



**Independent Scientific Review Panel**  
for the Northwest Power Planning Council  
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September 18, 2001

## **MEMORANDUM**

**TO:** Council Members

**FROM:** Rick Williams, ISRP Chair

**SUBJECT:** ISRP Review of Action Plan Responses to WA Department of Ecology Stream Gaging Proposals in the Entiat, Okanogan, and Wenatchee Watersheds

When the Council considered the ISRP's "fix-it" review of ten Action Plan proposals, it voted to allow three additional responses regarding WA Department of Ecology stream gaging proposals to be submitted to the ISRP review. These responses were not submitted when the Council originally invited responses, however the Council determined that the proposals merited the opportunity for review. The ISRP's final recommendation is provided below, followed by the sponsor's responses and the original ISRP comments.

### **Final ISRP Recommendation:**

The proposals for the gaging stations are technically sound and could provide long-term benefits for fish and aquatic habitat but primarily as a means of ensuring that legal instream flow requirements are met. The ISRP was not convinced of the immediate biological benefits of the proposed projects during this drought year and hence whether the project met the criteria for funding in the emergency action plan solicitation. Council should carefully consider whether the criteria for funding under the emergency action plan of 2001 are satisfied. For example, Council should be comfortable that providing gaging information to the local communities will in the short term generate a decrease in water consumption and thereby help to maintain flows in the channel for fish.

The ISRP appreciates the care taken to respond to our concerns, to clarify several issues on which we had questions, and to provide new commitments for operation and maintenance. We note that evaluation of the effect of these projects will be difficult? How will one know that the gaging stations had anything to do with future changes in the fish populations, flow, or other biological parameters? Some thought should be given to designing a monitoring and evaluation plan to assess the effectiveness of the project to provide benefits to fish and aquatic habitat.

## **Attachment 1.**

### **Washington State Department of Ecology Response to ISRP comments on Stream Gaging Proposals for the Entiat, Okanogan and Wenatchee Watersheds**

*ISRP Original Comment 1 - This proposal assumes that installing stream gages and thus, having the ability to monitor in-basin stream flows in real time, will translate into management actions that will keep more water instream for anadromous fish than would occur without the gages and associated telemetry stations. While this is a tempting argument and may in fact be true, the proposal does not provide examples of how this might occur or reference any documentation that provides the reviewers confidence that such linkages are in place and would be utilized.*

WA Response - More real time gages in these watersheds will allow the communities in these watersheds to take direct and immediate steps to save salmon. The gages will serve as an early warning system for the watershed to let them know that flows are decreasing to the point where fish will be stranded and/or their ability to access fish ladders will be curtailed. By providing this information to the community it would allow citizens to voluntarily decrease their water consumption thereby helping to maintain flows in the channel for fish. Voluntary energy conservation has been an effective way to deal with the energy crisis facing the Northwest and we think this is also an effective way to deal with the drought. In a similar way that the Forest Service uses their signs to communicate fire danger this will allow the watershed to communicate flow danger for fish and to encourage citizens and water users to voluntarily conserve water. It will also be used to communicate to fish managers the need to deploy fish rescue teams. See flow chart in response to question number 5.

Over a longer timeframe these gages will be an essential component to the overall management of water within these watersheds for fish and for out of stream use. They will be used to verify the effectiveness of water management strategies. For example, whether fixing leaky diversion systems have really increased the flow in the system. The gages will also be used to verify if the instream flows are being met and/or how often they are not being met. In the Dungeness watershed they are using a series of these gages to determine when irrigators can operate and when they need to stop diverting, for fish, as part of a trust water right agreement. These gages will also be helpful in determining whether water rights purchased or leased in these watersheds are actually increasing the flows for fish.

The long-term benefits are significant, however the immediate benefits during this drought will be imperative to protecting fish this year.

*2- It is not clear how data will be provided to managers on a real-time basis, or how and by what arrangement, the data will be used by managers to improve survival and productivity of ESA species.*

The data will be provided on The Department of Ecology's website. We are currently displaying this type of information for other gages in the state and the information is used and accessed on a daily basis. The system that Ecology has developed in the Dungeness is exactly what we are requesting funding for in the Entiat, Wenatchee and Okanogan. You can see this information by going to the website: <http://www.ecy.wa.gov/programs/eap/flow/agnewditch.html>  
Attached is a printout of the website.

*3 -No map is provided showing the subbasin and the proposed gauging stations.*

Maps showing the proposed gages for each of these watersheds are attached.

