQUAL  2          0.30         COPY          INPUT  MEAN  8
PERLND      PQUAL   POQUAL  2          0.037        COPY          INPUT  MEAN  9
PERLND      NITR    SEDN   1          COPY          INPUT  MEAN  9
PERLND      PQUAL   POQUAL  2          0.0037       COPY          INPUT  MEAN 10

PERLND      NITR    PONO3          COPY          INPUT  MEAN  6

PERLND      NITR      TSAMS  1          COPY          INPUT  MEAN  5
PERLND      NITR      TSAMS  5          COPY          INPUT  MEAN  5
PERLND      NITR      SSAMS  3          COPY          INPUT  MEAN  5
PERLND      NITR      SEDN   2          COPY          INPUT  MEAN  5
  END MASS-LINK      5

```

```

MASS-LINK      6
<Srce>      <-Grp> <-Member-><--Mult--> <Targ>      <-Grp> <-Member-> ***
<Name>      <Name> <Name> # #<-factor-> <Name>      <Name> <Name> # # ***
PERLND      PWATER  PERO          0.0833333  COPY          INPUT  MEAN  1
PERLND      SEDMNT  SOSED   1          COPY          INPUT  MEAN  2
PERLND      PWTGAS  POHT          COPY          INPUT  MEAN  3
PERLND      PWTGAS  PODOXM         COPY          INPUT  MEAN  4

PERLND      PQUAL   POQUAL  1          0.30         COPY          INPUT  MEAN  8
PERLND      PQUAL   POQUAL  1          0.037        COPY          INPUT  MEAN  9
PERLND      NITR    SEDN   1          COPY          INPUT  MEAN  9
PERLND      PQUAL   POQUAL  1          0.0037       COPY          INPUT  MEAN 10

PERLND      NITR    PONO3          COPY          INPUT  MEAN  6

PERLND      NITR      TSAMS  1          COPY          INPUT  MEAN  5
PERLND      NITR      TSAMS  5          COPY          INPUT  MEAN  5
PERLND      NITR      SSAMS  3          COPY          INPUT  MEAN  5
PERLND      NITR      SEDN   2          COPY          INPUT  MEAN  5

PERLND      PHOS    TSP4S  1          COPY          INPUT  MEAN  7
PERLND      PHOS    TSP4S  5          COPY          INPUT  MEAN  7
PERLND      PHOS    SSP4S  3          COPY          INPUT  MEAN  7
PERLND      PHOS    SEDP   2          COPY          INPUT  MEAN  7
  END MASS-LINK      6

```

```

MASS-LINK          7
<Srce>           <-Grp> <-Member-><--Mult-->      <Targ>           <-Grp> <-Member-> ***
<Name>           <Name> <Name> # #<-factor->      <Name>           <Name> <Name> # # ***
IMPLND           IWATER SURO          0.0833333      COPY             INPUT MEAN 1
IMPLND           IWTGAS SOHT                    COPY             INPUT MEAN 3
IMPLND           IWTGAS SODOXM                    COPY             INPUT MEAN 4
IMPLND           IWATER SURO          9.040          COPY             INPUT MEAN 5
IMPLND           IWATER SURO          2.260          COPY             INPUT MEAN 6
IMPLND           IWATER SURO          2.260          COPY             INPUT MEAN 7
IMPLND           IWATER SURO          158.2          COPY             INPUT MEAN 8
IMPLND           IWATER SURO          67.80          COPY             INPUT MEAN 9
IMPLND           IWATER SURO          3.39            COPY             INPUT MEAN 10
END MASS-LINK     7

```

```

MASS-LINK          8
<Srce>           <-Grp> <-Member-><--Mult-->      <Targ>           <-Grp> <-Member-> ***
<Name>           <Name> <Name> # #<-factor->      <Name>           <Name> <Name> # # ***
IMPLND           IWATER SURO          0.0833333      COPY             INPUT MEAN 1
IMPLND           IWTGAS SOHT                    COPY             INPUT MEAN 3
IMPLND           IWTGAS SODOXM                    COPY             INPUT MEAN 4
IMPLND           IQUAL  SOQUAL 1                    COPY             INPUT MEAN 5
IMPLND           IQUAL  SOQUAL 2                    COPY             INPUT MEAN 6
IMPLND           IQUAL  SOQUAL 3                    COPY             INPUT MEAN 7
IMPLND           IQUAL  SOQUAL 4          0.3            COPY             INPUT MEAN 8
IMPLND           IQUAL  SOQUAL 4          0.037          COPY             INPUT MEAN 9
IMPLND           IQUAL  SOQUAL 4          0.0037         COPY             INPUT MEAN 10
END MASS-LINK     8

```

```
END MASS-LINK
```

B-5 MASS-LINK Update Script file

```

cp /work/dpi/phase4a/util/bin/ml_fac_ts.prn .
/work/dpi/phase4a/util/bin/masslink_factor_change_ts.exe
rm ml_fac_ts.prn

```

Attachment C

C-1 Nutrient Management Fortran Program

C-2 Nutrient Management Data File

C-3 Nutrient Management Script File

C-1 Nutrient Management Fortran Program

```
PROGRAM SPEC
*****72*****72*****
** VARIABLE NAMES *****

***** this program looks for fertilizer special actions and
***** replaces the applications with modified applications
***** according to the file spec_?.inp

CHARACTER*25,FNAM
DIMENSION JJSEG(3),REDUX(3,3,5)
CHARACTER*90,LINE
CHARACTER*1,TYPE,FLAG
*****
***** REDUX INDICES: REDUX(a,b,c) **
***** a = JJSEG NUMBER **
***** b = 1 for dummy, 2 for N, 3 for P **
***** c = 2 for hitil, 3 for lotil, 4 for hay, 5 for urban **
*****

***** read in source file name and open target file
READ*,FNAM
OPEN(11,FILE=FNAM,STATUS='OLD')

OPEN(13,FILE='f'//FNAM,STATUS='NEW')

READ(11,'(A90)')LINE
***** read to ingrp and change wdm
DO WHILE (LINE(:9).NE.' INGRP')
  IF (LINE(:3).EQ.'WDM') THEN
    DO 33 I=1,50
      IF (LINE(I:I+5).EQ.'s0lref') LAST=I-1
33 CONTINUE
      WRITE(13,'(A,A7,A)')LINE(:LAST),'s19pr96',LINE(LAST+7:80)
    ELSE
      CALL RITE(LINE)
    END IF
  READ(11,'(A90)')LINE
END DO

I=0
***** read to end of ingrp and get segments
DO WHILE (LINE(:9).NE.' END I')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
  IF ((LINE(7:12).EQ.'COPY ') .OR. (LINE(7:12).EQ.'RCHRES')) THEN
    BACKSPACE 11
    I=I+1
    READ(11,'(17X,I3)')JJSEG(I)
  END IF
END DO
INBASN=I
CALL GETRDX(INBASN,JJSEG,REDUX)
DO 54 I=1,INBASN
  REDUX(I,1,1)=1.0
```

```

        REDUX(I,1,2)=1.0
        REDUX(I,1,3)=1.0
        REDUX(I,1,4)=1.0
54    CONTINUE

        DO 10 J=1,INBASN
            IF (JJSEG(J).EQ.235) JJSEG(J)=230
            IF (JJSEG(J).EQ.265) JJSEG(J)=260
            IF (JJSEG(J).EQ.175) JJSEG(J)=180
10    CONTINUE

        CALL RITE(LINE)

***** begin searching for special actions for fertilizer
***** the value of FLAG determines the type of application
***** extreme care must be used to make sure that the type of
***** application is specified somewhere above the line
***** future hspf applications should use different user-defined
***** variables for manure and fertilizer
        DO WHILE (LINE(:8).NE.'END SPEC')
            READ(11,'(A90)')LINE
            IF (ICNTAN(LINE,'MANU').EQ.1) FLAG='M'
            IF ((ICNTAN(LINE,'FERT').EQ.1).OR.
+             (ICNTAN(LINE,'fert').EQ.1).OR.
+             (ICNTAN(LINE,'Fert').EQ.1)) FLAG='F'
            IF ((LINE(3:8).EQ.'PERLND').AND.(FLAG.EQ.'F')) THEN
                BACKSPACE 11
***** if the line is a fertilizer application to PERLND
***** read the segment and land use, nutrient, and application value
                READ(11,1234)JSEG,LUNUM,TYPE,APP
                I=1
                J=1
                IF (TYPE.EQ.'N') I=2
                IF (TYPE.EQ.'P') I=3
                IF (LUNUM.EQ.2) J=2
                IF (LUNUM.EQ.3) J=3
                IF (LUNUM.EQ.6) J=4
                IF (LUNUM.EQ.5) J=5
                DO 200 II = 1,INBASN
                    IF (JSEG.EQ.(JJSEG(II)/10)) JJ=II
200    CONTINUE
***** modify the application and write the new line
                APP=APP*REDUX(JJ,I,J)
                WRITE(13,1235)LINE(:60),APP,LINE(71:80)
                ELSE
                    CALL RITE(LINE)
                END IF
            END DO
***** read until the end
            DO WHILE (LINE(:7).NE.'END RUN')
                READ(11,'(A90)')LINE
                CALL RITE(LINE)
            END DO

1234  FORMAT(8X,I2,I1,31X,A1,17X,F10.0)
1235  FORMAT(A60,F10.3,A10)
        END

        SUBROUTINE GETRDX(INBASN,JJSEG,REDUX)

```

```

*****
** This subroutine uses the file ps_fac.prn to find **
** the point source factors for the segment in 'seg' **
** The point source factors are stored in psfac **
*****

```

```

DIMENSION JJSEG(3),REDUX(3,3,5)

OPEN(98,FILE='spec_pr96.prn',STATUS='OLD')
DO 10 I=1,INBASN
  ISEGM='0'
  DO WHILE (ISEGM.NE.JJSEG(I))
    READ(98,100)ISEGM
  END DO
  BACKSPACE 98
  READ(98,200) (REDUX(I,2,J),J=2,5),(REDUX(I,3,J),J=2,4)
  REWIND 98
10 CONTINUE
  CLOSE(98)

100 FORMAT(5X,I3)
200 FORMAT(8X,7F8.0)

END

```

```

SUBROUTINE RITE(LINE)
  CHARACTER*90,LINE
  IF (LINE(:37).EQ.' ') THEN
    WRITE(13,*)
    GOTO 2002
  END IF

  DO 1001 I=1,90
    IF (LINE(I:I).NE.' ') LAST = I
1001 CONTINUE

  WRITE(13,'(A)') LINE(:LAST)
2002 CONTINUE
END

```

```

FUNCTION icNTAN(LINE,TARGET)
*****
***** this function determine whether LINE contains TARGET **
***** it returns 0 if not, 1 if yes *****
*****
CHARACTER*90,LINE
CHARACTER*4, TARGET

icNTAN = 0
DO 10 I=1,87
  IF (LINE(I:I+3).EQ.TARGET) THEN
    icNTAN=1
  END IF
10 CONTINUE
RETURN
END

```


C-2 Nutrient Management Data File

	hitil n	lotil n	hay n	urban n	hitil p	lotil p	hay p
999							
10	0.9446	0.7649	0.8239	1.0000	0.9662	0.7837	0.8829
20	0.9956	0.9343	0.9579	1.0000	0.9924	0.8958	0.9579
30	0.9341	0.9145	0.9377	1.0000	0.7874	0.8104	0.7327
40	0.8415	0.8538	0.9232	1.0000	0.8878	0.8078	0.7546
50	0.7590	0.6651	0.6772	1.0000	0.9171	0.7155	0.7736
60	0.7046	0.7615	0.8648	1.0000	0.9334	0.7851	0.8084
70	0.6201	0.5999	0.6745	1.0000	0.9220	0.4239	0.7631
80	0.3113	0.0440	0.2765	1.0000	0.7509	0.7057	0.7732
90	0.6359	0.7231	0.9390	1.0000	0.7727	0.6990	0.7013
100	0.4389	0.4156	0.9285	1.0000	0.6900	0.3029	0.3100
110	0.0154	0.0087	0.1791	1.0000	0.4724	0.4076	0.4527
120	0.0027	0.1907	0.0823	1.0000	0.8376	0.9002	0.9082
140	0.2476	0.3541	0.2046	1.0000	0.9119	0.9211	0.9205
160	0.9477	0.8686	0.6858	1.0000	0.9844	0.9579	0.9686
170	1.0000	1.0000	0.9972	1.0000	1.0000	1.0000	0.9972
175	0.9567	0.9534	0.9856	1.0000	0.9557	0.9681	0.9508
180	0.8785	0.8288	0.9558	1.0000	0.9545	0.7737	0.6060
190	0.0207	0.0207	0.9021	1.0000	0.0207	0.0207	0.0207
200	0.3044	0.4043	0.9262	1.0000	0.3044	0.3735	0.2619
210	0.8233	0.8327	0.9610	1.0000	0.7385	0.7559	0.6104
220	0.7961	0.8034	0.9496	1.0000	0.7311	0.6553	0.5288
230	0.9319	0.9284	0.9391	1.0000	0.7712	0.7805	0.7636
235	0.9706	0.9824	0.9865	1.0000	0.9865	0.9865	0.9801
240	0.9915	0.9915	0.9915	1.0000	0.9865	0.9915	0.9861
250	0.9851	0.9851	0.9851	1.0000	0.9851	0.9831	0.9720
260	0.9936	0.9631	0.9936	1.0000	0.9936	0.9812	0.9922
265	0.9490	0.9602	0.9602	1.0000	0.8956	0.9593	0.6978
270	0.9281	0.9263	0.7251	1.0000	0.8478	0.8360	0.7761
280	0.9725	0.9772	0.9626	1.0000	0.9742	0.9716	0.9450
290	0.9465	0.9459	0.9664	1.0000	0.9433	0.9397	0.8872
300	0.9827	0.9864	0.9884	1.0000	0.9815	0.9671	0.9803
310	0.9880	0.9941	0.9941	1.0000	0.9941	0.9941	0.9877
330	0.7230	0.7174	0.9398	1.0000	0.9398	0.9305	0.9398
340	0.7602	0.7427	0.9305	1.0000	0.9305	0.9305	0.9305
370	0.8919	0.8234	0.9281	1.0000	0.9636	0.9334	0.9281
380	0.7204	0.6549	0.9105	1.0000	0.9364	0.9135	0.9357
390	0.5756	0.5557	0.3263	1.0000	0.9326	0.9326	0.9326
400	0.6158	0.6881	0.9277	1.0000	0.9298	0.8686	0.8691
410	0.9031	0.9011	0.9907	1.0000	0.9031	0.9011	0.9071
420	0.6966	0.6946	0.6944	1.0000	0.6966	0.6946	0.6944
430	0.7330	0.7237	0.9715	1.0000	0.7330	0.7237	0.9715
440	0.9625	0.9654	0.9882	1.0000	0.9882	0.9845	0.9389
450	0.6086	0.3354	0.3461	1.0000	0.5067	0.3479	0.3461
470	0.6978	0.5961	0.9122	1.0000	0.9189	0.9104	0.9122
480	0.6105	0.5031	0.2359	1.0000	0.9000	0.9000	0.9000
490	0.5080	0.6623	0.2633	1.0000	0.9000	0.9000	0.9000
500	0.7342	0.7890	0.5423	1.0000	0.9358	0.9300	0.9404
510	0.6698	0.5774	0.9240	1.0000	0.9240	0.9240	0.9240
540	0.4433	0.4526	0.0000	1.0000	0.6269	0.5844	0.5483
550	0.8341	0.9078	0.7238	1.0000	0.9618	0.9618	0.7898
560	0.8841	0.8845	0.8202	1.0000	0.9758	0.9641	0.9110
580	0.7141	0.7050	0.5441	1.0000	0.8326	0.8161	0.7563
590	0.9277	0.9237	0.8747	1.0000	0.9696	0.9742	0.9399
600	0.9013	0.8997	0.8458	1.0000	0.9846	0.9846	0.9283
610	0.9347	0.9304	0.8817	1.0000	0.9882	0.9882	0.9416
620	0.9508	0.9522	0.8881	1.0000	0.9666	0.9624	0.9464

630	0.9807	0.9782	0.9731	1.0000	0.9899	0.9884	0.9871
650	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
700	0.5123	0.6240	0.4135	1.0000	0.5329	0.7927	0.4135
710	0.1209	0.1284	0.1482	1.0000	0.6966	0.5145	0.6146
720	0.4967	0.2999	0.0823	1.0000	0.8320	0.7023	0.9082
730	0.5982	0.6768	0.9256	1.0000	0.9168	0.8245	0.8581
740	0.7509	0.8408	0.9688	1.0000	0.8649	0.9132	0.9098
750	0.7506	0.7032	0.9396	1.0000	0.6898	0.6971	0.3956
760	0.5846	0.7088	0.9078	1.0000	0.7759	0.9078	0.9078
770	0.9439	0.8689	0.9763	1.0000	0.9397	0.8598	0.8349
780	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
800	0.9242	0.8618	0.9238	1.0000	0.9639	0.9301	0.9238
810	0.9305	0.8188	0.9260	1.0000	0.9305	0.9251	0.9260
820	0.9000	0.9000	0.9000	1.0000	0.9000	0.8259	0.9000
830	0.9351	0.9351	0.9351	1.0000	0.9351	0.9351	0.9351
840	0.9696	0.9696	0.9696	1.0000	0.9696	0.9696	0.9696
850	0.9236	0.9025	0.2360	1.0000	0.8776	0.8590	0.9236
860	0.8234	0.8165	0.9146	1.0000	0.8106	0.7863	0.9146
870	0.9481	0.9438	0.4814	1.0000	0.8835	0.8685	0.9481
880	0.7665	0.7936	0.5030	1.0000	0.9324	0.9324	0.9324
890	0.5339	0.5950	0.5767	1.0000	0.9000	0.9000	0.9000
900	1.0000	1.0000	0.0000	1.0000	1.0000	1.0000	0.9000
910	0.6345	0.7086	0.3657	1.0000	0.9000	0.9000	0.9000
920	0.6555	0.7843	0.1796	1.0000	0.9123	0.9123	0.9123
930	0.8424	0.8387	0.7454	1.0000	0.9104	0.8982	0.8637
940	0.7616	0.7785	0.6187	1.0000	0.9619	0.9532	0.8224
950	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
960	0.9009	0.8975	0.9304	1.0000	0.9415	0.9403	0.9300
970	0.6021	0.6462	0.0444	1.0000	0.9044	0.8588	0.9044
980	0.7678	0.9400	0.6425	1.0000	0.8682	0.8414	0.9400
990	0.7609	0.7594	0.4487	1.0000	0.9449	0.9449	0.9449

C-3 Nutrient Management Script File

```

cp /work/dpi/phase4a/util/bin/spec_lot.prn .
/work/dpi/phase4a/util/bin/change_spec_nutrient_management_.exe
rm spec_lot.prn

```

Attachment D

D-1 Mass Link Change Fortran Program

D-2 Mass Link Change Data File

D-3 Mass Link Change Script File

D-1 Mass Link Change Fortran Program

```
PROGRAM MASS
*****72*****72*****
** VARIABLE NAMES *****

*****

CHARACTER*25, FNAM
DIMENSION JJSEG(3)
CHARACTER*90, LINE
CHARACTER*6, LTYPE
CHARACTER*3, ML(3,8), MLNUM
REAL MLFAC(3,24)

***** read file name and open source and target files
READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
OPEN(13, FILE='m'//FNAM, STATUS='NEW')

***** read to INGRP and find segments
READ(11, '(A90)')LINE
DO WHILE (LINE(:9).NE.' INGRP')
  CALL RITE(LINE)
READ(11, '(A90)')LINE
END DO

I=0
DO WHILE (LINE(:9).NE.' END I')
  CALL RITE(LINE)
  READ(11, '(A90)')LINE
  IF ((LINE(7:12).EQ.'COPY ') .OR. (LINE(7:12).EQ.'RCHRES')) THEN
    BACKSPACE 11
    I=I+1
    READ(11, '(17X, I3)')JJSEG(I)
  END IF
END DO
INBASN=I
CALL GETML(INBASN, JJSEG, MLFAC)

DO 10 J=1, INBASN
  IF (JJSEG(J).EQ.235) JJSEG(J)=230
  IF (JJSEG(J).EQ.265) JJSEG(J)=260
  IF (JJSEG(J).EQ.175) JJSEG(J)=180
10 CONTINUE

***** read to schematic
DO WHILE (LINE(:9).NE.'SCHEMATIC')
  CALL RITE(LINE)
  READ(11, '(A90)')LINE
END DO

***** once in SCHEMATIC read perlnd and implnd lines and determine the
***** mass link number for each individual land use
```

```

***** store in variable ML(segment,landuse)
      DO WHILE (LINE(:6).NE.'PERLND')
      CALL RITE(LINE)
      READ(11,'(A90)')LINE
      END DO
      BACKSPACE 11
      READ(11,1000)LTYPE,JSEG,LUNUM,MLNUM
      DO WHILE (LTYPE.NE.'RCHRES')
      CALL RITE(LINE)
      READ(11,'(A90)')LINE
      BACKSPACE 11
***** decide what land use to input
      DO 200 II = 1,INBASN
      IF (JSEG.EQ.(JJSEG(II)/10)) J=II
200  CONTINUE
      I = LUNUM
      IF (LTYPE.EQ.'IMPLND') I = LUNUM +3
      ML(J,I)=MLNUM
100  CONTINUE
      READ(11,'(A6)',ERR=100)LTYPE
      IF (LTYPE.EQ.'END SC') GOTO 222
      BACKSPACE 11
      READ(11,1000)LTYPE,JSEG,LUNUM,MLNUM
      END DO
222  CONTINUE
      BACKSPACE 11

      READ(11,'(A90)')LINE

*****do while in mass link section
      DO WHILE (LINE(:13).NE.'END MASS-LINK')
***** section to read mass link number and quit if
***** current mass links are not compatible with this program

***** read down to mass link section
      DO WHILE (LINE(3:11).NE.'MASS-LINK')
      CALL RITE(LINE)
      READ(11,'(A90)')LINE
      IF (LINE(:13).EQ.'END MASS-LINK') GOTO 990
      END DO

***** find mass link number of current mass link
      MLNUM=LINE(18:20)

***** initialize mass links to 1.0 in case no previous factor exists
      DO 332 I=1,INBASIN
      DO 333 J=1,24
      MLFAC(I,J)=1.0
333  CONTINUE
332  CONTINUE

***** the following section will kick out to line 999 if the current mass
***** link has the same mass link number as any other segment and the mass
***** link factors for those segments are not identical. If the mass link
***** is shared, but the factors are the same, the program should still work
***** even though it has not been tested for this purpose. If no problem is
***** found factors are set here for the remainder of the current mass link.
      I=0
      DO 343 J=1,INBASN
      DO 344 K=1,8
      IF (ML(J,K).EQ.MLNUM) THEN

```

```

          I=I+1
***** increment I to see if multiple land use for this number and test for
agreement
          IF ((I.GT.1).AND.((xNFAC.NE.MLFAC(J,K))
+           .OR.(xPFAC.NE.MLFAC(J,K+8))
+           .OR.(xSFAC.NE.MLFAC(J,K+16))))
+           GOTO 999
***** if no kick out, set N, P, and Sed factors for current mass link
          xNFAC=MLFAC(J,K)
          xPFAC=MLFAC(J,K+8)
          xSFAC=MLFAC(J,K+16)
          END IF
344      CONTINUE
343      CONTINUE
          CALL RITE(LINE)

***** IF MASS LINK FOUND THEN CHANGE MASS LINK UNTIL END MASS LINK
***** method of mass link change is to find the target variable and decide
***** whether it is nitrogen, phosphorus, or sediment.
***** the current multiplier is read and multiplied by the mass link factor
          IF (I.GT.0) THEN
              READ(11,'(A90)')LINE

***** do while still in current mass link
              DO WHILE (LINE(3:15).NE.'END MASS-LINK')

***** if no comment then
                  IF (icMMNT(LINE).EQ.0) THEN
                      FACTOR=1.0
***** this section finds the type of nutrient of sediment
***** and sets the factor appropriately
***** iFLAG turns to 1 if N,P, or Sed found
                      iFLAG=0
                      IF ((LINE(66:73).EQ.'NUIF1 1').OR.
+                       (LINE(66:73).EQ.'NUIF1 2').OR.
+                       (LINE(66:73).EQ.'NUIF2 2').OR.
+                       (LINE(66:73).EQ.'NUIF2 3').OR.
+                       (LINE(66:73).EQ.'PKIF 3')) THEN
                          FACTOR=xNFAC
                          iFLAG=1
                      END IF
                      IF ((LINE(66:73).EQ.'NUIF1 4').OR.
+                       (LINE(66:73).EQ.'PKIF 4')) THEN
                          FACTOR=xPFAC
                          iFLAG=1
                      END IF
                      IF (LINE(66:69).EQ.'ISED') THEN
                          FACTOR=xSFAC
                          iFLAG=1
                      END IF

***** since BOD has N and P components, set the mass link factor
***** at the average on N and P
                      IF (LINE(66:73).EQ.'OXIF 2') THEN
                          FACTOR=(xPFAC+xNFAC)/2
                          iFLAG=1
                      END IF

***** if N,P,Sed found make the change

```

```

                IF (iFLAG.EQ.1) THEN
***** check for blank meaning unity
                IF (LINE(29:38).EQ.'          ') THEN
                    OLDFAC=1.0
                ELSE
                    BACKSPACE 11
                    READ(11,'(28X,F10.0)')OLDFAC
                END IF
                XFAC=OLDFAC*FACTOR
                WRITE(13,'(A28,F10.4,A52)')LINE(:28),XFAC,LINE(39:)
            ELSE
***** else if not N,P,Sed write the line
                CALL RITE(LINE)
            END IF
        ELSE
***** else if comment copy the line
                CALL RITE(LINE)
            END IF
            READ(11,'(A90)')LINE
        END DO
***** end do while in current mass link
            CALL RITE(LINE)
***** write the END MASS-LINK line

                END IF
***** end if current mass link has a corresponding land use
***** this mass link will simply be copied if it is a reach mass link

                READ(11,'(A90)')LINE
            END DO
***** end 'do while in mass link section'

***** copy rest of file to target file
990    CALL RITE(LINE)
        DO WHILE (LINE(:7).NE.'END RUN')
            READ(11,'(A90)')LINE
            CALL RITE(LINE)
        END DO

***** if normal operation skip next section
        GOTO 1001

***** if mass links not well structured quit the program
999    PRINT*,'*****'
        PRINT*,'** THE MASS LINKS IN THIS FILE DO NOT HAVE **'
        PRINT*,'** A STRUCTURE AMENABLE TO THIS PROGRAM **'
        PRINT*,'** USE THE MASS LINK GENERATOR PROGRAM **'
        PRINT*,'** BEFORE TRYING THIS AGAIN **'
        PRINT*,'*****'

1000   FORMAT(A6,1X,I2,I1,47X,A3)
1001   CONTINUE

        END

        SUBROUTINE GETML(INBASN,JJSEG,MLFAC)

```

```

*****
** This subroutine uses the file ps_fac.prn to find **
** the point source factors for the segment in 'seg' **
** The point source factors are stored in psfac **
*****

        DIMENSION JJSEG(3)
        REAL MLFAC(3,24)

        OPEN(98,FILE='ml_fac_pr96.prn',STATUS='OLD')
        DO 10 I=1,INBASN
           ISEGM='0'
           DO WHILE (ISEGM.NE.JJSEG(I))
              READ(98,100)ISEGM
           END DO
           BACKSPACE 98
           READ(98,200) (MLFAC(I,J),J=1,24)
           REWIND 98
10      CONTINUE
           CLOSE(98)

100     FORMAT(5X,I3)
200     FORMAT(8X,24F8.0)

        END

        SUBROUTINE RITE(LINE)
           CHARACTER*90,LINE
           IF (LINE(:37).EQ.' ') THEN
              WRITE(13,*)
              GOTO 2002
           END IF

           DO 1001 I=1,90
              IF (LINE(I:I).NE.' ') LAST = I
1001     CONTINUE

           WRITE(13,'(A)') LINE(:LAST)
2002     CONTINUE
        END

        FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '***' **
***** it returns 0 if not, 1 if yes *****
*****
        CHARACTER*90,LINE

        icMMNT = 0
        DO 10 I=1,88
           IF (LINE(I:I+3).EQ.'***') THEN
              icMMNT=1
           END IF
10      CONTINUE
        RETURN
        END

```


Attachment E

E-1 Point Source and Septic Change Fortran Program

E-2 Point Source Change Data File

E-3 Septic Change Data File

E-4 Point Source and Septic Change Script File

E-1 Point Source and Septic Change Fortran Program

```
PROGRAM PSSEP
*****72*****72*****
** VARIABLE NAMES *****

CHARACTER*25, FNAM
CHARACTER*90, LINE
CHARACTER*3, SEG
CHARACTER*8, PSFAC(7), SEPFAC

***** get file name and open source and target files
READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
OPEN(13, FILE='p'//FNAM, STATUS='NEW')

***** very simple program, read whole file, and search each line
***** for septic or point source specification
READ(11, '(A90)')LINE
DO WHILE (LINE(:7).NE.'END RUN')

***** if septic, read the correct septic information from the data file
***** replace factor with every two day poundage
IF (LINE(:10).EQ.'WDM      1') THEN
  SEG= LINE(51:53)
  CALL GETSEP(SEG, SEPFAC)
  LINE(30:37)=SEPFAC

***** else if first point source line start putting factors vs base case
ELSE IF ((LINE(:3).EQ.'WDM').AND.
+ (LINE(7:7).EQ.'8').AND.
+ ((LINE(10:10).EQ.'0').OR.
+ (LINE(10:10).EQ.'5')))) THEN
  SEG=LINE(8:10)
***** get the point source factors from file
CALL GETPS(SEG, PSFAC)

***** until last point source line read lines and determine the type
***** of point source input, substitute the appropriate factor
DO WHILE (LINE(:1).NE.' ')
  LINE(29:29)=' '
  LINE(35:38)='    '
  IF (LINE(12:15).EQ.'FLOW')LINE(30:37)=PSFAC(1)
  IF (LINE(12:15).EQ.'NH3X')LINE(30:37)=PSFAC(2)
  IF (LINE(12:15).EQ.'NO3X')LINE(30:37)=PSFAC(3)
  IF (LINE(12:15).EQ.'PO4X')LINE(30:37)=PSFAC(4)
  IF (LINE(12:15).EQ.'HEAT')LINE(30:37)=PSFAC(5)
  IF (LINE(12:15).EQ.'ORGN')LINE(30:37)=PSFAC(6)
  IF (LINE(12:15).EQ.'ORGP')LINE(30:37)=PSFAC(7)
  CALL RITE(LINE)
  READ(11, '(A90)')LINE
END DO
END IF
***** if neither point source or septic, write line to target
CALL RITE(LINE)
READ(11, '(A90)')LINE
```

```

        END DO
        CALL RITE(LINE)
        END

        SUBROUTINE GETSEP(SEG,SEPFAC)
*****
** This subroutine uses the file ps_fac.prn to find **
** the point source factors for the segment in 'seg' **
** The point source factors are stored in psfac **
*****

        CHARACTER*3,SEG,ISEGM
        CHARACTER*8,SEPFAC

        OPEN(98,FILE='septicts.prn',STATUS='OLD')
        ISEGM='0'
        DO WHILE (ISEGM.NE.SEG)
            READ(98,100)ISEGM
        END DO
        BACKSPACE 98
        READ(98,200) SEPFAC
        CLOSE(98)

100    FORMAT(5X,A3)
200    FORMAT(8X,A8)

        END

        SUBROUTINE GETPS(SEG,PSFAC)
*****
** This subroutine uses the file ps_fac.prn to find **
** the point source factors for the segment in 'seg' **
** The point source factors are stored in psfac **
*****

        CHARACTER*3,SEG,ISEGM
        CHARACTER*8,PSFAC(7)

        OPEN(99,FILE='ps_fac_nts.prn',STATUS='OLD')
        ISEGM='0'
        DO WHILE (ISEGM.NE.SEG)
            READ(99,100)ISEGM
        END DO
        BACKSPACE 99
        READ(99,200) (PSFAC(J),J=1,7)
        REWIND 99
10    CONTINUE
        CLOSE(99)

100    FORMAT(5X,A3)
200    FORMAT(8X,7(A8))

        END

        SUBROUTINE RITE(LINE)
            CHARACTER*90,LINE
            IF (LINE(:37).EQ.'
                WRITE(13,*)
                GOTO 2002
            ') THEN

```

```
        END IF
        DO 1001 I=1,90
1001     IF (LINE(I:I).NE.' ') LAST = I
        CONTINUE
        WRITE(13,'(A)') LINE(:LAST)
2002     CONTINUE
END
```

E-2 Point Source Change Data File

010	1.3271	0.4231	2.9377	1.3231	1.3271	0.9681	1.3234
020	0.8362	0.8001	0.9915	0.8448	0.8362	0.4755	0.845
030	1.6315	1.1825	1.7311	1.5202	1.6315	1.7311	1.5201
040	1.3089	1.2965	1.3243	1.2992	1.3089	1.3243	1.2992
050	1.1316	1.084	1.0902	1.0956	1.1316	1.0903	1.0956
060	1.448	1.2783	1.4189	1.2127	1.448	1.4188	1.2126
070	1.2336	1.2501	1.2515	1.2763	1.2336	1.2515	1.2764
080	1.5217	1.5353	1.5353	1.562	1.5217	1.5353	1.5706
090	1.2242	1.2242	1.2242	1.224	1.2242	1.2242	1.2253
100	1.3865	1.3861	1.3784	1.3804	1.3865	1.3784	1.3802
110	1.6717	1.7137	1.728	1.9051	1.6717	1.7279	1.9051
120	0.9552	0.9475	1.013	0.8997	0.9552	0.9433	0.9545
140	0.9552	0.9475	1.013	0.8997	0.9552	0.9433	0.9545
150	0.9552	0.9475	1.013	0.8997	0.9552	0.9433	0.9545
160	1.154	2.0886	0.782	1.1	1.154	1.3336	0.9967
170	0.8354	0.5847	1.3128	0.8355	0.8354	0.5572	0.835
175	1.4421	1.4996	1.3979	1.388	1.4421	1.2912	1.4155
180	1.2202	1.2225	1.3227	1.2219	1.2202	1.2131	1.4651
190	1.6422	0.8623	1.3185	1.0707	1.6422	1.6115	1.4232
200	1.01	0.1487	2.1201	0.5277	1.01	0.8004	0.6509
210	1.7155	0.4359	4.7324	1.7729	1.7155	0.8666	1.4691
220	1.2989	0.4379	1.3564	1.1953	1.2989	0.8924	2.0483
230	1.4424	1.4651	1.1669	1.3943	1.4424	1.4262	1.8532
235	1	1	1	1	1	1	1
250	1.2274	1.261	1.0043	1.1697	1.2274	1.2274	1.555
260	3.9408	4.7922	3.8172	2.9271	3.9408	4.6637	3.8886
270	1.0312	0.2925	0.8437	0.5478	1.0312	1.0312	0.7282
280	1.0343	0.4548	0.8438	0.9616	1.0343	1.0313	1.2781
300	3.8212	3.9386	3.1373	1.4339	3.8212	3.8313	1.9034
330	0.2517	21.1427	0	0.4437	0.2517	0	0.1082
340	1.3763	0.7267	1.456	1.1184	1.3763	2.1841	1.0972
370	1.3096	1.4297	0	1.2665	1.3096	1.4335	1.5943
380	1.4022	0.768	4.3435	1.2327	1.4022	2.2501	2.3916
390	3.6057	3.6587	3.7319	3.8477	3.6057	3.3172	5.5167
400	1.2517	0.5765	7.6775	1.1884	1.2517	0.8272	1.7375
410	0.9787	0.731	1.3743	0.8918	0.9787	0.912	0.8896
420	0.972	0.9372	1.5065	0.8528	0.972	0.8608	1.7318
430	1.6638	0.9935	2.7168	1.4724	1.6638	2.8637	4.1297
440	2.0348	0.0519	1.6628	0.8486	2.0348	2.0358	1.1293
450	1.2255	1.212	1.2457	0.9879	1.2255	1.3307	1.8485
470	1.5549	0.6166	36.7792	0.7394	1.5549	1.1454	2.4475
480	0.8147	0.8799	0	0.8063	0.8147	0.9526	0.8587
490	1.3081	0.8786	4.2563	1.0373	1.3081	0.9829	1.8714
500	1.534	3.0948	1.409	1.4734	1.534	3.3412	2.1568
510	0.5898	7.2822	0.0689	0.544	0.5898	0.561	1.0027
540	0.4596	1.2037	0.0017	0.4925	0.4596	0.2248	0.1004
550	2.121	2.1436	1.7071	1.6013	2.121	2.0865	2.8145
560	1.8035	1.2734	1.1315	0.9993	1.8035	1.3828	1.3274
580	1.3621	1.3979	1.1249	1.314	1.3621	1.3599	1.6345
590	1.3386	0.4591	1.0958	0.5092	1.3386	1.3393	0.6768
600	1.2112	0.7916	0.9908	0.8933	1.2112	1.211	1.1874
610	1	1	1	1	1	1	1
620	1.7046	1.7513	1.3947	1.6244	1.7046	1.7046	2.1593
630	1.0686	1.0861	0.9094	0.8465	1.0686	1.1114	1.1252
700	1	1.4913	1	1.4953	1	1	1.4686
710	1.8277	1.8396	1.8396	2.1275	1.8277	1.8396	2.1282
720	2.135	1.75	2.0948	3.0198	2.135	2.0948	3.0198

730	1.9132	2.105	2.1051	1.9499	1.9132	2.1048	1.9501
740	1.2113	0.125	1.4985	0.3593	1.2113	1.8347	0.6069
750	1.8346	2.203	2.2031	2.3143	1.8346	2.2036	2.3138
760	1.6465	0.3598	6.5922	1.5279	1.6465	0.5388	4.3374
770	26.0687	27.2063	0	26.2773	26.0687	32.8466	25.026
780	1.6465	0.3598	6.5922	1.5279	1.6465	0.5388	4.3374
800	1.2338	1.3665	0.6775	1.1743	1.2338	1.291	1.4893
810	0.9777	1.1408	0.8611	0.9304	0.9777	0.7584	1.1226
820	2.1954	1.409	3.9032	1.4456	2.1954	1.2519	9.5255
830	0.9441	0.9389	0.994	0.9203	0.9441	0.9144	1.1401
850	1.4869	1.7219	1.5804	1.3621	1.4869	1.128	1.1439
860	0.2695	0.3374	1.533544	1.1579	0.2695	1.6491	0.0987
870	0.9357	0.3117	4.8434	0.6752	0.9357	1.7629	2.0047
880	1.3446	0.9705	1.4517	1.025	1.3446	2.7513	3.8315
890	1.0842	1.0651	1.161	1.0795	1.0842	1.0771	1.083
900	1.2098	1.2333	0.9821	1.108	1.2098	1.2004	1.9268
910	1.0992	0.7847	1.2021	1.2442	1.0992	1.1413	1.7703
920	1.1268	2.6213	0.8091	0.8948	1.1268	1.0062	2.4596
930	1.2207	1.2543	0.9974	1.1628	1.2207	1.2211	1.5496
940	0.2904	0.2984	0.238	0.2689	0.2904	0.2907	0.3338
960	1.3608	1.3981	1.1134	1.2968	1.3608	1.3608	1.7237
970	1.1034	1.1337	0.9027	1.037	1.1034	1.1035	1.4835
980	4.0755	4.1869	3.3434	2.4321	4.0755	4.0743	3.0782
990	1.6181	1.4303	1.5454	1.5952	1.6181	2.1769	1.7768

E-3 Septic Change Data File

10	1201.96
20	2576.18
30	1024.97
40	994.76
50	599.93
60	849.01
70	710.38
80	1568.20
90	367.54
100	1140.66
110	2322.79
120	386.48
140	324.99
160	377.61
170	203.20
175	249.93
180	738.63
190	922.00
200	776.48
210	1139.53
220	957.72
230	776.36
235	148.65
240	126.89
250	126.43
260	359.52
265	18.37
270	520.35
280	1528.29
290	318.65
300	383.85
310	69.83
330	231.08
340	255.46
370	25.26
380	209.33
390	51.12
400	256.07
410	536.16
420	337.49
430	298.22
440	230.44
450	1362.26
470	832.31
480	223.93
490	316.54
500	804.23
510	239.87
540	122.39
550	841.75
560	534.10
580	34.28
590	640.43
600	1131.75
610	340.41
620	228.84
630	2.48
650	299.48

700	90.86
710	404.42
720	868.44
730	352.46
740	1151.84
750	155.82
760	290.04
770	116.75
780	55.14
800	125.09
810	67.38
820	127.44
830	119.38
840	55.23
850	40.66
860	96.31
870	343.16
880	506.17
890	69.44
900	174.37
910	236.34
920	768.05
930	32.70
940	290.19
950	149.49
960	278.70
970	46.12
980	529.07
990	31.02

E-4 Point Source and Septic Change Script File

```
cp /work/dpi/phase4a/util/bin/ps_fac_ts.prn .
cp /work/dpi/phase4a/util/bin/septicts.prn .

