

SRF Turbidity Workshop, Nov. 11-12, 2003 (R. Klein)

**CLASSROOM SESSION (8:00-12:00)**

- 1) Introduction
  - a) My background and interests
  - b) Class background, turbidity experience and interests/relevance to job/hobby
- 2) Background
  - a) Definitions:
    - i) Turbidity
    - ii) Suspended sediment (transport, concentration, yield, rating curve)
    - iii) Sediment delivery (ratio)
    - iv) Erosion
  - b) Sources of turbidity (organic particulates, suspended sediment)
  - c) Suspended sediment delivery, transport, deposition, dilution
  - d) Physical and biological effects
  - e) Key literature, access to more....
- 3) Measurements
  - a) Equipment
  - b) Methods
    - i) Manual (grab, 'box' sample, depth-integrated sample)
    - ii) Automated (hardware, software)
  - c) Sources of error (incomplete mixing, sensor drift, sand, biofouling, etc.)
- 4) Study Design
  - a) Objectives (habitat conditions, SS yield/sediment budget, disturbance/restoration effects, etc.)
  - b) Examples (Mattole, Lost Man, Caspar Cr, SF Wages Cr)
  - c) Logistics (sample timing, access, triggers, peaks vs chronic)
- 5) Quality control
- 6) Data corrections/conversions
- 7) Analyses, reports
- 8) Complementary data (stage, discharge, cross sections, photos)
- 9) Introduction to field session: description of Caspar Creek research

**FIELD SESSION (13:00-16:00)**

- 1) Visit Caspar Creek gaging station
- 2) Overview of stream conditions and indicators of turbidity and suspended sediment
- 3) Demonstration of manual sample collection
- 4) Comparison of turbidity meters
- 5) Discussion of complementary measurements