*4- No specific personnel are listed for the proposed work.*

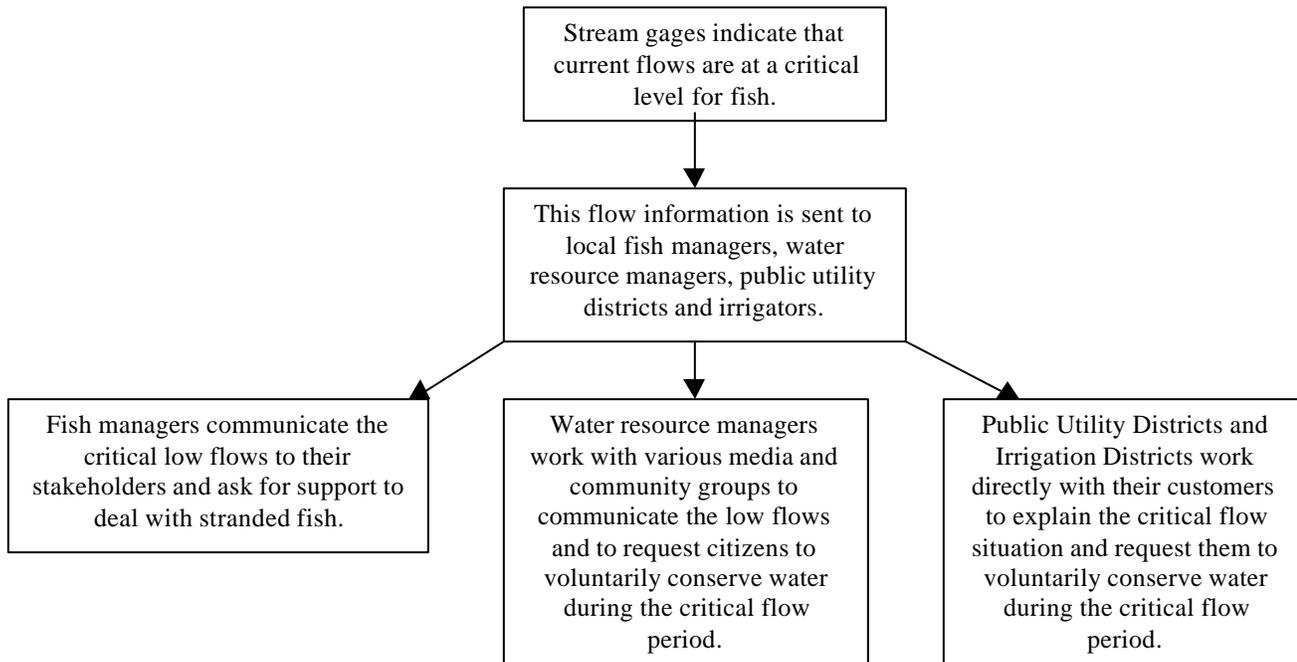
The original application for this was to include funding for local staff to maintain the gages. The applications have been altered to include staff from the Department of Ecology's Stream Hydrology Unit. This website provides contact information along with information on groups other stream monitoring activities. Brad Hopkins supervises the unit.

[http://www.ecy.wa.gov/programs/eap/flow/shu\\_main.html](http://www.ecy.wa.gov/programs/eap/flow/shu_main.html)

Attached is a printout of the website.

The Department of Ecology's Stream Hydrology Unit will get these gages on line and help train and hire local staff to help with routine maintenance of the gages. The maintenance will be partially handed off to the locals at some point this year after there has been proper training by Ecology staff. Ecology will continue to stay involved over the life of the gages and they will help with instream measurements and quality control checks. The involvement of Ecology staff this year will mean an increase of \$25,000/per watershed to cover indirect costs.

5- No specific description or flow chart is provided that shows how data would be routed and how decisions on water management would be affected.



6- There is no funding to operate and maintain the monitoring program once the hardware is in place. The sponsors insist that the project has benefit for the affected broods, but until operating funds are found and committed for the long-term, no data will be available.

The Department of Ecology will maintain and operate these gages and will provide funding past this initial year to a local watershed planning group to hire staff to handle the "in basin" maintenance activities. Ecology will continue to provide assistance and will continue to perform quality control checks and instream measurements.

## Attachment 2 - Original ISRP Review Comments

### **Project ID: 26016**

Entiat Subbasin - Stream Gaging Installation and Operations

**Sponsor:** Chelan Conservation District

**Province:** Columbia Cascade

**Subbasin:** Entiat

**FY01 Request:** \$173,000

**Short Description:** Purchase, establish, and operate stream gages in eight critical reaches of the Entiat. The operations will include installation of the gages, telemetry, data recording, and associated activities.

