Worksheet 10. Sample form for recording gage station and field data

(after Leopold et al, 1998)

Summary of **USGS GAGE STATION** Data/Records for

STREAM CHANNEL CLASSIFICATION

Station NAME: | Station Number:

LOCATION:

Period of RECORD: Yrs. | Mean Annual DISCHARGE: CFS (QA)

Drainage AREA: Ac. SqMi. | Drainage Mean ELEVATION: Ft.

Reference REACH SLOPE: Ft/Ft. | STREAM TYPE:

BANKFULL CHARACTERISTICS

Determined by FIELD MEASUREMENT		*Determined from GAGE DATA Analyses*	
Bankfull WIDTH:	Ft.(W_{bkf})	Bankfull WIDTH:	Ft.(W_{bkf})
Bankfull MEAN DEPTH	Ft.(d_{bkf})	Bankfull MEAN DEPTH	Ft.(d_{bkf})
Bankfull Xsec AREA	SqFt.(A_{bkf})	Bankfull Xsec AREA	SqFt.(A_{bkf})
Wetted PERIMETER	Ft.(W_P)	Wetted PERIMETER	Ft.(W_P)
Bankfull STAGE (Gage Height)	Ft.	Bankfull STAGE (Gage Height)	Ft.
Est. Mean VELOCITY	Ft/Sec.(**u**)	Mean VELOCITY	Ft/Sec.(**u**)
Est. Bnkfl. DISCHARGE:	Cfs.(Q_{bkf})	Bankfull DISCHARGE:	Cfs.(Q_{bkf})

Bankfull DISCHARGE associated with *"field determined"* Bankfull STAGE:_____ Cfs.(Q_{bkf})

(From Gage Height reading at Staff Plate and tabular Stage-Discharge curve data.)

Recurrence **I**nterval (Log-Pearson) associated with *"field determined"* Bankfull Discharge.

R.I. = Years

From the *Annual Peak Flow Frequency Analysis* data for the Gage Station, determine:

1.5 Year R.I. Discharge =_____ Cfs. **10** Year R.I. Discharge =_____ Cfs.

2.0 Year R.I. Discharge =_____ Cfs. **25** Year R.I. Discharge =_____ Cfs.

5.0 Year R.I. Discharge =_____ Cfs. **50** Year R.I. Discharge =_____ Cfs.

MEANDER GEOMETRY

Meander Length (L_M) =_____ Ft. Radius of Curvature (R_C) =_____ Ft.

Belt Width (W_B) =_____ Ft. Meander Width Ratio (W_B / W_{BKF}) =_____

HYDRAULIC GEOMETRY

Based on: *USGS Discharge Summary Notes* data (Form 9-207) and regression analyses of measured discharge (**Q**) with the hydraulic parameters of Width (**W**), Area (**A**), Mean Depth (**d**), & Mean Velocity (**u**); determine the *intercept coefficient* (**a**) and the *slope exponent* (**b**) values for a power function of the form $Y = aX^b$; when Y is one of the selected hydraulic parameters, and X is a given discharge value (**Q**).

	Width (**W**)	Depth (**d**)	Area (**A**)	Velocity (**u**)
Coefficient: (**a**)				
Slope Expn: (**b**)				

Hydraulic Radius: ($R = A / W_P$) _____ Ft. **Manning's "n"** (Rough. Coeff.) at Bankfull Stage _____

"**n**" = 1.486 / Q_{BKF} [(**A**rea) (Hydraulic **R**adius$^{2/3}$) (**S**lope$^{1/2}$)]