/work/dpi/phase4a/util/bin/psadd_s04.exe

rm ps_fac_ts.prn
rm septicts.prn
```

Attachment F

F-1 Atmospheric Deposition UCI Change Program

F-2 Atmospheric Deposition Change Data File

F-3 Atmospheric Deposition Change Script File

F-1 Atmospheric Deposition UCI Change Program

```
PROGRAM AIR
*****72*****72*****
** VARIABLE NAMES *****

CHARACTER*25, FNAM
DIMENSION JJSEG(4), FADFAC(4,2)
CHARACTER*90, LINE
CHARACTER*3, SEG(4), SEG1

***** read file name and open source and target files
READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')

OPEN(13, FILE='d'//FNAM, STATUS='NEW')

READ(11, '(A90)')LINE
***** read to ingrp and change wdm
DO WHILE (LINE(:9).NE.' INGRP')
  CALL RITE(LINE)
  READ(11, '(A90)')LINE
END DO

***** read segments in input file and get the reduction factors for
***** wet and dry deposition. Store atmospheric deposition factors
I=0
DO WHILE (LINE(:9).NE.' END I')
  CALL RITE(LINE)
  READ(11, '(A90)')LINE
  IF ((LINE(7:12).EQ.'RCHRES').OR.(LINE(7:12).EQ.'COPY')) THEN
    BACKSPACE 11
    I=I+1
    READ(11, '(17X,I3)')JJSEG(I)
    SEG(I)=LINE(18:20)
  END IF
END DO
INBASN=I
CALL GETATM(INBASN, JJSEG, FADFAC)
CALL RITE(LINE)

DO 10 J=1, INBASN
  IF (JJSEG(J).EQ.235) SEG(J)='230'
  IF (JJSEG(J).EQ.265) SEG(J)='260'
  IF (JJSEG(J).EQ.175) SEG(J)='180'
10 CONTINUE
```

```

***** the following section deals with changing the daily load and initial load
***** by an amount proportional to the reduction in dry atmospheric deposition
***** for impervious urban land impervious urban is different from all other
***** land uses in that the dry deposition is parameterized instead of input
***** from an external source

```

```

***** find second qual-inputs section by looking for first end

```

```

DO WHILE (LINE(3:14).NE.'END QUAL-INP')
  READ(11,'(A90)')LINE
  IF (LINE(:11).EQ.'EXT SOURCES') GOTO 1001
  CALL RITE(LINE)
END DO

DO WHILE (LINE(3:12).NE.'QUAL-INPUT')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

READ(11,'(A90)')LINE
DO WHILE (LINE(3:14).NE.'END QUAL-INP')
  IF (ICMMNT(LINE).EQ.0) THEN
    BACKSPACE 11
    READ(11,2000)SEG1,SQO,POTFW,ACQOP,SQOLIM,WSQOP
2000  FORMAT(2X,A3,5X,5F8.0)
2001  FORMAT(2X,A3,5X,5F8.5)
    DO 100 I=1,INBASN
      IF (SEG1(1:2).EQ.SEG(I)(1:2)) THEN
        SQO=SQO*FADFAC(I,2)
        ACQOP=ACQOP*FADFAC(I,2)
      END IF
100   CONTINUE
      WRITE(13,2001)SEG1,SQO,POTFW,ACQOP,SQOLIM,WSQOP
    ELSE
      CALL RITE(LINE)
    END IF
    READ(11,'(A90)')LINE
  END DO

1001  CONTINUE
      CALL RITE(LINE)

***** close out
DO WHILE (LINE(:7).NE.'END RUN')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

1234  FORMAT(8X,I2,I1,31X,A1,17X,F10.0)
1235  FORMAT(A60,F10.3,A10)
      END

```

```

      SUBROUTINE GETATM(INBASN,JJSEG,FADFAC)
*****
** This subroutine uses the file atm_xx.prn to find **
** the atmospheric deposition percentages for wet and **
** dry deposition by segment **
*****

      DIMENSION JJSEG(4),FADFAC(4,2)
** FADFAC*,1 = WET DEPOSITION, 2= DRY DEPOSITION % OF BASE
      OPEN(98,FILE='atm_s08otca_cd.prn',STATUS='OLD')
      OPEN(99,FILE='atm_s08otca_wm.prn',STATUS='OLD')

      DO 10 I=1,INBASN
         ISEGM=0
         DO WHILE (ISEGM.NE.JJSEG(I))
            READ(98,100)ISEGM
         END DO
         BACKSPACE 98
         READ(98,201) CD_WET,CD_DRY
         REWIND 98

         ISEGM=0
         DO WHILE (ISEGM.NE.JJSEG(I))
            READ(99,100)ISEGM
         END DO
         BACKSPACE 99
         READ(99,201) WM_WET,WM_DRY
         REWIND 99

***** have to take a yearly average for this since it's going
***** in the input file rather than in the wdm
         FADFAC(I,1)=(7.*CD_WET+5.*WM_WET)/12.
         FADFAC(I,2)=(7.*CD_DRY+5.*WM_DRY)/12.

10      CONTINUE
         CLOSE(99)

100     FORMAT(5X,I3)
201     FORMAT(8X,2F8.0)

      END

      SUBROUTINE RITE(LINE)
      CHARACTER*90,LINE
         IF (LINE(:37).EQ.' ') THEN
            WRITE(13,*)
            GOTO 2002
         END IF

         DO 1001 I=1,90
            IF (LINE(I:I).NE.' ') LAST = I
1001     CONTINUE

         WRITE(13,'(A)') LINE(:LAST)
2002     CONTINUE

      END

      FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '****' **

```

```
***** it returns 0 if not, 1 if yes *****
*****
CHARACTER*90,LINE

      icMMNT = 0
      DO 10 I=1,88
        IF (LINE(I:I+2).EQ.'***') THEN
          icMMNT=1
        END IF
10    CONTINUE
      RETURN
      END
```

F-2 Atmospheric Deposition Change Data Files

999%wet pas%dry passeasonal otc warm

10	0.7750	0.7700
20	0.7579	0.7579
30	0.7376	0.7497
40	0.7224	0.7404
50	0.7253	0.7355
60	0.7502	0.7519
70	0.7247	0.7522
80	0.7158	0.7671
90	0.7359	0.7474
100	0.7150	0.7459
110	0.7160	0.7635
120	0.7317	0.7960
140	0.7264	0.7975
160	0.7659	0.7569
170	0.7781	0.7823
175	0.7712	0.7689
180	0.7488	0.7687
190	0.7982	0.8208
200	0.7836	0.7950
210	0.7430	0.7770
220	0.7645	0.7795
230	0.7964	0.7979
235	0.8091	0.7654
240	0.8288	0.7846
250	0.8190	0.8027
260	0.8408	0.8043
265	0.8124	0.8040
270	0.8421	0.8345
280	0.8515	0.8357
290	0.8700	0.8214
300	0.8901	0.8366
310	0.8917	0.8343
330	0.7484	0.7713
340	0.7507	0.7671
370	0.7396	0.8146
380	0.7491	0.7508
390	0.7399	0.7561
400	0.7596	0.7619
410	0.7871	0.7678
420	0.8217	0.7727
430	0.8286	0.7733
440	0.8680	0.7865
450	0.7396	0.8037
470	0.7485	0.7847
480	0.7521	0.7706
490	0.7523	0.7629
500	0.7641	0.7476
510	0.7547	0.7564
540	0.7547	0.7667
550	0.7765	0.7644
560	0.8053	0.7808
580	0.7875	0.7954
590	0.8485	0.8237
600	0.8810	0.8464
610	0.8676	0.8345
620	0.8936	0.8559
630	0.9139	0.8653
700	0.7547	0.7552

710	0.7056	0.7652
720	0.7237	0.7888
730	0.7386	0.7611
740	0.7581	0.7683
750	0.7344	0.7735
760	0.7506	0.7721
770	0.7861	0.7547
780	0.7697	0.7617
800	0.7305	0.8143
810	0.7396	0.7822
820	0.7430	0.7521
830	0.7480	0.7590
840	0.7871	0.7710
850	0.7404	0.7969
860	0.7528	0.7617
870	0.7521	0.7531
880	0.7598	0.7471
890	0.7545	0.7700
900	0.7696	0.7647
910	0.7634	0.7428
920	0.7855	0.7400
930	0.7914	0.8029
940	0.8360	0.8210
950	0.9113	0.8549
960	0.9257	0.8425
970	0.7854	0.7424
980	0.7983	0.7605
990	0.8256	0.7667

999%wet pas%dry pasannual otc cold

10	0.8526	0.7770
20	0.8545	0.7841
30	0.8516	0.7584
40	0.8544	0.7454
50	0.8709	0.7677
60	0.8704	0.7645
70	0.8659	0.7281
80	0.8778	0.7175
90	0.8771	0.7461
100	0.8807	0.7392
110	0.8767	0.7034
120	0.8701	0.7082
140	0.8739	0.7105
160	0.9082	0.7713
170	0.9378	0.7513
175	0.9175	0.7589
180	0.8937	0.7362
190	0.9434	0.7447
200	0.9297	0.7414
210	0.8905	0.7162
220	0.8936	0.7549
230	0.9118	0.6996
235	0.9144	0.7560
240	0.9203	0.7747
250	0.9242	0.7278
260	0.9224	0.7889
265	0.9517	0.8424
270	0.9358	0.8487
280	0.9313	0.7924
290	0.9249	0.8004

300	0.9178	0.8071
310	0.9311	0.8474
330	0.8851	0.7515
340	0.8857	0.7594
370	0.8759	0.7044
380	0.8693	0.7663
390	0.8775	0.7700
400	0.8814	0.7732
410	0.8975	0.7679
420	0.9045	0.7716
430	0.9000	0.7690
440	0.9278	0.7931
450	0.8754	0.7119
470	0.8839	0.7159
480	0.8888	0.7630
490	0.8839	0.7799
500	0.8831	0.7688
510	0.8820	0.7900
540	0.8899	0.7557
550	0.8989	0.7515
560	0.9288	0.7700
580	0.9437	0.7921
590	0.9517	0.8026
600	0.9457	0.8237
610	0.9484	0.8110
620	0.9611	0.8247
630	0.9529	0.8262
700	0.8537	0.7406
710	0.8724	0.7047
720	0.8636	0.7262
730	0.9050	0.7215
740	0.9110	0.7510
750	0.8845	0.6977
760	0.8907	0.7312
770	0.8706	0.7655
780	0.8907	0.7655
800	0.8783	0.7118
810	0.8775	0.7331
820	0.8777	0.7760
830	0.8834	0.7733
840	0.9053	0.7782
850	0.8781	0.7172
860	0.8846	0.8039
870	0.8811	0.7894
880	0.8853	0.7776
890	0.8912	0.7569
900	0.8926	0.7576
910	0.8798	0.7480
920	0.8829	0.7536
930	0.9458	0.7978
940	0.9483	0.8041
950	0.9411	0.8201
960	0.9485	0.8222
970	0.8899	0.7545
980	0.8960	0.7545
990	0.9105	0.7673

F-3 Atmospheric Deposition Change Script File

```
cp /work/dpi/phase4a/util/bin/atm_s08otca_cd.prn .  
cp /work/dpi/phase4a/util/bin/atm_s08otca_wm.prn .  
  
/work/dpi/phase4a/util/bin/make_otca.exe  
  
rm atm_s08otca_cd.prn  
rm atm_s08otca_wm.prn
```

Attachment G

G-1 Bed Concentration Change Program

G-2 Bed Concentration Change Data File

G-3 Bed Concentration Change Script File

G-1 Bed Concentration Change Program

```
PROGRAM BEDCON
*****72*****72*****
** VARIABLE NAMES *****

CHARACTER*25, FNAM
DIMENSION JJSEG(4), FACTOR(4,2), BEDCON(4,6)
CHARACTER*90, LINE

READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
OPEN(13, FILE='n'//FNAM, STATUS='NEW')

***** get segments
READ(11, '(A90)')LINE
DO WHILE (LINE(:9).NE.' INGRP')
READ(11, '(A90)')LINE
END DO

I=0
DO WHILE (LINE(:9).NE.' END I')
READ(11, '(A90)')LINE
IF (LINE(7:12).EQ.'RCHRES') THEN
BACKSPACE 11
I=I+1
READ(11, '(17X,I3)')JJSEG(I)
END IF
END DO
INBASN=I
CALL GETFAC(INBASN, JJSEG, FACTOR)
CALL GETBDC(INBASN, JJSEG, BEDCON)

REWIND 11
***** rewind the input file and start writing
IF ((JJSEG(1).EQ.140).OR.(JJSEG(2).EQ.140).OR.
+ (JJSEG(3).EQ.140).OR.(JJSEG(4).EQ.140)) THEN
DO WHILE (LINE(:13).NE.' NUT-BENPARM')
READ(11, '(A90)')LINE
CALL RITE(LINE)
END DO
READ(11, '(A90)')LINE
DO WHILE (LINE(:13).NE.' END NUT-BEN')
IGOOD=0
DO 455 I=1, 88
IF (LINE(I:I+2).EQ.'***') IGOOD=1
455 CONTINUE
IF (IGOOD.EQ.1) CALL RITE(LINE)
READ(11, '(A90)')LINE
END DO

***** at end nut-bedconc write all bedconcs before continuing

WRITE(13, 3332)120, 4.6 * FACTOR(2,1),
+ 6. * FACTOR(2,1), 0.0, 0.0, 1.0
WRITE(13, 3332)140, 4.6 * FACTOR(3,1),
+ 6. * FACTOR(3,1), 0.0, 0.0, 1.0
3332 FORMAT(2X, I3, 5X, 5F10.2)

CALL RITE(LINE)
```

```

END IF

DO WHILE (LINE(:13).NE.' NUT-BEDCONC')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

READ(11,'(A90)')LINE
DO WHILE (LINE(:13).NE.' END NUT-BED')
  IGOOD=0
  DO 456 I=1,88
    IF (LINE(I:I+2).EQ.'***') IGOOD=1
456   CONTINUE
    IF (IGOOD.EQ.1) CALL RITE(LINE)
    READ(11,'(A90)')LINE
  END DO

***** at end nut-bedconcc write all bedconcs before continuing

DO 135 I = 1,INBASN
  WRITE(13,3333)JJSEG(I),BEDCON(I,1) * FACTOR(I,1),
+   BEDCON(I,2) * FACTOR(I,1),
+   BEDCON(I,3) * FACTOR(I,1),
+   BEDCON(I,4) * FACTOR(I,2),
+   BEDCON(I,5) * FACTOR(I,2),
+   BEDCON(I,6) * FACTOR(I,2)
3333  FORMAT(2X,I3,5X,6F10.0)
135  CONTINUE

CALL RITE(LINE)

DO WHILE (LINE(:7).NE.'END RUN')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

999  CONTINUE

1000 FORMAT(A6,1X,I2,I1,33X,A17)
2000 FORMAT(A6,1X,I2,I1,16X,F10.0,7X,A17)
3000 FORMAT(A6,1X,I2,I1,16X,17X,A17)
END

SUBROUTINE GETFAC(INBASN,JJSEG,FACTOR)
*****
** This subroutine uses the file lu_2000.txt to find **
** the land use acreages for each segment in the basin **
** The acreages are stored in xLUSE **
*****

DIMENSION JJSEG(4),FACTOR(4,2)

```

```

OPEN(99,FILE='bedc_s19.txt',STATUS='OLD')
DO 10 I=1,INBASN
ISEGM=0
DO WHILE (ISEGM.NE.JJSEG(I))
  READ(99,100)ISEGM
END DO
BACKSPACE 99
READ(99,200) (FACTOR(I,J),J=1,2)

10  REWIND 99
    CONTINUE
    CLOSE(99)

100  FORMAT(5X,I3)
200  FORMAT(8X,2F8.0)

END

SUBROUTINE GETBDC(INBASN,JJSEG,BEDCON)
*****
** This subroutine uses the file lu_2000.txt to find **
** the land use acreages for each segment in the basin **
** The acreages are stored in xLUSE **
*****

DIMENSION JJSEG(4),BEDCON(4,6)

OPEN(98,FILE='refbedconcs.prn',STATUS='OLD')
DO 10 I=1,INBASN
ISEGM=0
DO WHILE (ISEGM.NE.JJSEG(I))
  READ(98,100)ISEGM
END DO
BACKSPACE 98
READ(98,200) (BEDCON(I,J),J=1,6)

10  REWIND 98
    CONTINUE
    CLOSE(98)

100  FORMAT(5X,I3)
200  FORMAT(8X,6F8.0)

END

SUBROUTINE RITE(LINE)
CHARACTER*90,LINE
  IF (LINE(:37).EQ.' ') THEN
    WRITE(13,*)
    GOTO 2002
  END IF

  DO 1001 I=1,90
    IF (LINE(I:I).NE.' ') LAST = I
1001  CONTINUE

  WRITE(13,'(A)') LINE(:LAST)
2002  CONTINUE

END

```

```

        FUNCTION icNTAN(LINE,TARGET)
*****
***** this function determine whether LINE contains TARGET **
***** it returns 0 if not, 1 if yes *****
*****
        CHARACTER*90,LINE
        CHARACTER*4, TARGET

        icNTAN = 0
        DO 10 I=1,87
            IF (LINE(I:I+3).EQ.TARGET) THEN
                icNTAN=1
            END IF
10      CONTINUE
        RETURN
        END

```

G-2 Bed Concentration Change Data Files

999nitrogenphosphorus

10	0.7218	0.5649
20	0.6672	0.4172
30	0.7018	0.4934
40	0.6978	0.4786
50	0.7964	0.5559
60	0.7839	0.5127
70	0.7462	0.5406
80	0.7046	0.4879
90	0.7038	0.4229
100	0.6735	0.3803
110	0.6963	0.4818
120	0.6875	0.4835
140	0.6862	0.4869
150	0.6862	0.4869
160	0.7500	0.4513
170	0.7916	0.6727
175	0.7762	0.5150
180	0.6799	0.5832
190	0.6279	0.6071
200	0.6063	0.5796
210	0.5851	0.5006
220	0.6665	0.5700
230	0.6431	0.5912
235	0.8363	0.6788
240	0.8423	0.6829
250	0.6931	0.6025
260	0.8023	0.7178
265	0.7635	0.8292
270	0.7426	0.8012
280	0.7524	0.7383
290	0.7501	0.7310
300	0.7350	0.6155
310	0.7358	0.6145
330	0.6029	0.6371
340	0.6245	0.4309
370	0.4990	0.6625
380	0.4515	0.6551
390	0.4199	0.6251
400	0.5294	0.5281
410	0.4757	0.5416
420	0.5721	0.3199
430	0.5170	0.4552
440	0.6184	0.8498
450	0.6147	0.4837
470	0.5946	0.2944
480	0.7242	0.6772
490	0.3759	0.5119
500	0.6965	0.5407
510	0.8886	0.6756
540	0.6421	0.6665
550	1.0909	0.6707
560	0.4953	0.4654
580	0.4340	0.3903
590	0.5853	0.3918
600	0.6911	0.3257
610	0.7472	0.7392
620	0.5254	0.4378

630	0.6262	0.3791
700	0.6978	0.4603
710	0.6935	0.4811
720	0.6217	0.4944
730	0.6470	0.7191
740	0.7431	0.6230
750	0.5391	0.4666
760	0.6675	0.3262
770	0.5534	0.4734
780	0.4290	0.5014
800	0.7016	0.6851
810	0.6951	0.7120
820	0.7288	0.5060
830	0.6585	0.5165
840	0.5511	0.3070
850	0.6319	0.6923
860	0.2634	0.2724
870	0.9290	0.4321
880	0.7760	0.5352
890	0.7929	0.8986
900	0.5641	0.5091
910	0.5490	0.5858
920	0.6679	0.5541
930	0.3723	0.3347
940	0.5281	0.4268
950	0.7473	0.5810
960	1.0142	0.4266
970	0.7387	0.7193
980	0.6957	0.5394
990	0.7630	0.4388

G-3 Bed Concentration Change Script File

```
cp /work/dpi/phase4a/util/bin/bedc_s04.txt .
cp /work/dpi/phase4a/util/bin/refbedconcs.prn .

/work/dpi/phase4a/util/bin/bedconc_s04.exe

rm bedc_s04.txt
rm refbedconcs.prn
```

Attachment H

H-1 All UCI Change Script File

H-2 Wdm Name in UCI Change Script File

H-3 Wdm Name in UCI Change ed File

H-1 All UCI Change Script File

```
#!/bin/csh
#####
##### THIS FILE CHANGES ALL INPUTS TO THE CURRENT SCENARIO #####
##### EXTREME CAUTION SHOULD BE EXERCISED IN ITS USE #####
##### TO USE THIS FILE: #####
##### 1: CHANGE THE SCENARIO i.e. :g/s04trib/s//NEWSCEN/g #####
##### 2: CHANGE THE LAND USE i.e. :g/luts/s//NEWLU #####
##### 3: CHANGE THE MASS LINK FACTOR i.e. :g/mlfacts/s//NEWMLFAC #####
##### 4: CHANGE THE NUTRIENT MANAGEMENT FACTOR i.e. :g/nmts/s//NEWNM #####
##### 5: CHANGE THE POINT SOURCE AND SEPTIC i.e. :g/pssep04/s//NEWPS #####
#####
echo 'afl land use s04trib'
cd james/s04trib/
echo appom_p4.inp | luts
cd ../../
cd james/s04trib/
echo james1_p4.inp | luts
cd ../../
cd james/s04trib/
echo james2_p4.inp | luts
cd ../../
cd james/s04trib/
echo pamun_p4.inp | luts
cd ../../
cd james/s04trib/
echo matta_p4.inp | luts
cd ../../
cd potm/s04trib/
echo lopot_p4.inp | luts
cd ../../
cd potm/s04trib/
echo midpot_p4.inp | luts
cd ../../
cd potm/s04trib/
echo shena_p4.inp | luts
cd ../../
cd potm/s04trib/
echo uppot_p4.inp | luts
cd ../../
cd potm/s04trib/patux/
echo patux_p4.inp | luts
cd ../../..
cd potm/s04trib/rappa/
echo rappa_p4.inp | luts
cd ../../..
cd susq/s04trib/
echo ebsus1_p4.inp | luts
cd ../../
cd susq/s04trib/
echo ebsus2_p4.inp | luts
cd ../../
cd susq/s04trib/
echo junia_p4.inp | luts
cd ../../
cd susq/s04trib/
echo losus_p4.inp | luts
cd ../../
cd susq/s04trib/
```

```

echo wbsus_p4.inp | luts
echo conownps_p4.inp | luts
mv nconownps_p4.inp conownps_p4.inp
cd ../../
cd coast/s04trib/patapsco
echo pataps_p4.inp | luts
cd ../../
cd coast/s04trib/nanticoke
echo nant_p4.inp | luts
cd ../../
cd coast/s04trib/choptank
echo chop_p4.inp | luts
cd ../../
echo 'afl mlfacs'
cd james/s04trib/
echo nappom_p4.inp | amlfacts
cd ../../
cd james/s04trib/
echo njames1_p4.inp | amlfacts
cd ../../
cd james/s04trib/
echo njames2_p4.inp | amlfacts
cd ../../
cd james/s04trib/
echo npamun_p4.inp | amlfacts
cd ../../
cd james/s04trib/
echo nmatta_p4.inp | amlfacts
cd ../../
cd potm/s04trib/
echo nlopot_p4.inp | amlfacts
cd ../../
cd potm/s04trib/
echo nmidpot_p4.inp | amlfacts
cd ../../
cd potm/s04trib/
echo nshena_p4.inp | amlfacts
cd ../../
cd potm/s04trib/
echo nuppot_p4.inp | amlfacts
cd ../../
cd potm/s04trib/patux/
echo npatux_p4.inp | amlfacts
cd ../../
cd potm/s04trib/rappa/
echo nrappa_p4.inp | amlfacts
cd ../../
cd susq/s04trib/
echo nebsus1_p4.inp | amlfacts
cd ../../
cd susq/s04trib/
echo nebsus2_p4.inp | amlfacts
cd ../../
cd susq/s04trib/
echo njunia_p4.inp | amlfacts
cd ../../
cd susq/s04trib/
echo nlosus_p4.inp | amlfacts
cd ../../
cd susq/s04trib/
echo nwbsus_p4.inp | amlfacts

```

```

echo conownps_p4.inp | cmlfacts
mv mconownps_p4.inp conownps_p4.inp
cd ../../
cd coast/s04trib/patapsco
echo npataps_p4.inp | amlfacts
cd ../../
cd coast/s04trib/nanticoke
echo nnant_p4.inp | amlfacts
cd ../../
cd coast/s04trib/choptank
echo nchop_p4.inp | amlfacts
cd ../../
echo 'afl nut management'
cd james/s04trib/
echo mnappom_p4.inp | nmts
cd ../../
cd james/s04trib/
echo mnjames1_p4.inp | nmts
cd ../../
cd james/s04trib/
echo mnjames2_p4.inp | nmts
cd ../../
cd james/s04trib/
echo mnpamun_p4.inp | nmts
cd ../../
cd james/s04trib/
echo mnmatta_p4.inp | nmts
cd ../../
cd potm/s04trib/
echo mnlopot_p4.inp | nmts
cd ../../
cd potm/s04trib/
echo mnmidpot_p4.inp | nmts
cd ../../
cd potm/s04trib/
echo mnshena_p4.inp | nmts
cd ../../
cd potm/s04trib/
echo mnuppot_p4.inp | nmts
cd ../../
cd potm/s04trib/patux/
echo mnpatux_p4.inp | nmts
cd ../../
cd potm/s04trib/rappa/
echo mnrappa_p4.inp | nmts
cd ../../
cd susq/s04trib/
echo mnebsus1_p4.inp | nmts
cd ../../
cd susq/s04trib/
echo mnebsus2_p4.inp | nmts
cd ../../
cd susq/s04trib/
echo mnjunia_p4.inp | nmts
cd ../../
cd susq/s04trib/
echo mnlosus_p4.inp | nmts
cd ../../
cd susq/s04trib/
echo mnwbsus_p4.inp | nmts
echo conownps_p4.inp | nmts

```

```

mv fconownps_p4.inp conownps_p4.inp
cd ../../
cd coast/s04trib/patapsco
echo mmpataps_p4.inp | nmts
cd ../../.../
cd coast/s04trib/nanticoke
echo mnnant_p4.inp | nmts
cd ../../.../
cd coast/s04trib/choptank
echo mnchop_p4.inp | nmts
cd ../../.../
echo 'afl septic'
cd james/s04trib/
echo fmnappom_p4.inp | pssep04
cd ../../
cd james/s04trib/
echo fmnjames1_p4.inp | pssep04
cd ../../
cd james/s04trib/
echo fmnjames2_p4.inp | pssep04
cd ../../
cd james/s04trib/
echo fmpamun_p4.inp | pssep04
cd ../../
cd james/s04trib/
echo fmmatta_p4.inp | pssep04
cd ../../
cd potm/s04trib/
echo fmnlopot_p4.inp | pssep04
cd ../../
cd potm/s04trib/
echo fmmidpot_p4.inp | pssep04
cd ../../
cd potm/s04trib/
echo fmnshena_p4.inp | pssep04
cd ../../
cd potm/s04trib/
echo fmnuppot_p4.inp | pssep04
cd ../../
cd potm/s04trib/patux/
echo fmnpatux_p4.inp | pssep04
cd ../../.../
cd potm/s04trib/rappa/
echo fmrappa_p4.inp | pssep04
cd ../../.../
cd susq/s04trib/
echo fmnebsus1_p4.inp | pssep04
cd ../../
cd susq/s04trib/
echo fmnebsus2_p4.inp | pssep04
cd ../../
cd susq/s04trib/
echo fmnjunia_p4.inp | pssep04
cd ../../
cd susq/s04trib/
echo fmnlosus_p4.inp | pssep04
cd ../../
cd susq/s04trib/
echo fmnwbsus_p4.inp | pssep04
echo conowrch_p4.inp | pssep04
mv pconowrch_p4.inp conowrch_p4.inp

```

```

cd ../../
cd coast/s04trib/patapsco
echo fmnpataps_p4.inp | pssep04
cd ../../
cd coast/s04trib/nanticoke
echo fmnnant_p4.inp | pssep04
cd ../../
cd coast/s04trib/choptank
echo fmnchop_p4.inp | pssep04
cd ../../
echo 'moving afl'
mv potm/s04trib/pfmnlopot_p4.inp potm/s04trib/lopot_p4.inp
mv potm/s04trib/pfmnmidpot_p4.inp potm/s04trib/midpot_p4.inp
mv potm/s04trib/pfmnshena_p4.inp potm/s04trib/shena_p4.inp
mv potm/s04trib/pfmnuppot_p4.inp potm/s04trib/uppot_p4.inp
mv susq/s04trib/pfmnebsus1_p4.inp susq/s04trib/ebsus1_p4.inp
mv susq/s04trib/pfmnebsus2_p4.inp susq/s04trib/ebsus2_p4.inp
mv susq/s04trib/pfmnjunia_p4.inp susq/s04trib/junia_p4.inp
mv susq/s04trib/pfmnlosus_p4.inp susq/s04trib/losus_p4.inp
mv susq/s04trib/pfmnwbsus_p4.inp susq/s04trib/wbsus_p4.inp
mv james/s04trib/pfmnappom_p4.inp james/s04trib/appom_p4.inp
mv james/s04trib/pfmnjames1_p4.inp james/s04trib/james1_p4.inp
mv james/s04trib/pfmnjames2_p4.inp james/s04trib/james2_p4.inp
mv james/s04trib/pfmnpamun_p4.inp james/s04trib/pamun_p4.inp
mv james/s04trib/pfmnmatta_p4.inp james/s04trib/matta_p4.inp
mv potm/s04trib/patux/pfmnpatux_p4.inp potm/s04trib/patux/patux_p4.inp
mv potm/s04trib/rappa/pfmnrappa_p4.inp potm/s04trib/rappa/rappa_p4.inp
mv coast/s04trib/patapsco/pfmnpataps_p4.inp coast/s04trib/patapsco/pataps_p4.inp
mv coast/s04trib/choptank/pfmnchop_p4.inp coast/s04trib/choptank/chop_p4.inp
mv coast/s04trib/nanticoke/pfmnant_p4.inp coast/s04trib/nanticoke/nant_p4.inp
echo 'bfl land use'
cd coast/s04trib/bf11a/
echo bf11a_p4.inp | luts
cd ../../
cd coast/s04trib/bf11ac/
echo bf11ac_p4.inp | luts
cd ../../
cd coast/s04trib/bf11b/
echo bf11b_p4.inp | luts
cd ../../
cd coast/s04trib/bf11c/
echo bf11c_p4.inp | luts
cd ../../
cd coast/s04trib/bf12b/
echo bf12b_p4.inp | luts
cd ../../
cd coast/s04trib/bf12a/
echo bf12a_p4.inp | luts
cd ../../
cd coast/s04trib/bf13a/
echo bf13a_p4.inp | luts
cd ../../
cd coast/s04trib/bf13b/
echo bf13b_p4.inp | luts
cd ../../
cd coast/s04trib/bf13c/
echo bf13c_p4.inp | luts
cd ../../
cd coast/s04trib/bf14/
echo bf14_p4.inp | luts
cd ../../

```

```

cd coast/s04trib/bf15a/
echo bf15a_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf16a/
echo bf16a_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf15b/
echo bf15b_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf16b/
echo bf16b_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf17a/
echo bf17a_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf17bc/
echo bf17bc_p4.inp | luts
cd ../../../../
cd coast/s04trib/bf17b/
echo bf17b_p4.inp | luts
cd ../../../../
echo 'bf1 mlfacs'
cd coast/s04trib/bf11a/
echo nbf11a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf11ac/
echo nbf11ac_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf11b/
echo nbf11b_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf11c/
echo nbf11c_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf12b/
echo nbf12b_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf12a/
echo nbf12a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf13a/
echo nbf13a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf13b/
echo nbf13b_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf13c/
echo nbf13c_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf14/
echo nbf14_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf15a/
echo nbf15a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf16a/
echo nbf16a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf15b/
echo nbf15b_p4.inp | bmlfacts
cd ../../../../

```



```
cd coast/s04trib/bf16b/
echo nbfl6b_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf17a/
echo nbfl7a_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf17bc/
echo nbfl7bc_p4.inp | bmlfacts
cd ../../../../
cd coast/s04trib/bf17b/
echo nbfl7b_p4.inp | bmlfacts
cd ../../../../
echo 'bfl nut management'
cd coast/s04trib/bf11a/
echo mnbfl1a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf11ac/
echo mnbfl1ac_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf11b/
echo mnbfl1b_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf11c/
echo mnbfl1c_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf12b/
echo mnbfl2b_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf12a/
echo mnbfl2a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf13a/
echo mnbfl3a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf13b/
echo mnbfl3b_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf13c/
echo mnbfl3c_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf14/
echo mnbfl4_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf15a/
echo mnbfl5a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf16a/
echo mnbfl6a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf15b/
echo mnbfl5b_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf16b/
echo mnbfl6b_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf17a/
echo mnbfl7a_p4.inp | nmts
cd ../../../../
cd coast/s04trib/bf17bc/
echo mnbfl7bc_p4.inp | nmts
cd ../../../../
```

```

cd coast/s04trib/bfl7b/
echo mnbfl7b_p4.inp | nmts
cd ../../../../
echo 'moving bfl'
mv coast/s04trib/bfl1a/fmnbfl1a_p4.inp coast/s04trib/bfl1a/bfl1a_p4.inp
mv coast/s04trib/bfl1ac/fmnbfl1ac_p4.inp coast/s04trib/bfl1ac/bfl1ac_p4.inp
mv coast/s04trib/bfl1b/fmnbfl1b_p4.inp coast/s04trib/bfl1b/bfl1b_p4.inp
mv coast/s04trib/bfl1c/fmnbfl1c_p4.inp coast/s04trib/bfl1c/bfl1c_p4.inp
mv coast/s04trib/bfl2b/fmnbfl2b_p4.inp coast/s04trib/bfl2b/bfl2b_p4.inp
mv coast/s04trib/bfl2a/fmnbfl2a_p4.inp coast/s04trib/bfl2a/bfl2a_p4.inp
mv coast/s04trib/bfl3a/fmnbfl3a_p4.inp coast/s04trib/bfl3a/bfl3a_p4.inp
mv coast/s04trib/bfl3b/fmnbfl3b_p4.inp coast/s04trib/bfl3b/bfl3b_p4.inp
mv coast/s04trib/bfl3c/fmnbfl3c_p4.inp coast/s04trib/bfl3c/bfl3c_p4.inp
mv coast/s04trib/bfl4/fmnbfl4_p4.inp coast/s04trib/bfl4/bfl4_p4.inp
mv coast/s04trib/bfl5a/fmnbfl5a_p4.inp coast/s04trib/bfl5a/bfl5a_p4.inp
mv coast/s04trib/bfl6a/fmnbfl6a_p4.inp coast/s04trib/bfl6a/bfl6a_p4.inp
mv coast/s04trib/bfl5b/fmnbfl5b_p4.inp coast/s04trib/bfl5b/bfl5b_p4.inp
mv coast/s04trib/bfl6b/fmnbfl6b_p4.inp coast/s04trib/bfl6b/bfl6b_p4.inp
mv coast/s04trib/bfl7a/fmnbfl7a_p4.inp coast/s04trib/bfl7a/bfl7a_p4.inp
mv coast/s04trib/bfl7bc/fmnbfl7bc_p4.inp coast/s04trib/bfl7bc/bfl7bc_p4.inp
mv coast/s04trib/bfl7b/fmnbfl7b_p4.inp coast/s04trib/bfl7b/bfl7b_p4.inp
echo 'cleaning up deadwood'
rm james/s04trib/nappom_p4.inp
rm james/s04trib/njames1_p4.inp
rm james/s04trib/njames2_p4.inp
rm james/s04trib/npamun_p4.inp
rm james/s04trib/nmatta_p4.inp
rm potm/s04trib/nlopot_p4.inp
rm potm/s04trib/nmidpot_p4.inp
rm potm/s04trib/nshena_p4.inp
rm potm/s04trib/nuppot_p4.inp
rm susq/s04trib/nebsus1_p4.inp
rm susq/s04trib/nebsus2_p4.inp
rm susq/s04trib/njunia_p4.inp
rm susq/s04trib/nlosus_p4.inp
rm susq/s04trib/nwbsus_p4.inp
rm james/s04trib/mnappom_p4.inp
rm james/s04trib/mnjames1_p4.inp
rm james/s04trib/mnjames2_p4.inp
rm james/s04trib/mnpamun_p4.inp
rm james/s04trib/mnmatta_p4.inp
rm potm/s04trib/mnlopot_p4.inp
rm potm/s04trib/mnmidpot_p4.inp
rm potm/s04trib/mnshena_p4.inp
rm potm/s04trib/mnuppot_p4.inp
rm susq/s04trib/mnebsus1_p4.inp
rm susq/s04trib/mnebsus2_p4.inp
rm susq/s04trib/mnjunia_p4.inp
rm susq/s04trib/mnlosus_p4.inp
rm susq/s04trib/mnwbsus_p4.inp
rm james/s04trib/fmnappom_p4.inp
rm james/s04trib/fmnjames1_p4.inp
rm james/s04trib/fmnjames2_p4.inp
rm james/s04trib/fmnpamun_p4.inp
rm james/s04trib/fmnmatta_p4.inp
rm potm/s04trib/fmnlopot_p4.inp
rm potm/s04trib/fmnmidpot_p4.inp
rm potm/s04trib/fmnshena_p4.inp
rm potm/s04trib/fmnuppot_p4.inp
rm susq/s04trib/fmnebsus1_p4.inp
rm susq/s04trib/fmnebsus2_p4.inp

```

rm susq/s04trib/fmnjunia_p4.inp
rm susq/s04trib/fmnlosus_p4.inp
rm susq/s04trib/fmnwbsus_p4.inp
rm potm/s04trib/patux/npatux_p4.inp
rm potm/s04trib/rappa/nrappa_p4.inp
rm coast/s04trib/patapsco/npataps_p4.inp
rm coast/s04trib/nanticoke/nnant_p4.inp
rm coast/s04trib/choptank/nchop_p4.inp
rm coast/s04trib/bf11a/nbf11a_p4.inp
rm coast/s04trib/bf11ac/nbf11ac_p4.inp
rm coast/s04trib/bf11b/nbf11b_p4.inp
rm coast/s04trib/bf11c/nbf11c_p4.inp
rm coast/s04trib/bf12b/nbf12b_p4.inp
rm coast/s04trib/bf12a/nbf12a_p4.inp
rm coast/s04trib/bf13a/nbf13a_p4.inp
rm coast/s04trib/bf13b/nbf13b_p4.inp
rm coast/s04trib/bf13c/nbf13c_p4.inp
rm coast/s04trib/bf14/nbf14_p4.inp
rm coast/s04trib/bf15a/nbf15a_p4.inp
rm coast/s04trib/bf16a/nbf16a_p4.inp
rm coast/s04trib/bf15b/nbf15b_p4.inp
rm coast/s04trib/bf16b/nbf16b_p4.inp
rm coast/s04trib/bf17a/nbf17a_p4.inp
rm coast/s04trib/bf17bc/nbf17bc_p4.inp
rm coast/s04trib/bf17b/nbf17b_p4.inp
rm potm/s04trib/patux/mnpatux_p4.inp
rm potm/s04trib/rappa/mnrappa_p4.inp
rm coast/s04trib/patapsco/mnpataps_p4.inp
rm coast/s04trib/nanticoke/mnnant_p4.inp
rm coast/s04trib/choptank/mnchop_p4.inp
rm coast/s04trib/bf11a/mnbf11a_p4.inp
rm coast/s04trib/bf11ac/mnbf11ac_p4.inp
rm coast/s04trib/bf11b/mnbf11b_p4.inp
rm coast/s04trib/bf11c/mnbf11c_p4.inp
rm coast/s04trib/bf12b/mnbf12b_p4.inp
rm coast/s04trib/bf12a/mnbf12a_p4.inp
rm coast/s04trib/bf13a/mnbf13a_p4.inp
rm coast/s04trib/bf13b/mnbf13b_p4.inp
rm coast/s04trib/bf13c/mnbf13c_p4.inp
rm coast/s04trib/bf14/mnbf14_p4.inp
rm coast/s04trib/bf15a/mnbf15a_p4.inp
rm coast/s04trib/bf16a/mnbf16a_p4.inp
rm coast/s04trib/bf15b/mnbf15b_p4.inp
rm coast/s04trib/bf16b/mnbf16b_p4.inp
rm coast/s04trib/bf17a/mnbf17a_p4.inp
rm coast/s04trib/bf17bc/mnbf17bc_p4.inp
rm coast/s04trib/bf17b/mnbf17b_p4.inp
rm potm/s04trib/patux/fmnpatux_p4.inp
rm potm/s04trib/rappa/fmnrappa_p4.inp
rm coast/s04trib/patapsco/fmnpataps_p4.inp
rm coast/s04trib/nanticoke/fmnnant_p4.inp
rm coast/s04trib/choptank/fmnchop_p4.inp

H-2 Wdm Name in UCI Change Script File

