State, Federal and Tribal Fishery Agencies
Joint Technical Staff

US Fish and Wildlife Service

Columbia River Inter-Tribal Fish Commission

Idaho Department of Fish and Game

Oregon Department of Fish and Wildlife

National Marine Fisheries Service

Washington Department of Fish and Wildlife

May 6, 2003

Ms. Cindy Henriksen
COE-RCC
PO Box 2870
Portland, OR 97208

Dear Ms. Henriksen,

Recently some issues have come to our attention that have been raised regarding the implementation of the Biological Opinion Spill Program within the constraints of the waivers associated with levels of total dissolved gas (TDG). We recognize the difficulty of managing a dynamic system, such as the hydrosystem, to specific waiver limitations. However, we have been frustrated this year as well as the past few years with the COE's conservative approach to implementation of the Biological Opinion Spill Program, which is an integral component of the mitigation program designed to address impacts of the Federal Columbia River Power System.

First, we would like to state that it is not our intention to request the COE to specifically violate the State water quality agency waiver requirements. However, we are asking the COE to recognize the limitations of instrumentation, as well as the effect of environmental variables such as solar radiation, wind and changes in barometric pressure, in the way they are presently managing the spill program. The COE presently errs on the side of the water quality waivers, staying well below the waivers at some projects when many of these excursions of 1% change in total dissolved gas readings are likely due to the environmental and instrument effects. This type of management compromises the implementation of the Biological Opinion Spill Program and directly affects juvenile fish survival at COE projects.

A specific example of this type of management occurred at Little Goose Dam this spring. It is our understanding that spill at Little Goose Dam was being limited based on forebay readings at Ice Harbor Dam – two projects downstream. Spill was being constrained based on excursions of 1-2% in the TDG readings at Ice Harbor forebay. These excursions were likely due to environmental variables, given that the readings at the Ice Harbor tailrace monitor are often less than observed at the forebay. It is our understanding that the Lower Monumental forebay has now been substituted as the control point for Little Goose spill. At the request of FPC and NOAA Fisheries staff, spill was increased by a few Kcfs over several days. The Little Goose Dam tailrace has been

consistently at 116% to 117% and the Lower Monumental forebay has never exceeded the water quality waiver of 115% for the highest 12 hours in a 24-hour period. However, based on a single daily reading of 115% for the highest 12 hours on May 2, 2003, spill levels were immediately decreased. We believe this action was not consistent with the spirit of managing spill for fisheries mitigation, within the intent of the water quality waivers.

Additional examples have occurred, and are occurring in the lower Columbia River as well. Specifically, from April 16 to April 24 the average of the twelve highest hours in a 24-hour period for John Day Dam tailrace was 116.8%. The spill volume at JDA is supposed to be 60% of the total river flow. During the same time period the average spill was only 53.3 % of the river flow. At The Dalles Dam the COE has consistently provided 39% of daily average flow as spill, while the Biological Opinion calls for 40%. The consistency of being able to provide 39% suggests that the COE is capable of consistently providing 40% as required by the Biological Opinion. Attached is a table showing 12–hour TDG averages observed over the past two weeks at the forebay and tailrace locations of the Lower Snake River and Columbia River projects. From inspection of this table it can be observed that at some projects TDG levels are considerably below the gas waivers, and are not violating the gas levels at the next downstream project.

Further justification for meeting Biological Opinion Spill Program can be obtained from the gas bubble trauma monitoring that has been conducted for several years in association with the Smolt Monitoring Program. Historically, the biological criteria established by NOAA Fisheries for decreasing spill levels have not been exceeded at gas levels similar to those presently being observed in the system. The 2003 monitoring effort confirms those historic observations

We look forward to working with the COE to assure providing the full benefits of spill in the recovery of Columbia and Snake River salmon, while meeting the intent of the water quality waivers, which were specifically designed to allow full implementation of the Biological Opinion Spill Program.

