**Table 1** Definition of the hydrologic metrics used in our comparison of discharge produced using V*flo*, drainage area ratios, and gauge data (USGS gauging station).

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| Metric | Resolution | Definition |
| MA1 | Daily | Mean of the daily flow values for the entire flow record. |
|  | Monthly | As above – replace daily flows with monthly flows |
| MA3 | Daily | Coefficient of variation of annual flows – calculate annual standard deviation of the daily flows and divide by the annual mean of the daily flows, multiply by 100, and find the mean of the annual values. |
|  | Monthly | As above – replace daily flows with monthly flows |
| MA27 | Daily | Coefficient of variation of April flows –calculate annual standard deviation of the daily flows for April and divide by the annual mean of the daily flows for April, multiply by 100, and find the mean of the annual values. |
|  | Monthly | Calculate the standard deviation of the monthly flows for April and divide by the mean of the monthly flows for April, multiply by 100, |
| ML5 | Daily | Minimum flows for May – calculate the annual minimum of the daily flows for May, and find the mean of the annual values. |
|  | Monthly | Mean monthly flow for May |
| MH17 | Daily | High flow discharge index – calculate the 25% exceedance value for the whole flow record, divide by the median flow for the whole flow record. |
|  | Monthly | As above |
| FL3# | Daily | Frequency of low pulse spells – 1) calculate the number of days per year with flows below a threshold of 5% of the mean of the daily flow values for the entire flow record, and find the mean of the annual values, and 2) calculate the annual number of discrete events with flows below a threshold of 5% of the mean of the daily flow values for the entire flow record, and find the mean of the annual values. |
|  | Monthly | Calculate the number of months per year with flows below a threshold of 5% of the mean of the monthly flow values for the entire flow record, and find the mean of the annual values |
| FH5# | Daily | Flood frequency - 1) calculate the number of days per year with flows above a threshold of the median of the daily flow values for the entire flow record, and find the mean of the annual values, and 2) calculate the annual number of discrete events with flows above a threshold of the median of the daily flow values for the entire flow record, and find the mean of the annual values. |
| FH3 | Monthly | Calculate the number of months per year with flows above a threshold of three times the median of the monthly flow values for the entire flow record, and find the mean of the annual values |
| DL16 | Daily | Low flow pulse duration – for each year calculate the average duration of discrete events with flows below a threshold of 25th percentile of the daily flow values for the entire flow record, and find the mean of the annual values. |
|  | Monthly | N/A |
| DH17 | Daily | High flow duration – for each year calculate the average duration of discrete events with flows above a threshold of the median of the daily flow values for the entire flow record, and find the mean of the annual values. |
|  | Monthly | N/A |
| TA1 | Daily | Constancy – calculated following the formulation of Colwell (Colwell, 1974). |
|  | Monthly | N/A |
| TL1 | Daily | Julian date of annual minimum – calculate the mean Julian day where the minimum flow value for that year is reached for the first time. |
|  | Monthly | Calculate the mean month where the minimum flow value for that year is reached for the first time |
| THl | Daily | Julian date of annual maximum – calculate the mean Julian day where the maximum flow value for that year is reached for the first time. |
|  | Monthly | Calculate the mean month where the maximum flow value for that year is reached for the first time |
| RA8 | Daily | Number of reversals – for each year, calculate the number of days where the magnitude of the flow changes direction, and find the mean of the annual values. |
|  | Monthly | N/A |

# Owing to a disparity in the definitions between these flow metrics, two versions were calculated