```
ed james/s19pr96/pltgen_appom.inp <ed_wdm_line.edp
ed james/s19pr96/pltgen_james2.inp <ed_wdm_line.edp
ed james/s19pr96/pltgen_matta.inp <ed_wdm_line.edp
ed james/s19pr96/pltgen_pamun.inp <ed_wdm_line.edp
ed potm/s19pr96/pltgen_lopot.inp <ed_wdm_line.edp
ed potm/s19pr96/pltgen_midpot.inp <ed_wdm_line.edp
ed potm/s19pr96/pltgen_shena.inp <ed_wdm_line.edp
ed potm/s19pr96/pltgen_uppot.inp <ed_wdm_line.edp
ed susq/s19pr96/pltgen_ebsus1.inp <ed_wdm_line.edp
ed susq/s19pr96/pltgen_ebsus2.inp <ed_wdm_line.edp
ed susq/s19pr96/pltgen_junia.inp <ed_wdm_line.edp
ed susq/s19pr96/pltgen_losus.inp <ed_wdm_line.edp
ed susq/s19pr96/pltgen_wbsus.inp <ed_wdm_line.edp
ed susq/s19pr96/conowwdp_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/conowinf_p4.inp <ed_wdm_line.edp
ed james/s19pr96/appom_p4.inp <ed_wdm_line.edp
ed james/s19pr96/james1_p4.inp <ed_wdm_line.edp
ed james/s19pr96/james2_p4.inp <ed_wdm_line.edp
ed james/s19pr96/pamun_p4.inp <ed_wdm_line.edp
ed james/s19pr96/matta_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/lopot_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/midpot_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/shena_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/uppot_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/ebsus1_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/ebsus2_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/junia_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/losus_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/wbsus_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/conownps_p4.inp <ed_wdm_line.edp
ed susq/s19pr96/conowrch_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11a/pltlds1a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11ac/pltlds1ac_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11b/pltlds1b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11c/pltlds1c_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf12a/pltlds2a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf12b/pltlds2b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13a/pltlds3a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13b/pltlds3b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13c/pltlds3c_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf14/pltlds4_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf15a/pltlds5a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf15b/pltlds5b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf16a/pltlds6a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf16b/pltlds6b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17a/pltlds7a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17b/pltlds7b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17bc/pltlds7bc_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/patapsco/pltgen_patapsco.inp <ed_wdm_line.edp
ed potm/s19pr96/patux/pltgen_patux.inp <ed_wdm_line.edp
ed potm/s19pr96/rappa/pltgen_rappa.inp <ed_wdm_line.edp
ed coast/s19pr96/choptank/pltgen_chop_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/nanticoke/pltgen_nat_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11a/bf11a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11ac/bf11ac_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11b/bf11b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf11c/bf11c_p4.inp <ed_wdm_line.edp
```

```
ed coast/s19pr96/bf12b/bf12b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf12a/bf12a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13a/bf13a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13b/bf13b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf13c/bf13c_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf14/bf14_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf15a/bf15a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf16a/bf16a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf15b/bf15b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf16b/bf16b_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17a/bf17a_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17bc/bf17bc_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/bf17b/bf17b_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/rappa/rappa_p4.inp <ed_wdm_line.edp
ed potm/s19pr96/patux/patux_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/patapsco/pataps_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/nanticoke/nant_p4.inp <ed_wdm_line.edp
ed coast/s19pr96/choptank/chop_p4.inp <ed_wdm_line.edp
```

H-3 Wdm Name in UCI Change ed File

```
/WDM          21
s/s01ref/s19pr96
w
q
```

Attachment I

I-1 Sample Run 1 Script File

I-2 Sample Run 2 Script File

I-3 Sample Run 3 Script File

I-1 Sample Run 1 Script File

```
#!/bin/csh
#QSUB -lT 27000 -lt 8600 -lM 12MW -eo -s /bin/csh
#####
##### SCRIPT FILE TO RUN INITIAL RUN OF SCENARIO #####
##### SCENARIO OPERATIONS SYNOPSIS: #####
##### STEP 1: MAKE INPUTS USING /work/dpi/phase4a/scripts/abc_mv_kill.com ###
##### STEP 2: CHANGE WDM USING /work/dpi/phase4a/scripts/ed_wdm_line.com ###
##### STEP 3: CHANGE THIS SCRIPT FILE TO CURRENT SCENARIO BY ISSUING ###
##### THE VI COMMAND :g/oldscenario/s//newscenario/g ###
##### STEP 4: RUN THIS SCRIPT TO GET THE EDGE OF STREAM LOADS ###
##### STEP 5: USE SPREADSHEET TO DETERMINE BED CONCENTRATION REDUCTIONS ###
##### STEP 6: RUN /work/dpi/phase4a/inputs/bed.com ###
##### AND /work/dpi/phase4a/inputs/mvbed FOR THIS SCENARIO ###
##### STEP 7: RUN SECOND SCRIPT TO GET FINAL DELIVERED LOADS ###
##### STEP 8: RUN THIRD SCRIPT TO GET LOADS TO BAY MODEL ###
#####
##### THIS SCRIPT CHECKS THE INPUT FILES FOR 8 YEAR RUN AND COPIES THE 8 YEAR WDM ###
##### TO THE WORKING DIRECTORY. IT THEN RUNS ALL INPUT FILES AND THE INITIAL ###
##### POSTPROCESSOR TO MAKE EDGE OF STREAM LOADS ###
#####
##### SETTING OF VARIABLES TO BE USED THROUGHOUT THE SCRIPT
set awkprog1="/work/dpi/phase4a/hspf/programs/a01_strip_cmnts_special.awk"
set tempinput=zzztempfile.1
set hspf11="/usr/opt/wrdapp/hspf11.1/bin/hspf"

##### SECTION TO MAKE SURE ALL INPUT FILES HAVE THE CORRECT STOP TIME

set timeprog="/work/dpi/phase4a/util/ed_files/ed_time_8year.edp"

cd /work/dpi/phase4a/inputs/
ed james/s04trib/pltgen_appom.inp <$timeprog
ed james/s04trib/pltgen_james2.inp <$timeprog
ed james/s04trib/pltgen_matta.inp <$timeprog
ed james/s04trib/pltgen_pamun.inp <$timeprog
ed potm/s04trib/pltgen_lopot.inp <$timeprog
ed potm/s04trib/pltgen_midpot.inp <$timeprog
ed potm/s04trib/pltgen_shena.inp <$timeprog
ed potm/s04trib/pltgen_uppot.inp <$timeprog
ed susq/s04trib/pltgen_ebsus1.inp <$timeprog
ed susq/s04trib/pltgen_ebsus2.inp <$timeprog
ed susq/s04trib/pltgen_junia.inp <$timeprog
ed susq/s04trib/pltgen_losus.inp <$timeprog
ed susq/s04trib/pltgen_wbsus.inp <$timeprog
ed susq/s04trib/conowwdp_p4.inp <$timeprog
ed susq/s04trib/conowinf_p4.inp <$timeprog
ed james/s04trib/appom_p4.inp <$timeprog
ed james/s04trib/james1_p4.inp <$timeprog
ed james/s04trib/james2_p4.inp <$timeprog
ed james/s04trib/pamun_p4.inp <$timeprog
ed james/s04trib/matta_p4.inp <$timeprog
ed potm/s04trib/lopot_p4.inp <$timeprog
ed potm/s04trib/midpot_p4.inp <$timeprog
ed potm/s04trib/shena_p4.inp <$timeprog
ed potm/s04trib/uppot_p4.inp <$timeprog
ed susq/s04trib/ebsus1_p4.inp <$timeprog
ed susq/s04trib/ebsus2_p4.inp <$timeprog
ed susq/s04trib/junia_p4.inp <$timeprog
ed susq/s04trib/losus_p4.inp <$timeprog
ed susq/s04trib/wbsus_p4.inp <$timeprog
ed susq/s04trib/conownps_p4.inp <$timeprog
ed susq/s04trib/conowrch_p4.inp <$timeprog
ed coast/s04trib/bf11a/pltlgsla_p4.inp <$timeprog
ed coast/s04trib/bf11ac/pltlgslac_p4.inp <$timeprog
ed coast/s04trib/bf11b/pltlgslb_p4.inp <$timeprog
ed coast/s04trib/bf11c/pltlgslc_p4.inp <$timeprog
ed coast/s04trib/bf12a/pltlgsla_p4.inp <$timeprog
ed coast/s04trib/bf12b/pltlgslb_p4.inp <$timeprog
ed coast/s04trib/bf13a/pltlgsla_p4.inp <$timeprog
```

```

ed coast/s04trib/bfl3b/pltltds3b_p4.inp <$timeprog
ed coast/s04trib/bfl3c/pltltds3c_p4.inp <$timeprog
ed coast/s04trib/bfl4/pltltds4_p4.inp <$timeprog
ed coast/s04trib/bfl5a/pltltds5a_p4.inp <$timeprog
ed coast/s04trib/bfl5b/pltltds5b_p4.inp <$timeprog
ed coast/s04trib/bfl6a/pltltds6a_p4.inp <$timeprog
ed coast/s04trib/bfl6b/pltltds6b_p4.inp <$timeprog
ed coast/s04trib/bfl7a/pltltds7a_p4.inp <$timeprog
ed coast/s04trib/bfl7b/pltltds7b_p4.inp <$timeprog
ed coast/s04trib/bfl7bc/pltltds7bc_p4.inp <$timeprog
ed coast/s04trib/patapsco/pltgen_patapsco.inp <$timeprog
ed potm/s04trib/patux/pltgen_patux.inp <$timeprog
ed potm/s04trib/rappa/pltgen_rappa.inp <$timeprog
ed coast/s04trib/choptank/pltgen_chop_p4.inp <$timeprog
ed coast/s04trib/nanticoke/pltgen_nat_p4.inp <$timeprog
ed coast/s04trib/bfl1a/bfl1a_p4.inp <$timeprog
ed coast/s04trib/bfl1ac/bfl1ac_p4.inp <$timeprog
ed coast/s04trib/bfl1b/bfl1b_p4.inp <$timeprog
ed coast/s04trib/bfl1c/bfl1c_p4.inp <$timeprog
ed coast/s04trib/bfl2b/bfl2b_p4.inp <$timeprog
ed coast/s04trib/bfl2a/bfl2a_p4.inp <$timeprog
ed coast/s04trib/bfl3a/bfl3a_p4.inp <$timeprog
ed coast/s04trib/bfl3b/bfl3b_p4.inp <$timeprog
ed coast/s04trib/bfl3c/bfl3c_p4.inp <$timeprog
ed coast/s04trib/bfl4/bfl4_p4.inp <$timeprog
ed coast/s04trib/bfl5a/bfl5a_p4.inp <$timeprog
ed coast/s04trib/bfl6a/bfl6a_p4.inp <$timeprog
ed coast/s04trib/bfl5b/bfl5b_p4.inp <$timeprog
ed coast/s04trib/bfl6b/bfl6b_p4.inp <$timeprog
ed coast/s04trib/bfl7a/bfl7a_p4.inp <$timeprog
ed coast/s04trib/bfl7bc/bfl7bc_p4.inp <$timeprog
ed coast/s04trib/bfl7b/bfl7b_p4.inp <$timeprog
ed potm/s04trib/rappa/rappa_p4.inp <$timeprog
ed potm/s04trib/patux/patux_p4.inp <$timeprog
ed coast/s04trib/patapsco/pataps_p4.inp <$timeprog
ed coast/s04trib/nanticoke/nant_p4.inp <$timeprog
ed coast/s04trib/choptank/chop_p4.inp <$timeprog

```

```
##### BEGINNING OF RUN SECTION
```

```
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/susq.wdm /work/dpi/phase4a/wdm/susq/s04trib/susq.wdm
```

```

cd /work/dpi/phase4a/scripts/susq/s04trib/wbsus/
set inp="/work/dpi/phase4a/inputs/susq/s04trib/wbsus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(wbsus).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf91.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_wbsus.inp | $hspf11

```

```

mv hspf50.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.fores
mv hspf51.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.hitil
mv hspf52.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.lotil
mv hspf53.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.pastu
mv hspf54.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.purba
mv hspf55.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.hayla
mv hspf56.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.imura
mv hspf71.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.onp

```

```

mv hspf57.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.fores
mv hspf58.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.hitil
mv hspf59.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.lotil
mv hspf60.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.pastu
mv hspf61.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.purba
mv hspf62.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.hayla
mv hspf63.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.imura
mv hspf72.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.onp

```

```
mv hspf64.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.fores
```



```

mv hspf65.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.hitil
mv hspf66.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.lotil
mv hspf67.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.pastu
mv hspf68.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.purba
mv hspf69.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.hayla
mv hspf70.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.imura
mv hspf73.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.onp
mv hspf81.dat ../../../../outputs/susq/s04trib/wbsus/seg50_p4.all
mv hspf82.dat ../../../../outputs/susq/s04trib/wbsus/seg60_p4.all
mv hspf83.dat ../../../../outputs/susq/s04trib/wbsus/seg70_p4.all
mv hspf85.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.load
mv hspf86.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.load
mv hspf87.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.load

mv hspf74.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.tssx
mv hspf44.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.taux

mv hspf96.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.sedim
mv hspf98.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.sedim

mv hspf78.dat ../../../../outputs/susq/s04trib/wbsus/benal.wbsus
mv hspf30.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.nh3x
mv hspf31.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.no3x
mv hspf32.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.orgn
mv hspf33.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.totn
mv hspf34.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.po4x
mv hspf35.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.orgp
mv hspf36.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.totp
mv hspf37.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.doxx
mv hspf38.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.chla
mv hspf39.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.wtmp
mv hspf40.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.tocx
mv hspf41.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.flow

cd /work/dpi/phase4a/scripts/susq/s04trib/junia/

set inp="/work/dpi/phase4a/inputs/susq/s04trib/junia_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/junia/s90_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/junia/s100_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_junia.inp | $hspf11

mv hspf49.dat ../../../../outputs/susq/s04trib/junia/s90_p4.fores
mv hspf50.dat ../../../../outputs/susq/s04trib/junia/s90_p4.hitil
mv hspf51.dat ../../../../outputs/susq/s04trib/junia/s90_p4.lotil
mv hspf52.dat ../../../../outputs/susq/s04trib/junia/s90_p4.pastu
mv hspf53.dat ../../../../outputs/susq/s04trib/junia/s90_p4.purba
mv hspf54.dat ../../../../outputs/susq/s04trib/junia/s90_p4.hayla
mv hspf55.dat ../../../../outputs/susq/s04trib/junia/s90_p4.imura
mv hspf63.dat ../../../../outputs/susq/s04trib/junia/s90_p4.onp
mv hspf67.dat ../../../../outputs/susq/s04trib/junia/s90_p4.load

mv hspf56.dat ../../../../outputs/susq/s04trib/junia/s100_p4.fores
mv hspf57.dat ../../../../outputs/susq/s04trib/junia/s100_p4.hitil
mv hspf58.dat ../../../../outputs/susq/s04trib/junia/s100_p4.lotil
mv hspf59.dat ../../../../outputs/susq/s04trib/junia/s100_p4.pastu
mv hspf60.dat ../../../../outputs/susq/s04trib/junia/s100_p4.purba
mv hspf61.dat ../../../../outputs/susq/s04trib/junia/s100_p4.hayla
mv hspf62.dat ../../../../outputs/susq/s04trib/junia/s100_p4.imura
mv hspf64.dat ../../../../outputs/susq/s04trib/junia/s100_p4.onp
mv hspf65.dat ../../../../outputs/susq/s04trib/junia/s100_p4.conc1
mv hspf66.dat ../../../../outputs/susq/s04trib/junia/s100_p4.conc2
mv hspf68.dat ../../../../outputs/susq/s04trib/junia/s100_p4.load

mv hspf96.dat ../../../../outputs/susq/s04trib/junia/s90_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/junia/s100_p4.sedim

```

```

mv hspf32.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.tssx
mv hspf34.dat ../../../../outputs/susq/s04trib/junia/s90.shearvel
mv hspf35.dat ../../../../outputs/susq/s04trib/junia/s100.shearvel

mv hspf44.dat ../../../../outputs/susq/s04trib/junia/s90_p4.all
mv hspf45.dat ../../../../outputs/susq/s04trib/junia/s100_p4.all
mv hspf80.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.flow

cd /work/dpi/phase4a/scripts/susq/s04trib/ebsus1/

set inp="/work/dpi/phase4a/inputs/susq/s04trib/ebsus1_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo "... existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_ebsus1.inp | $hspf11

mv hspf31.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.imura
mv hspf55.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.onp
mv hspf61.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.load

mv hspf38.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.imura
mv hspf56.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.onp
mv hspf62.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.load

mv hspf45.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.fores
mv hspf46.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.hitil
mv hspf47.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.lotil
mv hspf48.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.pastu
mv hspf49.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.purba
mv hspf50.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.hayla
mv hspf51.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.imura
mv hspf57.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.onp
mv hspf63.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.load

mv hspf64.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.sedim
mv hspf65.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.sedim
mv hspf66.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.sedim

mv hspf67.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.all
mv hspf68.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.all
mv hspf69.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.all

```

```

mv hspf75.dat ../../../../outputs/susq/s04trib/ebsus1/benal.ebsus1
mv hspf80.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.flow

```

```
cd /work/dpi/phase4a/scripts/susq/s04trib/ebsus2/
```

```

set inp="/work/dpi/phase4a/inputs/susq/s04trib/ebsus2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.concs
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus2/benal.eb2
echo ../../../../inputs/susq/s04trib/pltgen_ebsus2.inp | $hspf11

```

```

mv hspf31.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.imura
mv hspf48.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.onp
mv hspf53.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.load

```

```

mv hspf38.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.imura
mv hspf49.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.onp
mv hspf51.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.conc1
mv hspf52.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.conc2
mv hspf54.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.load

```

```

mv hspf55.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.sedim
mv hspf56.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.sedim

```

```

mv hspf76.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.all
mv hspf77.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.all
mv hspf78.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s30_p4.benal
mv hspf79.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.benal

```

```

mv hspf80.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.nh3x
mv hspf60.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tssx
mv hspf81.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.wtmp
mv hspf90.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.flow
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tocx

```

```

mv hspf61.dat ../../../../outputs/susq/s04trib/ebsus2/shear.s30
mv hspf62.dat ../../../../outputs/susq/s04trib/ebsus2/shear.s40

cd /work/dpi/phase4a/scripts/susq/s04trib/losus/

set inp="/work/dpi/phase4a/inputs/susq/s04trib/losus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/losus/s80_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/losus/s110_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/losus/s710_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_losus.inp | $hspf11

mv hspf31.dat ../../../../outputs/susq/s04trib/losus/s80_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/losus/s80_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/losus/s80_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/losus/s80_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/losus/s80_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/losus/s80_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/losus/s80_p4.imura
mv hspf55.dat ../../../../outputs/susq/s04trib/losus/s80_p4.onp
mv hspf61.dat ../../../../outputs/susq/s04trib/losus/s80_p4.load
mv hspf64.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.conc1
mv hspf65.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.conc2

mv hspf38.dat ../../../../outputs/susq/s04trib/losus/s110_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/losus/s110_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/losus/s110_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/losus/s110_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/losus/s110_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/losus/s110_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/losus/s110_p4.imura
mv hspf56.dat ../../../../outputs/susq/s04trib/losus/s110_p4.onp
mv hspf62.dat ../../../../outputs/susq/s04trib/losus/s110_p4.load

mv hspf45.dat ../../../../outputs/susq/s04trib/losus/s710_p4.fores
mv hspf46.dat ../../../../outputs/susq/s04trib/losus/s710_p4.hitil
mv hspf47.dat ../../../../outputs/susq/s04trib/losus/s710_p4.lotil
mv hspf48.dat ../../../../outputs/susq/s04trib/losus/s710_p4.pastu
mv hspf49.dat ../../../../outputs/susq/s04trib/losus/s710_p4.purba
mv hspf50.dat ../../../../outputs/susq/s04trib/losus/s710_p4.hayla
mv hspf51.dat ../../../../outputs/susq/s04trib/losus/s710_p4.imura
mv hspf57.dat ../../../../outputs/susq/s04trib/losus/s710_p4.onp
mv hspf63.dat ../../../../outputs/susq/s04trib/losus/s710_p4.load

mv hspf72.dat ../../../../outputs/susq/s04trib/losus/s80_p4.all
mv hspf73.dat ../../../../outputs/susq/s04trib/losus/s110_p4.all
mv hspf74.dat ../../../../outputs/susq/s04trib/losus/s710_p4.all

mv hspf96.dat ../../../../outputs/susq/s04trib/losus/s80_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/losus/s110_p4.sedim
mv hspf98.dat ../../../../outputs/susq/s04trib/losus/s710_p4.sedim

mv hspf80.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.flow
mv hspf71.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.tssx

mv hspf67.dat ../../../../outputs/susq/s04trib/losus/s80_p4.shear

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mv hspf68.dat ../../../../outputs/susq/s04trib/losus/s110_p4.shear
mv hspf69.dat ../../../../outputs/susq/s04trib/losus/s710_p4.shear

cd /work/dpi/phase4a/scripts/susq/s04trib/conow/

set inp="/work/dpi/phase4a/inputs/susq/s04trib/conownps_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

mv hspf31.dat ../../../../outputs/susq/s04trib/conow/s120_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/conow/s120_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/conow/s120_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/conow/s120_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/conow/s120_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/conow/s120_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/conow/s120_p4.imura
mv hspf45.dat ../../../../outputs/susq/s04trib/conow/s120_p4.onp

mv hspf38.dat ../../../../outputs/susq/s04trib/conow/s140_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/conow/s140_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/conow/s140_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/conow/s140_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/conow/s140_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/conow/s140_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/conow/s140_p4.imura
mv hspf46.dat ../../../../outputs/susq/s04trib/conow/s140_p4.onp

mv hspf48.dat ../../../../outputs/susq/s04trib/conow/s720_p4.fores
mv hspf49.dat ../../../../outputs/susq/s04trib/conow/s720_p4.hitil
mv hspf50.dat ../../../../outputs/susq/s04trib/conow/s720_p4.lotil
mv hspf51.dat ../../../../outputs/susq/s04trib/conow/s720_p4.pastu
mv hspf52.dat ../../../../outputs/susq/s04trib/conow/s720_p4.purba
mv hspf53.dat ../../../../outputs/susq/s04trib/conow/s720_p4.hayla
mv hspf54.dat ../../../../outputs/susq/s04trib/conow/s720_p4.imura
mv hspf47.dat ../../../../outputs/susq/s04trib/conow/s720_p4.onp
mv hspf95.dat ../../../../outputs/susq/s04trib/conow/s120_p4.sedim
mv hspf96.dat ../../../../outputs/susq/s04trib/conow/s140_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/conow/s720_p4.sedim

#---Generate conowingo reservoir inflow ---
echo ../../../../inputs/susq/s04trib/conowinf_p4.inp | $hsfp11

mv hspf61.dat ../../../../outputs/susq/s04trib/conow/RESIN.DAT

#---Generate conowingo reservoir outflow ---

cp ../../../../outputs/susq/s04trib/conow/RESIN.DAT ../../../../scripts/susq/s04trib/conow/RESIN.PLT

cd /work/dpi/phase4a/scripts/susq/s04trib/conow/

echo "conowp3.reg":
ls
rm RESOUT.PLT
cp /work/dpi/phase4a/scripts/susq/conowp3.reg .
cp /work/dpi/phase4a/scripts/susq/RULE*.DAT .

conowp3.reg

mv RESOUT.PLT hspf91.dat

echo ../../../../inputs/susq/s04trib/conowwdp_p4.inp | $hsfp11

mv *.plt ../../../../outputs/susq/s04trib/conow

echo ../../../../inputs/susq/s04trib/conowrch_p4.inp | $hsfp11

mv hspf91.dat ../../../../outputs/susq/s04trib/conow/s720_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/conow/s120_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/conow/s140_p4.concs

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mv hspf94.dat ../../../../outputs/susq/s04trib/conow/s150_p4.concs
mv hspf89.dat s140vd.prn
mv hspf88.dat s140.3flow
cp hspf31.dat pltgen-s150_p4.flow
cp hspf71.dat pltgen-s120_p4.flow
mv hspf31.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.flow
mv hspf32.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.tssx
mv hspf33.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.no3x
mv hspf34.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.nh3x
mv hspf35.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.orgn
mv hspf36.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.totn
mv hspf37.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.po4x
mv hspf38.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.orgp
mv hspf39.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.totp
mv hspf40.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.tocx
mv hspf41.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.chla
mv hspf42.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.doxx
mv hspf43.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.wtmp
mv hspf45.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.bodx
mv hspf46.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.loads
mv hspf51.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.concl
mv hspf52.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.conc2
mv hspf53.dat ../../../../outputs/susq/s04trib/conow/s120_p4.load
mv hspf54.dat ../../../../outputs/susq/s04trib/conow/s140_p4.load
mv hspf69.dat ../../../../outputs/susq/s04trib/conow/s720_p4.load
mv hspf55.dat ../../../../outputs/susq/s04trib/conow/s120_p4.shear
mv hspf56.dat ../../../../outputs/susq/s04trib/conow/s140_p4.shear
mv hspf57.dat ../../../../outputs/susq/s04trib/conow/s150_p4.shear
mv hspf58.dat ../../../../outputs/susq/s04trib/conow/s720_p4.shear
mv hspf59.dat ../../../../outputs/susq/s04trib/conow/s720_p4.flow
mv hspf60.dat ../../../../outputs/susq/s04trib/conow/s120_p4.flow

mv hspf85.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf86.dat ../../../../outputs/susq/s04trib/conow/s140_p4.all

mv hspf71.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.flow
mv hspf72.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.tssx
mv hspf73.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.no3x
mv hspf74.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.nh3x
mv hspf75.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.orgn
mv hspf76.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.totn
mv hspf77.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.po4x
mv hspf78.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.orgp
mv hspf79.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.totp
mv hspf80.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.tocx
mv hspf81.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.chla
mv hspf82.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.doxx
mv hspf83.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.wtmp
mv hspf85.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf86.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf87.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.cclload
# -----

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/patux.wdm
cd /work/dpi/phase4a/scripts/potm/s04trib/patux/

set pgeninp="/work/dpi/phase4a/inputs/potm/s04trib/patux/pltgen_patux.inp"
set inp="/work/dpi/phase4a/inputs/potm/s04trib/patux/patux_p4.inp"

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(patux).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/potm/s04trib/patux/s330_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/patux/s340_p4.concs
  echo $pgeninp | $hspf11

#-----
mv *.out ../../../../outputs/potm/s04trib/patux/
mv *.stats ../../../../outputs/potm/s04trib/patux/

mv hspf31.dat ../../../../outputs/potm/s04trib/patux/s330_p4.fores

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mv hspf32.dat ../../../../outputs/potm/s04trib/patux/s330_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/patux/s330_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/patux/s330_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/patux/s330_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/patux/s330_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/patux/s330_p4.imura
mv hspf48.dat ../../../../outputs/potm/s04trib/patux/s330_p4.onp
mv hspf50.dat ../../../../outputs/potm/s04trib/patux/s330_p4.load

mv hspf96.dat ../../../../outputs/potm/s04trib/patux/s330_p4.sedim

mv hspf38.dat ../../../../outputs/potm/s04trib/patux/s340_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/patux/s340_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/patux/s340_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/patux/s340_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/patux/s340_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/patux/s340_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/patux/s340_p4.imura
mv hspf49.dat ../../../../outputs/potm/s04trib/patux/s340_p4.onp
mv hspf51.dat ../../../../outputs/potm/s04trib/patux/s340_p4.load
mv hspf57.dat ../../../../outputs/potm/s04trib/patux/s330_p4.shear
mv hspf58.dat ../../../../outputs/potm/s04trib/patux/s340_p4.shear

mv hspf97.dat ../../../../outputs/potm/s04trib/patux/s340_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/patux/patux_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/patux/patux_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/patux/patux_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/patux/patux_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/patux/patux_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/patux/patux_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/patux/patux_p4.wtmp
mv hspf94.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tocx
mv hspf91.dat ../../../../outputs/potm/s04trib/patux/patux_p4.flow
mv hspf45.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tssx

mv hspf54.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orgp
mv hspf55.dat ../../../../outputs/potm/s04trib/patux/patux_p4.totp
mv hspf59.dat ../../../../outputs/potm/s04trib/patux/patux_p4.bal

mv hspf46.dat ../../../../outputs/potm/s04trib/patux/patux_p4.bodx
mv hspf47.dat ../../../../outputs/potm/s04trib/patux/fall.load
mv hspf60.dat ../../../../outputs/potm/s04trib/patux/patux_p4.cclload

cd /work/dpi/phase4a/scripts/potm/s04trib/shena/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/potm.wdm

set inp="/work/dpi/phase4a/inputs/potm/s04trib/shena_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(shena).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

mv hspf91.dat ../../../../outputs/potm/s04trib/shena/s190_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/shena/s200_p4.concs
echo ../../../../inputs/potm/s04trib/pltgen_shena.inp | $hsfp11

mv *.stats ../../../../outputs/potm/s04trib/shena/
# -----

mv hspf31.dat ../../../../outputs/potm/s04trib/shena/s190_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/shena/s190_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/shena/s190_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/shena/s190_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/shena/s190_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/shena/s190_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/shena/s190_p4.imura
mv hspf48.dat ../../../../outputs/potm/s04trib/shena/s190_p4.onp
mv hspf53.dat ../../../../outputs/potm/s04trib/shena/s190_p4.load

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mv hspf38.dat ../../../../outputs/potm/s04trib/shena/s200_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/shena/s200_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/shena/s200_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/shena/s200_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/shena/s200_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/shena/s200_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/shena/s200_p4.imura
mv hspf49.dat ../../../../outputs/potm/s04trib/shena/s200_p4.onp
mv hspf51.dat ../../../../outputs/potm/s04trib/shena/s200_p4.concl
mv hspf52.dat ../../../../outputs/potm/s04trib/shena/s200_p4.conc2
mv hspf54.dat ../../../../outputs/potm/s04trib/shena/s200_p4.load

mv hspf55.dat ../../../../outputs/potm/s04trib/shena/s190_p4.sedim
mv hspf56.dat ../../../../outputs/potm/s04trib/shena/s200_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/shena/shena_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/shena/shena_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/shena/shena_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/shena/shena_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/shena/shena_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/shena/shena_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/shena/shena_p4.wtmp
mv hspf91.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tocx
mv hspf92.dat ../../../../outputs/potm/s04trib/shena/shena_p4.flow

mv hspf57.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tssx
mv hspf58.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orgp
mv hspf59.dat ../../../../outputs/potm/s04trib/shena/shena_p4.totp
mv hspf61.dat ../../../../outputs/potm/s04trib/shena/seg190_p4.transect
mv hspf62.dat ../../../../outputs/potm/s04trib/shena/seg200_p4.transect
mv hspf63.dat ../../../../outputs/potm/s04trib/shena/vs190_p4.visual
mv hspf64.dat ../../../../outputs/potm/s04trib/shena/vs200_p4.visual

mv hspf71.dat ../../../../outputs/potm/s04trib/uppot/s190.shear
mv hspf72.dat ../../../../outputs/potm/s04trib/uppot/s200.shear
mv *.out ../../../../outputs/potm/s04trib/shena/
mv *.stats ../../../../outputs/potm/s04trib/shena/

# -----

cd /work/dpi/phase4a/scripts/potm/s04trib/uppot

echo "====BEGIN UPPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/uppot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(uppot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspl1

mv hspf91.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.concs
  echo ../../../../inputs/potm/s04trib/pltgen_uppot.inp | $hspl1

mv *.stats ../../../../outputs/potm/s04trib/uppot/
# -----
mv hspf44.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.load
mv hspf50.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.fores
mv hspf51.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.hitil
mv hspf52.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.lotil
mv hspf53.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.pastu
mv hspf54.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.purba
mv hspf55.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.hayla
mv hspf56.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.fores
mv hspf58.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.hitil

```



```

mv hspf59.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.lotil
mv hspf60.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.pastu
mv hspf61.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.purba
mv hspf62.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.hayla
mv hspf63.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.imura

mv hspf64.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.fores
mv hspf65.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.hitil
mv hspf66.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.lotil
mv hspf67.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.pastu
mv hspf68.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.purba
mv hspf69.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.hayla
mv hspf70.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.imura
mv hspf72.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.onp

mv hspf73.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.onp
mv hspf41.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.concl
mv hspf42.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.conc2
mv hspf45.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.load

mv hspf96.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.sedim
mv hspf97.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.sedim
mv hspf98.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.flow
mv hspf81.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.nh3x
mv hspf82.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.no3x
mv hspf83.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orgn
mv hspf84.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.totn
mv hspf85.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.po4x
mv hspf86.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orpx
mv hspf87.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tpxx
mv hspf88.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.doxx
mv hspf89.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.chla
mv hspf91.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tocx

mv hspf76.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orgp
mv hspf77.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.totp

mv hspf71.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.onp

mv hspf43.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.load

mv hspf31.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.shear
mv hspf32.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.shear
mv hspf33.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.shear
mv hspf78.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tssx
mv hspf46.dat ../../../../outputs/potm/s04trib/uppot/seg160_p4.transect
mv hspf47.dat ../../../../outputs/potm/s04trib/uppot/seg170_p4.transect
mv hspf48.dat ../../../../outputs/potm/s04trib/uppot/seg175_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/uppot/vs160_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/uppot/vs170_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/uppot/vs175_p4.visual

mv *.out ../../../../outputs/potm/s04trib/uppot/

# =====

cd /work/dpi/phase4a/scripts/potm/s04trib/midpot

echo "====BEGIN MIDPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/midpot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(midpot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

echo "====END MIDPOT===="

```

```

mv hspf91.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.concs
  echo ../../../../inputs/potm/s04trib/pltgen_midpot.inp | $hspf11

#-----
mv hspf31.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.imura
mv hspf55.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.onp
mv hspf63.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.load

mv hspf38.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.imura
mv hspf56.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.onp
mv hspf64.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.load

mv hspf45.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.fores
mv hspf46.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.hitil
mv hspf47.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.lotil
mv hspf48.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.pastu
mv hspf49.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.purba
mv hspf50.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.hayla
mv hspf51.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.onp
mv hspf61.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.conc1
mv hspf62.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.conc2
mv hspf65.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.load

mv hspf80.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.flow
mv hspf81.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.nh3x
mv hspf82.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.no3x
mv hspf83.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orgn
mv hspf84.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.totn
mv hspf85.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.po4x
mv hspf86.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orpx
mv hspf87.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tpxx
mv hspf88.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.doxx
mv hspf89.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.chla
mv hspf91.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tocx

mv hspf68.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orgp
mv hspf69.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.totp

mv hspf96.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.sedim
mv hspf97.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.sedim
mv hspf98.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.sedim
mv hspf54.dat ../../../../outputs/potm/s04trib/midpot/fall_line.load
mv hspf58.dat ../../../../outputs/potm/s04trib/midpot/seg730_p4.transect
mv hspf59.dat ../../../../outputs/potm/s04trib/midpot/seg740_p4.transect
mv hspf60.dat ../../../../outputs/potm/s04trib/midpot/seg180_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/midpot/vs730_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/midpot/vs740_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/midpot/vs180_p4.visual

mv hspf70.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tssx
mv hspf71.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.sedpointofrocks
mv hspf72.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.shear
mv hspf73.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.shear
mv hspf74.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.shear

mv *.out ../../../../outputs/potm/s04trib/midpot/

```

```

# =====

cd /work/dpi/phase4a/scripts/potm/s04trib/lopot

echo "====BEGIN LOPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/lopot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(lopot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

echo "====END LOPOT===="

mv hspf91.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.concs
echo ../../../../inputs/potm/s04trib/pltgen_lopot.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/lopot/
#-----
mv hspf38.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.imura
mv hspf56.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.onp
mv hspf64.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.load

mv hspf45.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.fores
mv hspf46.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.hitil
mv hspf47.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.lotil
mv hspf48.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.pastu
mv hspf49.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.purba
mv hspf50.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.hayla
mv hspf51.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.onp
mv hspf61.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.conc1
mv hspf62.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.conc2
mv hspf65.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.load

mv hspf31.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.imura
mv hspf55.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.onp
mv hspf63.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.load

mv hspf66.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.sedim
mv hspf67.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.sedim
mv hspf68.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.wtmp
mv hspf91.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tocx
mv hspf92.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.flow

mv hspf69.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.cclload
mv hspf73.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orgp

```

```

mv hspf74.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.totp
mv hspf75.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tssx

mv hspf70.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.shear
mv hspf71.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.shear
mv hspf72.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.shear
mv hspf76.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.falline_loads
mv hspf78.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.bal
mv hspf77.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.amvol

mv hspf58.dat ../../../../outputs/potm/s04trib/lopot/seg750_p4.transect
mv hspf59.dat ../../../../outputs/potm/s04trib/lopot/seg210_p4.transect
mv hspf60.dat ../../../../outputs/potm/s04trib/lopot/seg220_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/lopot/vs750_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/lopot/vs210_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/lopot/vs220_p4.visual

mv hspf54.dat ../../../../outputs/potm/s04trib/lopot/load

mv *.out ../../../../outputs/potm/s04trib/lopot/
mv *.stats ../../../../outputs/potm/s04trib/lopot/
# -----

cd /work/dpi/phase4a/scripts/potm/s04trib/rappa/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/potm_rappa.wdm

set inp="/work/dpi/phase4a/inputs/potm/s04trib/rappa/rappa_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(rappa).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm $tempinput
mv hspf91.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.concs
  echo ../../../../inputs/potm/s04trib/rappa/pltgen_rappa.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/rappa/
# -----
mv *.out ../../../../outputs/potm/s04trib/rappa/

mv hspf31.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.imura
mv hspf38.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.onp
mv hspf49.dat ../../../../outputs/potm/s04trib/rappa/s230_loads.visual

mv hspf40.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.load
mv hspf43.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.load_annual
mv hspf44.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.cclload
mv hspf47.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tssx
mv hspf48.dat ../../../../outputs/potm/s04trib/rappa/shear_stress
mv hspf60.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.bal
mv hspf61.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.all
mv hspf73.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orgp
mv hspf74.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.totp

mv hspf45.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tpx
mv hspf87.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.chla

```

```

mv hspf89.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tocx
mv hspf91.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.flow

mv *.out ../../../../outputs/potm/s04trib/rappa/
mv *.stats ../../../../outputs/potm/s04trib/rappa/

#-----
cd /work/dpi/phase4a/scripts/james/s04trib/appom/
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/appom.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/appom_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(appom).. "
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hsfp11
mv hspf91.dat ../../../../outputs/james/s04trib/appom/s300_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/appom/s310_p4.concs

mv *.out ../../../../outputs/james/s04trib/appom/
mv *.stats ../../../../outputs/james/s04trib/appom/

mv hspf31.dat ../../../../outputs/james/s04trib/appom/s300_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/appom/s300_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/appom/s300_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/appom/s300_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/appom/s300_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/appom/s300_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/appom/s300_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/appom/s300_p4.onp
mv hspf76.dat ../../../../outputs/james/s04trib/appom/s300_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/appom/s310_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/appom/s310_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/appom/s310_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/appom/s310_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/appom/s310_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/appom/s310_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/appom/s310_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/appom/s310_p4.onp
mv hspf75.dat ../../../../outputs/james/s04trib/appom/s310_p4.sedim
mv hspf74.dat ../../../../outputs/james/s04trib/appom/s310_p4.bal

mv hspf62.dat ../../../../outputs/james/s04trib/appom/s300_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/appom/s310_p4.all
mv hspf64.dat ../../../../outputs/james/s04trib/appom/s300_loads.visual
mv hspf65.dat ../../../../outputs/james/s04trib/appom/s310_loads.visual

mv hspf45.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tssx
mv hspf46.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.bodx
mv hspf47.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.loads
mv hspf50.dat ../../../../outputs/james/s04trib/appom/s300_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/appom/s310_p4.load
mv hspf72.dat ../../../../outputs/james/s04trib/appom/s310_p4.load_annual
mv hspf73.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.cclload

echo ../../../../inputs/james/s04trib/pltgen_appom.inp | $hsfp11

mv *.out ../../../../outputs/james/s04trib/appom/
mv *.stats ../../../../outputs/james/s04trib/appom/

mv hspf80.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.totn
mv hspf84.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.po4x
mv hspf54.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.totp
mv hspf85.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orpx
mv hspf86.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tpxx
mv hspf87.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.doxx

```

```

mv hspf88.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.chla
mv hspf89.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.wtmp
mv hspf79.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tocx
mv hspf91.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.flow

cd /work/dpi/phase4a/scripts/james/s04trib/matta/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/matta.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/matta_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(matta).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/matta/s235_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/matta/s240_p4.concs
  echo ../../../../inputs/james/s04trib/pltgen_matta.inp | $hspf11

#-----
mv hspf31.dat ../../../../outputs/james/s04trib/matta/s235_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/matta/s235_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/matta/s235_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/matta/s235_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/matta/s235_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/matta/s235_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/matta/s235_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/matta/s235_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/matta/s235_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/matta/s240_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/matta/s240_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/matta/s240_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/matta/s240_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/matta/s240_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/matta/s240_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/matta/s240_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/matta/s240_p4.onp
mv hspf97.dat ../../../../outputs/james/s04trib/matta/s240_p4.sedim
mv hspf60.dat ../../../../outputs/james/s04trib/matta/matta_anual.loads
mv hspf61.dat ../../../../outputs/james/s04trib/matta/matta_p4.bal
mv hspf62.dat ../../../../outputs/james/s04trib/matta/s235_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/matta/s240_p4.all
mv hspf64.dat ../../../../outputs/james/s04trib/matta/s235_loads.visual
mv hspf65.dat ../../../../outputs/james/s04trib/matta/s240_loads.visual

mv hspf47.dat ../../../../outputs/james/s04trib/matta/s240_fall.loads
mv hspf57.dat ../../../../outputs/james/s04trib/matta/matta_p4.cclload
mv hspf50.dat ../../../../outputs/james/s04trib/matta/s235_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/matta/s240_p4.load
mv hspf52.dat ../../../../outputs/james/s04trib/matta/s240_p4.shear
mv hspf53.dat ../../../../outputs/james/s04trib/matta/s240_p4.shear

mv hspf70.dat ../../../../outputs/james/s04trib/matta/matta_p4.nh3x
mv hspf71.dat ../../../../outputs/james/s04trib/matta/matta_p4.no3x
mv hspf72.dat ../../../../outputs/james/s04trib/matta/matta_p4.orgn
mv hspf73.dat ../../../../outputs/james/s04trib/matta/matta_p4.totn
mv hspf74.dat ../../../../outputs/james/s04trib/matta/matta_p4.po4x
mv hspf75.dat ../../../../outputs/james/s04trib/matta/matta_p4.orpx
mv hspf76.dat ../../../../outputs/james/s04trib/matta/matta_p4.tpss
mv hspf77.dat ../../../../outputs/james/s04trib/matta/matta_p4.doxx
mv hspf78.dat ../../../../outputs/james/s04trib/matta/matta_p4.chla
mv hspf79.dat ../../../../outputs/james/s04trib/matta/matta_p4.wtmp
mv hspf80.dat ../../../../outputs/james/s04trib/matta/matta_p4.tocx
mv hspf81.dat ../../../../outputs/james/s04trib/matta/matta_p4.flow

mv hspf54.dat ../../../../outputs/james/s04trib/matta/matta_p4.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/matta/matta_p4.totp
mv hspf56.dat ../../../../outputs/james/s04trib/matta/matta_p4.tssx

```

```

mv *.out ../../../../outputs/james/s04trib/matta
mv *.stats ../../../../outputs/james/s04trib/matta
# -----
cd /work/dpi/phase4a/scripts/james/s04trib/pamun/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/pamun.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/pamun_p4.inp"
echo $inp | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/pamun/s250_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/pamun/s260_p4.concs
echo ../../../../inputs/james/s04trib/pltgen_pamun.inp | $hspf11

mv *.stats ../../../../outputs/james/s04trib/pamun/
mv *.out ../../../../outputs/james/s04trib/pamun/
# -----
mv hspf31.dat ../../../../outputs/james/s04trib/pamun/s250_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/pamun/s250_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/pamun/s250_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/pamun/s250_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/pamun/s250_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/pamun/s250_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/pamun/s250_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/pamun/s250_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/pamun/s250_p4.sedim
mv hspf60.dat ../../../../outputs/james/s04trib/pamun/pamun_annual.loads

mv hspf38.dat ../../../../outputs/james/s04trib/pamun/s260_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/pamun/s260_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/pamun/s260_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/pamun/s260_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/pamun/s260_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/pamun/s260_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/pamun/s260_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/pamun/s260_p4.onp
mv hspf97.dat ../../../../outputs/james/s04trib/pamun/s260_p4.sedim
mv hspf62.dat ../../../../outputs/james/s04trib/pamun/s250_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/pamun/s260_p4.all

mv hspf46.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.bodx
mv hspf47.dat ../../../../outputs/james/s04trib/pamun/pamun_fall.loads
mv hspf58.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.cclload
mv hspf50.dat ../../../../outputs/james/s04trib/pamun/s250_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/pamun/s260_p4.load
mv hspf61.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.bal
mv hspf56.dat ../../../../outputs/james/s04trib/pamun/s250_loads.visual
mv hspf57.dat ../../../../outputs/james/s04trib/pamun/s260_loads.visual

mv hspf80.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.totn
mv hspf84.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.po4x
mv hspf85.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orpx
mv hspf86.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tpxx
mv hspf87.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.doxx
mv hspf88.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.chla
mv hspf89.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.wtmp
mv hspf91.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tocx
mv hspf92.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.flow

mv hspf45.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tssx
mv hspf54.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.totp

mv *.stats ../../../../outputs/james/s04trib/pamun/
mv *.out ../../../../outputs/james/s04trib/pamun/

cd /work/dpi/phase4a/scripts/james/s04trib/james1/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/james.wdm
set inp="/work/dpi/phase4a/inputs/james/s04trib/james1_p4.inp"

```

```

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james1).. "
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/james1/s265_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/james1/s270_p4.concs
mv hspf31.dat ../../../../outputs/james/s04trib/james1/s265_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/james1/s265_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/james1/s265_p4.lotil

mv hspf34.dat ../../../../outputs/james/s04trib/james1/s265_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/james1/s265_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/james1/s265_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/james1/s265_p4.imura
mv hspf47.dat ../../../../outputs/james/s04trib/james1/s265_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/james1/s265_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/james1/s270_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/james1/s270_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/james1/s270_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/james1/s270_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/james1/s270_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/james1/s270_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/james1/s270_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/james1/s270_p4.onp
mv hspf94.dat ../../../../outputs/james/s04trib/james1/james1_p4.bal
mv hspf51.dat ../../../../outputs/james/s04trib/james1/s265_loads.visual
mv hspf52.dat ../../../../outputs/james/s04trib/james1/s270_loads.visual

mv hspf97.dat ../../../../outputs/james/s04trib/james1/s270_p4.sedim

mv hspf45.dat ../../../../outputs/james/s04trib/james1/s270_p4.shearvel
mv hspf46.dat ../../../../outputs/james/s04trib/james1/s270_p4.shearvel

# shearvel = shear stress and mean velocities

mv hspf49.dat ../../../../outputs/james/s04trib/james1/s265_p4.load
mv hspf50.dat ../../../../outputs/james/s04trib/james1/s270_p4.load

mv *.out ../../../../outputs/james/s04trib/james1/
mv *.stats ../../../../outputs/james/s04trib/james1/

cd /work/dpi/phase4a/scripts/james/s04trib/james2/

set inp="/work/dpi/phase4a/inputs/james/s04trib/james2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james2).. "
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11

mv hspf56.dat ../../../../outputs/james/s04trib/james2/james_290.nh3x
mv hspf57.dat ../../../../outputs/james/s04trib/james2/james_290.no3x
mv hspf58.dat ../../../../outputs/james/s04trib/james2/james_290.po4x
mv hspf59.dat ../../../../outputs/james/s04trib/james2/james_290.tocx
mv hspf60.dat ../../../../outputs/james/s04trib/james2/james_290.orgn
mv hspf63.dat ../../../../outputs/james/s04trib/james2/james_290.totn
mv hspf64.dat ../../../../outputs/james/s04trib/james2/james_290.orgp
mv hspf65.dat ../../../../outputs/james/s04trib/james2/james_290.totp
mv hspf71.dat ../../../../outputs/james/s04trib/james2/james_290.tssx

mv hspf91.dat ../../../../outputs/james/s04trib/james2/s280_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/james2/s290_p4.concs
mv hspf31.dat ../../../../outputs/james/s04trib/james2/s280_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/james2/s280_p4.hitil

```



```

mv hspf33.dat ../../../../outputs/james/s04trib/james2/s280_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/james2/s280_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/james2/s280_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/james2/s280_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/james2/s280_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/james2/s280_p4.onp
mv hspf76.dat ../../../../outputs/james/s04trib/james2/s280_p4.sedim
mv hspf98.dat ../../../../outputs/james/s04trib/james2/james2_p4.bal

mv hspf38.dat ../../../../outputs/james/s04trib/james2/s290_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/james2/s290_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/james2/s290_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/james2/s290_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/james2/s290_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/james2/s290_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/james2/s290_p4.imura
mv hspf50.dat ../../../../outputs/james/s04trib/james2/s290_p4.onp
mv hspf77.dat ../../../../outputs/james/s04trib/james2/s290_p4.sedim

mv hspf45.dat ../../../../outputs/james/s04trib/james2/james2_p4.tssx
mv hspf46.dat ../../../../outputs/james/s04trib/james2/s280_p4.shearvel
mv hspf47.dat ../../../../outputs/james/s04trib/james2/s290_p4.shearvel
mv hspf48.dat ../../../../outputs/james/s04trib/james2/james2_p4.loads
mv hspf51.dat ../../../../outputs/james/s04trib/james2/s280_p4.load
mv hspf52.dat ../../../../outputs/james/s04trib/james2/s290_p4.load
mv hspf55.dat ../../../../outputs/james/s04trib/james2/james2_290.cclload
mv hspf53.dat ../../../../outputs/james/s04trib/james1/s280_loads.visual
mv hspf54.dat ../../../../outputs/james/s04trib/james1/s290_loads.visual

mv hspf67.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgn
mv hspf68.dat ../../../../outputs/james/s04trib/james2/james2_p4.totn
mv hspf69.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgp
mv hspf70.dat ../../../../outputs/james/s04trib/james2/james2_p4.totp
#mv hspf71.dat ../../../../outputs/james/s04trib/james2/280_eos.conc
#mv hspf72.dat ../../../../outputs/james/s04trib/james2/290_eos.conc
#mv hspf73.dat ../../../../outputs/james/s04trib/james2/280_air.temp
#mv hspf74.dat ../../../../outputs/james/s04trib/james2/290_air.temp
#mv *.out ../../../../outputs/james/s04trib/james2/

echo ../../../../inputs/james/s04trib/pltgen_james2.inp | $hspf11

mv hspf80.dat ../../../../outputs/james/s04trib/james2/james2_p4.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/james2/james2_p4.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/james2/james2_p4.totn
mv hspf84.dat ../../../../outputs/james/s04trib/james2/james2_p4.po4x
***mv hspf85.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgp
***mv hspf86.dat ../../../../outputs/james/s04trib/james2/james2_p4.totp
mv hspf87.dat ../../../../outputs/james/s04trib/james2/james2_p4.doxx
mv hspf88.dat ../../../../outputs/james/s04trib/james2/james2_p4.chla
mv hspf89.dat ../../../../outputs/james/s04trib/james2/james2_p4.wtmp
mv hspf79.dat ../../../../outputs/james/s04trib/james2/james2_p4.tocx
mv hspf74.dat ../../../../outputs/james/s04trib/james2/james2_p4.flow
mv hspf75.dat ../../../../outputs/james/s04trib/james2/james_290.flow
mv hspf56.dat ../../../../outputs/james/s04trib/james2/james_290.nh3x
mv hspf57.dat ../../../../outputs/james/s04trib/james2/james_290.no3x
mv hspf58.dat ../../../../outputs/james/s04trib/james2/james_290.po4x
mv hspf59.dat ../../../../outputs/james/s04trib/james2/james_290.tocx
mv hspf60.dat ../../../../outputs/james/s04trib/james2/james_290.orgn
mv hspf63.dat ../../../../outputs/james/s04trib/james2/james_290.totn
mv hspf64.dat ../../../../outputs/james/s04trib/james2/james_290.orgp
mv hspf65.dat ../../../../outputs/james/s04trib/james2/james_290.totp
mv hspf71.dat ../../../../outputs/james/s04trib/james2/james_290.tssx

mv *.out ../../../../outputs/james/s04trib/james2/
mv *.stats ../../../../outputs/james/s04trib/james2/

```

```
#-----
```

```
cd /work/dpi/phase4a/scripts/coast/s04trib/bf11a/
```

```

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast1a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf11a/bf11a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf11a).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

  rm $tempinput
mv hspf31.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.onp
mv hspf51.dat ../../../../outputs/coast/s04trib/bf11a/baylds_p4.370

mv hspf38.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf11a/baylds_p4.800

mv hspf45.dat ../../../../outputs/coast/s04trib/bf11a/s370_p4.sedim
mv hspf46.dat ../../../../outputs/coast/s04trib/bf11a/s800_p4.sedim
mv hspf47.dat ../../../../outputs/coast/s04trib/bf11a/s370_loads.visual
mv hspf48.dat ../../../../outputs/coast/s04trib/bf11a/s800_loads.visual

cp ../../../../outputs/coast/s04trib/bf11a/baylds_p4.370 hspf51.dat
cp ../../../../outputs/coast/s04trib/bf11a/baylds_p4.800 hspf52.dat

echo ../../../../inputs/coast/s04trib/bf11a/pltllds1a_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg370.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf11a/pltgen-seg800.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf11a
#mv *.ech ../../../../outputs/coast/s04trib/bf11a
#mv *.stats ../../../../outputs/coast/s04trib/bf11a
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf11ac/

```

```

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coastlac.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfllac/bfllac_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfllac).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf40.dat ../../../../outputs/coast/s04trib/bfllac/s810_loads.visual
mv hspf41.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.fores
mv hspf42.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.hitil
mv hspf43.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.lotil
mv hspf44.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.pastu
mv hspf45.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.purba
mv hspf46.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.hayla
mv hspf47.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.imura
mv hspf48.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.onp
mv hspf49.dat ../../../../outputs/coast/s04trib/bfllac/baylds_p4.810

mv hspf74.dat ../../../../outputs/coast/s04trib/bfllac/s810_p4.sedim

cp ../../../../outputs/coast/s04trib/bfllac/baylds_p4.810 hspf50.dat

echo ../../../../inputs/coast/s04trib/bfllac/pltllds1lac_p4.inp | $hspf11

mv hspf51.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.flow
mv hspf52.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.nh4x
mv hspf53.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.no3x
mv hspf54.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.orgn
mv hspf55.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.totn
mv hspf56.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.po4x
mv hspf57.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.orgp
mv hspf58.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.totp
mv hspf59.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.tocx
mv hspf61.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.chla
mv hspf62.dat ../../../../outputs/coast/s04trib/bfllac/pltgen-seg810.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfllac
#mv *.ech ../../../../outputs/coast/s04trib/bfllac
#mv *.stats ../../../../outputs/coast/s04trib/bfllac
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfllb/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coastlb.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfllb/bfllb_p4.inp"

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfllb).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfllb/s380_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfllb/baylds_p4.380

mv hspf38.dat ../../../../outputs/coast/s04trib/bfllb/s390_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfllb/s390_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfllb/s390_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfllb/s390_p4.pastu

```

```

mv hspf42.dat ../../../../outputs/coast/s04trib/bf11b/s390_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf11b/s390_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf11b/s390_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf11b/s390_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf11b/baylds_p4.390

mv hspf45.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf11b/baylds_p4.400

mv hspf61.dat ../../../../outputs/coast/s04trib/bf11b/s380_p4.sedim
mv hspf62.dat ../../../../outputs/coast/s04trib/bf11b/s390_p4.sedim
mv hspf63.dat ../../../../outputs/coast/s04trib/bf11b/s400_p4.sedim

cp ../../../../outputs/coast/s04trib/bf11b/baylds_p4.380 hspf44.dat
cp ../../../../outputs/coast/s04trib/bf11b/baylds_p4.390 hspf45.dat
cp ../../../../outputs/coast/s04trib/bf11b/baylds_p4.400 hspf46.dat

echo ../../../../inputs/coast/s04trib/bf11b/pltltdslb_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg380.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg390.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf11b/pltgen-seg400.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf11b
#mv *.ech ../../../../outputs/coast/s04trib/bf11b
#mv *.stats ../../../../outputs/coast/s04trib/bf11b
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf11c/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast1c.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf11c/bf11c_p4.inp"
if (-e $tempinput) then

```

```

rm $tempinput
echo ".. existing $tempinput removed, new version written(bfllc).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfllc/baylds_p4.820

mv hspf38.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfllc/baylds_p4.830

mv hspf45.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bfllc/baylds_p4.840

mv hspf96.dat ../../../../outputs/coast/s04trib/bfllc/s820_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bfllc/s830_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bfllc/s840_p4.sedim

cp ../../../../outputs/coast/s04trib/bfllc/baylds_p4.820 hspf93.dat
cp ../../../../outputs/coast/s04trib/bfllc/baylds_p4.830 hspf94.dat
cp ../../../../outputs/coast/s04trib/bfllc/baylds_p4.840 hspf95.dat

echo /work/dpi/phase4a/inputs/coast/s04trib/bfllc/pltllds1c_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg820.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg830.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg840.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg840.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg840.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg840.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bfllc/pltgen-seg840.totn

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mv hspf85.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf11c/pltgen-seg840.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf11c
#mv *.ech ../../../../outputs/coast/s04trib/bf11c
#mv *.stats ../../../../outputs/coast/s04trib/bf11c
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf12a/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast2a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf12a/bf12a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf12/baylds_p4.410

mv hspf38.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf12/baylds_p4.420

mv hspf45.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf12/baylds_p4.430

mv hspf91.dat ../../../../outputs/coast/s04trib/bf12/s410_p4.sedim
mv hspf92.dat ../../../../outputs/coast/s04trib/bf12/s420_p4.sedim
mv hspf93.dat ../../../../outputs/coast/s04trib/bf12/s430_p4.sedim
mv hspf67.dat ../../../../outputs/coast/s04trib/bf12/s410_loads.visual
mv hspf68.dat ../../../../outputs/coast/s04trib/bf12/s420_loads.visual
mv hspf69.dat ../../../../outputs/coast/s04trib/bf12/s430_loads.visual

cp ../../../../outputs/coast/s04trib/bf12/baylds_p4.410 hspf31.dat
cp ../../../../outputs/coast/s04trib/bf12/baylds_p4.420 hspf32.dat
cp ../../../../outputs/coast/s04trib/bf12/baylds_p4.430 hspf34.dat

echo ../../../../inputs/coast/s04trib/bf12a/pltltds2a_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.po4x

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mv hspf64.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg410.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg420.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.chla
mv hspf94.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg430.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf12
#mv *.ech ../../../../outputs/coast/s04trib/bf12
#mv *.stats ../../../../outputs/coast/s04trib/bf12
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf12b/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast2b.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf12b/bf12b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf12b).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.imura
mv hspf66.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.onp
mv hspf62.dat ../../../../outputs/coast/s04trib/bf12/baylds_p4.440

mv hspf94.dat ../../../../outputs/coast/s04trib/bf12/s440_p4.sedim
cp ../../../../outputs/coast/s04trib/bf12/baylds_p4.440 hspf34.dat

echo ../../../../inputs/coast/s04trib/bf12b/pltds2b_p4.inp | $hspf11

mv hspf44.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.flow
mv hspf45.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.nh4x
mv hspf46.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.no3x
mv hspf47.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.orgn
mv hspf48.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.totn
mv hspf49.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.po4x
mv hspf50.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.orgp
mv hspf51.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.totp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf12/pltgen-seg440.tocx

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mv hspf53.dat ../../../../outputs/coast/s04trib/bfl2/pltgen-seg440.chla
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl2/pltgen-seg440.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfl2/
#mv *.ech ../../../../outputs/coast/s04trib/bfl2/
#mv *.stats ../../../../outputs/coast/s04trib/bfl2/
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfl3a/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast3a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfl3a/bfl3a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3a).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.imura
mv hspf52.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.onp
mv hspf55.dat ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.450

mv hspf38.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.imura
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.onp
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.850

mv hspf45.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.imura
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.onp
mv hspf57.dat ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.870

mv hspf96.dat ../../../../outputs/coast/s04trib/bfl3a/s450_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bfl3a/s850_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bfl3a/s870_p4.sedim

cp ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.450 hspf96.dat
cp ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.850 hspf97.dat
cp ../../../../outputs/coast/s04trib/bfl3a/baylds_p4.870 hspf98.dat

echo ../../../../inputs/coast/s04trib/bfl3a/pltl3a_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg450.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bfl3a/pltgen-seg850.flow

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mv hspf70.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg850.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf13a/pltgen-seg870.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf13a
#mv *.ech ../../../../outputs/coast/s04trib/bf13a
#mv *.stats ../../../../outputs/coast/s04trib/bf13a
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf13b/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast3b.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf13b/bf13b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf13b).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf13b/baylds_p4.470

mv hspf38.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf13b/baylds_p4.480

mv hspf45.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf13b/baylds_p4.490

mv hspf96.dat ../../../../outputs/coast/s04trib/bf13b/s470_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bf13b/s480_p4.sedim

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mv hspf98.dat ../../../../outputs/coast/s04trib/bf13b/s490_p4.sedim

cp ../../../../outputs/coast/s04trib/bf13b/baylds_p4.470 hspf96.dat
cp ../../../../outputs/coast/s04trib/bf13b/baylds_p4.480 hspf97.dat
cp ../../../../outputs/coast/s04trib/bf13b/baylds_p4.490 hspf98.dat

echo ../../../../inputs/coast/s04trib/bf13b/pltds3b_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg470.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg480.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf13b/pltgen-seg490.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf13b
#mv *.ech ../../../../outputs/coast/s04trib/bf13b
#mv *.stats ../../../../outputs/coast/s04trib/bf13b
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf13c/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast3c.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf13c/bf13c_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf13c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf13c/baylds_p4.510
mv hspf38.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.lotil

```

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mv hspf41.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf13c/baylds_p4.860
mv hspf45.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.hitul
mv hspf47.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf13c/baylds_p4.890

mv hspf96.dat ../../../../outputs/coast/s04trib/bf13c/s510_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bf13c/s860_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bf13c/s890_p4.sedim

cp ../../../../outputs/coast/s04trib/bf13c/baylds_p4.510 hspf51.dat
cp ../../../../outputs/coast/s04trib/bf13c/baylds_p4.860 hspf52.dat
cp ../../../../outputs/coast/s04trib/bf13c/baylds_p4.890 hspf53.dat

echo /work/dpi/phase4a/inputs/coast/s04trib/bf13c/pltllds3c_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg510.wtmp
mv hspf69.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg860.wtmp
mv hspf80.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf13c/pltgen-seg890.wtmp
#mv *.out ../../../../outputs/coast/s04trib/bf13c
#mv *.ech ../../../../outputs/coast/s04trib/bf13c
#mv *.stats ../../../../outputs/coast/s04trib/bf13c
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf14/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast4.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf14/bf14_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf14).."
endif

```

```

awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf14/baylds_p4.500

mv hspf38.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf14/baylds_p4.880

mv hspf45.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf14/baylds_p4.990

mv hspf96.dat ../../../../outputs/coast/s04trib/bf14/s500_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bf14/s880_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bf14/s990_p4.sedim

cp ../../../../outputs/coast/s04trib/bf14/baylds_p4.500 hspf31.dat
cp ../../../../outputs/coast/s04trib/bf14/baylds_p4.880 hspf32.dat
cp ../../../../outputs/coast/s04trib/bf14/baylds_p4.990 hspf33.dat

echo ../../../../inputs/coast/s04trib/bf14/pltl4s4_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg500.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg880.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf14/pltgen-seg990.totp

```

```

mv hspf88.dat ../../../../outputs/coast/s04trib/bfl4/pltgen-seg990.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bfl4/pltgen-seg990.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bfl4/pltgen-seg990.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfl4
#mv *.ech ../../../../outputs/coast/s04trib/bfl4
#mv *.stats ../../../../outputs/coast/s04trib/bfl4
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfl5a/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast5a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfl5a/bfl5a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl5a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.550

mv hspf38.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.900

mv hspf45.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.970

mv hspf96.dat ../../../../outputs/coast/s04trib/bfl5a/s550_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bfl5a/s900_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bfl5a/s970_p4.sedim

cp ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.550 hspf50.dat
cp ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.900 hspf51.dat
cp ../../../../outputs/coast/s04trib/bfl5a/baylds_p4.970 hspf52.dat

echo ../../../../inputs/coast/s04trib/bfl5a/pltlds5a_p4.inp | $hsfp11

mv hspf58.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfl5a/pltgen-seg550.wtmp

```

```

mv hspf69.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg900.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf15a/pltgen-seg970.wtmp

mv *.stats ../../../../outputs/coast/s04trib/bf15a
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf15b/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast5b.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf15b/bf15b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf15b/baylds_p4.540

mv hspf38.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bf15b/baylds_p4.910

mv hspf45.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bf15b/baylds_p4.920

mv hspf96.dat ../../../../outputs/coast/s04trib/bf15b/s540_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bf15b/s910_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bf15b/s920_p4.sedim

```

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cp ../../../../outputs/coast/s04trib/bf15b/baylds_p4.540 hspf47.dat
cp ../../../../outputs/coast/s04trib/bf15b/baylds_p4.910 hspf48.dat
cp ../../../../outputs/coast/s04trib/bf15b/baylds_p4.920 hspf49.dat

echo ../../../../inputs/coast/s04trib/bf15b/pltds5b_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg540.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg910.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bf15b/pltgen-seg920.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf15b
#mv *.ech ../../../../outputs/coast/s04trib/bf15b
#mv *.stats ../../../../outputs/coast/s04trib/bf15b
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf16a/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast6a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf16a/bf16a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf16a).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bf16a/s560_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bf16a/baylds_p4.560

mv hspf38.dat ../../../../outputs/coast/s04trib/bf16a/s940_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bf16a/s940_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bf16a/s940_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bf16a/s940_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bf16a/s940_p4.purba

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mv hspf43.dat ../../../../outputs/coast/s04trib/bfl6a/s940_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl6a/s940_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl6a/s940_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl6a/baylds_p4.940

mv hspf45.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl6a/baylds_p4.950

mv hspf96.dat ../../../../outputs/coast/s04trib/bfl6a/s560_p4.sedim
mv hspf97.dat ../../../../outputs/coast/s04trib/bfl6a/s940_p4.sedim
mv hspf98.dat ../../../../outputs/coast/s04trib/bfl6a/s950_p4.sedim
mv hspf58.dat ../../../../outputs/coast/s04trib/bfl6a/s560_loads.visual
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl6a/s940_loads.visual
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl6a/s950_loads.visual

cp ../../../../outputs/coast/s04trib/bfl6a/baylds_p4.560 hspf47.dat
cp ../../../../outputs/coast/s04trib/bfl6a/baylds_p4.940 hspf48.dat
cp ../../../../outputs/coast/s04trib/bfl6a/baylds_p4.950 hspf49.dat
echo ../../../../inputs/coast/s04trib/bfl6a/pltl6a_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg560.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg940.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bfl6a/pltgen-seg950.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfl6a
#mv *.ech ../../../../outputs/coast/s04trib/bfl6a
#mv *.stats ../../../../outputs/coast/s04trib/bfl6a
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfl6b/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast6b.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfl6b/bfl6b_p4.inp"
if (-e $tempinput) then

```



```

rm $tempinput
echo ".. existing $tempinput removed, new version written(bfl6b).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.580

mv hspf38.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.930

mv hspf45.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.980

mv hspf61.dat ../../../../outputs/coast/s04trib/bfl6b/s580_p4.sedim
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl6b/s930_p4.sedim
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl6b/s980_p4.sedim
mv hspf58.dat ../../../../outputs/coast/s04trib/bfl6b/s580_loads.visual
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl6b/s930_loads.visual
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl6b/s980_loads.visual

cp ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.580 hspf47.dat
cp ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.930 hspf48.dat
cp ../../../../outputs/coast/s04trib/bfl6b/baylds_p4.980 hspf49.dat
echo ../../../../inputs/coast/s04trib/bfl6b/pltds6b_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg580.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg930.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.no3x

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mv hspf83.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bfl6b/pltgen-seg980.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfl6b
#mv *.ech ../../../../outputs/coast/s04trib/bfl6b
#mv *.stats ../../../../outputs/coast/s04trib/bfl6b
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfl7a/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s0lref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast7a.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfl7a/bfl7a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7a).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspl1

mv hspf31.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.590

mv hspf38.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.600

mv hspf45.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.fores
mv hspf46.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.hitil
mv hspf47.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.lotil
mv hspf48.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.pastu
mv hspf49.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.purba
mv hspf50.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.hayla
mv hspf51.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.imura
mv hspf57.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.onp
mv hspf54.dat ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.610

mv hspf61.dat ../../../../outputs/coast/s04trib/bfl7a/s590_p4.sedim
mv hspf62.dat ../../../../outputs/coast/s04trib/bfl7a/s600_p4.sedim
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl7a/s610_p4.sedim
mv hspf58.dat ../../../../outputs/coast/s04trib/bfl7a/s590_loads.visual
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl7a/s600_loads.visual
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl7a/s610_loads.visual

cp ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.590 hspf42.dat
cp ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.600 hspf43.dat
cp ../../../../outputs/coast/s04trib/bfl7a/baylds_p4.610 hspf44.dat

echo ../../../../inputs/coast/s04trib/bfl7a/pltl7a_p4.inp | $hspl1

mv hspf58.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.orgn

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mv hspf62.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg590.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg600.wtmp

mv hspf80.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.flow
mv hspf81.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.nh4x
mv hspf82.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.no3x
mv hspf83.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.orgn
mv hspf84.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.totn
mv hspf85.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.po4x
mv hspf86.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.orgp
mv hspf87.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.totp
mv hspf88.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.tocx
mv hspf89.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.chla
mv hspf92.dat ../../../../outputs/coast/s04trib/bfl7a/pltgen-seg610.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bfl7a
#mv *.ech ../../../../outputs/coast/s04trib/bfl7a
#mv *.stats ../../../../outputs/coast/s04trib/bfl7a
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bfl7b/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast7b.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bfl7b/bfl7b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7b).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

mv hspf31.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.imura
mv hspf55.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.onp
mv hspf52.dat ../../../../outputs/coast/s04trib/bfl7b/baylds_p4.620

mv hspf38.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.fores
mv hspf39.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.hitil
mv hspf40.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.lotil
mv hspf41.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.pastu
mv hspf42.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.purba
mv hspf43.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.hayla
mv hspf44.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.imura
mv hspf56.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.onp
mv hspf53.dat ../../../../outputs/coast/s04trib/bfl7b/baylds_p4.630

mv hspf80.dat ../../../../outputs/coast/s04trib/bfl7b/s620_p4.sedim
mv hspf81.dat ../../../../outputs/coast/s04trib/bfl7b/s630_p4.sedim

cp ../../../../outputs/coast/s04trib/bfl7b/baylds_p4.620 hspf51.dat

```

```

cp ../../../../outputs/coast/s04trib/bf17b/baylds_p4.630 hspf52.dat

echo ../../../../inputs/coast/s04trib/bf17b/pltllds7b_p4.inp | $hspf11

mv hspf58.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.flow
mv hspf59.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.nh4x
mv hspf60.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.no3x
mv hspf61.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.orgn
mv hspf62.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.totn
mv hspf63.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.po4x
mv hspf64.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.orgp
mv hspf65.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.totp
mv hspf66.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.tocx
mv hspf67.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.chla
mv hspf68.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg620.wtmp

mv hspf69.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.flow
mv hspf70.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.nh4x
mv hspf71.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.no3x
mv hspf72.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.orgn
mv hspf73.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.totn
mv hspf74.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.po4x
mv hspf75.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.orgp
mv hspf76.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.totp
mv hspf77.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.tocx
mv hspf78.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.chla
mv hspf79.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg630.wtmp

#mv *.out ../../../../outputs/coast/s04trib/bf17b
#mv *.ech ../../../../outputs/coast/s04trib/bf17b
#mv *.stats ../../../../outputs/coast/s04trib/bf17b
#-----

cd /work/dpi/phase4a/scripts/coast/s04trib/bf17bc/

rm /work/dpi/phase4a/wdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/coast7bc.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/bf17bc/bf17bc_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf17c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf41.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.fores
mv hspf42.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.hitil
mv hspf43.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.lotil
mv hspf44.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.pastu
mv hspf45.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.purba
mv hspf46.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.hayla
mv hspf47.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.imura
mv hspf48.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.onp
mv hspf49.dat ../../../../outputs/coast/s04trib/bf17b/baylds_p4.960
mv hspf74.dat ../../../../outputs/coast/s04trib/bf17b/s960_p4.sedim
mv hspf40.dat ../../../../outputs/coast/s04trib/bf17b/s960_loads.visual

cp ../../../../outputs/coast/s04trib/bf17b/baylds_p4.960 hspf48.dat
echo ../../../../inputs/coast/s04trib/bf17bc/pltllds7bc_p4.inp | $hspf11

mv hspf63.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.flow
mv hspf64.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.nh4x
mv hspf65.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.no3x
mv hspf66.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.orgn
mv hspf67.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.totn
mv hspf68.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.po4x
mv hspf69.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.orgp
mv hspf70.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.totp
mv hspf71.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.tocx
mv hspf72.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.chla
mv hspf73.dat ../../../../outputs/coast/s04trib/bf17b/pltgen-seg960.wtmp

```

```

cd /work/dpi/phase4a/scripts/coast/s04trib/patapsco/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/patapsco.wdm

echo ../../../../inputs/coast/s04trib/patapsco/pataps_p4.inp | $hspf11

echo "====END PATAPSCO===="

mv hspf91.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.concs
mv hspf31.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.lotil

mv hspf34.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.onp
mv hspf64.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.sedim
mv hspf61.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.all

mv hspf46.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.bal
mv hspf51.dat ../../../../outputs/coast/s04trib/patapsco/s760_loads.visual

mv hspf47.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.shearvel
mv hspf48.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tssx

# shearvel = shear stress and mean velocities

mv hspf40.dat ../../../../outputs/coast/s04trib/patapsco/s760_fall_line.load
mv hspf41.dat ../../../../outputs/coast/s04trib/patapsco/N_P_.conc
mv hspf43.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.load
mv hspf44.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.cclload
mv hspf45.dat ../../../../outputs/coast/s04trib/patapsco/s760_annual.load
mv hspf51.dat ../../../../outputs/coast/s04trib/patapsco/s760.visual
mv hspf73.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.totp
mv *.out ../../../../outputs/coast/s04trib/patapsco/
mv *.stats ../../../../outputs/coast/s04trib/patapsco/

# -----

echo "====BEGIN PLTGEN===="
echo ../../../../inputs/coast/s04trib/patapsco/pltgen_patapsco.inp | $hspf11

echo "====END PLTGEN===="

mv hspf80.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.chla
mv hspf89.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.wtmp
mv hspf79.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tocx
mv hspf74.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.flow
mv *.out ../../../../outputs/coast/s04trib/patapsco/
mv *.stats ../../../../outputs/coast/s04trib/patapsco/

cd /work/dpi/phase4a/scripts/coast/s04trib/nanticoke/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/nanticoke.wdm

echo ../../../../inputs/coast/s04trib/nanticoke/nant_p4.inp | $hspf11
mv hspf91.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.concs

```

```

echo ../../../../inputs/coast/s04trib/nanticoke/pltgen_nat_p4.inp | $hspf11

mv *.stats ../../../../outputs/coast/s04trib/nanticoke/
# -----

mv hspf31.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.onp
mv hspf43.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.load1
#mv hspf40.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.load2
mv hspf41.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.concl
mv hspf42.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.conc2

mv hspf60.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tssx
mv hspf64.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.bal
mv hspf65.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.shear

mv hspf61.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit1
mv hspf62.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit2
mv hspf63.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit3

mv hspf96.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.sedim

mv hspf44.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.cload
mv hspf73.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.totp
mv hspf80.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.chla
mv hspf89.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.wtmp
mv hspf90.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tocx
mv hspf91.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.flow

mv *.out ../../../../outputs/coast/s04trib/nanticoke/

cd /work/dpi/phase4a/scripts/coast/s04trib/choptank/
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/choptank.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/choptank/chop_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written (choptank) .."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.concs
echo ../../../../inputs/coast/s04trib/choptank/pltgen_chop_p4.inp | $hspf11

mv *.stats ../../../../outputs/coast/s04trib/choptank/
# -----

mv hspf96.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.sedim
mv hspf31.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.onp

```

```

mv hspf43.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.load
#mv hspf40.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.load2
mv hspf41.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.conc1
mv hspf42.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.conc2

mv hspf60.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tssx

mv hspf76.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.benal
mv hspf77.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.depth

mv hspf78.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.sedim

mv hspf44.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.ccloud
mv hspf73.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.totp
mv hspf80.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.chla
mv hspf89.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.wtmp
mv hspf90.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tocx
mv hspf91.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.flow

mv *.out ../../../../outputs/coast/s04trib/choptank/

#####
##### SECTION TO MAKE .eos FILES, COPY THEM TO THE APPROPRIATE ###
##### OUTPUT POSTPROCESSOR DIRECTORY, AND MAKE THE eos.prn FILE ###
#####

cd /work/dpi/phase4a/outputs
rm /work/dpi/phase4a/outputs/*/s04trib/*/s???_p4.eos

cd coast/s04trib/bf11a/
echo 800 | gp
cd ../../../../
cd coast/s04trib/bf11a/
echo 370 | gp
cd ../../../../
cd coast/s04trib/bf11a/
echo 810 | gp
cd ../../../../
cd potm/s04trib/patux/
echo 340 | gp
cd ../../../../
cd potm/s04trib/patux/
echo 330 | gp
cd ../../../../
cd susq/s04trib/wbsus/
echo 50 | gp
cd ../../../../
cd susq/s04trib/wbsus/
echo 70 | gp
cd ../../../../
cd susq/s04trib/wbsus/
echo 60 | gp
cd ../../../../
cd coast/s04trib/bf11b/
echo 400 | gp
cd ../../../../
cd coast/s04trib/bf11b/
echo 390 | gp
cd ../../../../
cd coast/s04trib/bf11b/
echo 380 | gp
cd ../../../../
cd james/s04trib/appom/
echo 310 | gp

```

```
cd ../../../../
cd james/s04trib/appom/
echo 300 | gp
cd ../../../../
cd potm/s04trib/shena/
echo 190 | gp
cd ../../../../
cd potm/s04trib/shena/
echo 200 | gp
cd ../../../../
cd coast/s04trib/bf11c/
echo 840 | gp
cd ../../../../
cd coast/s04trib/bf11c/
echo 830 | gp
cd ../../../../
cd coast/s04trib/bf11c/
echo 820 | gp
cd ../../../../
cd susq/s04trib/junia/
echo 90 | gp
cd ../../../../
cd susq/s04trib/junia/
echo 100 | gp
cd ../../../../
cd james/s04trib/matta/
echo 240 | gp
cd ../../../../
cd james/s04trib/matta/
echo 235 | gp
cd ../../../../
cd coast/s04trib/bf12/
echo 430 | gp
cd ../../../../
cd coast/s04trib/bf12/
echo 420 | gp
cd ../../../../
cd coast/s04trib/bf12/
echo 410 | gp
cd ../../../../
cd coast/s04trib/bf12/
echo 440 | gp
cd ../../../../
cd potm/s04trib/uppot/
echo 175 | gp
cd ../../../../
cd potm/s04trib/uppot/
echo 170 | gp
cd ../../../../
cd potm/s04trib/uppot/
echo 160 | gp
cd ../../../../
cd james/s04trib/pamun/
echo 260 | gp
cd ../../../../
cd james/s04trib/pamun/
echo 250 | gp
cd ../../../../
cd susq/s04trib/ebsus1/
echo 700 | gp
cd ../../../../
cd susq/s04trib/ebsus1/
echo 20 | gp
cd ../../../../
cd susq/s04trib/ebsus1/
echo 10 | gp
cd ../../../../
cd coast/s04trib/bf13a/
echo 870 | gp
cd ../../../../
cd coast/s04trib/bf13a/
echo 850 | gp
cd ../../../../
cd coast/s04trib/bf13a/
echo 450 | gp
```



```
cd ../../../
cd james/s04trib/james1/
echo 270 | gp
cd ../../../
cd james/s04trib/james1/
echo 265 | gp
cd ../../../
cd susq/s04trib/ebsus2/
echo 30 | gp
cd ../../../
cd susq/s04trib/ebsus2/
echo 40 | gp
cd ../../../
cd potm/s04trib/midpot/
echo 740 | gp
cd ../../../
cd potm/s04trib/midpot/
echo 730 | gp
cd ../../../
cd potm/s04trib/midpot/
echo 180 | gp
cd ../../../
cd coast/s04trib/bfl3b/
echo 490 | gp
cd ../../../
cd coast/s04trib/bfl3b/
echo 480 | gp
cd ../../../
cd coast/s04trib/bfl3b/
echo 470 | gp
cd ../../../
cd james/s04trib/james2/
echo 290 | gp
cd ../../../
cd james/s04trib/james2/
echo 280 | gp
cd ../../../
cd coast/s04trib/bfl3c/
echo 890 | gp
cd ../../../
cd coast/s04trib/bfl3c/
echo 860 | gp
cd ../../../
cd coast/s04trib/bfl3c/
echo 510 | gp
cd ../../../
cd potm/s04trib/lopot/
echo 750 | gp
cd ../../../
cd potm/s04trib/lopot/
echo 220 | gp
cd ../../../
cd potm/s04trib/lopot/
echo 210 | gp
cd ../../../
cd coast/s04trib/bfl4/
echo 990 | gp
cd ../../../
cd coast/s04trib/bfl4/
echo 880 | gp
cd ../../../
cd coast/s04trib/bfl4/
echo 500 | gp
cd ../../../
cd susq/s04trib/losus/
echo 80 | gp
cd ../../../
cd susq/s04trib/losus/
echo 710 | gp
cd ../../../
cd susq/s04trib/losus/
echo 110 | gp
cd ../../../
cd potm/s04trib/rappa/
echo 230 | gp
```

