STREAM:_____ **SITE**:_____ **DATE**:_____2001

RIFFLE SERIES:_____/_____/_____/_____/_____/_____/_____/_____/_____/_____/_____.
_____/_____/_____/_____/_____/_____/_____/_____/_____/_____meters
POOL SERIES:_____/_____/_____/_____/_____/_____/_____/_____/_____/_____meters

Transects at 10 meter intervals along 150 meter reach

T	Stream Width	Bank Cover L	Bank Cover R	Angle Left	Angle Right	Densio. Left	Densio. Up	Densio. Down	Densio. Right	Rndm No.
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

GPS:_____ **ELEVATION**:_____

SLOPE(s):
stream length(s) upper level reading(s) lower level reading(s)

LINEAR DISTANCE ALONG 150 METER REACH LENGTH:_____ **WATER CHEM. SAMPLED?**___

TEMPERATURE _____ **pH** _____ **CONDUCTIVITY** _____ **D.O.** _____ **ALKALINITY**_____.

Surrounding **RIPARIAN VEGETATION** Cover (w/in 2 m of channel)
[descriptions of species present if known and sparse/common/ or dense]
[Sparse=<25%, Common=50%, Dense=>75%; S-C=25-50%, C-D=50-75%]

Herbaceous Cover_____

Woody Bushes_____

Deciduous Trees_____

Evergreen Trees_____

ALGAE TYPE(s) Present:

- ☐ Diatom Film (olive green)
- ☐ Filamentous Form (green)
- ☐ Mat / Slime (blue-green)

PHOTOS:_____

PHYSICAL HABITAT CODES

At each equidistant point along a transect (5 for streams more than 1 meter wide, or 4 for streams less than 1 meter wide), record depth (**D**) and current velocity (**V**) and substrate (**ST**) as coded below:

SUBSTRATE SIZE CLASSES [=ST or SUBSTRATE TYPE]

F = FINES = < 1 mm
S = SAND = 1 - 3 mm
G = GRAVEL = 3 - 65 mm (6.5 cm)
C = COBBLE = 6.5 - 25 cm (2.5-10 inches)
B = BOULDER (or BEDROCK) = > 25 cm (>10 inches)
these may be associated with:
V = AQUATIC VEGETATION (emergent or submerged)
A = ALGAE (filamentous or slime/mat forms)
W = WOOD
L = LEAVES
D = DETRITUS (fine organic particles)
R = ROOTS (usually of emergent vegetation, sometimes riparian)

Other Measures Along Transects:

Stream Width = wetted perimeter width of the stream (bank to bank water width)
Bank Cover (L&R) = types of cover or bank condition on each bank to the bankfull height.
Coded as the dominant substrate and condition:
(used to evaluate erosion potential or stability at edge of active stream channel)
[one of the first 3 may be combined with one or more of the second three]
O = open or exposed bank soils composed of fines or sand substrates
V = vegetated bank (grasses, bushes or shrubs, and trees growing in bank soils)
use veg. type categories also to classify main cover, $\mathbf{V_G}$=grass, $\mathbf{V_B}$=bushes, $\mathbf{V_T}$=trees
A = armored bank, with rocks or wood protecting the bank
E = eroded bank or erosion apparent
I = incised bank, vertical downcut along channel
S = stable bank, uneroded
Examples: $\mathbf{V_G S}$=grass vegetated stable bank, **OE**=open eroded bank, **OEI**=same but incised,
AS=stable bank armored by wood or rock, **VE**=bank vegetated but eroded
Bank Angles = angle formed by bank at the stream edge,
categorized as Shallow (<30º= **S**), Moderate to Steep (30º - 90º= **M**), or Undercut (>90º= **U**)
Densiometer = points where vegetation reflected in concave mirror at 17 total grid intersects

Cobble Embeddedness:

That portion of a cobble-size rock buried in fine or sand particles and estimated as the percent volume of the rock buried (visual estimate). Often marked by a ring of particles at the burial line or by algae color on the upper exposed surface, or other discoloration, or by holding the rock at the point where the rock was excavated. Scored during the transect-point measures, with additional cobbles added if needed by choosing further random transects until a total of n=25 are sampled.

Slope is measured along known stream distance(s), sighting a level on a level rod (at least 75 m of reach).
Linear distance along reach is measured as the direct distance along the stream valley from the top of the reach to the bottom of the reach (used with total stream reach length = 150 m to calculate sinuosity of the channel).

STREAM:_____ SITE:_____ DATE:_____2001

T	D-1	V-1	ST-1	D-2	V-2	ST-2	D-3	V-3	ST-3	D-4	V-4	ST-4	D-5	V-5	ST-5
1															
2															
3															
4															
5															
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9															
10															
11															
12															
13															
14															
15															

COBBLE EMBEDDEDNESS MEASURES (n=25)				

Current Meter used and units: