

# CROSS-SECTION PROCEDURES

GSC02

Early 1980's

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## ① HJAEER + LTER SECTIONS

A - AT EACH SECTION A TAPE IS STRUNG BETWEEN END POSTS. SAG SHOULD BE MINIMIZED, BUT ON LONG SECTIONS SOME SAG IS INEVITABLE. BY CONVENTION THE  $\emptyset$  END OF THE TAPE SHOULD ALWAYS BE ATTACHED TO THE LEFT HAND POST (LOOKING UPSTREAM) (Z-POST)

B - THE SURVEY INSTRUMENT SHOULD BE PLACED AND LEVELED DIRECTLY ABOVE OR ADJACENT TO Z POST. IF PLACEMENT AT Z POST IS NOT POSSIBLE USE X-POST [BUT  $\emptyset$  END OF TAPE IS ALWAYS AT Z-POST]

1m intervals outside Active channel & .5m inside Channel

C - ROD OPERATOR SHOULD START AT POST OPPOSITE THE INSTRUMENT. READINGS SHOULD BE MADE WITH THE ROD RESTING ON THE SUBSTRATE. ROD SHOULD BE PLACED ADJACENT TO TAPE AND SHOULD BE VERTICAL. ROD POINTS SHOULD BE TAKEN FREQUENTLY ENOUGH TO ACCURATELY DESCRIBE EXISTING GEOMORPHIC FEATURES. POINTS SHOULD ALWAYS BE TAKEN IN THE FOLLOWING CIRCUMSTANCES. ① MAJOR SLOPE BREAKS ② CHANGE IN GEOMORPHIC FEATURE ③ HIGH OR LOW POINT IN A GEOMORPHIC FEATURE. & Substrate Changes

D - INSTRUMENT OPERATOR VIEWS ROD THROUGH LEVEL SCOPE AND RECORDS Z DISTANCE (HORIZONTAL DISTANCE), LEVEL (VERTICAL READING ON ROD AT CROSS HAIR) AND SUBSTRATE (USING PROPER CODES).

ALWAYS RECORD AN INSTRUMENT HEIGHT AT THE END OF EACH SECTION. THE HI IS THE DISTANCE FROM THE GROUND SURFACE TO THE ~~TOP OF THE INSTRUMENT PLATFORM~~ CENTER OF THE INSTRUMENT SCOPE.

E - ANY SPECIAL NOTES SHOULD BE INCLUDED ON DATA SHEETS REGARDING UNDER CUT BANKS (Z DIST AND SIZE) OVERHANGING LOGS ETC.

NOTATIONS REGARDING IRREGULARITIES IN SURVEY SHOULD ALSO BE PUT IN THIS SPACE



## ② SHORTER CREEK X-SECTIONS

A- A CORD WITH A LINE LEVEL IS STRUNG BETWEEN END POSTS AT EACH SECTION. IF SECTION IS NO LONGER LEVEL, MOVE LINE UP POST ON LOW END, OR RESET STAKE.

B- ATTACH  $\phi$  END OF TAPE TO LEFT SIDE POST (LOOKING UP STREAM) AND SECURE AT OPPOSITE POST (MINIMIZING SAG)

C- READINGS SHOULD BE MADE ALONG TAPE USING A LEVEL ROD OR PLUMB LINE AND VERTICALLY REFERENCED AT THE LEVEL LINE.

READINGS ARE ALWAYS MADE AT:

1- SLOPE BREAKS

2- CHANGE IN SUBSTRATE

3- SIGNIFICANT GEOMORPHIC FEATURES

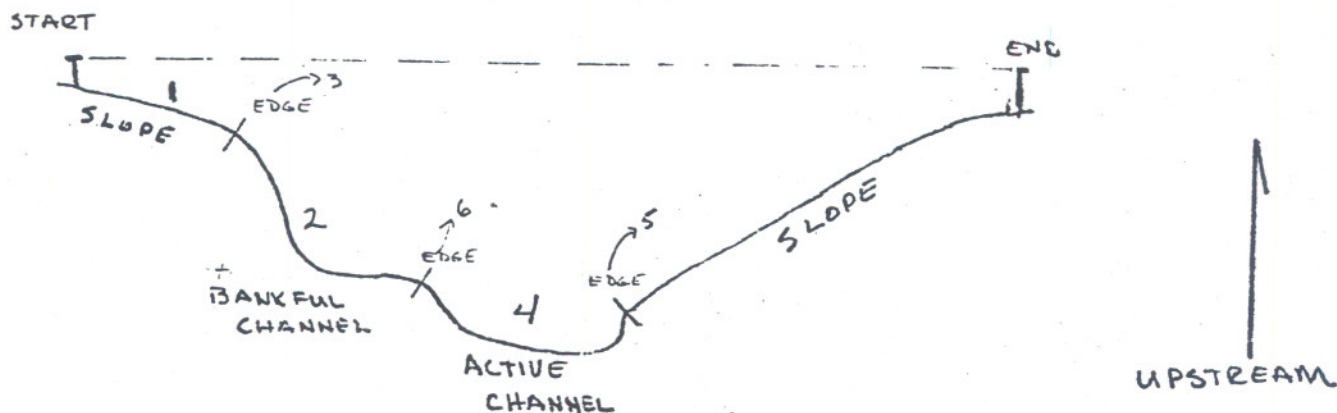
OTHER READINGS ARE MADE TO ACCURATELY DESCRIBE THE CROSS SECTION PROFILE

D- SLOPE BREAK POINTS SHOULD BE NOTED ON DATA SHEETS IN "CLASS" COLUMN IN ACCORDANCE WITH SCHEME ON ENCLOSED SHEET.

E- SUBSTRATES ARE TO BE NOTED IN "SUB CODE" COLUMN ACCORDING TO DEVELOPED SUBSTRATE CODE (SEE ATTACHED SHEET). A CHANGE IN SUBSTRATE WILL BE DENOTED AS THE LAST POINT IN ANY GIVEN SUBSTRATE THAT OCCUPIES 10 CONTINUOUS CM ALONG THE TRANSECT LINE. IF A SUBSTRATE TYPE DOES NOT COVER 10 CM NO NOTATION OF SUBSTRATE CHANGE WILL BE MADE. THE DOMINANT TYPE ALONG THE LINE SHOULD THEN BE CONTINUED.

F- ANY SLOPE BREAK SHOULD BE IDENTIFIED AS SUCH AT THE TOP OF THE BREAK.

# PROFILE KEY



## PROFILE CLASSIFICATION CODE

- 1 - SLOPE
- 2 - BANKFULL CHANNEL
- 3 - EDGE (1+2) (S/BC)
- 4 - ACTIVE CHANNEL
- 5 - EDGE (1+4) (S/AC)
- 6 - EDGE (2+4) (BC/AC)

## SECTION CODE

- 0(00) Upstream Control
- 1(00) Pull Section
- 2(00) Effect Section
- 3(00) Downstream Control

a) Edge is a the top of the break

b) Substrate changes should be marked at the end

## SUBSTRATE CODE

- LG - Log / Root >10cm
- OD - Organic Debris 1-10cm
- FS - Fine Sediment
- GR - Gravel
- ST - Stone (Cobble)
- BL - Boulder
- BD - Bedrock
- LI - Litter
- TF - Turf / Grassy Root Mat
- MS - Mineral Soil (Bare)
- SL - Logging Slash
- EQ - Equipment / Trails



## PARTICLE COUNT INSTRUCTIONS

Use these instructions as a guide for sampling channel bedload material on the LTER cross-sections:

1) Run a tape between the X and Z posts of the cross-section. Use the same attachment points and distances as the profile survey.

2) Starting at the active channel boundries, sample within a swath approximetly one meter upstream and downstream of the tape line. Sample after each step across the swath untill 100 sample diameters are taken. The swath may be traversed several times.

3) At each step sampling point, close your eyes and reach down and sample the particle you first touch. Measure the diameter of the B-axis of the particle in centimeters to one decimal place (millimeter). Particles less than 2mm will be grouped together, so they do not need to be measured. Particles less than 2mm are difficult to sample, so when in areas of this material take care to insure this size class is not overlooked during sampling.

If some particles are very large you may encounter them more than once in the swath. If so, go ahead and treat it as a new sample.

Record the particle diameter, and any comments on the data collection form. Also record the tape distance at the active channel boundries on the form header.

4) In addition to the particle count we would like to photo document the cross-sections. A camera with a wide angle lens will be provided. Use only black and white film if possible. Take a photo from upstream looking down to the x-sec, and one from downstream looking up to the x-sec. Include the leveling rod in side portions of the photos to get some scale. Record a roll number, frame number, and a description of the photo in the notebook so they may be identified after processing.