```

cd ../../../../
cd coast/s04trib/bf15a/
echo 970 | gp
cd ../../../../
cd coast/s04trib/bf15a/
echo 900 | gp
cd ../../../../
cd coast/s04trib/bf15a/
echo 550 | gp
cd ../../../../
cd susq/s04trib/conow/
echo 720 | gp
cd ../../../../
cd susq/s04trib/conow/
echo 140 | gp
cd ../../../../
cd susq/s04trib/conow/
echo 120 | gp
cd ../../../../
cd coast/s04trib/bf15b/
echo 540 | gp
cd ../../../../
cd coast/s04trib/bf15b/
echo 920 | gp
cd ../../../../
cd coast/s04trib/bf15b/
echo 910 | gp
cd ../../../../
cd coast/s04trib/bf16a/
echo 950 | gp
cd ../../../../
cd coast/s04trib/bf16a/
echo 940 | gp
cd ../../../../
cd coast/s04trib/bf16a/
echo 560 | gp
cd ../../../../
cd coast/s04trib/bf16b/
echo 980 | gp
cd ../../../../
cd coast/s04trib/bf16b/
echo 930 | gp
cd ../../../../
cd coast/s04trib/bf16b/
echo 580 | gp
cd ../../../../
cd coast/s04trib/bf17a/
echo 610 | gp
cd ../../../../
cd coast/s04trib/bf17a/
echo 600 | gp
cd ../../../../
cd coast/s04trib/bf17a/
echo 590 | gp
cd ../../../../
cd coast/s04trib/bf17b/
echo 630 | gp
cd ../../../../
cd coast/s04trib/bf17b/
echo 620 | gp
cd ../../../../
cd coast/s04trib/bf17b/
echo 960 | gp
cd ../../../../
cd coast/s04trib/patapsco/
echo 760 | gp
cd ../../../../
cd coast/s04trib/choptank/
echo 770 | gp
cd ../../../../
cd coast/s04trib/nanticoke/
echo 780 | gp
cd ../../../../

```

NOW COPY THEM TO THE APPROPRIATE LOCATION AND MAKE THE eos.prn

```
cp /work/dpi/phase4a/outputs/*/s04trib/*/*.eos /work/dpi/phase4a/outputs/eos_ppoc/s04trib/
cd /work/dpi/phase4a/outputs/eos_ppoc/s04trib/

../all.com
```

```
##### LAST PART CHECK THE ECHO FILES TO MAKE SURE COMPLETE
##### IT WOULD BE A GOOD IDEA TO SCRIPT THE CHECK SO AN ERROR WOULD APPEAR
```

```
cd /work/dpi/phase4a/scripts/
```

```
ls -l coast/s04trib/bf11a/bf11a_p4.ech >all_s04trib_echs
tail -1 coast/s04trib/bf11a/bf11a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11a/pltllds1a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11a/pltllds1a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11ac/bf11ac_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11ac/bf11ac_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11ac/pltllds1ac_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11ac/pltllds1ac_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11b/bf11b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11b/bf11b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11b/pltllds1b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11b/pltllds1b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11c/bf11c_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11c/bf11c_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf11c/pltllds1c_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf11c/pltllds1c_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf12a/bf12a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf12a/bf12a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf12a/pltllds2a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf12a/pltllds2a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf12b/bf12b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf12b/bf12b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf12b/pltllds2b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf12b/pltllds2b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13a/bf13a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13a/bf13a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13a/pltllds3a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13a/pltllds3a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13b/bf13b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13b/bf13b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13b/pltllds3b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13b/pltllds3b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13c/bf13c_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13c/bf13c_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf13c/pltllds3c_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf13c/pltllds3c_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf14/bf14_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf14/bf14_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf14/pltllds4_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf14/pltllds4_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf15a/bf15a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf15a/bf15a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf15a/pltllds5a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf15a/pltllds5a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf15b/bf15b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf15b/bf15b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf15b/pltllds5b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf15b/pltllds5b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf16a/bf16a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf16a/bf16a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf16a/pltllds6a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf16a/pltllds6a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf16b/bf16b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf16b/bf16b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf16b/pltllds6b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf16b/pltllds6b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf17a/bf17a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17a/bf17a_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf17a/pltllds7a_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17a/pltllds7a_p4.ech >>all_s04trib_echs
```

```

ls -l coast/s04trib/bf17b/bf17b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17b/bf17b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf17b/pltl7b_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17b/pltl7b_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf17bc/bf17bc_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17bc/bf17bc_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/bf17bc/pltl7c_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/bf17bc/pltl7c_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_echs
tail -1 coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_echs
ls -l coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_echs
tail -1 coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_echs
ls -l coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_echs
tail -1 coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_echs
ls -l coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_echs
tail -1 coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_echs
ls -l coast/s04trib/choptank/chpplt.ech >>all_s04trib_echs
tail -1 coast/s04trib/choptank/chpplt.ech >>all_s04trib_echs
ls -l james/s04trib/appom/appom.ech >>all_s04trib_echs
tail -1 james/s04trib/appom/appom.ech >>all_s04trib_echs
ls -l james/s04trib/appom/pltgen_p4.ech >>all_s04trib_echs
tail -1 james/s04trib/appom/pltgen_p4.ech >>all_s04trib_echs
ls -l james/s04trib/matta/matta_p4.ech >>all_s04trib_echs
tail -1 james/s04trib/matta/matta_p4.ech >>all_s04trib_echs
ls -l james/s04trib/matta/pltgen_p4.ech >>all_s04trib_echs
tail -1 james/s04trib/matta/pltgen_p4.ech >>all_s04trib_echs
ls -l james/s04trib/pamun/pamun.ech >>all_s04trib_echs
tail -1 james/s04trib/pamun/pamun.ech >>all_s04trib_echs
ls -l james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_echs
tail -1 james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_echs
ls -l james/s04trib/james1/james1.ech >>all_s04trib_echs
tail -1 james/s04trib/james1/james1.ech >>all_s04trib_echs
ls -l james/s04trib/james2/james2.ech >>all_s04trib_echs
tail -1 james/s04trib/james2/james2.ech >>all_s04trib_echs
ls -l james/s04trib/james2/pltgen_james2.ech >>all_s04trib_echs
tail -1 james/s04trib/james2/pltgen_james2.ech >>all_s04trib_echs
ls -l potm/s04trib/patux/patux_calib.ech >>all_s04trib_echs
tail -1 potm/s04trib/patux/patux_calib.ech >>all_s04trib_echs
ls -l potm/s04trib/patux/patux_plt.ech >>all_s04trib_echs
tail -1 potm/s04trib/patux/patux_plt.ech >>all_s04trib_echs
ls -l potm/s04trib/rappa/rappa.ech >>all_s04trib_echs
tail -1 potm/s04trib/rappa/rappa.ech >>all_s04trib_echs
ls -l potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_echs
tail -1 potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_echs
ls -l potm/s04trib/shena/shena.ech >>all_s04trib_echs
tail -1 potm/s04trib/shena/shena.ech >>all_s04trib_echs
ls -l potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_echs
tail -1 potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_echs
ls -l potm/s04trib/uppot/uppot.ech >>all_s04trib_echs
tail -1 potm/s04trib/uppot/uppot.ech >>all_s04trib_echs
ls -l potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_echs
tail -1 potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_echs
ls -l potm/s04trib/midpot/midpot.ech >>all_s04trib_echs
tail -1 potm/s04trib/midpot/midpot.ech >>all_s04trib_echs
ls -l potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_echs
tail -1 potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_echs
ls -l potm/s04trib/lopot/lopot.ech >>all_s04trib_echs
tail -1 potm/s04trib/lopot/lopot.ech >>all_s04trib_echs
ls -l potm/s04trib/lopot/lopot_plt.ech >>all_s04trib_echs
tail -1 potm/s04trib/lopot/lopot_plt.ech >>all_s04trib_echs
ls -l susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_echs
tail -1 susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_echs
ls -l susq/s04trib/junia/junia_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/junia/junia_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_echs
tail -1 susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_echs
ls -l susq/s04trib/ebus1/ebus1_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/ebus1/ebus1_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/ebus1/ebus1_p4_plt.ech >>all_s04trib_echs
tail -1 susq/s04trib/ebus1/ebus1_p4_plt.ech >>all_s04trib_echs
ls -l susq/s04trib/ebus2/ebus2_p4.ech >>all_s04trib_echs

```

```
tail -1 susq/s04trib/ebsus2/ebsus2_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/losus/losus_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/losus/losus_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_echs
tail -1 susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_echs
ls -l susq/s04trib/conow/conownps_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/conow/conownps_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/conow/conowdp_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/conow/conowdp_p4.ech >>all_s04trib_echs
ls -l susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_echs
tail -1 susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_echs
```

I-2 Sample Run 2 Script File

```
#!/bin/csh
#QSUB -lT 27000 -lt 8600 -lm 12MW -eo -s /bin/csh
#####
##### SCRIPT FILE TO RUN SECOND RUN OF SCENARIO #####
##### SCENARIO OPERATIONS SYNOPSIS: #####
##### STEP 1: MAKE INPUTS USING /work/dpi/phase4a/scripts/abc_mv_kill.com ###
##### STEP 2: CHANGE WDM USING /work/dpi/phase4a/scripts/ed_wdm_line.com ###
##### STEP 3: CHANGE THIS SCRIPT FILE TO CURRENT SCENARIO BY ISSUING ###
##### THE VI COMMAND :g/oldscenario/s//newscenario/g ###
##### STEP 4: RUN THIS SCRIPT TO GET THE EDGE OF STREAM LOADS ###
##### STEP 5: USE SPREADSHEET TO DETERMINE BED CONCENTRATION REDUCTIONS ###
##### STEP 6: RUN /work/dpi/phase4a/inputs/bed.com ###
##### AND /work/dpi/phase4a/inputs/mvbed FOR THIS SCENARIO ###
##### STEP 7: RUN SECOND SCRIPT TO GET FINAL DELIVERED LOADS ###
##### STEP 8: RUN THIRD SCRIPT TO GET LOADS TO BAY MODEL ###
#####
##### THIS SCRIPT RERUNS THE FILES AFTER THEY HAVE BEEN UPDATED USING THE ###
##### BED CONCENTRATION FILES DESCRIBED IN STEP 6 ABOVE ###
#####
##### SETTING OF VARIABLES TO BE USED THROUGHOUT THE SCRIPT
set awkprogl="/work/dpi/phase4a/hspf/programs/a01_strip_cmnts_special.awk"
set tempinput=zzztempfile.1
set hspf11="/usr/opt/wrdapp/hspf11.1/bin/hspf"

##### BEGINNING OF RUN SECTION
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/susq.wdm /work/dpi/phase4a/wdm/susq/s04trib/susq.wdm

cd /work/dpi/phase4a/scripts/susq/s04trib/wbsus/
set inp="/work/dpi/phase4a/inputs/susq/s04trib/wbsus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(wbsus).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_wbsus.inp | $hspf11

mv hspf50.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.fores
mv hspf51.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.hitil
mv hspf52.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.lotil
mv hspf53.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.pastu
mv hspf54.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.purba
mv hspf55.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.hayla
mv hspf56.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.imura
mv hspf71.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.onp

mv hspf57.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.fores
mv hspf58.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.hitil
mv hspf59.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.lotil
mv hspf60.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.pastu
mv hspf61.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.purba
mv hspf62.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.hayla
mv hspf63.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.imura
mv hspf72.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.onp

mv hspf64.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.fores
mv hspf65.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.hitil
mv hspf66.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.lotil
mv hspf67.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.pastu
mv hspf68.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.purba
mv hspf69.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.hayla
```

```

mv hspf70.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.imura
mv hspf73.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.onp
mv hspf81.dat ../../../../outputs/susq/s04trib/wbsus/seg50_p4.all
mv hspf82.dat ../../../../outputs/susq/s04trib/wbsus/seg60_p4.all
mv hspf83.dat ../../../../outputs/susq/s04trib/wbsus/seg70_p4.all
mv hspf85.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.load
mv hspf86.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.load
mv hspf87.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.load

mv hspf74.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.tssx
mv hspf44.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.taux

mv hspf96.dat ../../../../outputs/susq/s04trib/wbsus/s50_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/wbsus/s60_p4.sedim
mv hspf98.dat ../../../../outputs/susq/s04trib/wbsus/s70_p4.sedim

mv hspf78.dat ../../../../outputs/susq/s04trib/wbsus/benal.wbsus
mv hspf30.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.nh3x
mv hspf31.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.no3x
mv hspf32.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.orgn
mv hspf33.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.totn
mv hspf34.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.po4x
mv hspf35.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.orgp
mv hspf36.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.totp
mv hspf37.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.doxx
mv hspf38.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.chla
mv hspf39.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.wtmp
mv hspf40.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.tocx
mv hspf41.dat ../../../../outputs/susq/s04trib/wbsus/pltgen-s70_p4.flow

cd /work/dpi/phase4a/scripts/susq/s04trib/junia/

set inp="/work/dpi/phase4a/inputs/susq/s04trib/junia_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/junia/s90_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/junia/s100_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_junia.inp | $hspf11

mv hspf49.dat ../../../../outputs/susq/s04trib/junia/s90_p4.fores
mv hspf50.dat ../../../../outputs/susq/s04trib/junia/s90_p4.hitil
mv hspf51.dat ../../../../outputs/susq/s04trib/junia/s90_p4.lotil
mv hspf52.dat ../../../../outputs/susq/s04trib/junia/s90_p4.pastu
mv hspf53.dat ../../../../outputs/susq/s04trib/junia/s90_p4.purba
mv hspf54.dat ../../../../outputs/susq/s04trib/junia/s90_p4.hayla
mv hspf55.dat ../../../../outputs/susq/s04trib/junia/s90_p4.imura
mv hspf63.dat ../../../../outputs/susq/s04trib/junia/s90_p4.onp
mv hspf67.dat ../../../../outputs/susq/s04trib/junia/s90_p4.load

mv hspf56.dat ../../../../outputs/susq/s04trib/junia/s100_p4.fores
mv hspf57.dat ../../../../outputs/susq/s04trib/junia/s100_p4.hitil
mv hspf58.dat ../../../../outputs/susq/s04trib/junia/s100_p4.lotil
mv hspf59.dat ../../../../outputs/susq/s04trib/junia/s100_p4.pastu
mv hspf60.dat ../../../../outputs/susq/s04trib/junia/s100_p4.purba
mv hspf61.dat ../../../../outputs/susq/s04trib/junia/s100_p4.hayla
mv hspf62.dat ../../../../outputs/susq/s04trib/junia/s100_p4.imura
mv hspf64.dat ../../../../outputs/susq/s04trib/junia/s100_p4.onp
mv hspf65.dat ../../../../outputs/susq/s04trib/junia/s100_p4.conc1
mv hspf66.dat ../../../../outputs/susq/s04trib/junia/s100_p4.conc2
mv hspf68.dat ../../../../outputs/susq/s04trib/junia/s100_p4.load

mv hspf96.dat ../../../../outputs/susq/s04trib/junia/s90_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/junia/s100_p4.sedim

mv hspf32.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.tssx
mv hspf34.dat ../../../../outputs/susq/s04trib/junia/s90.shearvel
mv hspf35.dat ../../../../outputs/susq/s04trib/junia/s100.shearvel

```

```

mv hspf44.dat ../../../../outputs/susq/s04trib/junia/s90_p4.all
mv hspf45.dat ../../../../outputs/susq/s04trib/junia/s100_p4.all
mv hspf80.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/junia/pltgen-s100_p4.flow

```

```
cd /work/dpi/phase4a/scripts/susq/s04trib/ebsus1/
```

```

set inp="/work/dpi/phase4a/inputs/susq/s04trib/ebsus1_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_ebsus1.inp | $hspf11

```

```

mv hspf31.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.imura
mv hspf55.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.onp
mv hspf61.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.load

```

```

mv hspf38.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.imura
mv hspf56.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.onp
mv hspf62.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.load

```

```

mv hspf45.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.fores
mv hspf46.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.hitil
mv hspf47.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.lotil
mv hspf48.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.pastu
mv hspf49.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.purba
mv hspf50.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.hayla
mv hspf51.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.imura
mv hspf57.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.onp
mv hspf63.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.load

```

```

mv hspf64.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.sedim
mv hspf65.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.sedim
mv hspf66.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.sedim

```

```

mv hspf67.dat ../../../../outputs/susq/s04trib/ebsus1/s10_p4.all
mv hspf68.dat ../../../../outputs/susq/s04trib/ebsus1/s20_p4.all
mv hspf69.dat ../../../../outputs/susq/s04trib/ebsus1/s700_p4.all

```

```

mv hspf75.dat ../../../../outputs/susq/s04trib/ebsus1/benal.ebsus1
mv hspf80.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.totn

```



```

mv hspf84.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus1/pltgen-s700_p4.flow

```

```
cd /work/dpi/phase4a/scripts/susq/s04trib/ebsus2/
```

```

set inp="/work/dpi/phase4a/inputs/susq/s04trib/ebsus2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.concs
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus2/benal.eb2
echo ../../../../inputs/susq/s04trib/pltgen_ebsus2.inp | $hspf11

```

```

mv hspf31.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.imura
mv hspf48.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.onp
mv hspf53.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.load

```

```

mv hspf38.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.imura
mv hspf49.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.onp
mv hspf51.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.conc1
mv hspf52.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.conc2
mv hspf54.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.load

```

```

mv hspf55.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.sedim
mv hspf56.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.sedim

```

```

mv hspf76.dat ../../../../outputs/susq/s04trib/ebsus2/s30_p4.all
mv hspf77.dat ../../../../outputs/susq/s04trib/ebsus2/s40_p4.all
mv hspf78.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s30_p4.benal
mv hspf79.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.benal

```

```

mv hspf80.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.nh3x
mv hspf60.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tssx
mv hspf81.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.wtmp
mv hspf90.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.flow
mv hspf92.dat ../../../../outputs/susq/s04trib/ebsus2/pltgen-s40_p4.tocx

```

```

mv hspf61.dat ../../../../outputs/susq/s04trib/ebsus2/shear.s30
mv hspf62.dat ../../../../outputs/susq/s04trib/ebsus2/shear.s40

```

```
cd /work/dpi/phase4a/scripts/susq/s04trib/losus/
```

```

set inp="/work/dpi/phase4a/inputs/susq/s04trib/losus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/losus/s80_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/losus/s110_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/losus/s710_p4.concs
echo ../../../../inputs/susq/s04trib/pltgen_losus.inp | $hspf11

mv hspf31.dat ../../../../outputs/susq/s04trib/losus/s80_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/losus/s80_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/losus/s80_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/losus/s80_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/losus/s80_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/losus/s80_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/losus/s80_p4.imura
mv hspf55.dat ../../../../outputs/susq/s04trib/losus/s80_p4.onp
mv hspf61.dat ../../../../outputs/susq/s04trib/losus/s80_p4.load
mv hspf64.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.conc1
mv hspf65.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.conc2

mv hspf38.dat ../../../../outputs/susq/s04trib/losus/s110_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/losus/s110_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/losus/s110_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/losus/s110_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/losus/s110_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/losus/s110_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/losus/s110_p4.imura
mv hspf56.dat ../../../../outputs/susq/s04trib/losus/s110_p4.onp
mv hspf62.dat ../../../../outputs/susq/s04trib/losus/s110_p4.load

mv hspf45.dat ../../../../outputs/susq/s04trib/losus/s710_p4.fores
mv hspf46.dat ../../../../outputs/susq/s04trib/losus/s710_p4.hitil
mv hspf47.dat ../../../../outputs/susq/s04trib/losus/s710_p4.lotil
mv hspf48.dat ../../../../outputs/susq/s04trib/losus/s710_p4.pastu
mv hspf49.dat ../../../../outputs/susq/s04trib/losus/s710_p4.purba
mv hspf50.dat ../../../../outputs/susq/s04trib/losus/s710_p4.hayla
mv hspf51.dat ../../../../outputs/susq/s04trib/losus/s710_p4.imura
mv hspf57.dat ../../../../outputs/susq/s04trib/losus/s710_p4.onp
mv hspf63.dat ../../../../outputs/susq/s04trib/losus/s710_p4.load

mv hspf72.dat ../../../../outputs/susq/s04trib/losus/s80_p4.all
mv hspf73.dat ../../../../outputs/susq/s04trib/losus/s110_p4.all
mv hspf74.dat ../../../../outputs/susq/s04trib/losus/s710_p4.all

mv hspf96.dat ../../../../outputs/susq/s04trib/losus/s80_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/losus/s110_p4.sedim
mv hspf98.dat ../../../../outputs/susq/s04trib/losus/s710_p4.sedim

mv hspf80.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.nh3x
mv hspf81.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.no3x
mv hspf82.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.orgn
mv hspf83.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.totn
mv hspf84.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.po4x
mv hspf85.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.orgp
mv hspf86.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.totp
mv hspf87.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.doxx
mv hspf88.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.chla
mv hspf89.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.wtmp
mv hspf92.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.tocx
mv hspf91.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.flow
mv hspf71.dat ../../../../outputs/susq/s04trib/losus/pltgen-s710_p4.tssx

mv hspf67.dat ../../../../outputs/susq/s04trib/losus/s80_p4.shear
mv hspf68.dat ../../../../outputs/susq/s04trib/losus/s110_p4.shear
mv hspf69.dat ../../../../outputs/susq/s04trib/losus/s710_p4.shear

cd /work/dpi/phase4a/scripts/susq/s04trib/conow/

```

```

set inp="/work/dpi/phase4a/inputs/susq/s04trib/conownps_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf31.dat ../../../../outputs/susq/s04trib/conow/s120_p4.fores
mv hspf32.dat ../../../../outputs/susq/s04trib/conow/s120_p4.hitil
mv hspf33.dat ../../../../outputs/susq/s04trib/conow/s120_p4.lotil
mv hspf34.dat ../../../../outputs/susq/s04trib/conow/s120_p4.pastu
mv hspf35.dat ../../../../outputs/susq/s04trib/conow/s120_p4.purba
mv hspf36.dat ../../../../outputs/susq/s04trib/conow/s120_p4.hayla
mv hspf37.dat ../../../../outputs/susq/s04trib/conow/s120_p4.imura
mv hspf45.dat ../../../../outputs/susq/s04trib/conow/s120_p4.onp

mv hspf38.dat ../../../../outputs/susq/s04trib/conow/s140_p4.fores
mv hspf39.dat ../../../../outputs/susq/s04trib/conow/s140_p4.hitil
mv hspf40.dat ../../../../outputs/susq/s04trib/conow/s140_p4.lotil
mv hspf41.dat ../../../../outputs/susq/s04trib/conow/s140_p4.pastu
mv hspf42.dat ../../../../outputs/susq/s04trib/conow/s140_p4.purba
mv hspf43.dat ../../../../outputs/susq/s04trib/conow/s140_p4.hayla
mv hspf44.dat ../../../../outputs/susq/s04trib/conow/s140_p4.imura
mv hspf46.dat ../../../../outputs/susq/s04trib/conow/s140_p4.onp

mv hspf48.dat ../../../../outputs/susq/s04trib/conow/s720_p4.fores
mv hspf49.dat ../../../../outputs/susq/s04trib/conow/s720_p4.hitil
mv hspf50.dat ../../../../outputs/susq/s04trib/conow/s720_p4.lotil
mv hspf51.dat ../../../../outputs/susq/s04trib/conow/s720_p4.pastu
mv hspf52.dat ../../../../outputs/susq/s04trib/conow/s720_p4.purba
mv hspf53.dat ../../../../outputs/susq/s04trib/conow/s720_p4.hayla
mv hspf54.dat ../../../../outputs/susq/s04trib/conow/s720_p4.imura
mv hspf47.dat ../../../../outputs/susq/s04trib/conow/s720_p4.onp
mv hspf95.dat ../../../../outputs/susq/s04trib/conow/s120_p4.sedim
mv hspf96.dat ../../../../outputs/susq/s04trib/conow/s140_p4.sedim
mv hspf97.dat ../../../../outputs/susq/s04trib/conow/s720_p4.sedim

#---Generate conowingo reservoir inflow ---
echo ../../../../inputs/susq/s04trib/conowinf_p4.inp | $hspf11

mv hspf61.dat ../../../../outputs/susq/s04trib/conow/RESIN.DAT

#---Generate conowingo reservoir outflow ---

cp ../../../../outputs/susq/s04trib/conow/RESIN.DAT ../../../../scripts/susq/s04trib/conow/RESIN.PLT

cd /work/dpi/phase4a/scripts/susq/s04trib/conow/

echo "conowp3.reg":
ls
rm RESOUT.PLT
cp /work/dpi/phase4a/scripts/susq/conowp3.reg .
cp /work/dpi/phase4a/scripts/susq/RULE*.DAT .

conowp3.reg

mv RESOUT.PLT hspf91.dat

echo ../../../../inputs/susq/s04trib/conowwdp_p4.inp | $hspf11

mv *.plt ../../../../outputs/susq/s04trib/conow

echo ../../../../inputs/susq/s04trib/conowrch_p4.inp | $hspf11

mv hspf91.dat ../../../../outputs/susq/s04trib/conow/s720_p4.concs
mv hspf92.dat ../../../../outputs/susq/s04trib/conow/s120_p4.concs
mv hspf93.dat ../../../../outputs/susq/s04trib/conow/s140_p4.concs
mv hspf94.dat ../../../../outputs/susq/s04trib/conow/s150_p4.concs
mv hspf89.dat s140vd.prn
mv hspf88.dat s140.3flow
cp hspf31.dat pltgen-s150_p4.flow
cp hspf71.dat pltgen-s120_p4.flow

```

```

mv hspf31.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.flow
mv hspf32.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.tssx
mv hspf33.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.no3x
mv hspf34.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.nh3x
mv hspf35.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.orgn
mv hspf36.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.totn
mv hspf37.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.po4x
mv hspf38.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.orgp
mv hspf39.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.totp
mv hspf40.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.tocx
mv hspf41.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.chla
mv hspf42.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.doxx
mv hspf43.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.wtmp
mv hspf45.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.bodx
mv hspf46.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.loads
mv hspf51.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.concl
mv hspf52.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.conc2
mv hspf53.dat ../../../../outputs/susq/s04trib/conow/s120_p4.load
mv hspf54.dat ../../../../outputs/susq/s04trib/conow/s140_p4.load
mv hspf69.dat ../../../../outputs/susq/s04trib/conow/s720_p4.load
mv hspf55.dat ../../../../outputs/susq/s04trib/conow/s120_p4.shear
mv hspf56.dat ../../../../outputs/susq/s04trib/conow/s140_p4.shear
mv hspf57.dat ../../../../outputs/susq/s04trib/conow/s150_p4.shear
mv hspf58.dat ../../../../outputs/susq/s04trib/conow/s720_p4.shear
mv hspf59.dat ../../../../outputs/susq/s04trib/conow/s720_p4.flow
mv hspf60.dat ../../../../outputs/susq/s04trib/conow/s120_p4.flow

mv hspf85.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf86.dat ../../../../outputs/susq/s04trib/conow/s140_p4.all

mv hspf71.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.flow
mv hspf72.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.tssx
mv hspf73.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.no3x
mv hspf74.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.nh3x
mv hspf75.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.orgn
mv hspf76.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.totn
mv hspf77.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.po4x
mv hspf78.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.orgp
mv hspf79.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.totp
mv hspf80.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.tocx
mv hspf81.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.chla
mv hspf82.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.doxx
mv hspf83.dat ../../../../outputs/susq/s04trib/conow/pltgen-s120_p4.wtmp
mv hspf85.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf86.dat ../../../../outputs/susq/s04trib/conow/s120_p4.all
mv hspf87.dat ../../../../outputs/susq/s04trib/conow/pltgen-s150_p4.cclload
# -----

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/patux.wdm
cd /work/dpi/phase4a/scripts/potm/s04trib/patux/

set pgeninp="/work/dpi/phase4a/inputs/potm/s04trib/patux/pltgen_patux.inp"
set inp="/work/dpi/phase4a/inputs/potm/s04trib/patux/patux_p4.inp"

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(patux).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/potm/s04trib/patux/s330_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/patux/s340_p4.concs
echo $pgeninp | $hspf11

#-----
mv *.out ../../../../outputs/potm/s04trib/patux/
mv *.stats ../../../../outputs/potm/s04trib/patux/

mv hspf31.dat ../../../../outputs/potm/s04trib/patux/s330_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/patux/s330_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/patux/s330_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/patux/s330_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/patux/s330_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/patux/s330_p4.hayla

```

```

mv hspf37.dat ../../../../outputs/potm/s04trib/patux/s330_p4.imura
mv hspf48.dat ../../../../outputs/potm/s04trib/patux/s330_p4.onp
mv hspf50.dat ../../../../outputs/potm/s04trib/patux/s330_p4.load

mv hspf96.dat ../../../../outputs/potm/s04trib/patux/s330_p4.sedim

mv hspf38.dat ../../../../outputs/potm/s04trib/patux/s340_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/patux/s340_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/patux/s340_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/patux/s340_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/patux/s340_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/patux/s340_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/patux/s340_p4.imura
mv hspf49.dat ../../../../outputs/potm/s04trib/patux/s340_p4.onp
mv hspf51.dat ../../../../outputs/potm/s04trib/patux/s340_p4.load
mv hspf57.dat ../../../../outputs/potm/s04trib/patux/s330_p4.shear
mv hspf58.dat ../../../../outputs/potm/s04trib/patux/s340_p4.shear

mv hspf97.dat ../../../../outputs/potm/s04trib/patux/s340_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/patux/patux_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/patux/patux_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/patux/patux_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/patux/patux_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/patux/patux_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/patux/patux_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/patux/patux_p4.wtmp
mv hspf94.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tocx
mv hspf91.dat ../../../../outputs/potm/s04trib/patux/patux_p4.flow
mv hspf45.dat ../../../../outputs/potm/s04trib/patux/patux_p4.tssx

mv hspf54.dat ../../../../outputs/potm/s04trib/patux/patux_p4.orgp
mv hspf55.dat ../../../../outputs/potm/s04trib/patux/patux_p4.totp
mv hspf59.dat ../../../../outputs/potm/s04trib/patux/patux_p4.bal

mv hspf46.dat ../../../../outputs/potm/s04trib/patux/patux_p4.bodx
mv hspf47.dat ../../../../outputs/potm/s04trib/patux/fall.load
mv hspf60.dat ../../../../outputs/potm/s04trib/patux/patux_p4.cclload

cd /work/dpi/phase4a/scripts/potm/s04trib/shena/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/potm.wdm

set inp="/work/dpi/phase4a/inputs/potm/s04trib/shena_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(shena).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/potm/s04trib/shena/s190_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/shena/s200_p4.concs
echo ../../../../inputs/potm/s04trib/pltgen_shena.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/shena/
# -----
mv hspf31.dat ../../../../outputs/potm/s04trib/shena/s190_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/shena/s190_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/shena/s190_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/shena/s190_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/shena/s190_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/shena/s190_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/shena/s190_p4.imura
mv hspf48.dat ../../../../outputs/potm/s04trib/shena/s190_p4.onp
mv hspf53.dat ../../../../outputs/potm/s04trib/shena/s190_p4.load

mv hspf38.dat ../../../../outputs/potm/s04trib/shena/s200_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/shena/s200_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/shena/s200_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/shena/s200_p4.pastu

```

```

mv hspf42.dat ../../../../outputs/potm/s04trib/shena/s200_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/shena/s200_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/shena/s200_p4.imura
mv hspf49.dat ../../../../outputs/potm/s04trib/shena/s200_p4.onp
mv hspf51.dat ../../../../outputs/potm/s04trib/shena/s200_p4.conc1
mv hspf52.dat ../../../../outputs/potm/s04trib/shena/s200_p4.conc2
mv hspf54.dat ../../../../outputs/potm/s04trib/shena/s200_p4.load

mv hspf55.dat ../../../../outputs/potm/s04trib/shena/s190_p4.sedim
mv hspf56.dat ../../../../outputs/potm/s04trib/shena/s200_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/shena/shena_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/shena/shena_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/shena/shena_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/shena/shena_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/shena/shena_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/shena/shena_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/shena/shena_p4.wtmp
mv hspf91.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tocx
mv hspf92.dat ../../../../outputs/potm/s04trib/shena/shena_p4.flow

mv hspf57.dat ../../../../outputs/potm/s04trib/shena/shena_p4.tssx
mv hspf58.dat ../../../../outputs/potm/s04trib/shena/shena_p4.orgp
mv hspf59.dat ../../../../outputs/potm/s04trib/shena/shena_p4.totp
mv hspf61.dat ../../../../outputs/potm/s04trib/shena/seg190_p4.transect
mv hspf62.dat ../../../../outputs/potm/s04trib/shena/seg200_p4.transect
mv hspf63.dat ../../../../outputs/potm/s04trib/shena/vs190_p4.visual
mv hspf64.dat ../../../../outputs/potm/s04trib/shena/vs200_p4.visual

mv hspf71.dat ../../../../outputs/potm/s04trib/uppot/s190.shear
mv hspf72.dat ../../../../outputs/potm/s04trib/uppot/s200.shear
mv *.out ../../../../outputs/potm/s04trib/shena/
mv *.stats ../../../../outputs/potm/s04trib/shena/

# -----

cd /work/dpi/phase4a/scripts/potm/s04trib/uppot

echo "====BEGIN UPPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/uppot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(uppot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.concs
echo ../../../../inputs/potm/s04trib/pltgen_uppot.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/uppot/
# -----
mv hspf44.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.load
mv hspf50.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.fores
mv hspf51.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.hitil
mv hspf52.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.lotil
mv hspf53.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.pastu
mv hspf54.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.purba
mv hspf55.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.hayla
mv hspf56.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.fores
mv hspf58.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.hitil
mv hspf59.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.lotil

mv hspf60.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.pastu
mv hspf61.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.purba
mv hspf62.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.hayla

```

```

mv hspf63.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.imura
mv hspf64.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.fores
mv hspf65.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.hitil
mv hspf66.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.lotil
mv hspf67.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.pastu
mv hspf68.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.purba
mv hspf69.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.hayla
mv hspf70.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.imura
mv hspf72.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.onp

mv hspf73.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.onp
mv hspf41.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.concl
mv hspf42.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.conc2
mv hspf45.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.load

mv hspf96.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.sedim
mv hspf97.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.sedim
mv hspf98.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.flow
mv hspf81.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.nh3x
mv hspf82.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.no3x
mv hspf83.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orgn
mv hspf84.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.totn
mv hspf85.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.po4x
mv hspf86.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orpx
mv hspf87.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tpxx
mv hspf88.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.doxx
mv hspf89.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.chla
mv hspf91.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tocx

mv hspf76.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.orgp
mv hspf77.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.totp

mv hspf71.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.onp

mv hspf43.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.load

mv hspf31.dat ../../../../outputs/potm/s04trib/uppot/s160_p4.shear
mv hspf32.dat ../../../../outputs/potm/s04trib/uppot/s170_p4.shear
mv hspf33.dat ../../../../outputs/potm/s04trib/uppot/s175_p4.shear
mv hspf78.dat ../../../../outputs/potm/s04trib/uppot/uppot_p4.tssx
mv hspf46.dat ../../../../outputs/potm/s04trib/uppot/seg160_p4.transect
mv hspf47.dat ../../../../outputs/potm/s04trib/uppot/seg170_p4.transect
mv hspf48.dat ../../../../outputs/potm/s04trib/uppot/seg175_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/uppot/vs160_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/uppot/vs170_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/uppot/vs175_p4.visual

mv *.out ../../../../outputs/potm/s04trib/uppot/

# =====

cd /work/dpi/phase4a/scripts/potm/s04trib/midpot

echo "====BEGIN MIDPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/midpot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(midpot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hsfp11

echo "====END MIDPOT===="

mv hspf91.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.concs
echo ../../../../inputs/potm/s04trib/pltgen_midpot.inp | $hsfp11

```

```

#-----
mv hspf31.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.imura
mv hspf55.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.onp
mv hspf63.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.load

mv hspf38.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.imura
mv hspf56.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.onp
mv hspf64.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.load

mv hspf45.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.fores
mv hspf46.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.hitil
mv hspf47.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.lotil
mv hspf48.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.pastu
mv hspf49.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.purba
mv hspf50.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.hayla
mv hspf51.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.onp
mv hspf61.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.conc1
mv hspf62.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.conc2
mv hspf65.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.load

mv hspf80.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.flow
mv hspf81.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.nh3x
mv hspf82.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.no3x
mv hspf83.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orgn
mv hspf84.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.totn
mv hspf85.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.po4x
mv hspf86.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orpx
mv hspf87.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tpxx
mv hspf88.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.doxx
mv hspf89.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.chla
mv hspf91.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tocx

mv hspf68.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.orgp
mv hspf69.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.totp

mv hspf96.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.sedim
mv hspf97.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.sedim
mv hspf98.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.sedim
mv hspf54.dat ../../../../outputs/potm/s04trib/midpot/fall_line.load
mv hspf58.dat ../../../../outputs/potm/s04trib/midpot/seg730_p4.transect
mv hspf59.dat ../../../../outputs/potm/s04trib/midpot/seg740_p4.transect
mv hspf60.dat ../../../../outputs/potm/s04trib/midpot/seg180_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/midpot/vs730_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/midpot/vs740_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/midpot/vs180_p4.visual

mv hspf70.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.tssx
mv hspf71.dat ../../../../outputs/potm/s04trib/midpot/midpot_p4.sedpointofrocks
mv hspf72.dat ../../../../outputs/potm/s04trib/midpot/s730_p4.shear
mv hspf73.dat ../../../../outputs/potm/s04trib/midpot/s740_p4.shear
mv hspf74.dat ../../../../outputs/potm/s04trib/midpot/s180_p4.shear

mv *.out ../../../../outputs/potm/s04trib/midpot/

# =====
cd /work/dpi/phase4a/scripts/potm/s04trib/lopot

```



```

echo "====BEGIN LOPOT===="

set inp="/work/dpi/phase4a/inputs/potm/s04trib/lopot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(lopot).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

echo "====END LOPOT===="

mv hspf91.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.concs
mv hspf92.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.concs
mv hspf93.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.concs
  echo ../../../../inputs/potm/s04trib/pltgen_lopot.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/lopot/
#-----
mv hspf38.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.fores
mv hspf39.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.hitil
mv hspf40.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.lotil
mv hspf41.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.pastu
mv hspf42.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.purba
mv hspf43.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.hayla
mv hspf44.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.imura
mv hspf56.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.onp
mv hspf64.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.load

mv hspf45.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.fores
mv hspf46.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.hitil
mv hspf47.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.lotil
mv hspf48.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.pastu
mv hspf49.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.purba
mv hspf50.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.hayla
mv hspf51.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.imura
mv hspf57.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.onp
mv hspf61.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.conc1
mv hspf62.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.conc2
mv hspf65.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.load

mv hspf31.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.imura
mv hspf55.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.onp
mv hspf63.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.load

mv hspf66.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.sedim
mv hspf67.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.sedim
mv hspf68.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tpxx
mv hspf87.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.wtmp
mv hspf91.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tocx
mv hspf92.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.flow

mv hspf69.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.cclload
mv hspf73.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.orgp
mv hspf74.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.totp
mv hspf75.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.tssx

mv hspf70.dat ../../../../outputs/potm/s04trib/lopot/s210_p4.shear
mv hspf71.dat ../../../../outputs/potm/s04trib/lopot/s220_p4.shear

```

```

mv hspf72.dat ../../../../outputs/potm/s04trib/lopot/s750_p4.shear
mv hspf76.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.falline_loads
mv hspf78.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.bal
mv hspf77.dat ../../../../outputs/potm/s04trib/lopot/lopot_p4.amvol

mv hspf58.dat ../../../../outputs/potm/s04trib/lopot/seg750_p4.transect
mv hspf59.dat ../../../../outputs/potm/s04trib/lopot/seg210_p4.transect
mv hspf60.dat ../../../../outputs/potm/s04trib/lopot/seg220_p4.transect
mv hspf93.dat ../../../../outputs/potm/s04trib/lopot/vs750_p4.visual
mv hspf94.dat ../../../../outputs/potm/s04trib/lopot/vs210_p4.visual
mv hspf95.dat ../../../../outputs/potm/s04trib/lopot/vs220_p4.visual

mv hspf54.dat ../../../../outputs/potm/s04trib/lopot/load

mv *.out ../../../../outputs/potm/s04trib/lopot/
mv *.stats ../../../../outputs/potm/s04trib/lopot/
# -----

cd /work/dpi/phase4a/scripts/potm/s04trib/rappa/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/wdm/potm/s04trib/potm_rappa.wdm

set inp="/work/dpi/phase4a/inputs/potm/s04trib/rappa/rappa_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(rappa).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm $tempinput
mv hspf91.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.concs
echo ../../../../inputs/potm/s04trib/rappa/pltgen_rappa.inp | $hspf11

mv *.stats ../../../../outputs/potm/s04trib/rappa/
# -----
mv *.out ../../../../outputs/potm/s04trib/rappa/

mv hspf31.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.fores
mv hspf32.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.hitil
mv hspf33.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.lotil
mv hspf34.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.pastu
mv hspf35.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.purba
mv hspf36.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.hayla
mv hspf37.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.imura
mv hspf38.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.onp
mv hspf49.dat ../../../../outputs/potm/s04trib/rappa/s230_loads.visual

mv hspf40.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.load
mv hspf43.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.load_annual
mv hspf44.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.cclload
mv hspf47.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tssx
mv hspf48.dat ../../../../outputs/potm/s04trib/rappa/shear_stress
mv hspf60.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.bal
mv hspf61.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.all
mv hspf73.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orgp
mv hspf74.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.totp

mv hspf45.dat ../../../../outputs/potm/s04trib/rappa/s230_p4.sedim

mv hspf80.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.nh3x
mv hspf81.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.no3x
mv hspf82.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orgn
mv hspf83.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.totn
mv hspf84.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.po4x
mv hspf85.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.orpx
mv hspf86.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tpx
mv hspf87.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.doxx
mv hspf88.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.chla
mv hspf89.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.wtmp
mv hspf92.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.tocx
mv hspf91.dat ../../../../outputs/potm/s04trib/rappa/rappa_p4.flow

```

