

INSTREAM FLOW POLICY DISCUSSIONS

ISSUES RELATED TO NEW
PROJECTS

Definition and goals

- What is the DFO definition of Instream flow?
- What do we want to achieve with an instream flow and instream flow modulation?

Goals and Means to discuss

- Produce fish? Maintain habitat?
 - Use of habitat models
 - Is “No net loss” a goal related to instream flow?
- Preserve the geomorphology of the river reach?
 - Use of hydrological models
- Maintain water surface area?
 - Use of hydraulic models
- Is instream flow the only solution?
 - Use of weirs
 - Compensation mechanisms

Goals should be adapted to various situations

- Requirements for short reaches between a dam and a tailrace (hundreds of meters) should not be the same as for long diverted reaches or downstream reaches, as the potential impacts are not of the same magnitude.
- Reservoir filling instream flow needs (short period requirements)
- Other uses (human use) should be considered.

Methods vs Uncertainty

- Today, many methods are available, but none is applicable to all situations.
- Uncertainty should not be a reason for overuse of the “precautionary principle” since there are more means available today than there were in the past.
- Uncertainty can be dealt with by cross examination with different methods and by adaptive management.

Minimum requirements

- A new project should be examined with at least a combination of hydrological (flow related) and hydraulic (surface area related) methods.
- The necessity for fish habitat models in a given project should be discussed between DFO and the Utility because of the high cost and time delays related to these studies.

Questions common to all fish habitat methods

- Which species (representative species, fragile species, valued species, guilds)?
- Which species life stage (spawning, rearing, feeding)?
- Which sites?
- How many sites to model per reach length?
- Are fish habitat preference curves available, tested?

Aspects of biological models to discuss

- If most methods can describe fish habitat as related to flow (weighted usable area) none defines goals to attain.
- What kind of model validation is wanted?
- Do we want to relate habitat to production and how?
- Habitat quantity vs habitat quality
- Is a higher scale model (mesohabitat) preferable?

Conclusion

- The main concern of the industry is the lack of definition and goals related to instream flows from the authorities.
- The relative value of this measure to achieve “no net loss” has to be discussed.
- Precaution principle as related to methods needs boundaries.
- How instream flow studies would fit in a standardized impact assessment approach (HADD – Mitigation – Compensation) has to be determined