**ISRP Recommendation:**

Not fundable under this solicitation. This is a proposal to purchase and install the hardware (on-site and telemetry site) needed to monitor flow and temperature in four reaches of the Entiat River. This proposal assumes that installing stream gages and thus, having the ability to monitor in-basin stream flows in real time, will translate into management actions that will keep more water instream for anadromous fish than would occur without the gages and associated telemetry stations. While this is a tempting argument and may in fact be true, the proposal does not provide examples of how this might occur or reference any documentation that provides the reviewers confidence that such linkages are in place and would be utilized. It is not clear how data will be provided to managers on a real-time basis, or how and by what arrangement, the data will be used by managers to improve survival and productivity of ESA species. No map is provided showing the subbasin and the proposed gauging stations. No specific personnel are listed for the proposed work. No specific description or flow chart is provided that shows how data would be routed and how decisions on water management would be affected. There is no funding to operate and maintain the monitoring program once the hardware is in place. The sponsors insist that the project has benefit for the affected broods, but until operating funds are found and committed for the long-term, no data will be available.

This is one of 2 or 3 such proposals. A comprehensive program to monitor flow and temperature might be developed and submitted for study by the Council and BPA. The proposal should be developed with input from all entities to ensure that an efficient program is in place, it can be maintained into the future, and management entities are satisfied with the need for such a system and the suitability of the data management system. Projects 26016, 26017, and 26029 should be included in such a plan. The Entiat subbasin is in the upcoming Columbia Cascade Province; a solicitation for that province is scheduled for fall of 2001.

### **Project ID: 26017**

Okanogan Subbasin - Stream Gaging Installation and Operations

**Sponsor:** Washington Department of Ecology

**Province:** Columbia Cascade

**Subbasin:** Okanogan

**FY01 Request:** \$172,000

**Short Description:** Purchase, establish, and operate stream gages in eight critical reaches of the Okanogan. The operations will include installation of the gages, telemetry, data recording, and associated activities.

**ISRP Recommendation:**

Not fundable under this solicitation. This is a proposal to purchase and install the hardware (on-site and telemetry site) needed to monitor flow and temperature in four reaches of the Okanogan River. This proposal assumes that installing stream gages and thus, having the ability to monitor in-basin stream flows in real time, will translate into management actions that will keep more water instream for anadromous fish than would occur without the gages and associated telemetry stations. While this is a tempting argument and may in fact be true, the proposal does not provide examples of how this might occur or reference any documentation that provides the reviewers confidence that such linkages are in place and would be utilized. It is not clear how data will be provided to managers on a real-time basis, or how and by what arrangement, the data will be used by managers to improve survival and productivity of ESA species. No map is provided showing the subbasin and the proposed gauging stations. No specific personnel are listed for the

proposed work. No specific description or flow chart is provided that shows how data would be routed and how decisions on water management would be affected. There is no funding to operate and maintain the monitoring program once the hardware is in place. The sponsors insist that the project has benefit for the affected broods, but until operating funds are found and committed for the long-term, no data will be available.

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**Project ID: 26029**

Wenatchee Subbasin - Stream Gaging Installation and Operations

**Sponsor:** Chelan County Watershed Program

**Province:** Columbia Cascade

**Subbasin:** Wenatchee

**FY01 Request:** \$163,000

**Short Description:** Purchase, establish, and operate stream gages in eight critical reaches of the Wenatchee. The operations will include installation of the gages, telemetry, data recording, and associated activities.

**ISRP Recommendation:**

Not fundable under this solicitation. Although this project meets the ESA criterion, it does not meet the criterion for a one-time, on-the-ground action for benefit of fish. It also does not meet any of the four functional criteria for this solicitation. This is a proposal to set up water and temperature gauging stations in eight critical reaches of the Wenatchee River. It is a long-term project that could be begin in 2001, but is intended to have ongoing operations (as reflected in budgets of outyears). There is no doubt that the objectives are good and the work is needed for benefit of fish in the basin. However, the benefits will be in the future as the data from these monitoring stations are incorporated into plans for future water right acquisitions, land purchases, etc. or the monitoring of current water-related actions. In addition, although the types of data to be collected are useful for river and fishery managers they need to demonstrate that managers will use the information they will generate. This project may be appropriate for submittal in the Columbia Cascade Province solicitation coming up in the fall of 2001. It should be included as part of a comprehensive project to provide temperature and flow data in the Columbia Cascade Province/mid-Columbia or larger area as part of a responsive management program. Projects 26016, 26017, and 26029 could be included in such a plan.