```

mv *.out ../../../../outputs/potm/s04trib/rappa/
mv *.stats ../../../../outputs/potm/s04trib/rappa/

#-----
cd /work/dpi/phase4a/scripts/james/s04trib/appom/
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/appom.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/appom_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(appom).."
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11
mv hspf91.dat ../../../../outputs/james/s04trib/appom/s300_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/appom/s310_p4.concs

mv *.out ../../../../outputs/james/s04trib/appom/
mv *.stats ../../../../outputs/james/s04trib/appom/

mv hspf31.dat ../../../../outputs/james/s04trib/appom/s300_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/appom/s300_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/appom/s300_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/appom/s300_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/appom/s300_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/appom/s300_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/appom/s300_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/appom/s300_p4.onp
mv hspf76.dat ../../../../outputs/james/s04trib/appom/s300_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/appom/s310_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/appom/s310_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/appom/s310_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/appom/s310_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/appom/s310_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/appom/s310_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/appom/s310_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/appom/s310_p4.onp
mv hspf75.dat ../../../../outputs/james/s04trib/appom/s310_p4.sedim
mv hspf74.dat ../../../../outputs/james/s04trib/appom/s310_p4.bal

mv hspf62.dat ../../../../outputs/james/s04trib/appom/s300_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/appom/s310_p4.all
mv hspf64.dat ../../../../outputs/james/s04trib/appom/s300_loads.visual
mv hspf65.dat ../../../../outputs/james/s04trib/appom/s310_loads.visual

mv hspf45.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tssx
mv hspf46.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.bodx
mv hspf47.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.loads
mv hspf50.dat ../../../../outputs/james/s04trib/appom/s300_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/appom/s310_p4.load
mv hspf72.dat ../../../../outputs/james/s04trib/appom/s310_p4.load_annual
mv hspf73.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.cclload

echo ../../../../inputs/james/s04trib/pltgen_appom.inp | $hspf11

mv *.out ../../../../outputs/james/s04trib/appom/
mv *.stats ../../../../outputs/james/s04trib/appom/

mv hspf80.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.totn
mv hspf84.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.po4x
mv hspf54.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.totp
mv hspf85.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.orpx
mv hspf86.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tpxx
mv hspf87.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.doxx
mv hspf88.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.chla
mv hspf89.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.wtmp
mv hspf79.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.tocx
mv hspf91.dat ../../../../outputs/james/s04trib/appom/pltgen_appom.flow

```

```

cd /work/dpi/phase4a/scripts/james/s04trib/matta/
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/matta.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/matta_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(matta).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/matta/s235_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/matta/s240_p4.concs
echo ../../../../inputs/james/s04trib/pltgen_matta.inp | $hspf11

#-----
mv hspf31.dat ../../../../outputs/james/s04trib/matta/s235_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/matta/s235_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/matta/s235_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/matta/s235_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/matta/s235_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/matta/s235_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/matta/s235_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/matta/s235_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/matta/s235_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/matta/s240_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/matta/s240_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/matta/s240_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/matta/s240_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/matta/s240_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/matta/s240_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/matta/s240_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/matta/s240_p4.onp
mv hspf97.dat ../../../../outputs/james/s04trib/matta/s240_p4.sedim
mv hspf60.dat ../../../../outputs/james/s04trib/matta/matta_anual.loads
mv hspf61.dat ../../../../outputs/james/s04trib/matta/matta_p4.bal
mv hspf62.dat ../../../../outputs/james/s04trib/matta/s235_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/matta/s240_p4.all
mv hspf64.dat ../../../../outputs/james/s04trib/matta/s235_loads.visual
mv hspf65.dat ../../../../outputs/james/s04trib/matta/s240_loads.visual

mv hspf47.dat ../../../../outputs/james/s04trib/matta/s240_fall.loads
mv hspf57.dat ../../../../outputs/james/s04trib/matta/matta_p4.cclload
mv hspf50.dat ../../../../outputs/james/s04trib/matta/s235_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/matta/s240_p4.load
mv hspf52.dat ../../../../outputs/james/s04trib/matta/s240_p4.shear
mv hspf53.dat ../../../../outputs/james/s04trib/matta/s240_p4.shear

mv hspf70.dat ../../../../outputs/james/s04trib/matta/matta_p4.nh3x
mv hspf71.dat ../../../../outputs/james/s04trib/matta/matta_p4.no3x
mv hspf72.dat ../../../../outputs/james/s04trib/matta/matta_p4.orgn
mv hspf73.dat ../../../../outputs/james/s04trib/matta/matta_p4.totn
mv hspf74.dat ../../../../outputs/james/s04trib/matta/matta_p4.po4x
mv hspf75.dat ../../../../outputs/james/s04trib/matta/matta_p4.orpx
mv hspf76.dat ../../../../outputs/james/s04trib/matta/matta_p4.tpss
mv hspf77.dat ../../../../outputs/james/s04trib/matta/matta_p4.doxx
mv hspf78.dat ../../../../outputs/james/s04trib/matta/matta_p4.chla
mv hspf79.dat ../../../../outputs/james/s04trib/matta/matta_p4.wtmp
mv hspf80.dat ../../../../outputs/james/s04trib/matta/matta_p4.tocx
mv hspf81.dat ../../../../outputs/james/s04trib/matta/matta_p4.flow

mv hspf54.dat ../../../../outputs/james/s04trib/matta/matta_p4.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/matta/matta_p4.totp
mv hspf56.dat ../../../../outputs/james/s04trib/matta/matta_p4.tssx

mv *.out ../../../../outputs/james/s04trib/matta
mv *.stats ../../../../outputs/james/s04trib/matta
# -----
cd /work/dpi/phase4a/scripts/james/s04trib/pamun/

```

```

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/pamun.wdm

set inp="/work/dpi/phase4a/inputs/james/s04trib/pamun_p4.inp"
echo $inp | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/pamun/s250_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/pamun/s260_p4.concs
echo ../../../../inputs/james/s04trib/pltgen_pamun.inp | $hspf11

mv *.stats ../../../../outputs/james/s04trib/pamun/
mv *.out ../../../../outputs/james/s04trib/pamun/
#-----
mv hspf31.dat ../../../../outputs/james/s04trib/pamun/s250_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/pamun/s250_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/pamun/s250_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/pamun/s250_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/pamun/s250_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/pamun/s250_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/pamun/s250_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/pamun/s250_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/pamun/s250_p4.sedim
mv hspf60.dat ../../../../outputs/james/s04trib/pamun/pamun_annual.loads

mv hspf38.dat ../../../../outputs/james/s04trib/pamun/s260_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/pamun/s260_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/pamun/s260_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/pamun/s260_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/pamun/s260_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/pamun/s260_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/pamun/s260_p4.imura
mv hspf49.dat ../../../../outputs/james/s04trib/pamun/s260_p4.onp
mv hspf97.dat ../../../../outputs/james/s04trib/pamun/s260_p4.sedim
mv hspf62.dat ../../../../outputs/james/s04trib/pamun/s250_p4.all
mv hspf63.dat ../../../../outputs/james/s04trib/pamun/s260_p4.all

mv hspf46.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.bodx
mv hspf47.dat ../../../../outputs/james/s04trib/pamun/pamun_fall.loads
mv hspf58.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.cclload
mv hspf50.dat ../../../../outputs/james/s04trib/pamun/s250_p4.load
mv hspf51.dat ../../../../outputs/james/s04trib/pamun/s260_p4.load
mv hspf61.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.bal
mv hspf56.dat ../../../../outputs/james/s04trib/pamun/s250_loads.visual
mv hspf57.dat ../../../../outputs/james/s04trib/pamun/s260_loads.visual

mv hspf80.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.totn
mv hspf84.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.po4x
mv hspf85.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orpx
mv hspf86.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tpxx
mv hspf87.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.doxx
mv hspf88.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.chla
mv hspf89.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.wtmp
mv hspf91.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tocx
mv hspf92.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.flow

mv hspf45.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.tssx
mv hspf54.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.orgp
mv hspf55.dat ../../../../outputs/james/s04trib/pamun/pamun_p4.totp

mv *.stats ../../../../outputs/james/s04trib/pamun/
mv *.out ../../../../outputs/james/s04trib/pamun/

cd /work/dpi/phase4a/scripts/james/s04trib/james1/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/wdm/james/s04trib/james.wdm
set inp="/work/dpi/phase4a/inputs/james/s04trib/james1_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james1).."
endif
awk -f $awkprogl <$inp >$tempinput

```

```

echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/james/s04trib/james1/s265_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/james1/s270_p4.concs
mv hspf31.dat ../../../../outputs/james/s04trib/james1/s265_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/james1/s265_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/james1/s265_p4.lotil

mv hspf34.dat ../../../../outputs/james/s04trib/james1/s265_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/james1/s265_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/james1/s265_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/james1/s265_p4.imura
mv hspf47.dat ../../../../outputs/james/s04trib/james1/s265_p4.onp
mv hspf96.dat ../../../../outputs/james/s04trib/james1/s265_p4.sedim

mv hspf38.dat ../../../../outputs/james/s04trib/james1/s270_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/james1/s270_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/james1/s270_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/james1/s270_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/james1/s270_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/james1/s270_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/james1/s270_p4.imura
mv hspf48.dat ../../../../outputs/james/s04trib/james1/s270_p4.onp
mv hspf94.dat ../../../../outputs/james/s04trib/james1/james1_p4.bal
mv hspf51.dat ../../../../outputs/james/s04trib/james1/s265_loads.visual
mv hspf52.dat ../../../../outputs/james/s04trib/james1/s270_loads.visual

mv hspf97.dat ../../../../outputs/james/s04trib/james1/s270_p4.sedim

mv hspf45.dat ../../../../outputs/james/s04trib/james1/s270_p4.shearvel
mv hspf46.dat ../../../../outputs/james/s04trib/james1/s270_p4.shearvel

# shearvel = shear stress and mean velocities

mv hspf49.dat ../../../../outputs/james/s04trib/james1/s265_p4.load
mv hspf50.dat ../../../../outputs/james/s04trib/james1/s270_p4.load

mv *.out ../../../../outputs/james/s04trib/james1/
mv *.stats ../../../../outputs/james/s04trib/james1/

cd /work/dpi/phase4a/scripts/james/s04trib/james2/

set inp="/work/dpi/phase4a/inputs/james/s04trib/james2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james2).. "
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11

mv hspf56.dat ../../../../outputs/james/s04trib/james2/james_290.nh3x
mv hspf57.dat ../../../../outputs/james/s04trib/james2/james_290.no3x
mv hspf58.dat ../../../../outputs/james/s04trib/james2/james_290.po4x
mv hspf59.dat ../../../../outputs/james/s04trib/james2/james_290.tocx
mv hspf60.dat ../../../../outputs/james/s04trib/james2/james_290.orgn
mv hspf63.dat ../../../../outputs/james/s04trib/james2/james_290.totn
mv hspf64.dat ../../../../outputs/james/s04trib/james2/james_290.orgp
mv hspf65.dat ../../../../outputs/james/s04trib/james2/james_290.totp
mv hspf71.dat ../../../../outputs/james/s04trib/james2/james_290.tssx

mv hspf91.dat ../../../../outputs/james/s04trib/james2/s280_p4.concs
mv hspf92.dat ../../../../outputs/james/s04trib/james2/s290_p4.concs
mv hspf31.dat ../../../../outputs/james/s04trib/james2/s280_p4.fores
mv hspf32.dat ../../../../outputs/james/s04trib/james2/s280_p4.hitil
mv hspf33.dat ../../../../outputs/james/s04trib/james2/s280_p4.lotil
mv hspf34.dat ../../../../outputs/james/s04trib/james2/s280_p4.pastu
mv hspf35.dat ../../../../outputs/james/s04trib/james2/s280_p4.purba
mv hspf36.dat ../../../../outputs/james/s04trib/james2/s280_p4.hayla
mv hspf37.dat ../../../../outputs/james/s04trib/james2/s280_p4.imura

```

```

mv hspf49.dat ../../../../outputs/james/s04trib/james2/s280_p4.onp
mv hspf76.dat ../../../../outputs/james/s04trib/james2/s280_p4.sedim
mv hspf98.dat ../../../../outputs/james/s04trib/james2/james2_p4.bal

mv hspf38.dat ../../../../outputs/james/s04trib/james2/s290_p4.fores
mv hspf39.dat ../../../../outputs/james/s04trib/james2/s290_p4.hitil
mv hspf40.dat ../../../../outputs/james/s04trib/james2/s290_p4.lotil
mv hspf41.dat ../../../../outputs/james/s04trib/james2/s290_p4.pastu
mv hspf42.dat ../../../../outputs/james/s04trib/james2/s290_p4.purba
mv hspf43.dat ../../../../outputs/james/s04trib/james2/s290_p4.hayla
mv hspf44.dat ../../../../outputs/james/s04trib/james2/s290_p4.imura
mv hspf50.dat ../../../../outputs/james/s04trib/james2/s290_p4.onp
mv hspf77.dat ../../../../outputs/james/s04trib/james2/s290_p4.sedim

mv hspf45.dat ../../../../outputs/james/s04trib/james2/james2_p4.tssx
mv hspf46.dat ../../../../outputs/james/s04trib/james2/s280_p4.shearvel
mv hspf47.dat ../../../../outputs/james/s04trib/james2/s290_p4.shearvel
mv hspf48.dat ../../../../outputs/james/s04trib/james2/james2_p4.loads
mv hspf51.dat ../../../../outputs/james/s04trib/james2/s280_p4.load
mv hspf52.dat ../../../../outputs/james/s04trib/james2/s290_p4.load
mv hspf55.dat ../../../../outputs/james/s04trib/james2/james_290.cclload
mv hspf53.dat ../../../../outputs/james/s04trib/james1/s280_loads.visual
mv hspf54.dat ../../../../outputs/james/s04trib/james1/s290_loads.visual

mv hspf67.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgn
mv hspf68.dat ../../../../outputs/james/s04trib/james2/james2_p4.totn
mv hspf69.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgp
mv hspf70.dat ../../../../outputs/james/s04trib/james2/james2_p4.totp
#mv hspf71.dat ../../../../outputs/james/s04trib/james2/280_eos.conc
#mv hspf72.dat ../../../../outputs/james/s04trib/james2/290_eos.conc
#mv hspf73.dat ../../../../outputs/james/s04trib/james2/280_air.temp
#mv hspf74.dat ../../../../outputs/james/s04trib/james2/290_air.temp
#mv *.out ../../../../outputs/james/s04trib/james2/

echo ../../../../inputs/james/s04trib/pltgen_james2.inp | $hspf11

mv hspf80.dat ../../../../outputs/james/s04trib/james2/james2_p4.nh3x
mv hspf81.dat ../../../../outputs/james/s04trib/james2/james2_p4.no3x
mv hspf82.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgn
mv hspf83.dat ../../../../outputs/james/s04trib/james2/james2_p4.totn
mv hspf84.dat ../../../../outputs/james/s04trib/james2/james2_p4.po4x
***mv hspf85.dat ../../../../outputs/james/s04trib/james2/james2_p4.orgp
***mv hspf86.dat ../../../../outputs/james/s04trib/james2/james2_p4.totp
mv hspf87.dat ../../../../outputs/james/s04trib/james2/james2_p4.doxx
mv hspf88.dat ../../../../outputs/james/s04trib/james2/james2_p4.chla
mv hspf89.dat ../../../../outputs/james/s04trib/james2/james2_p4.wtmp
mv hspf79.dat ../../../../outputs/james/s04trib/james2/james2_p4.tocx
mv hspf74.dat ../../../../outputs/james/s04trib/james2/james2_p4.flow
mv hspf75.dat ../../../../outputs/james/s04trib/james2/james_290.flow
mv hspf56.dat ../../../../outputs/james/s04trib/james2/james_290.nh3x
mv hspf57.dat ../../../../outputs/james/s04trib/james2/james_290.no3x
mv hspf58.dat ../../../../outputs/james/s04trib/james2/james_290.po4x
mv hspf59.dat ../../../../outputs/james/s04trib/james2/james_290.tocx
mv hspf60.dat ../../../../outputs/james/s04trib/james2/james_290.orgn
mv hspf63.dat ../../../../outputs/james/s04trib/james2/james_290.totn
mv hspf64.dat ../../../../outputs/james/s04trib/james2/james_290.orgp
mv hspf65.dat ../../../../outputs/james/s04trib/james2/james_290.totp
mv hspf71.dat ../../../../outputs/james/s04trib/james2/james_290.tssx

mv *.out ../../../../outputs/james/s04trib/james2/
mv *.stats ../../../../outputs/james/s04trib/james2/

cd /work/dpi/phase4a/scripts/coast/s04trib/patapsco/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/patapsco.wdm

echo ../../../../inputs/coast/s04trib/patapsco/pataps_p4.inp | $hspf11

echo "====END PATAPSCO===="

```

```

mv hspf91.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.concs
mv hspf31.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.lotil

mv hspf34.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.onp
mv hspf64.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.sedim
mv hspf61.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.all

mv hspf46.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.bal
mv hspf51.dat ../../../../outputs/coast/s04trib/patapsco/s760_loads.visual

mv hspf47.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.shearvel
mv hspf48.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tssx

# shearvel = shear stress and mean velocities

mv hspf40.dat ../../../../outputs/coast/s04trib/patapsco/s760_fall_line.load
mv hspf41.dat ../../../../outputs/coast/s04trib/patapsco/N_P_.conc
mv hspf43.dat ../../../../outputs/coast/s04trib/patapsco/s760_p4.load
mv hspf44.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.cclload
mv hspf45.dat ../../../../outputs/coast/s04trib/patapsco/s760_annual.load
mv hspf51.dat ../../../../outputs/coast/s04trib/patapsco/s760.visual
mv hspf73.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.totp
mv *.out ../../../../outputs/coast/s04trib/patapsco/
mv *.stats ../../../../outputs/coast/s04trib/patapsco/

# -----

echo "====BEGIN PLTGEN===="
echo ../../../../inputs/coast/s04trib/patapsco/pltgen_patapsco.inp | $hspf11

echo "====END PLTGEN===="

mv hspf80.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.chla
mv hspf89.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.wtmp
mv hspf79.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.tocx
mv hspf74.dat ../../../../outputs/coast/s04trib/patapsco/patapsco_p4.flow
mv *.out ../../../../outputs/coast/s04trib/patapsco/
mv *.stats ../../../../outputs/coast/s04trib/patapsco/

cd /work/dpi/phase4a/scripts/coast/s04trib/nanticoke/

cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/nanticoke.wdm

echo ../../../../inputs/coast/s04trib/nanticoke/nant_p4.inp | $hspf11
mv hspf91.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.concs
echo ../../../../inputs/coast/s04trib/nanticoke/pltgen_nat_p4.inp | $hspf11

mv *.stats ../../../../outputs/coast/s04trib/nanticoke/
# -----

mv hspf31.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.lotil

```



```

mv hspf34.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.onp
mv hspf43.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.load1
#mv hspf40.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.load2
mv hspf41.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.conc1
mv hspf42.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.conc2

mv hspf60.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tssx
mv hspf64.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.bal
mv hspf65.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.shear

mv hspf61.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit1
mv hspf62.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit2
mv hspf63.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.nit3

mv hspf96.dat ../../../../outputs/coast/s04trib/nanticoke/s780_p4.sedim

mv hspf44.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.cclload
mv hspf73.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.totp
mv hspf80.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.ch1a
mv hspf89.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.wtmp
mv hspf90.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.tocx
mv hspf91.dat ../../../../outputs/coast/s04trib/nanticoke/pltgen_nanticoke.flow

mv *.out ../../../../outputs/coast/s04trib/nanticoke/

cd /work/dpi/phase4a/scripts/coast/s04trib/choptank/
cp /work/dpi/phase4a/wdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/wdm/coast/s04trib/choptank.wdm

set inp="/work/dpi/phase4a/inputs/coast/s04trib/choptank/chop_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written (choptank) .."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf91.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.concs
echo ../../../../inputs/coast/s04trib/choptank/pltgen_chop_p4.inp | $hspf11

mv *.stats ../../../../outputs/coast/s04trib/choptank/
# -----

mv hspf96.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.sedim
mv hspf31.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.fores
mv hspf32.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.hitil
mv hspf33.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.lotil
mv hspf34.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.pastu
mv hspf35.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.purba
mv hspf36.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.hayla
mv hspf37.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.imura
mv hspf38.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.onp
mv hspf43.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.load
#mv hspf40.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.load2
mv hspf41.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.conc1
mv hspf42.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.conc2

mv hspf60.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tssx

mv hspf76.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.benal
mv hspf77.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.depth

```

```

mv hspf78.dat ../../../../outputs/coast/s04trib/choptank/s770_p4.sedim

mv hspf44.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.ccloud
mv hspf73.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orgp
mv hspf74.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.totp
mv hspf80.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.nh3x
mv hspf81.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.no3x
mv hspf82.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orgn
mv hspf83.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.totn
mv hspf84.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.po4x
mv hspf85.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.orpx
mv hspf86.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tpxx
mv hspf87.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.doxx
mv hspf88.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.chla
mv hspf89.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.wtmp
mv hspf90.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.tocx
mv hspf91.dat ../../../../outputs/coast/s04trib/choptank/pltgen_choptank.flow

```

```
mv *.out ../../../../outputs/coast/s04trib/choptank/
```

```

#####
##### SECTION TO MAKE .load_tf FILES, COPY THEM TO THE APPROPRIATE ###
##### OUTPUT POSTPROCESSOR DIRECTORY, AND MAKE THE tfloads.prn FILE ###
#####

```

```
cd /work/dpi/phase4a/outputs/
```

```
rm /work/dpi/phase4a/outputs/*/s04trib/*/*load_tf
```

```

cd coast/s04trib/patapsco/
echo s760_p4.concs | mkload
cd ../../../../
cd james/s04trib/appom/
echo s310_p4.concs | mkload
cd ../../../../
cd james/s04trib/appom/
echo s300_p4.concs | mkload
cd ../../../../
cd coast/s04trib/nanticoke/
echo s780_p4.concs | mkload
cd ../../../../
cd potm/s04trib/patux/
echo s340_p4.concs | mkload
cd ../../../../
cd potm/s04trib/patux/
echo s330_p4.concs | mkload
cd ../../../../
cd coast/s04trib/choptank/
echo s770_p4.concs | mkload
cd ../../../../
cd susq/s04trib/wbsus/
echo s70_p4.concs | mkload
cd ../../../../
cd susq/s04trib/wbsus/
echo s60_p4.concs | mkload
cd ../../../../
cd susq/s04trib/wbsus/
echo s50_p4.concs | mkload
cd ../../../../
cd james/s04trib/matta/
echo s240_p4.concs | mkload
cd ../../../../
cd james/s04trib/matta/
echo s235_p4.concs | mkload
cd ../../../../
cd potm/s04trib/shena/
echo s200_p4.concs | mkload
cd ../../../../
cd potm/s04trib/shena/
echo s190_p4.concs | mkload
cd ../../../../
cd james/s04trib/pamun/

```

```

echo s260_p4.concs | mkload
cd ../../../../
cd james/s04trib/pamun/
echo s250_p4.concs | mkload
cd ../../../../
cd potm/s04trib/uppot/
echo s175_p4.concs | mkload
cd ../../../../
cd potm/s04trib/uppot/
echo s170_p4.concs | mkload
cd ../../../../
cd potm/s04trib/uppot/
echo s160_p4.concs | mkload
cd ../../../../
cd susq/s04trib/junia/
echo s90_p4.concs | mkload
cd ../../../../
cd susq/s04trib/junia/
echo s100_p4.concs | mkload
cd ../../../../
cd potm/s04trib/midpot/
echo s740_p4.concs | mkload
cd ../../../../
cd potm/s04trib/midpot/
echo s730_p4.concs | mkload
cd ../../../../
cd potm/s04trib/midpot/
echo s180_p4.concs | mkload
cd ../../../../
cd james/s04trib/james1/
echo s270_p4.concs | mkload
cd ../../../../
cd james/s04trib/james1/
echo s265_p4.concs | mkload
cd ../../../../
cd susq/s04trib/ebsus1/
echo s700_p4.concs | mkload
cd ../../../../
cd susq/s04trib/ebsus1/
echo s20_p4.concs | mkload
cd ../../../../
cd susq/s04trib/ebsus1/
echo s10_p4.concs | mkload
cd ../../../../
cd potm/s04trib/lopot/
echo s750_p4.concs | mkload
cd ../../../../
cd potm/s04trib/lopot/
echo s220_p4.concs | mkload
cd ../../../../
cd potm/s04trib/lopot/
echo s210_p4.concs | mkload
cd ../../../../
cd james/s04trib/james2/
echo s290_p4.concs | mkload
cd ../../../../
cd james/s04trib/james2/
echo s280_p4.concs | mkload
cd ../../../../
cd potm/s04trib/rappa/
echo s230_p4.concs | mkload
cd ../../../../
cd susq/s04trib/ebsus2/
echo s40_p4.concs | mkload
cd ../../../../
cd susq/s04trib/ebsus2/
echo s30_p4.concs | mkload
cd ../../../../
cd susq/s04trib/losus/
echo s80_p4.concs | mkload
cd ../../../../
cd susq/s04trib/losus/
echo s710_p4.concs | mkload
cd ../../../../
cd susq/s04trib/losus/

```

```

echo s110_p4.concs | mkload
cd ../../../../
cd susq/s04trib/conow/
echo s720_p4.concs | mkload
cd ../../../../
cd susq/s04trib/conow/
echo s150_p4.concs | mkload
cd ../../../../
cd susq/s04trib/conow/
echo s140_p4.concs | mkload
cd ../../../../
cd susq/s04trib/conow/
echo s120_p4.concs | mkload
cd ../../../../

```

NOW COPY THEM TO THE APPROPRIATE LOCATION AND MAKE THE tloads.prn

```

cp /work/dpi/phase4a/outputs/*/s04trib/*/*.load_tf /work/dpi/phase4a/outputs/load_pproc/s04trib/
cd /work/dpi/phase4a/outputs/load_pproc/s04trib/

../all_loads.com

```

LAST PART CHECK THE ECHO FILES TO MAKE SURE COMPLETE
IT WOULD BE A GOOD IDEA TO SCRIPT THE CHECK SO AN ERROR WOULD APPEAR

```

cd /work/dpi/phase4a/scripts/

ls -l coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_echs_tf
ls -l coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_echs_tf
ls -l coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_echs_tf
ls -l coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_echs_tf
ls -l coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_echs_tf
ls -l coast/s04trib/choptank/chpplt.ech >>all_s04trib_echs_tf
tail -1 coast/s04trib/choptank/chpplt.ech >>all_s04trib_echs_tf
ls -l james/s04trib/appom/appom.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/appom/appom.ech >>all_s04trib_echs_tf
ls -l james/s04trib/appom/pltgen_p4.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/appom/pltgen_p4.ech >>all_s04trib_echs_tf
ls -l james/s04trib/matta/matta_p4.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/matta/matta_p4.ech >>all_s04trib_echs_tf
ls -l james/s04trib/matta/pltgen_p4.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/matta/pltgen_p4.ech >>all_s04trib_echs_tf
ls -l james/s04trib/pamun/pamun.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/pamun/pamun.ech >>all_s04trib_echs_tf
ls -l james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_echs_tf
ls -l james/s04trib/james1/james1.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/james1/james1.ech >>all_s04trib_echs_tf
ls -l james/s04trib/james2/james2.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/james2/james2.ech >>all_s04trib_echs_tf
ls -l james/s04trib/james2/pltgen_james2.ech >>all_s04trib_echs_tf
tail -1 james/s04trib/james2/pltgen_james2.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/patux/patux_calib.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/patux/patux_calib.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/patux/patux_plt.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/patux/patux_plt.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/rappa/rappa.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/rappa/rappa.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/shena/shena.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/shena/shena.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/uppot/uppot.ech >>all_s04trib_echs_tf
tail -1 potm/s04trib/uppot/uppot.ech >>all_s04trib_echs_tf

```

```

ls -l potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_echs_tf
tail -l potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/midpot/midpot.ech >>all_s04trib_echs_tf
tail -l potm/s04trib/midpot/midpot.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_echs_tf
tail -l potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/lopot/lopot.ech >>all_s04trib_echs_tf
tail -l potm/s04trib/lopot/lopot.ech >>all_s04trib_echs_tf
ls -l potm/s04trib/lopot/lopot_plt.ech >>all_s04trib_echs_tf
tail -l potm/s04trib/lopot/lopot_plt.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/junia/junia_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/junia/junia_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/ebsus1/ebsus1_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/ebsus1/ebsus1_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/ebsus1/ebsus1_p4_plt.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/ebsus1/ebsus1_p4_plt.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/ebsus2/ebsus2_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/ebsus2/ebsus2_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/losus/losus_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/losus/losus_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/conow/conownps_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/conow/conownps_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/conow/conowwdp_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/conow/conowwdp_p4.ech >>all_s04trib_echs_tf
ls -l susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_echs_tf
tail -l susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_echs_tf

```

I-3 Sample Run 3 Script File

```
#!/bin/csh
#QSUB -lT 27000 -lM 8600 -lM 12MW -eo -s /bin/csh
#####
##### SCRIPT FILE TO RUN INITIAL RUN OF SCENARIO #####
##### SCENARIO OPERATIONS SYNOPSIS: #####
##### STEP 1: MAKE INPUTS USING /work/dpi/phase4a/scripts/abc_mv_kill.com ###
##### STEP 2: CHANGE WDM USING /work/dpi/phase4a/scripts/ed_wdm_line.com ###
##### STEP 3: CHANGE THIS SCRIPT FILE TO CURRENT SCENARIO BY ISSUING ###
##### THE VI COMMAND :g/oldscenario/s//newscenario/g ###
##### STEP 4: RUN THIS SCRIPT TO GET THE EDGE OF STREAM LOADS ###
##### STEP 5: USE SPREADSHEET TO DETERMINE BED CONCENTRATION REDUCTIONS ###
##### STEP 6: RUN /work/dpi/phase4a/inputs/bed.com ###
##### AND /work/dpi/phase4a/inputs/mvbed FOR THIS SCENARIO ###
##### STEP 7: RUN SECOND SCRIPT TO GET FINAL DELIVERED LOADS ###
##### STEP 8: RUN THIRD SCRIPT TO GET LOADS TO BAY MODEL ###
#####
##### THIS SCRIPT CHECKS COPIES THE 8YEAR RUN INPUT FILES TO THE ccinputs
##### DIRECTORIES, CHANGES THE DATE AND WDM AND RUNS THEM FOR 12 YEARS,
##### GENERATING ONLY THOSE FILES NEEDED FOR THE WQM INPUT
#####
##### SETTING OF VARIABLES TO BE USED THROUGHOUT THE SCRIPT
set awkprogl="/work/dpi/phase4a/hspf/programs/a01_strip_cmnts_special.awk"
set tempinput=zzztempfile.1
set hspf11="/usr/opt/wrdapp/hspf11.1/bin/hspf"

##### SECTION TO COPY ALL INPUT FILES TO THE CC SECTION
cd /work/dpi/phase4a

set scen =(s04trib )

cp inputs/james/$scen/pltgen_appom.inp ccinputs/james/$scen/pltgen_appom.inp
cp inputs/james/$scen/pltgen_james2.inp ccinputs/james/$scen/pltgen_james2.inp
cp inputs/james/$scen/pltgen_pamun.inp ccinputs/james/$scen/pltgen_pamun.inp
cp inputs/susq/$scen/conowinf_p4.inp ccinputs/susq/$scen/conowinf_p4.inp
cp inputs/susq/$scen/conowwdp_p4.inp ccinputs/susq/$scen/conowwdp_p4.inp
cp inputs/susq/$scen/pltgen_ebsus1.inp ccinputs/susq/$scen/pltgen_ebsus1.inp
cp inputs/susq/$scen/pltgen_ebsus2.inp ccinputs/susq/$scen/pltgen_ebsus2.inp
cp inputs/susq/$scen/pltgen_junia.inp ccinputs/susq/$scen/pltgen_junia.inp
cp inputs/susq/$scen/pltgen_losus.inp ccinputs/susq/$scen/pltgen_losus.inp
cp inputs/susq/$scen/pltgen_wbsus.inp ccinputs/susq/$scen/pltgen_wbsus.inp
cp inputs/james/$scen/pltgen_matta.inp ccinputs/james/$scen/pltgen_matta.inp
cp inputs/potm/$scen/lopot_p4.inp ccinputs/potm/$scen/lopot_p4.inp
cp inputs/susq/$scen/ebsus1_p4.inp ccinputs/susq/$scen/ebsus1_p4.inp
cp inputs/susq/$scen/ebsus2_p4.inp ccinputs/susq/$scen/ebsus2_p4.inp
cp inputs/susq/$scen/losus_p4.inp ccinputs/susq/$scen/losus_p4.inp
cp inputs/susq/$scen/wbsus_p4.inp ccinputs/susq/$scen/wbsus_p4.inp
cp inputs/james/$scen/james1_p4.inp ccinputs/james/$scen/james1_p4.inp
cp inputs/james/$scen/james2_p4.inp ccinputs/james/$scen/james2_p4.inp
cp inputs/susq/$scen/junia_p4.inp ccinputs/susq/$scen/junia_p4.inp
cp inputs/james/$scen/pamun_p4.inp ccinputs/james/$scen/pamun_p4.inp
cp inputs/susq/$scen/conowrch_p4.inp ccinputs/susq/$scen/conowrch_p4.inp
cp inputs/susq/$scen/conownps_p4.inp ccinputs/susq/$scen/conownps_p4.inp
cp inputs/potm/$scen/midpot_p4.inp ccinputs/potm/$scen/midpot_p4.inp
cp inputs/potm/$scen/shena_p4.inp ccinputs/potm/$scen/shena_p4.inp
cp inputs/potm/$scen/uppot_p4.inp ccinputs/potm/$scen/uppot_p4.inp
cp inputs/james/$scen/appom_p4.inp ccinputs/james/$scen/appom_p4.inp
cp inputs/potm/$scen/pltgen_lopot.inp ccinputs/potm/$scen/pltgen_lopot.inp
cp inputs/potm/$scen/pltgen_midpot.inp ccinputs/potm/$scen/pltgen_midpot.inp
cp inputs/potm/$scen/pltgen_shena.inp ccinputs/potm/$scen/pltgen_shena.inp
cp inputs/potm/$scen/pltgen_uppot.inp ccinputs/potm/$scen/pltgen_uppot.inp
cp inputs/james/$scen/matta_p4.inp ccinputs/james/$scen/matta_p4.inp
cp inputs/coast/$scen/patapsco/pltgen_patapsco.inp
ccinputs/coast/$scen/patapsco/pltgen_patapsco.inp
cp inputs/coast/$scen/nanticoke/pltgen_nat_p4.inp ccinputs/coast/$scen/nanticoke/pltgen_nat_p4.inp
cp inputs/coast/$scen/patapsco/pataps_p4.inp ccinputs/coast/$scen/patapsco/
cp inputs/coast/$scen/nanticoke/nant_p4.inp ccinputs/coast/$scen/nanticoke/
```

```

cp inputs/coast/$scen/bfllac/pltlldslac_p4.inp ccinputs/coast/$scen/bfllac/pltlldslac_p4.inp
cp inputs/coast/$scen/bfllb/pltllds1b_p4.inp ccinputs/coast/$scen/bfllb/pltllds1b_p4.inp
cp inputs/coast/$scen/bfllc/pltllds1c_p4.inp ccinputs/coast/$scen/bfllc/pltllds1c_p4.inp
cp inputs/coast/$scen/bf12a/pltllds2a_p4.inp ccinputs/coast/$scen/bf12a/pltllds2a_p4.inp
cp inputs/coast/$scen/bf12b/pltllds2b_p4.inp ccinputs/coast/$scen/bf12b/pltllds2b_p4.inp
cp inputs/coast/$scen/bf13a/pltllds3a_p4.inp ccinputs/coast/$scen/bf13a/pltllds3a_p4.inp
cp inputs/coast/$scen/bf13b/pltllds3b_p4.inp ccinputs/coast/$scen/bf13b/pltllds3b_p4.inp
cp inputs/coast/$scen/bf13c/pltllds3c_p4.inp ccinputs/coast/$scen/bf13c/pltllds3c_p4.inp
cp inputs/coast/$scen/bf14/pltllds4_p4.inp ccinputs/coast/$scen/bf14/pltllds4_p4.inp
cp inputs/coast/$scen/bf15a/pltllds5a_p4.inp ccinputs/coast/$scen/bf15a/pltllds5a_p4.inp
cp inputs/coast/$scen/bf15b/pltllds5b_p4.inp ccinputs/coast/$scen/bf15b/pltllds5b_p4.inp
cp inputs/coast/$scen/bf16a/pltllds6a_p4.inp ccinputs/coast/$scen/bf16a/pltllds6a_p4.inp
cp inputs/coast/$scen/bf16b/pltllds6b_p4.inp ccinputs/coast/$scen/bf16b/pltllds6b_p4.inp
cp inputs/coast/$scen/bf17a/pltllds7a_p4.inp ccinputs/coast/$scen/bf17a/pltllds7a_p4.inp
cp inputs/coast/$scen/bf17b/pltllds7b_p4.inp ccinputs/coast/$scen/bf17b/pltllds7b_p4.inp
cp inputs/coast/$scen/bf11a/pltllds1a_p4.inp ccinputs/coast/$scen/bf11a/pltllds1a_p4.inp
cp inputs/coast/$scen/bf17bc/pltllds7bc_p4.inp ccinputs/coast/$scen/bf17bc/pltllds7bc_p4.inp
cp inputs/potm/$scen/rappa/pltgen_rappa.inp ccinputs/potm/$scen/rappa/pltgen_rappa.inp
cp inputs/coast/$scen/bf11a/bf11a_p4.inp ccinputs/coast/$scen/bf11a/bf11a_p4.inp
cp inputs/coast/$scen/bfllac/bfllac_p4.inp ccinputs/coast/$scen/bfllac/bfllac_p4.inp
cp inputs/coast/$scen/bf11b/bf11b_p4.inp ccinputs/coast/$scen/bf11b/bf11b_p4.inp
cp inputs/coast/$scen/bf11c/bf11c_p4.inp ccinputs/coast/$scen/bf11c/bf11c_p4.inp
cp inputs/coast/$scen/bf12a/bf12a_p4.inp ccinputs/coast/$scen/bf12a/bf12a_p4.inp
cp inputs/coast/$scen/bf12b/bf12b_p4.inp ccinputs/coast/$scen/bf12b/bf12b_p4.inp
cp inputs/coast/$scen/bf13a/bf13a_p4.inp ccinputs/coast/$scen/bf13a/bf13a_p4.inp
cp inputs/coast/$scen/bf13b/bf13b_p4.inp ccinputs/coast/$scen/bf13b/bf13b_p4.inp
cp inputs/coast/$scen/bf13c/bf13c_p4.inp ccinputs/coast/$scen/bf13c/bf13c_p4.inp
cp inputs/coast/$scen/bf14/bf14_p4.inp ccinputs/coast/$scen/bf14/bf14_p4.inp
cp inputs/coast/$scen/bf15a/bf15a_p4.inp ccinputs/coast/$scen/bf15a/bf15a_p4.inp
cp inputs/coast/$scen/bf15b/bf15b_p4.inp ccinputs/coast/$scen/bf15b/bf15b_p4.inp
cp inputs/coast/$scen/bf16a/bf16a_p4.inp ccinputs/coast/$scen/bf16a/bf16a_p4.inp
cp inputs/coast/$scen/bf16b/bf16b_p4.inp ccinputs/coast/$scen/bf16b/bf16b_p4.inp
cp inputs/coast/$scen/bf17a/bf17a_p4.inp ccinputs/coast/$scen/bf17a/bf17a_p4.inp
cp inputs/coast/$scen/bf17b/bf17b_p4.inp ccinputs/coast/$scen/bf17b/bf17b_p4.inp
cp inputs/coast/$scen/bf17bc/bf17bc_p4.inp ccinputs/coast/$scen/bf17bc/bf17bc_p4.inp
cp inputs/potm/$scen/patux/patux_p4.inp ccinputs/potm/$scen/patux/patux_p4.inp
cp inputs/potm/$scen/patux/pltgen_patux.inp ccinputs/potm/$scen/patux/pltgen_patux.inp
cp inputs/potm/$scen/rappa/rappa_p4.inp ccinputs/potm/$scen/rappa/rappa_p4.inp
cp inputs/coast/$scen/choptank/pltgen_chop_p4.inp ccinputs/coast/$scen/choptank/pltgen_chop_p4.inp
cp inputs/coast/$scen/choptank/chop_p4.inp ccinputs/coast/$scen/choptank/

```

SECTION TO MAKE SURE ALL INPUT FILES HAVE THE CORRECT STOP TIME

