

DRAFT MINUTES

INSTREAM FLOW TELECONFERENCE

March 25, 2004

In attendance on the conference were:

Joe Klein, ADF&G Anchorage;
Dean Orbison, City and Borough of Sitka Electric Department;
Mike Prewitt, City relicensing consultant.

Mike started by saying the City wished to respond to Jim Feguson's e-mail of March 18, 2004, asking for additional detail in the instream flow methods paper recently distributed by the City. These minutes provide a summary of methods discussed, by general topic, and are not intended to exactly document the conversation.

Velocity measurement.

Meter: Price AA and top-set wading rod, purchased by the City;

Metering Time: 40 seconds;

Velocity Measurement Intervals: To define the major habitat breaks. There was some discussion about how to measure around rocks, heterogeneous areas, etc. Joe said that judgment would be necessary. Joe stressed that the velocity measurements were not to determine discharge, but to define habitat distribution. Mike said participants in the cross-section selection on April 20 would discuss and demonstrate how best to do this.

Depths of Velocity Measurements: 0.6 of depths less than 2.5 feet, average of 0.2 and 0.8 in depths greater than 2.5 feet.

Measurement Limits: Mike added that, due to access and safety concerns, they planned to measure depths and velocities only in wadeable areas. Joe said this was OK.

Field forms: Dean asked if ADF&G had preferred field forms. Joe said there were forms which facilitated computer input, and that he would look them up. Mike asked that they be faxed or sent electronically so we could print them on field paper. Mike said that in the absence of forms, he was comfortable using level notebooks with simple Distance, Depth and Velocity entry areas, as approved by agencies. Joe said these would be alright but would continue to look for the existing forms.

Surveying.

Mike said the City had a Nikon automatic level which should be adequate. He said all surveying would be done to 0.1 ft and that each cross-section set would be surveyed relative to a permanent bench.

Number of Overall Measurements:

Joe asked about the overall number of measurements. Dean said that he could set the river up for two or three flows between 50 and 120 cfs.

Dean said that, in his experience, there was very little difference between water levels at 50 and 120 cfs, and that it might not be effective to do three measurements. He asked if it would be OK to just do two measurements (50 and 120 cfs) and then see if the differences warranted a third measurement. Joe said this would be OK. Joe added that we could measure just water surface elevations at an intermediate flow. Mike added that this could also be done at a higher flow, perhaps about 300 cfs, during spill, if sufficient overbank was included in the initial cross-section measurements.

Measurement Units

Mike said we should do all measurements in English, not metric units. He said the City had a Nikon automatic level and a 25 foot English 0.1 foot rod. He said we needed a tape in English units.

Benchmarks and Headpins-stakes

Dean said that we would drive rebar stakes for anchoring the tape. Mike added that the rebar head stakes should be “permanent”, through several seasons if possible.

Joe asked that hydraulic controls be shot at the cross-section sets. Mike agreed, and said that the pools in lower river set themselves up for this quite well.

Summary of Measurement Specifics:

- Meter: Price AA with topset wading rod
- Metering time: 40 seconds
- Use of two meters if possible
- Vertical spacing: To represent habitat, not necessarily to measure exact discharge;
- Metering depth: 0.6 or depth in water less than 2.5 feet; average of 0.2 and 0.8 of depth in water greater than 2.5 feet;
- Number of verticals: To adequately define habitat structure and to bound edges of breaks;
- Placement of cross sections longitudinally: Through middle (not on up- or downstream bounds), with weighting representation;
- Surveying to be done to within 0.1 foot (Nikon automatic level, a25 foot rod, English units)

- Cloth tape with clamps for horizontal measurements;
- Rebar head stakes permanently emplaced.