

Attached, please find the latest Real-time GBT reports for the Salmonid and Non-salmonid GBT monitoring programs, with data through batch date of May 20<sup>th</sup>.

The Salmonid GBT Report (gbtsumbybatchdate\_realtime.pdf) has new data from:

- RIS (Batch date 5/20)
- LMN (Batch date 5/19)

The Non-Salmonid GBT Report (NS\_gbtsumbybatchdate\_realtime.pdf) has new data from a sample conducted as part of the feasibility study on using the Pikeminnow program electrofishing and dam angling crews to collect native non-salmonids for GBT examinations. This non-salmonid sample was conducted below Bonneville, via electrofishing, on May 19, 2021 (i.e., Electrofishing Below Bonneville).

Finally, USGS conducted a non-salmonid GBT sample in a location that was not included in the regionally approved plan. This sample was conducted below Little Goose Dam. The FPC data management system and reporting system was designed to process and report data from pre-planned sites and, therefore, data from this sample were not processed by our automated system or reported in the attached Non-Salmonid GBT Report. FPC staff will work to manually incorporate the data from this unanticipated site into our database. In the meantime, we will we will report data from unplanned sampling sites in tables, in memorandum form, for distribution to the region. A memorandum with the data from the sample conducted below Little Goose will be sent out later this afternoon.

A summary of the sample below LGS are below.

- 49 total fish examined, no signs of GBT observed.
- Of these 49 fish, 20 were sculpin and 29 were smallmouth bass. It should be noted that smallmouth bass are a non-native species and, therefore, are not part of the regionally approved plan for native non-salmonid GBT monitoring.
- The sampling method for these fish is currently not known to FPC.

## Gas Bubble Monitoring Program Two Week Salmonid GBT Monitoring Report

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### LOWER GRANITE DAM

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/14/2021	CH1+ST	45	0	0	0.00 %	0.00 %	0	0	0	0

### LITTLE GOOSE DAM

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/10/2021	CH0+CH1+ST	100	2	2	2.00 %	0.00 %	2	0	0	0
05/17/2021	CH0+CH1+ST	100	2	2	2.00 %	0.00 %	2	0	0	0



Samples highlighted in yellow indicate that the sample size criteria of 50 fish was not met. The inability to collect an adequate sample precludes the accurate estimation of the percentage of fish with GBT. Therefore, making management decisions based on these small of sample sizes is inadvisable.

The action criteria for interruption of the voluntary spill program is defined as either 15% of examined fish showing signs of GBT in their non-paired fins or 5% of examined fish showing severe signs of GBT in their non-paired fins (severe signs constitute >25% of the surface area of the fin is occluded by gas bubbles, corresponding to Ranks of 3 or 4)

## Gas Bubble Monitoring Program Two Week Salmonid GBT Monitoring Report

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### LOWER MONUMENTAL DAM

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/12/2021	CH1+ST	100	2	2	2.00 %	0.00 %	2	0	0	0
05/19/2021	CH0+CH1+ST	100	6	6	6.00 %	0.00 %	6	0	0	0

### McNARY DAM

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/11/2021	CH1+ST	100	0	0	0.00 %	0.00 %	0	0	0	0
05/15/2021	CH1+ST	100	1	1	1.00 %	0.00 %	1	0	0	0
05/19/2021	CH0+CH1+ST	100	0	0	0.00 %	0.00 %	0	0	0	0



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## Gas Bubble Monitoring Program Two Week Salmonid GBT Monitoring Report

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### BONNEVILLE DAM

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/09/2021	CH1+ST	100	0	0	0.00 %	0.00 %	0	0	0	0
05/12/2021	CH1+ST	100	0	0	0.00 %	0.00 %	0	0	0	0
05/16/2021	CH1+ST	100	1	1	1.00 %	0.00 %	1	0	0	0
05/19/2021	CH1+ST	100	1	1	1.00 %	0.00 %	1	0	0	0