```
set timeprog="/work/dpi/phase4a/util/ed_files/ed_time_12year.edp"
```

```

cd /work/dpi/phase4a/ccinputs/
ed james/s04trib/pltgen_appom.inp <$timeprog
ed james/s04trib/pltgen_james2.inp <$timeprog
ed james/s04trib/pltgen_matta.inp <$timeprog
ed james/s04trib/pltgen_pamun.inp <$timeprog
ed potm/s04trib/pltgen_lopot.inp <$timeprog
ed potm/s04trib/pltgen_midpot.inp <$timeprog
ed potm/s04trib/pltgen_shena.inp <$timeprog
ed potm/s04trib/pltgen_uppot.inp <$timeprog
ed susq/s04trib/pltgen_ebsus1.inp <$timeprog
ed susq/s04trib/pltgen_ebsus2.inp <$timeprog
ed susq/s04trib/pltgen_junia.inp <$timeprog
ed susq/s04trib/pltgen_losus.inp <$timeprog
ed susq/s04trib/pltgen_wbsus.inp <$timeprog
ed susq/s04trib/conowwdp_p4.inp <$timeprog
ed susq/s04trib/conowinf_p4.inp <$timeprog
ed james/s04trib/appom_p4.inp <$timeprog
ed james/s04trib/james1_p4.inp <$timeprog
ed james/s04trib/james2_p4.inp <$timeprog
ed james/s04trib/pamun_p4.inp <$timeprog
ed james/s04trib/matta_p4.inp <$timeprog
ed potm/s04trib/lopot_p4.inp <$timeprog
ed potm/s04trib/midpot_p4.inp <$timeprog
ed potm/s04trib/shena_p4.inp <$timeprog
ed potm/s04trib/uppot_p4.inp <$timeprog
ed susq/s04trib/ebsus1_p4.inp <$timeprog
ed susq/s04trib/ebsus2_p4.inp <$timeprog

```

```

ed susq/s04trib/junia_p4.inp <$timeprog
ed susq/s04trib/losus_p4.inp <$timeprog
ed susq/s04trib/wbsus_p4.inp <$timeprog
ed susq/s04trib/conownps_p4.inp <$timeprog
ed susq/s04trib/conowrch_p4.inp <$timeprog
ed coast/s04trib/bf11a/pltllds1a_p4.inp <$timeprog
ed coast/s04trib/bf11ac/pltllds1ac_p4.inp <$timeprog
ed coast/s04trib/bf11b/pltllds1b_p4.inp <$timeprog
ed coast/s04trib/bf11c/pltllds1c_p4.inp <$timeprog
ed coast/s04trib/bf12a/pltllds2a_p4.inp <$timeprog
ed coast/s04trib/bf12b/pltllds2b_p4.inp <$timeprog
ed coast/s04trib/bf13a/pltllds3a_p4.inp <$timeprog
ed coast/s04trib/bf13b/pltllds3b_p4.inp <$timeprog
ed coast/s04trib/bf13c/pltllds3c_p4.inp <$timeprog
ed coast/s04trib/bf14/pltllds4_p4.inp <$timeprog
ed coast/s04trib/bf15a/pltllds5a_p4.inp <$timeprog
ed coast/s04trib/bf15b/pltllds5b_p4.inp <$timeprog
ed coast/s04trib/bf16a/pltllds6a_p4.inp <$timeprog
ed coast/s04trib/bf16b/pltllds6b_p4.inp <$timeprog
ed coast/s04trib/bf17a/pltllds7a_p4.inp <$timeprog
ed coast/s04trib/bf17b/pltllds7b_p4.inp <$timeprog
ed coast/s04trib/bf17bc/pltllds7bc_p4.inp <$timeprog
ed coast/s04trib/patapsco/pltgen_patapsco.inp <$timeprog
ed potm/s04trib/patux/pltgen_patux.inp <$timeprog
ed potm/s04trib/rappa/pltgen_rappa.inp <$timeprog
ed coast/s04trib/choptank/pltgen_chop_p4.inp <$timeprog
ed coast/s04trib/nanticoke/pltgen_nat_p4.inp <$timeprog
ed coast/s04trib/bf11a/bf11a_p4.inp <$timeprog
ed coast/s04trib/bf11ac/bf11ac_p4.inp <$timeprog
ed coast/s04trib/bf11b/bf11b_p4.inp <$timeprog
ed coast/s04trib/bf11c/bf11c_p4.inp <$timeprog
ed coast/s04trib/bf12b/bf12b_p4.inp <$timeprog
ed coast/s04trib/bf12a/bf12a_p4.inp <$timeprog
ed coast/s04trib/bf13a/bf13a_p4.inp <$timeprog
ed coast/s04trib/bf13b/bf13b_p4.inp <$timeprog
ed coast/s04trib/bf13c/bf13c_p4.inp <$timeprog
ed coast/s04trib/bf14/bf14_p4.inp <$timeprog
ed coast/s04trib/bf15a/bf15a_p4.inp <$timeprog
ed coast/s04trib/bf16a/bf16a_p4.inp <$timeprog
ed coast/s04trib/bf15b/bf15b_p4.inp <$timeprog
ed coast/s04trib/bf16b/bf16b_p4.inp <$timeprog
ed coast/s04trib/bf17a/bf17a_p4.inp <$timeprog
ed coast/s04trib/bf17bc/bf17bc_p4.inp <$timeprog
ed coast/s04trib/bf17b/bf17b_p4.inp <$timeprog
ed potm/s04trib/rappa/rappa_p4.inp <$timeprog
ed potm/s04trib/patux/patux_p4.inp <$timeprog
ed coast/s04trib/patapsco/pataps_p4.inp <$timeprog
ed coast/s04trib/nanticoke/nant_p4.inp <$timeprog
ed coast/s04trib/choptank/chop_p4.inp <$timeprog

```

SECTION TO CHANGE WDM TO CORRECT DIRECTORY

```
set wdmprog="/work/dpi/phase4a/util/ed_files/ed_wdm2cc.edp"
```

```

cd /work/dpi/phase4a/ccinputs/
ed james/s04trib/pltgen_appom.inp <$wdmprog
ed james/s04trib/pltgen_james2.inp <$wdmprog
ed james/s04trib/pltgen_matta.inp <$wdmprog
ed james/s04trib/pltgen_pamun.inp <$wdmprog
ed potm/s04trib/pltgen_lopot.inp <$wdmprog
ed potm/s04trib/pltgen_midpot.inp <$wdmprog
ed potm/s04trib/pltgen_shena.inp <$wdmprog
ed potm/s04trib/pltgen_uppet.inp <$wdmprog
ed susq/s04trib/pltgen_ebsus1.inp <$wdmprog
ed susq/s04trib/pltgen_ebsus2.inp <$wdmprog
ed susq/s04trib/pltgen_junia.inp <$wdmprog
ed susq/s04trib/pltgen_losus.inp <$wdmprog
ed susq/s04trib/pltgen_wbsus.inp <$wdmprog
ed susq/s04trib/conowwdp_p4.inp <$wdmprog
ed susq/s04trib/conowinf_p4.inp <$wdmprog
ed james/s04trib/appom_p4.inp <$wdmprog
ed james/s04trib/james1_p4.inp <$wdmprog

```



```

ed james/s04trib/james2_p4.inp <$wdmprog
ed james/s04trib/pamun_p4.inp <$wdmprog
ed james/s04trib/matta_p4.inp <$wdmprog
ed potm/s04trib/lopot_p4.inp <$wdmprog
ed potm/s04trib/midpot_p4.inp <$wdmprog
ed potm/s04trib/shena_p4.inp <$wdmprog
ed potm/s04trib/uppot_p4.inp <$wdmprog
ed susq/s04trib/ebsus1_p4.inp <$wdmprog
ed susq/s04trib/ebsus2_p4.inp <$wdmprog
ed susq/s04trib/junia_p4.inp <$wdmprog
ed susq/s04trib/losus_p4.inp <$wdmprog
ed susq/s04trib/wbsus_p4.inp <$wdmprog
ed susq/s04trib/conownps_p4.inp <$wdmprog
ed susq/s04trib/conowrch_p4.inp <$wdmprog
ed coast/s04trib/bf11a/pltllds1a_p4.inp <$wdmprog
ed coast/s04trib/bf11ac/pltllds1ac_p4.inp <$wdmprog
ed coast/s04trib/bf11b/pltllds1b_p4.inp <$wdmprog
ed coast/s04trib/bf11c/pltllds1c_p4.inp <$wdmprog
ed coast/s04trib/bf12a/pltllds2a_p4.inp <$wdmprog
ed coast/s04trib/bf12b/pltllds2b_p4.inp <$wdmprog
ed coast/s04trib/bf13a/pltllds3a_p4.inp <$wdmprog
ed coast/s04trib/bf13b/pltllds3b_p4.inp <$wdmprog
ed coast/s04trib/bf13c/pltllds3c_p4.inp <$wdmprog
ed coast/s04trib/bf14/pltllds4_p4.inp <$wdmprog
ed coast/s04trib/bf15a/pltllds5a_p4.inp <$wdmprog
ed coast/s04trib/bf15b/pltllds5b_p4.inp <$wdmprog
ed coast/s04trib/bf16a/pltllds6a_p4.inp <$wdmprog
ed coast/s04trib/bf16b/pltllds6b_p4.inp <$wdmprog
ed coast/s04trib/bf17a/pltllds7a_p4.inp <$wdmprog
ed coast/s04trib/bf17b/pltllds7b_p4.inp <$wdmprog
ed coast/s04trib/bf17bc/pltllds7bc_p4.inp <$wdmprog
ed coast/s04trib/patapsco/pltgen_patapsco.inp <$wdmprog
ed potm/s04trib/patux/pltgen_patux.inp <$wdmprog
ed potm/s04trib/rappa/pltgen_rappa.inp <$wdmprog
ed coast/s04trib/choptank/pltgen_chop_p4.inp <$wdmprog
ed coast/s04trib/nanticoke/pltgen_nat_p4.inp <$wdmprog
ed coast/s04trib/bf11a/bf11a_p4.inp <$wdmprog
ed coast/s04trib/bf11ac/bf11ac_p4.inp <$wdmprog
ed coast/s04trib/bf11b/bf11b_p4.inp <$wdmprog
ed coast/s04trib/bf11c/bf11c_p4.inp <$wdmprog
ed coast/s04trib/bf12b/bf12b_p4.inp <$wdmprog
ed coast/s04trib/bf12a/bf12a_p4.inp <$wdmprog
ed coast/s04trib/bf13a/bf13a_p4.inp <$wdmprog
ed coast/s04trib/bf13b/bf13b_p4.inp <$wdmprog
ed coast/s04trib/bf13c/bf13c_p4.inp <$wdmprog
ed coast/s04trib/bf14/bf14_p4.inp <$wdmprog
ed coast/s04trib/bf15a/bf15a_p4.inp <$wdmprog
ed coast/s04trib/bf16a/bf16a_p4.inp <$wdmprog
ed coast/s04trib/bf15b/bf15b_p4.inp <$wdmprog
ed coast/s04trib/bf16b/bf16b_p4.inp <$wdmprog
ed coast/s04trib/bf17a/bf17a_p4.inp <$wdmprog
ed coast/s04trib/bf17bc/bf17bc_p4.inp <$wdmprog
ed coast/s04trib/bf17b/bf17b_p4.inp <$wdmprog
ed potm/s04trib/rappa/rappa_p4.inp <$wdmprog
ed potm/s04trib/patux/patux_p4.inp <$wdmprog
ed coast/s04trib/patapsco/pataps_p4.inp <$wdmprog
ed coast/s04trib/nanticoke/nant_p4.inp <$wdmprog
ed coast/s04trib/choptank/chop_p4.inp <$wdmprog

##### it would be good to check here for bad special actions

##### BEGINNING OF RUN SECTION
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/susq.wdm /work/dpi/phase4a/ccwdm/susq/s04trib/susq.wdm

cd /work/dpi/phase4a/ccscrips/susq/s04trib/wbsus/
set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/wbsus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(wbsus).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf???.dat

```

```

cd /work/dpi/phase4a/ccscripts/susq/s04trib/junia/

set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/junia_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11
rm hspf??.dat

cd /work/dpi/phase4a/ccscripts/susq/s04trib/ebsus1/

set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/ebsus1_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/susq/s04trib/ebsus2/

set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/ebsus2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/susq/s04trib/losus/

set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/losus_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/susq/s04trib/conow/

set inp="/work/dpi/phase4a/ccinputs/susq/s04trib/conownps_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(junia).. "
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

#---Generate conowingo reservoir inflow ---
echo ../../../../ccinputs/susq/s04trib/conowinf_p4.inp | $hspf11

mv hspf61.dat ../../../../ccoutputs/susq/s04trib/conow/RESIN.DAT

#---Generate conowingo reservoir outflow ---

cp ../../../../ccoutputs/susq/s04trib/conow/RESIN.DAT
../../../../ccscripts/susq/s04trib/conow/RESIN.PLT

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/susq/s04trib/conow/

echo "conowp3.reg":
ls
rm RESOUT.PLT

```

```

cp /work/dpi/phase4a/scripts/susq/conowp3.reg .
cp /work/dpi/phase4a/scripts/susq/RULE*.DAT .

conowp3.reg

mv RESOUT.PLT hspf91.dat

echo ../../../../ccinputs/susq/s04trib/conowwdp_p4.inp | $hspf11

echo ../../../../ccinputs/susq/s04trib/conowrch_p4.inp | $hspf11

mv hspf31.dat ../../../../ccoutputs/susq/s04trib/conow/pltgen-s150_p4.flow
mv hspf41.dat ../../../../ccoutputs/susq/s04trib/conow/pltgen-s150_p4.chla
mv hspf42.dat ../../../../ccoutputs/susq/s04trib/conow/pltgen-s150_p4.doxx
mv hspf43.dat ../../../../ccoutputs/susq/s04trib/conow/pltgen-s150_p4.wtmp
mv hspf87.dat ../../../../ccoutputs/susq/s04trib/conow/pltgen-s150_p4.ccload
#-----

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/ccwdm/potm/s04trib/patux.wdm
rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/patux/

set pgeninp="/work/dpi/phase4a/ccinputs/potm/s04trib/patux/pltgen_patux.inp"
set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/patux/patux_p4.inp"

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(patux).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

echo $pgeninp | $hspf11

#-----
mv hspf87.dat ../../../../ccoutputs/potm/s04trib/patux/patux_p4.doxx
mv hspf88.dat ../../../../ccoutputs/potm/s04trib/patux/patux_p4.chla
mv hspf89.dat ../../../../ccoutputs/potm/s04trib/patux/patux_p4.wtmp
mv hspf91.dat ../../../../ccoutputs/potm/s04trib/patux/patux_p4.flow

mv hspf60.dat ../../../../ccoutputs/potm/s04trib/patux/patux_p4.ccload

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/shena/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/potm.wdm /work/dpi/phase4a/ccwdm/potm/s04trib/potm.wdm

set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/shena_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(shena).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/uppot

echo "====BEGIN UPPOT===="

set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/uppot_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(uppot).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/midpot

set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/midpot_p4.inp"
if (-e $tempinput) then

```

```

    rm $tempinput
    echo ".. existing $tempinput removed, new version written(midpot).."
    endif
    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/lopot

    set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/lopot_p4.inp"
    if (-e $tempinput) then
        rm $tempinput
        echo ".. existing $tempinput removed, new version written(lopot).."
        endif
    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

        echo ../../../../ccinputs/potm/s04trib/pltgen_lopot.inp | $hspf11

mv hspf87.dat ../../../../ccoutputs/potm/s04trib/lopot/lopot_p4.doxx
mv hspf88.dat ../../../../ccoutputs/potm/s04trib/lopot/lopot_p4.chla
mv hspf89.dat ../../../../ccoutputs/potm/s04trib/lopot/lopot_p4.wtmp
mv hspf92.dat ../../../../ccoutputs/potm/s04trib/lopot/lopot_p4.flow

mv hspf69.dat ../../../../ccoutputs/potm/s04trib/lopot/lopot_p4.cclload
# -----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/potm/s04trib/rappa/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/potm.wdm
/work/dpi/phase4a/ccwdm/potm/s04trib/potm_rappa.wdm

    set inp="/work/dpi/phase4a/ccinputs/potm/s04trib/rappa/rappa_p4.inp"
    if (-e $tempinput) then
        rm $tempinput
        echo ".. existing $tempinput removed, new version written(rappa).."
        endif
    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

rm $tempinput
    echo ../../../../ccinputs/potm/s04trib/rappa/pltgen_rappa.inp | $hspf11

mv hspf87.dat ../../../../ccoutputs/potm/s04trib/rappa/rappa_p4.doxx
mv hspf88.dat ../../../../ccoutputs/potm/s04trib/rappa/rappa_p4.chla
mv hspf89.dat ../../../../ccoutputs/potm/s04trib/rappa/rappa_p4.wtmp
mv hspf91.dat ../../../../ccoutputs/potm/s04trib/rappa/rappa_p4.flow
mv hspf44.dat ../../../../ccoutputs/potm/s04trib/rappa/rappa_p4.cclload

#-----
rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/james/s04trib/appom/
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/ccwdm/james/s04trib/appom.wdm

    set inp="/work/dpi/phase4a/ccinputs/james/s04trib/appom_p4.inp"
    if (-e $tempinput) then
        rm $tempinput
        echo ".. existing $tempinput removed, new version written(appom).."
        endif
    awk -f $awkprogl <$inp >$tempinput

    echo $tempinput | $hspf11
mv hspf73.dat ../../../../ccoutputs/james/s04trib/appom/pltgen_appom.cclload

    echo ../../../../ccinputs/james/s04trib/pltgen_appom.inp | $hspf11

mv hspf87.dat ../../../../ccoutputs/james/s04trib/appom/pltgen_appom.doxx
mv hspf88.dat ../../../../ccoutputs/james/s04trib/appom/pltgen_appom.chla
mv hspf89.dat ../../../../ccoutputs/james/s04trib/appom/pltgen_appom.wtmp
mv hspf91.dat ../../../../ccoutputs/james/s04trib/appom/pltgen_appom.flow

```

```

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/james/s04trib/matta/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/ccwdm/james/s04trib/matta.wdm

set inp="/work/dpi/phase4a/ccinputs/james/s04trib/matta_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(matta).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

echo ../../../../ccinputs/james/s04trib/pltgen_matta.inp | $hspf11

mv hspf57.dat ../../../../ccoutputs/james/s04trib/matta/matta_p4.cclload
mv hspf77.dat ../../../../ccoutputs/james/s04trib/matta/matta_p4.doxx
mv hspf78.dat ../../../../ccoutputs/james/s04trib/matta/matta_p4.chla
mv hspf79.dat ../../../../ccoutputs/james/s04trib/matta/matta_p4.wtmp
mv hspf81.dat ../../../../ccoutputs/james/s04trib/matta/matta_p4.flow

# -----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/james/s04trib/pamun/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/ccwdm/james/s04trib/pamun.wdm

set inp="/work/dpi/phase4a/ccinputs/james/s04trib/pamun_p4.inp"
echo $inp | $hspf11

echo ../../../../ccinputs/james/s04trib/pltgen_pamun.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/james/s04trib/pamun/pamun_p4.cclload
mv hspf87.dat ../../../../ccoutputs/james/s04trib/pamun/pamun_p4.doxx
mv hspf88.dat ../../../../ccoutputs/james/s04trib/pamun/pamun_p4.chla
mv hspf89.dat ../../../../ccoutputs/james/s04trib/pamun/pamun_p4.wtmp
mv hspf92.dat ../../../../ccoutputs/james/s04trib/pamun/pamun_p4.flow

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/james/s04trib/james1/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/james.wdm /work/dpi/phase4a/ccwdm/james/s04trib/james.wdm
set inp="/work/dpi/phase4a/ccinputs/james/s04trib/james1_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james1).."
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/james/s04trib/james2/

set inp="/work/dpi/phase4a/ccinputs/james/s04trib/james2_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(james2).."
endif
awk -f $awkprogl <$inp >$tempinput

echo $tempinput | $hspf11

mv hspf55.dat ../../../../ccoutputs/james/s04trib/james2/james_290.cclload

echo ../../../../ccinputs/james/s04trib/pltgen_james2.inp | $hspf11
mv hspf87.dat ../../../../ccoutputs/james/s04trib/james2/james2_p4.doxx
mv hspf88.dat ../../../../ccoutputs/james/s04trib/james2/james2_p4.chla

```

```

mv hspf89.dat ../../../../ccoutputs/james/s04trib/james2/james2_p4.wtmp

mv hspf75.dat ../../../../ccoutputs/james/s04trib/james2/james_290.flow
mv hspf55.dat ../../../../ccoutputs/james/s04trib/james2/james_290.cclload

#-----

rm hspf?? .dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bflla/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bflla/bflla_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bflla).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm $tempinput
mv hspf51.dat ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.370
mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.800
cp ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.370 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.800 hspf52.dat

echo ../../../../ccinputs/coast/s04trib/bflla/pltllds1a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg370.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg370.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg370.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg800.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg800.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg800.wtmp

rm hspf?? .dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfllac/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/coast1ac.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfllac/bfllac_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bflla).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf49.dat ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.810
cp ../../../../ccoutputs/coast/s04trib/bflla/baylds_p4.810 hspf50.dat

echo ../../../../ccinputs/coast/s04trib/bfllac/pltllds1ac_p4.inp | $hspf11

mv hspf51.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg810.flow
mv hspf61.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg810.chla
mv hspf62.dat ../../../../ccoutputs/coast/s04trib/bflla/pltgen-seg810.wtmp

rm hspf?? .dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfllb/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm

```

```

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11b/bf11b_p4.inp"

if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf11b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.380
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.390
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.400

cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.380 hspf44.dat
cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.390 hspf45.dat
cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.400 hspf46.dat

echo ../../../../ccinputs/coast/s04trib/bf11b/pltllds1b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.wtmp

rm hspf?? .dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf11c/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1c.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11c/bf11c_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf11c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.820
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.830
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.840

cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.820 hspf93.dat
cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.830 hspf94.dat
cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.840 hspf95.dat

echo /work/dpi/phase4a/ccinputs/coast/s04trib/bf11c/pltllds1c_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.wtmp

```

```

#-----
rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf12a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast2a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf12a/bf12a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.410
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.420
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.430

mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf12/s420_loads.visual
mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf12/s430_loads.visual

cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.410 hspf31.dat
cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.420 hspf32.dat
cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.430 hspf34.dat

echo ../../../../ccinputs/coast/s04trib/bf12a/pltllds2a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.chla
mv hspf94.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf12b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast2b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf12b/bf12b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf12b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf62.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.440

cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.440 hspf34.dat

echo ../../../../ccinputs/coast/s04trib/bf12b/pltllds2b_p4.inp | $hspf11

mv hspf44.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg440.flow
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg440.chla
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg440.wtmp

#-----

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rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3a/bfl3a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf55.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.450
mv hspf56.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.850
mv hspf57.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.870

cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.450 hspf96.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.850 hspf97.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.870 hspf98.dat

echo ../../../../ccinputs/coast/s04trib/bfl3a/pltl3a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3b/bfl3b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.470
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.480
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.490

cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.470 hspf96.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.480 hspf97.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.490 hspf98.dat

echo ../../../../ccinputs/coast/s04trib/bfl3b/pltl3b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.flow

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mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3c/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3c.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3c/bfl3c_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.510
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.860
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.890

cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.510 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.860 hspf52.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.890 hspf53.dat

echo /work/dpi/phase4a/ccinputs/coast/s04trib/bfl3c/pltl3c_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.wtmp
mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.wtmp
mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl4/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast4.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl4/bfl4_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl4).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.500
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.880
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.990

cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.500 hspf31.dat
cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.880 hspf32.dat
cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.990 hspf33.dat

echo ../../../../ccinputs/coast/s04trib/bfl4/pltl4_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.wtmp

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mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg880.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg880.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg880.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg990.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg990.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf14/pltgen-seg990.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf15a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast5a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf15a/bf15a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.550
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.900
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.970

cp ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.550 hspf50.dat
cp ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.900 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bf15a/baylds_p4.970 hspf52.dat

echo ../../../../ccinputs/coast/s04trib/bf15a/pltlds5a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg550.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg550.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg550.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg900.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg900.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg900.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.wtmp

mv *.stats ../../../../ccoutputs/coast/s04trib/bf15a
#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf15b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast5b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf15b/bf15b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.540
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.910
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.920
cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.540 hspf47.dat

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cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.910 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.920 hspf49.dat

echo ../../../../ccinputs/coast/s04trib/bf15b/pltlds5b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf16a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast6a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf16a/bf16a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf16a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.560
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.940
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.950

cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.560 hspf47.dat
cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.940 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.950 hspf49.dat
echo ../../../../ccinputs/coast/s04trib/bf16a/pltlds6a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg560.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg560.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg560.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg940.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg940.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg940.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg950.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg950.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf16a/pltgen-seg950.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf16b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast6b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf16b/bf16b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf16b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf16b/baylds_p4.580
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf16b/baylds_p4.930

```

```

mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.980

cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.580 hspf47.dat
cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.930 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.980 hspf49.dat
echo ../../../../ccinputs/coast/s04trib/bfl6b/pltl6b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.wtmp

#-----
rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast7a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7a/bfl7a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.590
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.600
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.610

cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.590 hspf42.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.600 hspf43.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.610 hspf44.dat

echo ../../../../ccinputs/coast/s04trib/bfl7a/pltl7a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.flow
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.wtmp

#-----
rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast7b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7b/bfl7b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7b).."
endif

```

```

    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.620
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.630

cp ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.620 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.630 hspf52.dat

    echo ../../../../ccinputs/coast/s04trib/bfl7b/pltl7b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.flow
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.flow
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7bc/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/coast7bc.wdm

    set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7bc/bfl7bc_p4.inp"
    if (-e $tempinput) then
        rm $tempinput
        echo ".. existing $tempinput removed, new version written(bfl7c).."
    endif
    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

mv hspf49.dat ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.960

cp ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.960 hspf48.dat
    echo ../../../../ccinputs/coast/s04trib/bfl7bc/pltl7bc_p4.inp | $hspf11

mv hspf63.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg960.flow
mv hspf72.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg960.chla
mv hspf73.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg960.wtmp

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/patapsco/

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/patapsco.wdm

    echo ../../../../ccinputs/coast/s04trib/patapsco/pataps_p4.inp | $hspf11

    echo "====END PATAPSCO===="

mv hspf44.dat ../../../../ccoutputs/coast/s04trib/patapsco/patapsco_p4.cclload

echo ../../../../ccinputs/coast/s04trib/patapsco/pltgen_patapsco.inp | $hspf11

mv hspf87.dat ../../../../ccoutputs/coast/s04trib/patapsco/patapsco_p4.doxx
mv hspf88.dat ../../../../ccoutputs/coast/s04trib/patapsco/patapsco_p4.chla
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/patapsco/patapsco_p4.wtmp
mv hspf74.dat ../../../../ccoutputs/coast/s04trib/patapsco/patapsco_p4.flow

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/nanticoke/

```

```

cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/nanticoke.wdm

    echo ../../../../ccinputs/coast/s04trib/nanticoke/nant_p4.inp | $hspf11
mv hspf91.dat ../../../../ccoutputs/coast/s04trib/nanticoke/s780_p4.concs
    echo ../../../../ccinputs/coast/s04trib/nanticoke/pltgen_nat_p4.inp | $hspf11

mv *.stats ../../../../ccoutputs/coast/s04trib/nanticoke/
# -----

mv hspf44.dat ../../../../ccoutputs/coast/s04trib/nanticoke/pltgen_nanticoke.cclload
mv hspf87.dat ../../../../ccoutputs/coast/s04trib/nanticoke/pltgen_nanticoke.doxx
mv hspf88.dat ../../../../ccoutputs/coast/s04trib/nanticoke/pltgen_nanticoke.chla
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/nanticoke/pltgen_nanticoke.wtmp
mv hspf91.dat ../../../../ccoutputs/coast/s04trib/nanticoke/pltgen_nanticoke.flow

mv *.out ../../../../ccoutputs/coast/s04trib/nanticoke/

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/choptank/
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/choptank.wdm

    set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/choptank/chop_p4.inp"
    if (-e $tempinput) then
        rm $tempinput
        echo ".. existing $tempinput removed, new version written (choptank) .."
    endif
    awk -f $awkprogl <$inp >$tempinput
    echo $tempinput | $hspf11

mv hspf91.dat ../../../../ccoutputs/coast/s04trib/choptank/s770_p4.concs
    echo ../../../../ccinputs/coast/s04trib/choptank/pltgen_chop_p4.inp | $hspf11

# -----

mv hspf44.dat ../../../../ccoutputs/coast/s04trib/choptank/pltgen_choptank.cclload
mv hspf87.dat ../../../../ccoutputs/coast/s04trib/choptank/pltgen_choptank.doxx
mv hspf88.dat ../../../../ccoutputs/coast/s04trib/choptank/pltgen_choptank.chla
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/choptank/pltgen_choptank.wtmp
mv hspf91.dat ../../../../ccoutputs/coast/s04trib/choptank/pltgen_choptank.flow

##### NEW SECTION TO GENERATE PPAR FILES ON THE FLY
rm /work/dpi/phase4a/ccinputs/coast/s04trib/*/bppar*.inp
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf11a/
echo bf11a_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf11ac/
echo bf11ac_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf11b/
echo bf11b_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf12b/
echo bf12b_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf11c/
echo bf11c_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf12a/
echo bf12a_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf13a/
echo bf13a_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf13c/
echo bf13c_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf13b/
echo bf13b_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf14/
echo bf14_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf15a/
echo bf15a_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf16a/
echo bf16a_p4.inp | mkppar

```

```

cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf15b/
echo bf15b_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf17a/
echo bf17a_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf16b/
echo bf16b_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf17bc/
echo bf17bc_p4.inp | mkppar
cd /work/dpi/phase4a/ccinputs/coast/s04trib/bf17b/
echo bf17b_p4.inp | mkppar

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf11a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11a/bpparla_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf11a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

rm $tempinput
mv hspf51.dat ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.370
mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.800

cp ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.370 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.800 hspf52.dat

echo ../../../../ccinputs/coast/s04trib/bf11a/pltlldsla_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg370.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg370.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg370.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg370.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg800.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg800.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg800.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg800.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf11ac/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/coast1ac.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11ac/bppar1ac_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf11a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf40.dat ../../../../ccoutputs/coast/s04trib/bf11a/s810_loads.visual
mv hspf49.dat ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.810

cp ../../../../ccoutputs/coast/s04trib/bf11a/baylds_p4.810 hspf50.dat

echo ../../../../ccinputs/coast/s04trib/bf11ac/pltlldslac_p4.inp | $hspf11

mv hspf51.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg810.flow
mv hspf57.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg810.ppar
mv hspf61.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg810.chla

```



```

mv hspf62.dat ../../../../ccoutputs/coast/s04trib/bf11a/pltgen-seg810.wtmp
#-----
rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf11b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11b/bppar1b_p4.inp"

if (-e $tempinput) then
    rm $tempinput
    echo ".. existing $tempinput removed, new version written(bf11b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.380
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.390
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.400

cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.380 hspf44.dat
cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.390 hspf45.dat
cp ../../../../ccoutputs/coast/s04trib/bf11b/baylds_p4.400 hspf46.dat

echo ../../../../ccinputs/coast/s04trib/bf11b/pltlds1b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg380.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg390.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf11b/pltgen-seg400.wtmp

#-----
rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf11c/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast1c.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf11c/bppar1c_p4.inp"
if (-e $tempinput) then
    rm $tempinput
    echo ".. existing $tempinput removed, new version written(bf11c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.820
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.830
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.840

cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.820 hspf93.dat
cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.830 hspf94.dat
cp ../../../../ccoutputs/coast/s04trib/bf11c/baylds_p4.840 hspf95.dat

echo /work/dpi/phase4a/ccinputs/coast/s04trib/bf11c/pltlds1c_p4.inp | $hspf11

```

```

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg820.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg830.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf11c/pltgen-seg840.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf12a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast2a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf12a/bppar2a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.410
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.420
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.430

cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.410 hspf31.dat
cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.420 hspf32.dat
cp ../../../../ccoutputs/coast/s04trib/bf12/baylds_p4.430 hspf34.dat

echo ../../../../ccinputs/coast/s04trib/bf12a/pltl2ds2a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg410.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg420.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.chla
mv hspf94.dat ../../../../ccoutputs/coast/s04trib/bf12/pltgen-seg430.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf12b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast2b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf12b/bppar2b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf12b).."
endif
awk -f $awkprogl <$inp >$tempinput

```

```

echo $tempinput | $hspf11

mv hspf62.dat ../../../../ccoutputs/coast/s04trib/bfl2/baylds_p4.440

cp ../../../../ccoutputs/coast/s04trib/bfl2/baylds_p4.440 hspf34.dat

echo ../../../../ccinputs/coast/s04trib/bfl2b/pltlds2b_p4.inp | $hspf11

mv hspf44.dat ../../../../ccoutputs/coast/s04trib/bfl2/pltgen-seg440.flow
mv hspf50.dat ../../../../ccoutputs/coast/s04trib/bfl2/pltgen-seg440.ppar
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl2/pltgen-seg440.chla
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl2/pltgen-seg440.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3a/bppar3a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf55.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.450

mv hspf56.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.850

mv hspf57.dat ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.870

cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.450 hspf96.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.850 hspf97.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3a/baylds_p4.870 hspf98.dat

echo ../../../../ccinputs/coast/s04trib/bfl3a/pltlds3a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg450.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg850.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3a/pltgen-seg870.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3b/bppar3b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.470
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.480
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.490

cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.470 hspf96.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.480 hspf97.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3b/baylds_p4.490 hspf98.dat

echo ../../../../ccinputs/coast/s04trib/bfl3b/pltl3b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg470.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg480.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3b/pltgen-seg490.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl3c/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast3c.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl3c/bppar3c_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl3c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.510
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.860
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.890

cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.510 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.860 hspf52.dat
cp ../../../../ccoutputs/coast/s04trib/bfl3c/baylds_p4.890 hspf53.dat

echo /work/dpi/phase4a/ccinputs/coast/s04trib/bfl3c/pltl3c_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg510.wtmp
mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg860.wtmp
mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl3c/pltgen-seg890.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl4/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast4.wdm

```

```

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl4/bppar4_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl4).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.500
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.880
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.990

cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.500 hspf31.dat
cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.880 hspf32.dat
cp ../../../../ccoutputs/coast/s04trib/bfl4/baylds_p4.990 hspf33.dat

echo ../../../../ccinputs/coast/s04trib/bfl4/pltl4ds4_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg500.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg880.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg880.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg880.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg880.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg990.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg990.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg990.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl4/pltgen-seg990.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl5a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast5a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl5a/bppar5a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl5a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.550
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.900
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.970

cp ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.550 hspf50.dat
cp ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.900 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bfl5a/baylds_p4.970 hspf52.dat

echo ../../../../ccinputs/coast/s04trib/bfl5a/pltl4ds5a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg550.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg550.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg550.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg550.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg900.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg900.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg900.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl5a/pltgen-seg900.wtmp

```

```

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf15a/pltgen-seg970.wtmp

mv *.stats ../../../../ccoutputs/coast/s04trib/bf15a
#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf15b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast5b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf15b/bppar5b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf15b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.540
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.910
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.920

cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.540 hspf47.dat
cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.910 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bf15b/baylds_p4.920 hspf49.dat

echo ../../../../ccinputs/coast/s04trib/bf15b/pltlds5b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg540.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg910.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bf15b/pltgen-seg920.wtmp

#-----

rm hspf??.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bf16a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast6a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bf16a/bppar6a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bf16a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.560
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.940
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.950

cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.560 hspf47.dat
cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.940 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bf16a/baylds_p4.950 hspf49.dat

```

```

echo ../../../../ccinputs/coast/s04trib/bfl6a/pltlds6a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg560.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg560.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg560.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg560.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg940.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg940.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg940.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg940.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg950.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg950.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg950.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl6a/pltgen-seg950.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl6b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast6b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl6b/bppar6b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl6b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.580
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.930
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.980

cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.580 hspf47.dat
cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.930 hspf48.dat
cp ../../../../ccoutputs/coast/s04trib/bfl6b/baylds_p4.980 hspf49.dat
echo ../../../../ccinputs/coast/s04trib/bfl6b/pltlds6b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg580.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg930.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl6b/pltgen-seg980.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7a/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast7a.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7a/bppar7a_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7a).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

```

```

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.590
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.600
mv hspf54.dat ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.610

cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.590 hspf42.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.600 hspf43.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7a/baylds_p4.610 hspf44.dat

echo ../../../../ccinputs/coast/s04trib/bfl7a/pltl7a_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg590.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg600.wtmp

mv hspf80.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.flow
mv hspf86.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.ppar
mv hspf89.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.chla
mv hspf92.dat ../../../../ccoutputs/coast/s04trib/bfl7a/pltgen-seg610.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7b/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm /work/dpi/phase4a/ccwdm/coast/s04trib/coast7b.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7b/bppar7b_p4.inp"
if (-e $tempinput) then
  rm $tempinput
  echo ".. existing $tempinput removed, new version written(bfl7b).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf52.dat ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.620
mv hspf53.dat ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.630

cp ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.620 hspf51.dat
cp ../../../../ccoutputs/coast/s04trib/bfl7b/baylds_p4.630 hspf52.dat

echo ../../../../ccinputs/coast/s04trib/bfl7b/pltl7b_p4.inp | $hspf11

mv hspf58.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.flow
mv hspf64.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.ppar
mv hspf67.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.chla
mv hspf68.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg620.wtmp

mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.flow
mv hspf75.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.ppar
mv hspf78.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.chla
mv hspf79.dat ../../../../ccoutputs/coast/s04trib/bfl7b/pltgen-seg630.wtmp

#-----

rm hspf???.dat
cd /work/dpi/phase4a/ccscripts/coast/s04trib/bfl7bc/

rm /work/dpi/phase4a/ccwdm/coast/s04trib/co*.wdm
cp /work/dpi/phase4a/ccwdm/freshwdm/s01ref/coast.wdm
/work/dpi/phase4a/ccwdm/coast/s04trib/coast7bc.wdm

set inp="/work/dpi/phase4a/ccinputs/coast/s04trib/bfl7bc/bppar7bc_p4.inp"

```



```

if (-e $tempinput) then
  rm $tempinput
  echo "... existing $tempinput removed, new version written(bf17c).."
endif
awk -f $awkprogl <$inp >$tempinput
echo $tempinput | $hspf11

mv hspf49.dat ../../../../ccoutputs/coast/s04trib/bf17b/baylds_p4.960

cp ../../../../ccoutputs/coast/s04trib/bf17b/baylds_p4.960 hspf48.dat
echo ../../../../ccinputs/coast/s04trib/bf17bc/pltds7bc_p4.inp | $hspf11

mv hspf63.dat ../../../../ccoutputs/coast/s04trib/bf17b/pltgen-seg960.flow
mv hspf69.dat ../../../../ccoutputs/coast/s04trib/bf17b/pltgen-seg960.ppar
mv hspf72.dat ../../../../ccoutputs/coast/s04trib/bf17b/pltgen-seg960.chla
mv hspf73.dat ../../../../ccoutputs/coast/s04trib/bf17b/pltgen-seg960.wtmp

rm hspf??.dat

##### LAST PART CHECK THE ECHO FILES TO MAKE SURE COMPLETE
##### IT WOULD BE A GOOD IDEA TO SCRIPT THE CHECK SO AN ERROR WOULD APPEAR

cd /work/dpi/phase4a/ccscripts/

ls -l coast/s04trib/bf11a/bf11a_p4.ech >all_s04trib_ccechs
tail -1 coast/s04trib/bf11a/bf11a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11a/pltds1a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11a/pltds1a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11ac/bf11ac_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11ac/bf11ac_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11ac/pltds1ac_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11ac/pltds1ac_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11b/bf11b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11b/bf11b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11b/pltds1b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11b/pltds1b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11c/bf11c_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11c/bf11c_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf11c/pltds1c_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf11c/pltds1c_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf12a/bf12a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf12a/bf12a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf12a/pltds2a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf12a/pltds2a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf12b/bf12b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf12b/bf12b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf12b/pltds2b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf12b/pltds2b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13a/bf13a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13a/bf13a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13a/pltds3a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13a/pltds3a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13b/bf13b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13b/bf13b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13b/pltds3b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13b/pltds3b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13c/bf13c_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13c/bf13c_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf13c/pltds3c_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf13c/pltds3c_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf14/bf14_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf14/bf14_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf14/pltds4_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf14/pltds4_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf15a/bf15a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf15a/bf15a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf15a/pltds5a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf15a/pltds5a_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf15b/bf15b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf15b/bf15b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf15b/pltds5b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bf15b/pltds5b_p4.ech >>all_s04trib_ccechs
ls -l coast/s04trib/bf16a/bf16a_p4.ech >>all_s04trib_ccechs

```

