A. Virginia & Maryland: List of Runs for 2023 GAM results

1. Full record using Models: gam2 and gam4[a];

Parameter	Layer	Full years for GAM runs	Subsets for percent change[b]	
			Seasons	years
Temperature	S or SAP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Salinity[a]	S or SAP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Dissolved Oxygen	S or SAP	1985-2023	Annual, Summer1 (Jun-Sep)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B only	1985-2023	Annual, Summer1 (Jun-Sep)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Secchi Depth	--	1985-2023	Annual, SAV (Apr-Oct)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Chlorophyll-a	S or SAP	1985-2023	Annual, Spring1 (Mar-May), Summer2 (Jun-Sep)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	1985-2023	Annual, Spring1 (Mar-May), Summer2 (Jun-Sep)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023

[a]gam4 not needed for salinity (no flow/salinity-adjustment for salinity)

[b]1985 does not need to be the start date if it is not the first full year of data, but use 2 years for the percent change

2. Total Nutrients Models: gam2/3 and gam4/5; (these parameters may have interventions as previously tested)

Parameter	Layer	Full years for GAM runs	Subsets for percent change[b]	
			Seasons	years
Total Nitrogen (note – start dates vary, see notes below)[a]	S or SAP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Total Phosphorus	S or SAP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	1985-2023	Annual	1985-1986 to 2022-2023; 2014-2015 to 2022-2023

[a]Decisions were made to start VA tribs in 1994 (use 1994-1995 period) and VA mainstem in 1988 (use 1988-1989) for TN

[b]1985 does not need to be the start date if it is not the first full year of data.

3. 1999 start Models: gam2 at least, preferable gam4 also

Parameter	Layer	Full years for GAM runs[b]	Subsets for percent change	
			Seasons	years
TSS	S or SAP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
Dissolved inorganic nitrogen (DIN)	S or SAP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
Orthophosphate (PO4)	S or SAP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
	B or BBP	Any year -2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023

[b] 1999 is fine for a start date of these runs, or earlier if possible for any stations. The key thing is that the percent change computations (set with analySpec$gamDiffPeriods) should at least contain 1999-2000 to 2022-2023 for comparison between states.

Washington DC stations: List of Runs for 2023 GAM results

Based on what was decided and used the last 2 years, this is the list that might be for DC stations. Note that we did not have PO4 results ending in 2022.

1. Models: gam2 and gam4

Parameter	Layer	Full years for GAM runs	Subsets for percent change[b]	
			Seasons	years
Dissolved Oxygen	S	1985-2023	Annual, Summer1 (Jun-Sep)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Secchi Depth	S	1985-2023	Annual, SAV (Apr-Oct)	1985-1986 to 2022-2023; 2014-2015 to 2022-2023
Chlorophyll-a	S	Any year[a] - 2023	Annual, Spring1 (Mar-May), Summer2 (Jun-Sep)	2014-2015 to 2022-2023 (we just presented short-term for these stations based on data availably for chla)
TSS	S	Any year[a] - 2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023
Orthophosphate (PO4)	S	Any year[a] - 2023	Annual	1999-2000 to 2022-2023; 2014-2015 to 2022-2023

[a] 1999 is fine for a start date of these runs, or earlier if possible for any stations. The key thing is that the percent change computations (set with analySpec$gamDiffPeriods) should at least contain 1999-2000 to 2022-2023 for comparison between states.