### ROCK ISLAND DAM (ALL FISH)

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/11/2021	CH1+ST	100	4	4	4.00 %	0.00 %	3	1	0	0
05/13/2021	CH1+ST	100	5	5	5.00 %	0.00 %	5	0	0	0
05/18/2021	CH1+ST	100	2	2	2.00 %	0.00 %	2	0	0	0
05/20/2021	CH1+ST	100	3	3	3.00 %	0.00 %	3	0	0	0



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### ROCK ISLAND DAM ("TRADITIONAL" EXAMS ONLY)

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/18/2021	CH1	16	1	1	6.00 %	0.00 %	1	0	0	0

### ROCK ISLAND DAM ("FRESH" EXAMS ONLY)

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/11/2021	CH1+ST	100	4	4	4.00 %	0.00 %	3	1	0	0
05/13/2021	CH1+ST	100	5	5	5.00 %	0.00 %	5	0	0	0
05/18/2021	CH1+ST	84	1	1	1.00 %	0.00 %	1	0	0	0
05/20/2021	CH1+ST	100	3	3	3.00 %	0.00 %	3	0	0	0



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## Gas Bubble Monitoring Program Two Week GBT Non-Salmonid Monitoring Report

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### Non-salmonid Below Bonneville

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/13/2021	AP+CH0+SC+SK+NP	102	1	1	1.00 %	0.00 %	0	1	0	0

### Electrofishing Below Bonneville

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/19/2021	LU+PM+SC+NP+SU	31	2	2	6.00 %	0.00 %	2	0	0	0



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## Gas Bubble Monitoring Program Two Week GBT Non-Salmonid Monitoring Report

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### Dam Angling at Bonneville Tailrace

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4

### Dam Angling at The Dalles Tailrace

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4



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## Gas Bubble Monitoring Program Two Week GBT Non-Salmonid Monitoring Report

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### Dam Angling at John Day Tailrace

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4

### Non-salmonid Below McNary

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/10/2021	SC+SD	76	3	3	4.00 %	1.00 %	2	0	0	1
05/17/2021	MW+SC+SK+NP+SU	60	0	0	0.00 %	0.00 %	0	0	0	0



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## Gas Bubble Monitoring Program Two Week GBT Non-Salmonid Monitoring Report

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### Non-salmonid Below Ice Harbor

Date	Species Examined	Total Fish Examined	Total Fish w/ GBT	Total Fish w/ Fin GBT	Percent Fish w/ Fin GBT	Percent Fish w/ Severe Fin GBT	Number of Fish with Fin GBT - By Rank			
							Rank 1	Rank 2	Rank 3	Rank 4
05/11/2021	MW+SC+NP	127	1	1	1.00 %	0.00 %	1	0	0	0
05/18/2021	MW+SC+NP	133	1	1	1.00 %	0.00 %	1	0	0	0



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## Gas Bubble Monitoring Program

### Two Week GBT Non-Salmonid Monitoring Report

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Species Code	Description	Species Code	Description	Species Code	Description
BM	Bass, Large Mouth	BS	Bass, Small Mouth	BL	Bluegill and Pumpkinseed
BH	Bullhead	CP	Carp	CC	Channel Cat
CM	Chiselmouth	UM	Chum	CR	Crappie species
LD	Dace - Long Nose	SD	Dace - Speckled	BK	Killifish, Banded
AP	Lamprey Ammocoete (Pacific)	MP	Lamprey Macrophthalmia Pacific	LK	Lamprey Adult (Brook)
LP	Lamprey Adult (Pacific)	LR	Lamprey Adult (River)	MA	Madtom, Tadpole
OT	Other incidental species not listed	PM	Peamouth	PE	Perch
NP	Pike Minnow, Northern	SR	Sand Roller	SC	Sculpin species
SA	Shad Adult	SJ	Shad Juvenile	RS	Shiner Redside
SK	Stickleback	SN	Sturgeon, Green	SG	Sturgeon, White
BU	Sucker - Bridgelip	LU	Sucker - Largescale	MU	Sucker - Mountain
SU	Sucker, Species	TT	Tench	BT	Trout - Brook
NT	Trout - Brown	LT	Trout - Bull	CT	Trout - Cutthroat
RT	Trout - Rainbow	WE	Walleye	WA	Warmouth
LW	Whitefish - Lake	MW	Whitefish - Mountain		



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