



The Fish Passage Center
Fish Passage Center
1827 NE 44th Avenue, Suite 240
Portland, OR 97213
USA

November 8, 2011

Three hydro power stations have been proposed for construction in the Thjorsa River, South Iceland. The combined effects of the three proposed power projects will dramatically change the present river and, therefore, we are concerned regarding the potential impacts on the future survival of North Atlantic Salmon (*Salmo salar*). There are some questions that we have regarding the impact of these power stations on our salmonid species and were hoping you could address the following questions based on your experience with hydro power stations on the Columbia River.

1. We have been provided with the following information: “Example of places where bypass channels have provided good results in coloured water are Bonneville Dam and Lower Granite Dam in the Columbia River in USA where the survival estimate of smolts that go through bypass channels is 98-99% according to measurements.” Are there any studies that have been conducted that explain what percentage of juvenile salmon smolts passing these projects would be expected to enter these bypass channels?
2. Can we expect that the juvenile survival estimates calculated at the dam bypass structure of 98-99%, and through Kaplan Turbines of 85-90%, to be sufficient to describe the total effects of these hydro power projects on salmon survival? Would there be additional effects of hydro power project passage on survival to the adult return stage?
3. Downstream of the Urridafoss project there will be a reduced water flow, down to only 10 m³/s, which is a dramatic decrease from the 360 m³/s which is the natural average stream flow of the river. These lower flows will continue over natural barriers, such as the Urridafoss waterfall. Have you observed any similar situations on the Columbia River and do you have any information describing the potential impacts to adult salmon migrants? Will this create low flow barriers to fish passage? Can you estimate the potential extent of these barriers?

Are the numbers of salmon caught (here by both net and rod) an appropriate way to monitor salmon abundance?

Sincerely,

A handwritten signature in black ink, appearing to read 'Orri Vigfússon', written in a cursive style.

Orri Vigfússon

NORTH ATLANTIC SALMON FUND,

Skipholti 35, 105 Reykjavík, Iceland

Tel: + 354 568 6277 - Fax: +354 588 4758 - nasf@vortex.is - www.nasfworldwide.com