

# **Testimony to the Clallam County Commissioners**

## **Regarding the Proposed Dungeness Instream Flow Rule**

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**By**

**Dr. Robert N. Crittenden**

P.O. Box 222 Carlsborg WA 98324

robertc@harpub.com

360 504-2405

There are serious flaws in each of the three main studies that provide the basis for the proposed instream flow rule for the Dungeness River. These are the groundwater model, the IFIM study of the Dungeness River, and Swift's toe-width method, which was used on the small streams. I'll only mention a few main points.

The most serious defect in the groundwater model is that it has more parameters than data. That is the same as, trying to fit a straight line to a single point. An infinite number of lines will do that. Likewise, this model yields multiple solutions. They can arbitrarily choose whichever solution they prefer. Furthermore, we are told that the model they are using is proprietary. Its secret. You can't see it but they will use it to determine how much water you will be allowed and how much mitigation you will have to pay.

(I am referring specifically to the steady-state calibration runs described in the February 19, 2009 report written by Pacific Groundwater Group, entitled *2008 Dungeness groundwater flow model design, construction, calibration and results.*) It has 70 data and 68 parameters for hydraulic conductivity but there were also other parameters that were estimated. As a result, it has zero degrees of freedom. The estimator for its standard error is the Residual sum of squares divided by the degrees of freedom (RSS/df). Since, the model has zero degrees of freedom, that estimator involves a division by zero. So, the estimated standard error is infinity --- Having an infinite standard error is the same as saying that the model tells you precisely nothing.

Any time a model doesn't present standard errors or other measures of dispersion, that should be recognized as a warning flag. They didn't present them. Perhaps, now you know why.

Now let us move on to the second major study. That is the IFIM determination of the optimum flow for the Dungeness River. It has a qualitative element. That is their selection of the species composition of the fish in the river. As Ken Bovee pointed out in his 1986 review of IFIM, that qualitative step allows considerable latitude in the value selected as the "optimum" flow. (Bovee, K.D. 1986. Development and evaluation of habitat suitability criteria for use in the instream flow incremental methodology. Washington, DC: USDI Fish and Wildlife Service Instream Flow Information Paper #21 FWS/OBS-86/7. 235 p.)

A second flaw in that study, was that, according to Dr. Hal Beecher's public presentation, they didn't sample cross-sections at random.

The third major study is Swifts Toe-width method. It was used to determine the "optimum" flows for the small streams. It appears to have a technical problem. Specifically, they didn't discount the alpha-

level for multiple comparisons, when they developed that methodology. In addition, it was developed for larger rivers, in terms of discharge, than the ones to which it is being applied, here. However, even if these two flaws weren't concerns, the toe-width still reflects the peak flow rather than the average flow, because, that is what scours the vegetation off the banks, thereby, establishing the toe-width.

We are told that the purpose for the instream flow rule is to provide or protect freshwater habitat for salmon. However, their low run sizes are not caused by a lack of habitat. --- For example, I attended the impact statement hearings on the Washington State Department of Fisheries and Wildlife's hatchery management plan. It was presented by upper-level employees of WDFW and NOAA. I was only one of two members of the public who attended, so, I was able to ask several questions. --- During the early 1990s, I wrote a scientific paper (Crittenden, R.N. 1994. Optimum escapement computed using Ricker's spawner-recruit curve. *Fish. Res.* 2: 275-227.) which demonstrated that, at that time, fisheries biologists usually couldn't achieve statistical significance in fitting Ricker's spawner recruit curve with the data that were then available. However, they only needed a little more data from low abundance years to achieve significance. So, I asked whether they were deliberately depressing the stocks to get those data. They answered, "Yes." Then, I asked what rivers they were doing that on. They said that it was too many to remember. So, I asked about the Samish and Dungeness Rivers. They said that they were doing that on both of them. --- As their low abundance is a matter of deliberate policy, rather than habitat limitation, increasing the amount of instream flow will not increase their abundance.

That is also acutely obvious for the Dungeness River, above the hatchery. No water is withdrawn from the upper river but they had previously raked the river to exterminate those stocks. Unfortunately, they have had only limited success in getting them to recolonize. I believe that they are deliberately not using appropriate methods, until, such time as they want to repopulate the upper river.

In the larger context, the instream flow rule responds to the Boldt case. In particular, the grant of the fishing right given in part I was interpreted, in part II, as carrying with it an implied right to freshwater fish habitat and water. --- I was led through that case by Jim Johnson, who was the defending lawyer for part II. I also talked to several other people who had been involved. One of the things that I was told was that it had begun in a meeting in which they laid out its overall plan and decided to do the case. One of the people who was present at that meeting was Larry Coniff, the defending lawyer for part I. I called him to verify whether that was true. He said that it was and he, also, verified several other details of what happened at that meeting. --- The lawsuit was intended to essentially repeat of the Alaska Pipeline lawsuit. The overall pattern is to transfer natural resources to the Tribes and, then, for the Federal government to confiscate them and compensate the Tribes. In this case, that will be very easy to do, as the Stevens' Treaties contain a clause that allows the US President to unilaterally alter any part of those treaties. I think that that is what we should expect to happen, here, after a large part of the instream flow has been designated as serving fish habitat needs in the Western States.

Consequently, I am concerned that the minimum instream flow might be re-interpreted, as a treaty right senior to any of the existing water rights in the valley. In the negotiations, the department has repeatedly stated that it will be a junior water-right. So, I suggest that some care be taken, so that it cannot be re-interpreted.

Sincerely

Dr. Robert N. Crittenden