



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

April 10, 2012

Stephen J. Wright
Administrator
Bonneville Power Administration
905 N.E. 11th Avenue
Portland, Oregon 97232

Dear Mr. ^{Steve}Wright:

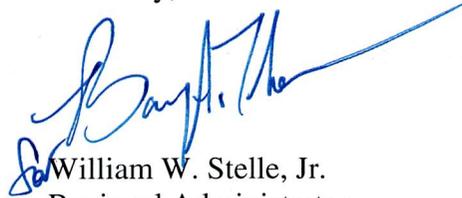
It has come to my attention that as part of the recent proceedings regarding the Bonneville Power Administration's Oversupply Management Protocol, comments have been made regarding the impacts of total dissolved gas (TDG) on juvenile salmon and steelhead as they migrate through the Federal Columbia River Power System. I am writing to confirm the biological rationale for maintaining the gas limitations allowed by the Washington Department of Ecology and the Oregon Department of Environmental Quality's waivers. The best available science, based on results from the gas bubble trauma (GBT) monitoring program required by the waivers, indicates that spill levels resulting in tailrace TDG levels of $\leq 120\%$ are generally safe for juvenile salmon and steelhead (e.g., generally $\leq 1\%$ incidence of fish with fin GBT symptoms). The incidence of fin GBT symptoms increases to nearly 3% at tailrace TDG levels of 121-125%, nearly 5% at TDG levels of 126-130, and over 6.5% at TDG levels greater than 130%. The severity of fin GBT symptoms has been correlated to higher mortality under laboratory conditions.

Accordingly, in order to protect migrating salmon and steelhead, we recommend that dams should not be voluntarily operated to exceed tailrace TDG levels of 120% - consistent with the state waivers. In cases of over-generational spill (beyond the 120% TDG limits allowed in the state waivers), we continue to support the U.S. Army Corps of Engineers use of the spill priority list in consultation with the Technical Management Team to minimize the impacts of these events on migrating juvenile and adult salmon and steelhead.

TDG limits remain an important consideration in the provision of safe and effective passage for salmon and steelhead at the mainstem Columbia and Snake River dams.

Please let me know if you have questions.

Sincerely,


William W. Stelle, Jr.
Regional Administrator

