

## 1. cGAM-PPLO model (`all_gage_looest_pplo.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_pplo` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the censored generalized additive model.
8. `pplo` — The observed decadal no-flow fraction.
9. `flowtime` — The flowtime of the decadal no-flow fraction for which the flowtime is the base-10 logarithmic transformation of the number of nonzero streamflow days observed in the decade.
10. `est_lwr_pplo` — The whole-model lower 95-percent prediction limit of the decadal no-flow fraction.
11. `est_pplo` — The whole-model estimate of the decadal no-flow fraction.
12. `est_upr_pplo` — The whole-model upper 95-percent prediction limit of the decadal no-flow fraction.
13. `est_lwr_flowtime` — The whole-model lower 95-percent prediction limit of the decadal flowtime in base-10 logarithms of days.
14. `est_flowtime` — The whole-model estimate of the decadal flowtime is the base-10 logarithmic transformation of the number of nonzero streamflow days observed in the decade.
15. `est_upr_flowtime` — The whole-model upper 95-percent prediction limit of the decadal flowtime in base-10 logarithms of days.
16. `rse_flowtime` — The scale of the residuals of the whole model in base-10 logarithmic transformation of days, and note that the model is constructed as a censored regression of the flowtime and not the no-flow fraction.
17. `se_fit_flowtime` — The standard error of fit reported by the whole model and note that the model is constructed as a censored regression of the flowtime and not the no-flow fraction.
18. `loo_est_lwr_pplo` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of decadal no-flow fraction.
19. `loo_est_pplo` — The LOO estimate of decadal no-flow fraction.
20. `loo_est_upr_pplo` — The LOO upper 95-percent prediction limit of decadal no-flow fraction.
21. `loo_est_lwr_flowtime` — The LOO lower 95-percent prediction limit of the decadal flowtime in base-10 logarithms of days.
22. `loo_est_flowtime` — The LOO estimate of the decadal flowtime in base-10 logarithms of days.
23. `loo_est_upr_flowtime` — The LOO upper 95-percent prediction limit of the decadal flowtime in base-10 logarithms of days.

## 2. GAM-L1 model (`all_gage_looest_L1.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_L1` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `bias_corr` — The Duan smearing estimator of the re-transformation bias correction factor.
9. `L1` — The observed decadal mean nonzero streamflow, cubic meters per second.
10. `est_lwr_L1` — The whole-model lower 95-percent prediction limit of the decadal mean nonzero streamflow, cubic meters per second.
11. `est_L1` — The whole-model estimate the decadal mean nonzero streamflow, cubic meters per second.
12. `est_upr_L1` — The whole-model upper 95-percent prediction limit of the decadal mean nonzero streamflow, cubic meters per second.
13. `rse_L1` — The scale of the residuals of the whole model, cubic meters per second.
14. `se_fit_L1` — The standard error of fit reported by the whole model, cubic meters per second.
15. `loo_est_lwr_L1` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal mean nonzero streamflow, cubic meters per second.
16. `loo_est_L1` — The LOO estimate of the decadal mean nonzero streamflow, cubic meters per second.
17. `loo_est_upr_L1` — The LOO upper 95-percent prediction limit of the decadal mean nonzero streamflow, cubic meters per second.

## 3. Combined cGAM-PPLO and GAM-L1 models (`all_gage_looest_overL1.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983. over

7. `in_model_L1` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `overL1` — The decadal mean streamflow, cubic meters per second.
9. `est_lwr_overL1` — The whole-model lower 95-percent prediction limit of the decadal mean streamflow corrected by (1+0.23) correction to tighten the limits to correct 95-percent coverage probabilities and Duan smearing factor applied in computation of the mean, cubic meters per second.
10. `est_overL1` — The whole-model estimate the decadal mean streamflow and Duan smearing factor applied in computation of the mean, cubic meters per second.
11. `est_upr_overL1` — The whole-model upper 95-percent prediction limit of the decadal mean streamflow corrected by (1-0.23) correction to tighten the limits to correct 95-percent coverage probabilities and Duan smearing factor applied in computation of the mean, cubic meters per second.
12. `loo_est_lwr_overL1` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal mean streamflow corrected by (1+0.23) correction to tighten the limits to correct 95-percent coverage probabilities and Duan smearing factor applied in computation of the mean, cubic meters per second.
13. `loo_est_overL1` — The LOO estimate of the decadal mean streamflow and Duan smearing factor applied in computation of the mean, cubic meters per second.
14. `loo_est_upr_overL1` — The LOO upper 95-percent prediction limit of the decadal mean nonzero streamflow corrected by (1-0.23) correction to tighten the limits to correct 95-percent coverage probabilities and Duan smearing factor applied in computation of the mean, cubic meters per second.

