

Appendix 2_10C Streamflow statistics for site S24 estimated using a drainage-area-ratio method and historical streamflows (Olson. S.A., and Mack,T.J., 2011, Technique for estimation of streamflow statistics in mineral areas of interest in Afghanistan: U.S. Geological Survey Open-File Report 2011-1176)

[km², square kilometer; mm, millimeter; m, meter; m³/s, cubic meter per second; The streamgage, listed with Afghan identification number, is the historical site used for the ungaged site estimate.]

Basin Characteristics:

Drainage area:	1832.8 km ²	Basin percent above 3000 m:	21.6
Basin slope percent:	29.1	Mean October precipitation:	5 mm
Centroid elevation:	2288.6 m	Mean November precipitation:	12.3 mm
Basin percent irrigated:	6.8	Mean December precipitation:	29.2 mm
		Mean January precipitation:	44.9 mm

Drainage area ratio technique:

(Olson and Mack, 2011)

Streamgage: Arghandab River at Sang-i-Masha

4-1.L00-9A

Drainage area, km²: 2167

Results

Streamgage data:		Ungaged site estimate:	area exponent
7Q10:	0.73 m ³ /s	0.60 m ³ /s	1.14
7Q2:	2.38 m ³ /s	2.00 m ³ /s	1.03
90% flow duration:	2.68 m ³ /s	2.18 m ³ /s	1.25
80% flow duration:	3.72 m ³ /s	3.05 m ³ /s	1.18
Mean annual discharge:	8.89 m ³ /s	7.47 m ³ /s	1.04
October mean monthly discharge:	4.9 m ³ /s	4.08 m ³ /s	1.10
November mean monthly discharge:	6.12 m ³ /s	5.10 m ³ /s	1.09
December mean monthly discharge:	6.1 m ³ /s	5.09 m ³ /s	1.08
January mean monthly discharge:	5.87 m ³ /s	4.91 m ³ /s	1.06
February mean monthly discharge:	6.15 m ³ /s	5.20 m ³ /s	1.00
March mean monthly discharge:	12 m ³ /s	10.29 m ³ /s	0.92
April mean monthly discharge:	29.3 m ³ /s	25.21 m ³ /s	0.90
May mean monthly discharge:	15.3 m ³ /s	12.84 m ³ /s	1.05
June mean monthly discharge:	5.57 m ³ /s	4.57 m ³ /s	1.18
July mean monthly discharge:	6.33 m ³ /s	5.28 m ³ /s	1.08
August mean monthly discharge:	4.95 m ³ /s	4.15 m ³ /s	1.06
September mean monthly discharge:	3.98 m ³ /s	3.31 m ³ /s	1.09
October minimum monthly discharge:	2.59 m ³ /s	2.12 m ³ /s	1.20
November minimum monthly discharge:	3.77 m ³ /s	3.09 m ³ /s	1.19
December minimum monthly discharge:	4.25 m ³ /s	3.49 m ³ /s	1.18
January minimum monthly discharge:	3.78 m ³ /s	3.08 m ³ /s	1.21
February minimum monthly discharge:	3.84 m ³ /s	3.16 m ³ /s	1.17
March minimum monthly discharge:	5.54 m ³ /s	4.65 m ³ /s	1.04
April minimum monthly discharge:	5.97 m ³ /s	5.02 m ³ /s	1.03
May minimum monthly discharge:	2.11 m ³ /s	1.73 m ³ /s	1.17
June minimum monthly discharge:	0.78 m ³ /s	0.63 m ³ /s	1.30
July minimum monthly discharge:	0.63 m ³ /s	0.51 m ³ /s	1.25
August minimum monthly discharge:	1.8 m ³ /s	1.45 m ³ /s	1.29
September minimum monthly discharge:	1.15 m ³ /s	0.93 m ³ /s	1.27