Sincerely,

Howard Schaller, USFWS

Steve Pettit, IDFG

Ron Boyce, ODFW

Tom Lorz, CRITFC

Paul Wagner, NMFS

Shane Scott, WDFW

Cc: Russell Harding, OR DEQ
Chris Maynard, WA DOE
Mary Lou Soscia, EPA

Total Dissolved Gas Data at Lower Snake and Columbia River Sites

	LGO				LGO Tailwater				LMN				LMN Tailwater				IHR				IHR Tailwater			
	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
22-Apr	110	110	111	24	113	116	116	24	112	113	114	24	118	119	120	24	115	116	116	24	114	115	117	24
23-Apr	111	111	111	14	113	114	116	14	112	112	113	14	117	117	119	13	114	114	115	14	113	113	114	13
24-Apr	110	110	111	16	112	113	116	16	112	112	113	23	117	118	118	23	112	113	114	24	114	114	115	24
25-Apr	108	110	111	24	111	115	116	24	112	113	113	24	118	119	120	24	113	114	116	24	114	115	116	24
26-Apr	108	109	110	24	111	115	116	24	110	112	112	24	118	118	119	24	112	112	113	24	114	114	115	24
27-Apr	107	108	109	24	111	116	116	24	109	111	113	24	118	119	120	24	112	113	116	24	114	115	115	24
28-Apr	107	108	109	24	112	116	116	24	111	113	114	24	119	120	120	24	114	116	118	24	114	115	117	24
29-Apr	107	109	112	24	111	116	117	24	112	113	115	24	118	119	120	24	115	115	115	24	114	115	117	24
30-Apr	108	109	111	24	112	116	116	24	111	113	115	24	118	119	120	24	114	115	115	24	113	114	114	24
1-May	110	110	111	24	113	116	116	24	111	112	113	24	118	119	120	24	115	115	116	24	113	113	114	24
2-May	110	110	111	24	114	117	118	24	112	113	114	24	118	120	121	24	115	116	116	24	113	114	117	24
3-May	110	111	111	24	113	116	117	24	114	115	116	24	118	118	120	24	116	116	116	24	114	114	117	24
4-May	109	110	110	24	113	116	116	24	113	114	115	24	117	118	118	24	114	115	115	24	112	113	115	24
5-May	107	107	108	24	111	115	116	24	110	111	112	24	117	117	118	24	110	111	112	24	111	112	113	24

	McN OR				McN WA				McN Tailwater				JDA				JDA Tailwater			
	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
22-Apr	109	109	110	24	109	110	110	24	117	119	122	24	108	108	109	23	112	117	118	24
23-Apr	108	109	112	24	108	108	109	24	116	120	122	24	109	110	111	23	113	118	119	24
24-Apr	107	107	108	24	108	108	109	24	116	119	120	24	110	110	110	23	113	117	118	24
25-Apr	108	109	110	24	109	111	111	24	115	120	122	24	109	110	110	23	113	117	118	24
26-Apr	109	109	110	24	110	111	111	24	117	121	122	24	108	108	109	23	113	118	119	24
27-Apr	110	112	115	24	110	111	113	24	115	120	121	24	109	110	113	23	113	117	118	24
28-Apr	110	111	112	24	111	111	112	24	115	120	121	24	109	110	111	23	113	117	118	24
29-Apr	112	114	117	24	113	114	114	24	116	119	120	24	109	110	110	23	113	116	117	24
30-Apr	112	113	114	24	112	113	113	24	116	119	120	24	109	110	110	24	113	117	118	24
1-May	113	115	116	24	114	115	116	24	116	119	120	24	111	112	114	23	114	117	118	24
2-May	115	117	119	24	115	116	116	24	117	119	120	24	114	115	116	23	116	118	119	24
3-May	114	114	115	24	116	116	116	24	117	119	119	24	114	114	115	23	116	118	119	24
4-May	113	113	114	24	113	114	115	24	116	119	119	24	112	113	113	23	115	117	118	24
5-May	108	109	110	24	108	109	110	24	114	118	119	22	110	110	111	23	114	118	119	24

	TDA				TDA Downstream				BVL				Warrendale				Camas/Wash			
	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#	24h	12h		#
Date	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr	Avg	Avg	High	hr
22-Apr	108	109	111	23	115	116	117	24	109	109	110	23	117	118	118	23	112	115	116	24
23-Apr	109	112	114	23	116	118	120	24	109	110	111	23	117	118	118	23	113	114	116	24
24-Apr	110	112	113	23	116	117	118	24	111	112	112	23	114	116	118	23	113	114	115	24
25-Apr	111	113	114	23	117	117	118	24	112	113	113	23	115	117	118	23	112	113	118	24
26-Apr	111	113	115	23	117	118	119	24	113	114	115	23	115	116	118	23	113	115	121	24
27-Apr	111	114	116	23	116	118	119	24	114	114	115	23	115	117	118	23	115	117	124	24
28-Apr	113	115	116	23	118	119	120	24	115	116	116	23	119	119	120	23	115	115	118	16
29-Apr	111	113	115	23	117	118	119	24	115	116	116	23	119	119	120	23	116	117	118	24
30-Apr	111	112	113	24	116	117	118	24	114	115	115	24	118	118	118	24	116	116	117	24
1-May	111	113	114	21	117	118	119	24	113	113	114	23	117	117	118	23	115	116	117	24
2-May	112	114	115	23	117	118	118	24	116	116	116	23	116	116	117	23	116	117	118	24
3-May	113	113	114	23	117	117	118	24	114	115	115	20	114	115	116	23	113	114	115	24
4-May	112	113	114	23	116	116	117	24	111	112	112	23	113	114	114	23	111	111	112	24
5-May	110	111	113	23	115	116	117	24	111	111	111	23	114	115	115	23	111	112	113	24