```

tail -1 coast/s04trib/bfl6a/bfl6a_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl6a/pltl6a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl6a/pltl6a_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl6b/bfl6b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl6b/bfl6b_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl6b/pltl6b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl6b/pltl6b_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7a/bfl7a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7a/bfl7a_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7a/pltl7a_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7a/pltl7a_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7b/bfl7b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7b/bfl7b_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7b/pltl7b_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7b/pltl7b_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7bc/bfl7bc_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7bc/bfl7bc_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/bfl7bc/pltl7bc_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/bfl7bc/pltl7bc_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/patapsco/patapsco_calib.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/patapsco/pltgen_calib.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/nanticoke/nanticoke_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/nanticoke/nanplt.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/choptank/choptank_p4.ech >>all_s04trib_ccechs
ls -1 coast/s04trib/choptank/chpplt.ech >>all_s04trib_ccechs
tail -1 coast/s04trib/choptank/chpplt.ech >>all_s04trib_ccechs
ls -1 james/s04trib/appom/appom.ech >>all_s04trib_ccechs
tail -1 james/s04trib/appom/appom.ech >>all_s04trib_ccechs
ls -1 james/s04trib/appom/pltgen_p4.ech >>all_s04trib_ccechs
tail -1 james/s04trib/appom/pltgen_p4.ech >>all_s04trib_ccechs
ls -1 james/s04trib/matta/matta_p4.ech >>all_s04trib_ccechs
tail -1 james/s04trib/matta/matta_p4.ech >>all_s04trib_ccechs
ls -1 james/s04trib/matta/pltgen_p4.ech >>all_s04trib_ccechs
tail -1 james/s04trib/matta/pltgen_p4.ech >>all_s04trib_ccechs
ls -1 james/s04trib/pamun/pamun.ech >>all_s04trib_ccechs
tail -1 james/s04trib/pamun/pamun.ech >>all_s04trib_ccechs
ls -1 james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_ccechs
tail -1 james/s04trib/pamun/pltgen_pamun_p4.ech >>all_s04trib_ccechs
ls -1 james/s04trib/james1/james1.ech >>all_s04trib_ccechs
tail -1 james/s04trib/james1/james1.ech >>all_s04trib_ccechs
ls -1 james/s04trib/james2/james2.ech >>all_s04trib_ccechs
tail -1 james/s04trib/james2/james2.ech >>all_s04trib_ccechs
ls -1 james/s04trib/james2/pltgen_james2.ech >>all_s04trib_ccechs
tail -1 james/s04trib/james2/pltgen_james2.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/patux/patux_calib.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/patux/patux_calib.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/patux/patux_plt.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/patux/patux_plt.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/rappa/rappa.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/rappa/rappa.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/rappa/plot_rappa.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/shena/shena.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/shena/shena.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/shena/shena_plt_p4.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/uppot/uppot.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/uppot/uppot.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/uppot/uppot_plt_scour.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/midpot/midpot.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/midpot/midpot.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/midpot/midpot_plt_scour.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/lopot/lopot.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/lopot/lopot.ech >>all_s04trib_ccechs
ls -1 potm/s04trib/lopot/lopot-plt.ech >>all_s04trib_ccechs
tail -1 potm/s04trib/lopot/lopot-plt.ech >>all_s04trib_ccechs
ls -1 susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/wbsus/wbsus_p4.ech >>all_s04trib_ccechs

```

```
ls -l susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/wbsus/wbsus_p4_plt.ech >>all_s04trib_ccechs
ls -l susq/s04trib/junia/junia_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/junia/junia_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/junia/junia_p4_plt.ech >>all_s04trib_ccechs
ls -l susq/s04trib/ebsus1/ebsus1_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/ebsus1/ebsus1_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/ebsus1/ebsus1_p4_plt.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/ebsus1/ebsus1_p4_plt.ech >>all_s04trib_ccechs
ls -l susq/s04trib/ebsus2/ebsus2_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/ebsus2/ebsus2_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/ebsus2/ebsus2_plt_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/losus/losus_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/losus/losus_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/losus/losus_p4_plt.ech >>all_s04trib_ccechs
ls -l susq/s04trib/conow/conownps_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/conow/conownps_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/conow/conowinf_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/conow/conowwdp_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/conow/conowwdp_p4.ech >>all_s04trib_ccechs
ls -l susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_ccechs
tail -1 susq/s04trib/conow/conowrch_p4.ech >>all_s04trib_ccechs
```

Attachment J

J-1 FORTRAN Program to Generate Edge-of-Stream Files

J-2 FORTRAN Program to Generate Load Files

J-1 FORTRAN Program to Generate Edge-of-Stream Files

```
PROGRAM LUSE
*****72*****72*****
** VARIABLE NAMES *****

***** this program makes the transport factor scenarios
***** for each scenario you must change the wdm info on lines 31 and 33

CHARACTER*25, FNAM
DIMENSION JJSEG(4)
CHARACTER*90, LINE

READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
DO 50 I = 1, 22
  IF (FNAM(I:I).EQ.'_') LAST=I-1
50 CONTINUE

OPEN(12, FILE='pltgen1', STATUS='OLD')
OPEN(14, FILE='plotinfo', STATUS='OLD')
OPEN(13, FILE=FNAM(:LAST)//'_tf.inp', STATUS='NEW')

READ(11, '(A90)')LINE
***** read to ingrp and change wdm
DO WHILE (LINE(:9).NE.' INGRP')
  IF (LINE(:3).EQ.'WDM') THEN
    DO 33 I=1, 50
      IF (LINE(I:I+6).EQ.'s04trib') LAST=I-1
33 CONTINUE
      WRITE(13, '(A,A5,A)')LINE(:LAST), 'loads', LINE(LAST+8:80)
    ELSE
      CALL RITE(LINE)
    END IF
  READ(11, '(A90)')LINE
END DO

***** get segments stored in JJEG and number of segments stored in INBASN
***** get rid of all pltgens except for one gener and one pltgen for each
***** rch

CALL RITE(LINE)
I=0
DO WHILE (LINE(:9).NE.' END I')
  READ(11, '(A90)')LINE
  IF (((LINE(7:12).EQ.'COPY ').OR.(LINE(7:12).EQ.'RCHRES'))
+ .AND.(icMMNT(LINE).EQ.0)) THEN
    CALL RITE(LINE)
    BACKSPACE 11
    I=I+1
    READ(11, '(17X, I3)')JJSEG(I)
    WRITE(13, '(A19, I1)')' GENER ' , I
    WRITE(13, '(A19, I1)')' PLTGEN ' , I
  ELSE
    IF ((LINE(7:12).NE.'PLTGEN')
+ .AND.(LINE(7:12).NE.'GENER ').AND.
+ (icMMNT(LINE).EQ.0)) CALL RITE(LINE)
```

```

        END IF
    END DO
    INBASN=I
    READ(11, '(A90)')LINE

***** change opcode section
    DO WHILE (LINE(:8).NE.' OPCODE')
        CALL RITE(LINE)
        READ(11, '(A90)')LINE
    END DO
    CALL RITE(LINE)

    DO WHILE (LINE(:8).NE.' END OP')
        READ(11, '(A90)')LINE
        IF (icMMNT(LINE).EQ.1) CALL RITE(LINE)
    END DO
    WRITE(13, '(A15)')'      1      4      19'
    CALL RITE(LINE)

***** read to network
    DO WHILE (LINE(:9).NE.'NETWORK  ')
        READ(11, '(A90)')LINE
        CALL RITE(LINE)
    END DO

    DO WHILE (LINE(:9).NE.'END NETWO')
        READ(11, '(A90)')LINE
    END DO

    DO 152 I=1, INBASN
        DO 151 J=1, 23
            READ(12, '(A90)')LINE
            IF (LINE(:6).EQ.'RCHRES') THEN
                WRITE(13, '(A7, I3, A42, I1, A27)')LINE(:7), JJSEG(I), LINE(11:52)
                +                                     , I, LINE(54:80)
            ELSEIF (LINE(:6).EQ.'GENER') THEN
                WRITE(13, '(A9, I1, A42, I1, A27)')LINE(:9), I, LINE(11:52)
                +                                     , I, LINE(54:80)
            ELSE
                CALL RITE(LINE)
            END IF
151         CONTINUE
            REWIND 12
152         CONTINUE
            BACKSPACE 11

            READ(11, '(A90)')LINE
            DO WHILE (LINE(:6).NE.'PLTGEN')
                CALL RITE(LINE)
                READ(11, '(A90)')LINE
            END DO
***** no more from 11

            DO 166 I=1, 10
                READ(14, '(A90)')LINE
                CALL RITE(LINE)
166         CONTINUE

            DO 168 I=1, INBASN

```

```

        WRITE(13,1100)I,'      REACH LOADS FROM SEG. ',JJSEG(I)
168    CONTINUE
1100   FORMAT(4X,I1,A27,I3)

        DO WHILE (LINE(:7).NE.'END RUN')
            READ(14,'(A90)')LINE
            CALL RITE(LINE)
        END DO
*****

        END

        SUBROUTINE RITE(LINE)
            CHARACTER*90,LINE
            IF (LINE(:37).EQ.'      ') THEN
                WRITE(13,*)
                GOTO 2002
            END IF

            DO 1001 I=1,90
                IF (LINE(I:I).NE.' ') LAST = I
1001    CONTINUE

            WRITE(13,'(A)') LINE(:LAST)
2002    CONTINUE
        END

        FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '***' **
***** it returns 0 if not, 1 if yes *****
*****
            CHARACTER*90,LINE

            icMMNT = 0
            DO 10 I=1,88
                IF (LINE(I:I+2).EQ.'***') THEN
                    icMMNT=1
                END IF
10    CONTINUE
            RETURN
        END

```

J-2 FORTRAN Program to Generate Load Files

```
PROGRAM LUSE
*****72*****72*****
** VARIABLE NAMES *****

***** this program makes the delivered load files

CHARACTER*25, FNAM
DIMENSION JJSEG(4)
CHARACTER*90, LINE

READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
DO 50 I = 1, 22
  IF (FNAM(I:I).EQ.'_') LAST=I-1
50 CONTINUE

OPEN(12, FILE='pltgen1', STATUS='OLD')
OPEN(14, FILE='plotinfo', STATUS='OLD')
OPEN(13, FILE=FNAM(:LAST)//'_tf.inp', STATUS='NEW')

READ(11, '(A90)')LINE
***** read to ingrp and change wdm
DO WHILE (LINE(:9).NE.' INGRP')
  IF (LINE(:3).EQ.'WDM') THEN
    DO 33 I=1, 50
      IF (LINE(I:I+6).EQ.'s04trib') LAST=I-1
33 CONTINUE
      WRITE(13, '(A,A5,A)')LINE(:LAST), 'loads', LINE(LAST+8:80)
    ELSE
      CALL RITE(LINE)
    END IF
  READ(11, '(A90)')LINE
END DO

***** get segments stored in JJEG and number of segments stored in INBASN
***** get rid of all pltgens except for one gener and one pltgen for each
***** rch

CALL RITE(LINE)
I=0
DO WHILE (LINE(:9).NE.' END I')
  READ(11, '(A90)')LINE
  IF (((LINE(7:12).EQ.'COPY ').OR.(LINE(7:12).EQ.'RCHRES'))
+ .AND.(icMMNT(LINE).EQ.0)) THEN
    CALL RITE(LINE)
    BACKSPACE 11
    I=I+1
    READ(11, '(17X, I3)')JJSEG(I)
    WRITE(13, '(A19, I1)')' GENER ' , I
    WRITE(13, '(A19, I1)')' PLTGEN ' , I
  ELSE
    IF ((LINE(7:12).NE.'PLTGEN')
+ .AND.(LINE(7:12).NE.'GENER ').AND.
+ (icMMNT(LINE).EQ.0)) CALL RITE(LINE)
  END IF
```



```

END DO
INBASN=I
READ(11,'(A90)')LINE

***** change opcode section
DO WHILE (LINE(:8).NE.' OPCODE')
  CALL RITE(LINE)
  READ(11,'(A90)')LINE
END DO
CALL RITE(LINE)

DO WHILE (LINE(:8).NE.' END OP')
  READ(11,'(A90)')LINE
  IF (ICMMNT(LINE).EQ.1) CALL RITE(LINE)
END DO
WRITE(13,'(A15)')'      1      4      19'
CALL RITE(LINE)

***** read to network
DO WHILE (LINE(:9).NE.'NETWORK  ')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO

DO WHILE (LINE(:9).NE.'END NETWO')
  READ(11,'(A90)')LINE
END DO

DO 152 I=1,INBASN
  DO 151 J=1,23
    READ(12,'(A90)')LINE
    IF (LINE(:6).EQ.'RCHRES') THEN
      WRITE(13,'(A7,I3,A42,I1,A27)')LINE(:7),JJSEG(I),LINE(11:52)
+                                     ,I,LINE(54:80)
    ELSEIF (LINE(:6).EQ.'GENER') THEN
      WRITE(13,'(A9,I1,A42,I1,A27)')LINE(:9),I,LINE(11:52)
+                                     ,I,LINE(54:80)
    ELSE
      CALL RITE(LINE)
    END IF
151   CONTINUE
      REWIND 12
152   CONTINUE
      BACKSPACE 11

    READ(11,'(A90)')LINE
    DO WHILE (LINE(:6).NE.'PLTGEN')
      CALL RITE(LINE)
      READ(11,'(A90)')LINE
    END DO
***** no more from 11

DO 166 I=1,10
  READ(14,'(A90)')LINE
  CALL RITE(LINE)
166  CONTINUE

DO 168 I=1,INBASN
  WRITE(13,1100)I,'      REACH LOADS FROM SEG. ',JJSEG(I)

```

```

168  CONTINUE
1100  FORMAT(4X,I1,A27,I3)

      DO WHILE (LINE(:7).NE.'END RUN')
          READ(14,'(A90)')LINE
          CALL RITE(LINE)
      END DO
*****

      END

      SUBROUTINE RITE(LINE)
          CHARACTER*90,LINE
          IF (LINE(:37).EQ.' ' ) THEN
              WRITE(13,*)
              GOTO 2002
          END IF

          DO 1001 I=1,90
              IF (LINE(I:I).NE.' ') LAST = I
1001      CONTINUE

          WRITE(13,'(A)') LINE(:LAST)
2002      CONTINUE
      END

      FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '***' **
***** it returns 0 if not, 1 if yes *****
*****
          CHARACTER*90,LINE

          icMMNT = 0
          DO 10 I=1,88
              IF (LINE(I:I+2).EQ.'***') THEN
                  icMMNT=1
              END IF
10      CONTINUE
          RETURN
      END

```

Attachment K

- K-1 Unix Script To Implement UCI and WDM Changes for Atmospheric Deposition Reduction Scenarios
- K-2 Template File To Generate Wdm Extraction UCI
- K-3 FORTRAN Program to Create Atmospheric Time Series Extraction UCI
- K-4 FORTRAN Program to Change Atmospheric Time Series
- K-5 FORTRAN Program to Create Atmospheric Time Series Import UCI
- K-6 FORTRAN Program to Change Main UCI for Conflicting DSNs
- K-7 FORTRAN Program to Create Atmospheric Time Series Import UCI With Conflicting DSNs

K-1 Unix Script To Implement UCI and WDM Changes for Atmospheric Deposition Reduction Scenarios

```
##### RUBE GOLDBERG AIR SECTION
##### SECTION TO GENERATE WDMs FOR AIR RUNS
###      REMOVE OLD FILES, COPY THE INPUT AND TEMPLATE FILE HERE
    rm conflict
    rm hspf3?.dat
    rm hspf4?.dat
    rm *_atdep_pltgen.inp
    rm wtemp_uci
    rm temp_uci
    cp $inp temp_uci
    cp /work/dpi/phase4a/util/bin/get_ts_temp .

###      MAKE THE UCI THAT EXTRACTS THE ATDEP DSN'S
    echo temp_uci | /work/dpi/phase4a/util/bin/make_atdep_uci.exe

###      RUN THE EXTRACTION UCI
    echo make_atdep_pltgen.inp | $hspf11

###      CHANGE THE EXTRACTED PLTGENS ACCORDING TO THE SCENARIO
    cp /work/dpi/phase4a/util/bin/atm_s08otca_wm.prn .
    cp /work/dpi/phase4a/util/bin/atm_s08otca_cd.prn .
    echo s08otca | /work/dpi/phase4a/util/bin/change_atdep_plt.exe

###      CHECK FOR EXISTENCE OF CONFLICT FILE
###      IF IT EXISTS MODIFY THE INPUT FILE AND USE THE
make_put_uci_conflict.exe
    if (-e conflict) then
        echo temp_uci | /work/dpi/phase4a/util/bin/resolve_wdm_conflict.exe
        mv wtemp_uci $inp
        cp /work/dpi/phase4a/wdm/freshwdm/s01ref/atdep_blank.wdm atdep_blank5.wdm
        cp /work/dpi/phase4a/wdm/freshwdm/s01ref/atdep_blank.wdm atdep_blank2.wdm
        cp /work/dpi/phase4a/wdm/freshwdm/s01ref/atdep_blank.wdm atdep_blank3.wdm
        cp /work/dpi/phase4a/wdm/freshwdm/s01ref/atdep_blank.wdm atdep_blank4.wdm
        echo make_atdep_pltgen.inp |
/work/dpi/phase4a/util/bin/make_put_uci_conflict.exe
    else

###      ELSE CREATE THE STANDARD WDM MODIFICATION UCI
    echo make_atdep_pltgen.inp | /work/dpi/phase4a/util/bin/make_put_uci.exe
endif

###      RUN THE MODIFICATION
    echo put_atdep_pltgen.inp | $hspf11

##### END AIR RUN SECTION
```

K-2 Template File To Generate Wdm Extraction UCI

```
END INGRP
END OPN SEQUENCE
```

```
PLTGEN
```

```
  PLOTINFO
```

#thru#	FILE	NPT	NMN	Labl	PYR	PIVL	***
1	30		3	0	12	1	
2	31		3	0	12	1	
3	32		3	0	12	1	
4	33		3	0	12	1	
5	34		3	0	12	1	
6	35		3	0	12	1	
7	36		3	0	12	1	
8	37		3	0	12	1	
9	38		3	0	12	1	
10	39		3	0	12	1	

```
END PLOTINFO
```

```
GEN-LABELS
```

```
  #thru#<-----TITLE ----->***          <-----Y AXIS----->
END GEN-LABELS
```

```
SCALING
```

#thru#	YMIN	YMAX	IVLIN	THRESH	***
1 99	0.	50000.	20.	0.0	

```
END SCALING
```

```
CURV-DATA
```

```
  #thru#  <Curve label  > ***
  1 99    NH4X
END CURV-DATA          1 1 AVER
```

```
CURV-DATA
```

```
  #thru#  <Curve label  > ***
  1 99    NO23
END CURV-DATA          1 1 AVER
```

```
CURV-DATA
```

```
  #thru#  <Curve label  > ***
  1 99    NO3D
END CURV-DATA          1 1 AVER
```

```
END PLTGEN
```

```
EXT SOURCES
```

```
<-Volume-> <Member> SsysSgap<--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # tem strg<-factor->strg <Name> # # <Name> # # ***
END EXT SOURCES
```

```
EXT TARGETS
```

```
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Volume-> <Member> Tsys Tgap Amd ***
<Name> # <Name> # #<-factor->strg <Name> # <Name> # tem strg strg***
END EXT TARGETS
```

```
NETWORK
```

```
<-Volume-> <-Grp> <-Member-><--Mult-->Tran <-Target vols> <-Grp> <-Member-> ***
<Name> # <Name> # #<-factor->strg <Name> # # <Name> # # ***
END NETWORK
```

END RUN

K-3 FORTRAN Program to Create Atmospheric Time Series Extraction UCI

```

PROGRAM MAKATD
*****72*****72*****
***** LINE = VARIABLE USED TO STORE A LINE
***** FNAM = NAME OF THE FILE TO MODIFY
***** xLUSE(I,J)= ACRES OF LAND USE SEGMENT I LAND USE J
***** JJSEG(I) = NAME OF SEGMENT I
***** AMON(I) = AMMONIA APPLIED TO PASTURE FOR SEGMENT I
***** ORGN(I) = ORGANIC NITROGEN APPLIED TO PASTURE FOR SEGMENT I
***** LTYPE = PERLND, IMPLND, OR RCHRES
***** TARGET = STORAGE FOR TARGET PORTION OF SCHEMATIC LINE

CHARACTER*25, FNAM
CHARACTER*4, DSNS(4,3)
DIMENSION JJSEG(4)
CHARACTER*90, LINE

***** open old and new input files
READ*, FNAM
OPEN(11, FILE='get_ts_temp', STATUS='OLD')
OPEN(12, FILE=FNAM, STATUS='OLD')
OPEN(13, FILE='make_atdep_pltgen.inp', STATUS='NEW')

***** read and write to INGRP
READ(12, '(A90)')LINE
DO WHILE (LINE(:9).NE.' INGRP')
  IF ((LINE(:3).NE.'WDM').OR.(LINE(4:4).EQ.' '))CALL RITE(LINE)
READ(12, '(A90)')LINE
END DO
WRITE(13, '(A)')' INGRP INDELT 24:00'

***** store segment numbers for this file in memory
I=0
DO WHILE (LINE(:9).NE.' END I')
  READ(12, '(A90)')LINE
  IF ((LINE(7:12).EQ.'RCHRES').OR.(LINE(7:10).EQ.'COPY')) THEN
    BACKSPACE 12
    I=I+1
    READ(12, '(17X,I3)')JJSEG(I)
  END IF
END DO

***** store number of segments in INBASN and get the land use and pasture
***** applications
INBASN=I

***** correct for nonstandard segment numbering
DO 10 J=1, INBASN
  IF (JJSEG(J).EQ.235) JJSEG(J)=230
  IF (JJSEG(J).EQ.265) JJSEG(J)=260
  IF (JJSEG(J).EQ.175) JJSEG(J)=180
10 CONTINUE

***** write ingrp of new file
DO 20 J=1, INBASN
  WRITE(13, '(6X,A6,7X,I1)')'PLTGEN', J

```

```

20    CONTINUE

***** copy template file to new file until GEN LABELS section
DO WHILE (LINE(:12).NE.' GEN-LABELS')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO
READ(11,'(A90)')LINE
CALL RITE(LINE)

***** stick in GEN LABELS particular to this input file
DO 50 J=1,INBASN
  WRITE(13,2000)J,JJSEG(J)
50    CONTINUE

2000  FORMAT(4X,I1,5X,'SEGMENT ',I3)
***** read down to external sources
DO WHILE (LINE(:11).NE.'EXT SOURCES')
  READ(11,'(A90)')LINE
  CALL RITE(LINE)
END DO
READ(11,'(A90)')LINE
CALL RITE(LINE)
READ(11,'(A90)')LINE
CALL RITE(LINE)

icNFLC=0
***** find DSN's from the regular input file
DO WHILE (LINE(:7).NE.'END RUN')
  READ(12,'(A90)')LINE
***** corrections for extra wdm's that may already be in file
  LINE(4:4)=' '
  IF (LINE(12:15).EQ.'NH4X') THEN
    IF (icMNT(LINE).EQ.0) THEN
      IF (LINE(44:49).EQ.'PERLND') THEN
        READ(LINE,'(50X,I3)')ISEGM
        DO 70 J=1,INBASN
          IF (JJSEG(J).EQ.ISEGM-1) THEN
            WRITE(13,1000)LINE(:38),J,'1'
            DSNS(J,1)=LINE(7:10)
            DO 67 JJ=1,INBASN
              IF((JJ.NE.J).AND.(DSNS(JJ,1).EQ.DSNS(J,1)))icNFLC=1
67              CONTINUE
            END IF
          CONTINUE
70          END IF
        END IF
      END IF
    END IF
  END IF

  IF (LINE(12:15).EQ.'NO23') THEN
    IF (icMNT(LINE).EQ.0) THEN
      IF (LINE(44:49).EQ.'PERLND') THEN
        READ(LINE,'(50X,I3)')ISEGM
        DO 71 J=1,INBASN
          IF (JJSEG(J).EQ.ISEGM-1) THEN
            WRITE(13,1000)LINE(:38),J,'2'
            DSNS(J,2)=LINE(7:10)
            DO 68 JJ=1,INBASN
              IF((JJ.NE.J).AND.(DSNS(JJ,2).EQ.DSNS(J,2)))icNFLC=1
68              CONTINUE
            END IF
          END IF
        END IF
      END IF
    END IF
  END IF

```



```

71          CONTINUE
           END IF
           END IF
           END IF

           IF (LINE(12:15).EQ.'NO3D') THEN
             IF (icMMNT(LINE).EQ.0) THEN
               IF (LINE(44:49).EQ.'PERLND') THEN
                 READ(LINE,'(50X,I3)')ISEGM
                 DO 72 J=1,INBASN
                   IF (JJSEG(J).EQ.ISEGM-1) THEN
                     WRITE(13,1000)LINE(:38),J,'3'
                     DSNS(J,3)=LINE(7:10)
                     DO 69 JJ=1,INBASN
                       IF((JJ.NE.J).AND.(DSNS(JJ,3).EQ.DSNS(J,3)))icNFLC=1
69          CONTINUE
                   END IF
                 END IF
72          CONTINUE
           END IF
           END IF
           END IF

           END DO

           LINE='GO HOOS'
           DO WHILE (LINE(:7).NE.'END RUN')
             READ(11,'(A90)')LINE
             CALL RITE(LINE)
           END DO

***** if conflict found (icNFLC=1) then write the conflict file
           IF (icNFLC.EQ.1) THEN
             OPEN (14,FILE='conflict',STATUS='NEW')
             DO 123 J=1,INBASN
               WRITE(14,'(A3,I1,1X,I3)')'WDM',J+1,JJSEG(J)
123          CONTINUE
             END IF

1000  FORMAT(A38,'SAME PLTGEN ',I1,' INPUT MEAN ',A1)

           END

           SUBROUTINE RITE(LINE)
             CHARACTER*90,LINE
             IF (LINE(:37).EQ.' ') THEN
               WRITE(13,*)
               GOTO 2002
             END IF

             DO 1001 I=1,90
               IF (LINE(I:I).NE.' ') LAST = I
1001          CONTINUE

             WRITE(13,'(A)') LINE(:LAST)
2002          CONTINUE
           END

           FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '***' **

```

```
***** it returns 0 if not, 1 if yes *****
*****
CHARACTER*90,LINE

      icMMNT = 0
      DO 10 I=1,88
        IF (LINE(I:I+2).EQ.'***') THEN
          icMMNT=1
        END IF
10    CONTINUE
      RETURN
      END
```

K-4 FORTRAN Program to Change Atmospheric Time Series

```
PROGRAM ONE
***** this program changes pltgens according to reduction values supplied by
***** RADM.

CHARACTER*80 DUMMY
CHARACTER*70 FNAM
CHARACTER*20 SCENAR
DIMENSION X(10)

      READ(*,'(A)')SCENAR
      print*,scenar
      print*,len(scenar)
      print*,scenar(2:2)
      DO 999 JJJ=0,5

      FNAM='hspf3'//CHAR(JJJ+48)//'.dat'
      OPEN(12,FILE=FNAM,STATUS='OLD',ERR=999)

      DO 10 I=1,5
      READ(12,'(A80)')DUMMY
10      CONTINUE

      READ(DUMMY,'(27X,I3)')JJSEG
      REWIND 12
      IF (DUMMY(28:28).EQ.' ') DUMMY(28:28)='_ '
      FNAM='s'//DUMMY(28:30)//'.atdep'
      OPEN(13,FILE=FNAM,STATUS='NEW')

      DO 101 I=1,26
      READ(12,'(A80)')DUMMY
      CALL RITE(DUMMY)
101     CONTINUE

      CALL GETATM(SCENAR,JJSEG,CD_WET,WM_WET,CD_DRY,WM_DRY)
      I=1
      DO WHILE (I.EQ.1)
      READ(12,1000,ERR=999)
+      DUMMY, YEAR, MONTH, DAY, HOUR, ZERO, X(1), X(2), X(3)
      IF ((MONTH.LT.5).OR.(MONTH.GT.9)) THEN
      X(2)=X(2)*CD_WET
      X(3)=X(3)*CD_DRY
      ELSE
      X(2)=X(2)*WM_WET
      X(3)=X(3)*WM_DRY
      END IF
      WRITE(13,1000)DUMMY, YEAR, MONTH, DAY, HOUR, ZERO, X(1), X(2), X(3)
200     END DO

999     CONTINUE
1000    FORMAT(A6,I4,4I3,3E14.5)
      END

      SUBROUTINE GETATM(SCENAR,JJSEG,CD_WET,WM_WET,CD_DRY,WM_DRY)
*****
** This subroutine uses the file atm_xx.prn to find **
** the atmospheric deposition percentages for wet and **
** dry deposition by segment **
```

```

*****

      CHARACTER*20 SCENAR

      DO 10 I=1,20
        IF (SCENAR(I:I).NE.' ') LAST=I
10     CONTINUE

**  FADFAC*,1 = WET DEPOSITION, 2= DRY DEPOSITION % OF BASE
      OPEN(98,FILE='atm_'//SCENAR(:LAST)//'_cd.prn',STATUS='OLD')
      OPEN(99,FILE='atm_'//SCENAR(:LAST)//'_wm.prn',STATUS='OLD')

      ISEGM=0
      DO WHILE (ISEGM.NE.JJSEG)
        READ(98,100)ISEGM
      END DO
      BACKSPACE 98
      READ(98,201) CD_WET,CD_DRY
      CLOSE(98)

      ISEGM=0
      DO WHILE (ISEGM.NE.JJSEG)
        READ(99,100)ISEGM
      END DO
      BACKSPACE 99
      READ(99,201) WM_WET,WM_DRY
      CLOSE(99)

100   FORMAT(5X,I3)
201   FORMAT(8X,2F8.0)

      END

      SUBROUTINE RITE(LINE)
        CHARACTER*80,LINE
        IF (LINE(:37).EQ.' ') THEN
          WRITE(13,*)
          GOTO 2002
        END IF

        DO 1001 I=1,80
          IF (LINE(I:I).NE.' ') LAST = I
1001   CONTINUE

        WRITE(13,'(A)') LINE(:LAST)
2002   CONTINUE
      END

```

K-5 FORTRAN Program to Create Atmospheric Time Series Import UCI

```

PROGRAM MAKMUT
*****
***** THIS PROGRAM TAKES AN EXTRACTION HSPF INPUT FILE **
***** AND MAKES AN OUTPUT FILE THAT PUTS A TIME SERIES **
***** INTO A WDM *****
*****
      CHARACTER*90 LINE

```

```

OPEN(12,FILE='make_atdep_pltgen.inp',STATUS='OLD')
OPEN(13,FILE='put_atdep_pltgen.inp',STATUS='NEW')

***** read from old file and change pltgen to mutsin
LINE='XXX'
DO WHILE (LINE(:7).NE.'END OPN')
  READ(12,'(A90)')LINE
  IF (LINE(7:12).EQ.'PLTGEN') LINE(7:12)='MUTSIN'
  CALL RITE(LINE)
END DO

***** enter some standard stuff
***** hardcoded to avoid copying extra files
WRITE(13,'(A)') 'MUTSIN'
WRITE(13,'(A)') ' MUTSINFO'
WRITE(13,'(A)') ' # - # MFL NPT NMN NLI MSFG***'
WRITE(13,'(A)') ' 1 40 3 25 0 '
WRITE(13,'(A)') ' 2 41 3 25 0 '
WRITE(13,'(A)') ' 3 42 3 25 0 '
WRITE(13,'(A)') ' 4 43 3 25 0 '
WRITE(13,'(A)') ' 5 44 3 25 0 '
WRITE(13,'(A)') ' 6 45 3 25 0 '
WRITE(13,'(A)') ' 7 46 3 25 0 '
WRITE(13,'(A)') ' 8 47 3 25 0 '
WRITE(13,'(A)') ' 9 48 3 25 0 '
WRITE(13,'(A)') ' 10 49 3 25 0 '
WRITE(13,'(A)') ' END MUTSINFO'
WRITE(13,'(A)') 'END MUTSIN'
WRITE(13,'(A)') ''
WRITE(13,'(A)') 'EXT TARGETS'

***** read down to external sources in old file
DO WHILE (LINE(:8).NE.'EXT SOUR')
  READ(12,'(A90)')LINE
  END DO
  READ(12,'(A90)')LINE
  CALL RITE(LINE)
  READ(12,'(A90)')LINE
  CALL RITE(LINE)

***** write in the external targets based on the old file
  READ(12,'(A90)')LINE
  DO WHILE (LINE(:7).NE.'END EXT')
    WRITE(13,1000)'MUTSIN',LINE(53:53),'OUTPUT',LINE(66:73),
+      LINE(39:42),LINE(1:24),'REPL'
1000 FORMAT(A6,3X,A1,1X,A6,1X,A8,12X,A4,1X,A24,6X,A4)
    READ(12,'(A90)')LINE
  END DO

***** finish out the bookkeeping stuff
WRITE(13,'(A)') 'END EXT TARGETS'
WRITE(13,'(A)') ''
WRITE(13,'(A)') 'END RUN'

END

SUBROUTINE RITE(LINE)
  CHARACTER*90,LINE
  IF (LINE(:37).EQ.'

```

```
        WRITE(13,*)  
        GOTO 2002  
    END IF  
  
    DO 1001 I=1,90  
        IF (LINE(I:I).NE.' ') LAST = I  
1001    CONTINUE  
  
        WRITE(13,'(A)') LINE(:LAST)  
2002    CONTINUE  
    END
```

K-6 FORTRAN Program to Change Main UCI for Conflicting DSNs

PROGRAM CHGUCI

*****72*****72*****

```
CHARACTER*25, FNAM
CHARACTER*4, WDM(4)
DIMENSION JJSEG(4), ISEG(4)
CHARACTER*90, LINE
```

***** open old and new input files

```
READ*, FNAM
OPEN(11, FILE=FNAM, STATUS='OLD')
OPEN(13, FILE='w'//FNAM, STATUS='NEW')
```

***** read to INGRP

```
READ(11, '(A90)')LINE
DO WHILE (LINE(:9).NE.' INGRP')
READ(11, '(A90)')LINE
END DO
```

***** store segment numbers for this file in memory

```
I=0
DO WHILE (LINE(:9).NE.' END I')
READ(11, '(A90)')LINE
IF ((LINE(7:12).EQ.'RCHRES').OR.(LINE(7:10).EQ.'COPY')) THEN
BACKSPACE 11
I=I+1
READ(11, '(17X, I3)')JJSEG(I)
END IF
END DO
```

***** store number of segments in INBASN

```
INBASN=I
```

***** correct for nonstandard segment numbering

```
DO 10 J=1, INBASN
IF (JJSEG(J).EQ.235) JJSEG(J)=230
IF (JJSEG(J).EQ.265) JJSEG(J)=260
IF (JJSEG(J).EQ.175) JJSEG(J)=180
10 CONTINUE
```

***** reset file to read from beginning

```
REWIND 11
```

***** read and write to WDM line

```
DO WHILE (LINE(:13).NE.'WDM 21')
READ(11, '(A90)')LINE
CALL RITE(LINE)
END DO

OPEN(10, FILE='conflict', STATUS='OLD')
DO 13 I=1, INBASN
READ(10, '(A4, 1X, I3)', ERR=14)WDM(I), ISEG(I)
WRITE(13, 888)'WDM', I+1, ' 2', I+5, ' atdep_blank', I+1, '.wdm'
13 CONTINUE
888 FORMAT(A3, I1, A8, I1, A14, I1, A4)
14 CONTINUE
```

```

CLOSE (10)

DO WHILE (LINE(:7).NE.'EXT SOU')
READ(11,'(A90)')LINE
  IF (LINE(:3).NE.'WDM' .AND. LINE(5:12).NE.' 2')
+   CALL RITE(LINE)
END DO

DO WHILE (LINE(:7).NE.'END EXT')
READ(11,'(A90)')LINE
  IF (((LINE(12:15).EQ.'NO23').OR.
+   (LINE(12:15).EQ.'NO3D').OR.
+   (LINE(12:15).EQ.'NH4X')).AND.
+   (icMMNT(LINE).EQ.0)) THEN
  READ(LINE,'(50X,I3)')ISEGM
  DO 22 I=1,INBASN
    IF ((ISEGM.EQ.ISEG(I)).OR.(ISEGM.EQ.JJSEG(I)+1).OR.
+   (ISEGM.EQ.JJSEG(I)+5)) LINE(:4)=WDM(I)
22  CONTINUE
  END IF
  CALL RITE(LINE)
END DO

***** close out
DO WHILE (LINE(:7).NE.'END RUN')
READ(11,'(A90)')LINE
CALL RITE(LINE)
END DO

999  CONTINUE

1000  FORMAT(A6,1X,I2,I1,33X,A17)
2000  FORMAT(A6,1X,I2,I1,16X,F10.0,7X,A17)
3000  FORMAT(A6,1X,I2,I1,16X,17X,A17)
END

SUBROUTINE RITE(LINE)
  CHARACTER*90,LINE
  IF (LINE(:37).EQ.' ') THEN
    WRITE(13,*)
    GOTO 2002
  END IF

  DO 1001 I=1,90
    IF (LINE(I:I).NE.' ') LAST = I
1001  CONTINUE

  WRITE(13,'(A)') LINE(:LAST)
2002  CONTINUE
END

FUNCTION icMMNT(LINE)
*****
***** this function determine whether LINE contains '****' **
***** it returns 0 if not, 1 if yes *****
*****
CHARACTER*90,LINE

```



```
      iCMMNT = 0
      DO 10 I=1,88
        IF (LINE(I:I+2).EQ.'***') THEN
          iCMMNT=1
        END IF
10    CONTINUE
      RETURN
      END
```

K-7 FORTRAN Program to Create Atmospheric Time Series Import UCI With Conflicting DSNs

```

PROGRAM MAKMUT
*****
***** THIS PROGRAM TAKES AN EXTRACTION HSPF INPUT FILE **
***** AND MAKES AN OUTPUT FILE THAT PUTS A TIME SERIES **
***** INTO A WDM *****
*****

CHARACTER*90 LINE

OPEN(12,FILE='make_atdep_pltgen.inp',STATUS='OLD')
OPEN(13,FILE='put_atdep_pltgen.inp',STATUS='NEW')

***** read from old file and change pltgen to mutsin
LINE='XXX'
READ(12,'(A90)')LINE
DO WHILE (LINE(:13).NE.'WDM          21')
  CALL RITE(LINE)
  READ(12,'(A90)')LINE
END DO

WRITE(13,'(A)')'WDM1          26  atdep_blank2.wdm'
WRITE(13,'(A)')'WDM2          27  atdep_blank3.wdm'
WRITE(13,'(A)')'WDM3          28  atdep_blank4.wdm'
WRITE(13,'(A)')'WDM4          29  atdep_blank5.wdm'

DO WHILE (LINE(:7).NE.'END OPN')
  READ(12,'(A90)')LINE
  IF (LINE(7:12).EQ.'PLTGEN') LINE(7:12)='MUTSIN'
  CALL RITE(LINE)
END DO

***** enter some standard stuff
***** hardcoded to avoid copying extra files
WRITE(13,'(A)') 'MUTSIN'
WRITE(13,'(A)') '  MUTSINFO'
WRITE(13,'(A)') '    # - #  MFL  NPT  NMN  NLI  MSFG***'
WRITE(13,'(A)') '    1    40    3  25    0    '
WRITE(13,'(A)') '    2    41    3  25    0    '
WRITE(13,'(A)') '    3    42    3  25    0    '
WRITE(13,'(A)') '    4    43    3  25    0    '
WRITE(13,'(A)') '    5    44    3  25    0    '
WRITE(13,'(A)') '    6    45    3  25    0    '
WRITE(13,'(A)') '    7    46    3  25    0    '
WRITE(13,'(A)') '    8    47    3  25    0    '
WRITE(13,'(A)') '    9    48    3  25    0    '
WRITE(13,'(A)') '   10    49    3  25    0    '
WRITE(13,'(A)') '  END MUTSINFO'
WRITE(13,'(A)') 'END MUTSIN'
WRITE(13,'(A)') ''
WRITE(13,'(A)') 'EXT TARGETS'

***** read down to external sources in old file

```

```

DO WHILE (LINE(:8).NE.'EXT SOUR')
  READ(12,'(A90)')LINE
END DO
READ(12,'(A90)')LINE
CALL RITE(LINE)
READ(12,'(A90)')LINE
CALL RITE(LINE)

***** write in the external targets based on the old file
  READ(12,'(A90)')LINE
DO WHILE (LINE(:7).NE.'END EXT')
  LINE(4:4)=LINE(53:53)
  WRITE(13,1000)'MUTSIN',LINE(53:53),'OUTPUT',LINE(66:73),
+           LINE(39:42),LINE(1:24),'REPL'
1000 FORMAT(A6,3X,A1,1X,A6,1X,A8,12X,A4,1X,A24,6X,A4)
  READ(12,'(A90)')LINE
END DO

***** finish out the bookkeeping stuff
WRITE(13,'(A)') 'END EXT TARGETS'
WRITE(13,'(A)') ''
WRITE(13,'(A)') 'END RUN'

END

SUBROUTINE RITE(LINE)
  CHARACTER*90,LINE
  IF (LINE(:37).EQ.' ') THEN
    WRITE(13,*)
    GOTO 2002
  END IF

  DO 1001 I=1,90
    IF (LINE(I:I).NE.' ') LAST = I
1001 CONTINUE

  WRITE(13,'(A)') LINE(:LAST)
2002 CONTINUE
END

```

This report is cited in the following way:
Palace, M.W., L.C.Linker, and G.W. Shenk. 1998. Chesapeake Bay Watershed Model Applications & Calculation of Nutrient & Sediment Loadings - Appendix I: Model Operations Manual Report of the Modeling Subcommittee. August, 1998. Chesapeake Bay Program Office, Annapolis, MD. <http://www.chesapeakebay.net/modsc.htm> - *Publications Tab*. Date Retrieved: *retrieval date*