#### 4. GAM-T2 model (`all_gage_looest_T2.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_T2` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `T2` — The observed decadal coefficient of L-variation of the nonzero streamflows, dimensionless.
9. `est_lwr_T2` — The whole-model lower 95-percent prediction limit of the decadal coefficient of L-variation, dimensionless.
10. `est_T2` — The whole-model estimate the decadal coefficient of L-variation, dimensionless.
11. `est_upr_T2` — The whole-model upper 95-percent prediction limit of the decadal coefficient of L-variation, dimensionless.
12. `rse_T2` — The scale of the residuals of the whole model, dimensionless.
13. `se.fit_T2` — The standard error of fit reported by the whole model, dimensionless.

14. `loo_est_lwr_T2` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal coefficient of L-variation, dimensionless.
15. `loo_est_T2` — The LOO estimate of the decadal coefficient of L-variation, dimensionless.
16. `loo_est_upr_T2` — The LOO upper 95-percent prediction limit of the decadal coefficient of L-variation, dimensionless.

## 5. GAM-T3 model (`all_gage_looest_T3.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_T3` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `T3` — The observed decadal L-skew of the nonzero streamflows, dimensionless.
9. `est_lwr_T3` — The whole-model lower 95-percent prediction limit of the decadal L-skew, dimensionless.
10. `est_T3` — The whole-model estimate the decadal L-skew, dimensionless.
11. `est_upr_T3` — The whole-model upper 95-percent prediction limit of the decadal L-skew, dimensionless.
12. `rse_T3` — The scale of the residuals of the whole model, dimensionless.
13. `se_fit_T3` — The standard error of fit reported by the whole model, dimensionless.
14. `loo_est_lwr_T3` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal L-skew, dimensionless.
15. `loo_est_T3` — The LOO estimate of the decadal L-skew, dimensionless.
16. `loo_est_upr_T3` — The LOO upper 95-percent prediction limit of the decadal L-skew, dimensionless.

## 6. GAM-T4 model (`all_gage_looest_T4.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.

5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_T4` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `T4` — The observed decadal L-kurtosis of the nonzero streamflows, dimensionless.
9. `est_lwr_T4` — The whole-model lower 95-percent prediction limit of the decadal L-kurtosis, dimensionless.
10. `est_T4` — The whole-model estimate the decadal L-kurtosis, dimensionless.
11. `est_upr_T4` — The whole-model upper 95-percent prediction limit of the decadal L-kurtosis, dimensionless.
12. `rse_T4` — The scale of the residuals of the whole model, dimensionless.
13. `se.fit_T4` — The standard error of fit reported by the whole model, dimensionless.
14. `loo_est_lwr_T4` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal L-kurtosis, dimensionless.
15. `loo_est_T4` — The LOO estimate of the decadal L-kurtosis, dimensionless.
16. `loo_est_upr_T4` — The LOO upper 95-percent prediction limit of the decadal L-kurtosis, dimensionless.

## 7. GAM-T5 model (`all_gage_looest_T5.feather`)

1. `comid` — The stream reach specific common identification number (COMID) of the stream reach identified as the stream reach of the USGS streamgage. Note that geometrically, streamgages could share a COMID, so do not rely on COMID being absolutely not repeated between streamgages.
2. `site_no` — The USGS streamflow-gaging (streamgage) identification number.
3. `huc12` — The level-12 hydrologic unit code (HUC12) number containing the streamgage. Note that geometrically, streamgages could share a HUC12, so do not rely on HUC12 being absolutely not repeated between streamgages.
4. `decade` — The decade for which the 1950 decade is defined as the days January 1, 1950 to December 31, 1959.
5. `dec_long_va` — The decimal degrees longitude in North American Datum of 1983.
6. `dec_lat_va` — The decimal degrees latitude in North American Datum of 1983.
7. `in_model_T5` — A binary indicator (1 = yes, 0 = no) that the streamgage-decade record was included in the whole-model computations to construct the generalized additive model.
8. `T5` — The observed decadal fifth L-moment ratio of the nonzero streamflows, dimensionless.
9. `est_lwr_T5` — The whole-model lower 95-percent prediction limit of the decadal fifth L-moment ratio, dimensionless.
10. `est_T5` — The whole-model estimate the decadal fifth L-moment ratio, dimensionless.
11. `est_upr_T5` — The whole-model upper 95-percent prediction limit of the decadal fifth L-moment ratio, dimensionless.
12. `rse_T5` — The scale of the residuals of the whole model, dimensionless.
13. `se.fit_T5` — The standard error of fit reported by the whole model, dimensionless.
14. `loo_est_lwr_T5` — The leave-one-watershed-out (LOO) lower 95-percent prediction limit of the decadal fifth L-moment ratio, dimensionless.
15. `loo_est_T5` — The LOO estimate of the decadal fifth L-moment ratio, dimensionless.
16. `loo_est_upr_T5` — The LOO upper 95-percent prediction limit of the decadal fifth L-moment ratio, dimensionless.