

From: [Tiffan, Kenneth F](#)
To: [Sullivan, Leah S \(BPA\) - EWP-4](#); [Feil, Daniel H CIV_CENWD_CENWD \(USA\)](#); [Tony Norris](#); [Scott Bettin](#); [Turner, Daniel F CIV_USARMY_CENWD \(USA\)](#); [Dykstra, Timothy A CIV_USARMY_CENWD \(US\)](#); [Baus, Douglas M CIV_USARMY_CENWD \(USA\)](#); [Wright, Lisa S CIV_USARMY_CENWD \(USA\)](#); [Peery, Christopher A CIV_USARMY_CENWW \(USA\)](#); [Mackey, Tammy M CIV_USARMY_CENWP \(USA\)](#); ["Trevor Conder"](#)
Subject: [Non-DoD Source] Native, nonsalmonid GBT report (May 3-6)
Date: Thursday, May 6, 2021 8:52:48 PM

All,
 Below is a brief summary of GBT sampling for native nonsalmonids below Ice Harbor, McNary, and Bonneville for the week of May 3. This was the second week that GBT was observed, which only occurred in 1 sculpin below McNary, 1 sculpin below Ice Harbor, and 4 sculpins below Bonneville. The one sculpin that showed GBT signs below McNary had the caudal fin >50% occluded by bubbles (rank 4 or "severe") and 6-25% occlusion in the dorsal fin (rank 2). The one sculpin that showed signs below Ice Harbor had less than 5% occlusion in the caudal fin (rank 1). Both sculpins were relatively large (≥ 100 mm). Four sculpins were observed below Bonneville that had bubbles on their heads, but not in the unpaired fins. Thus, I did not include them in any calculation of incidence or rank. Let me know if you have any questions.

Ken Tiffan
 U.S. Geological Survey
 Western Fisheries Research Center
 Columbia River Research Laboratory
 5501A Cook-Underwood Rd.
 Cook, WA 98605

Zone	Dates sampled	Methods Seine	E-fish	Species sampled	Number examined	Size range (mm)	GBT rate %	GBT rank	Comments
IHR	5/4	X	X	NPM, COT	126	45-125	0.8	1	1 sculpin had a rank 1 in the caudal fin
BON + MCN	5/3, 5/6	X	X	NPM, COT, TSS, SPD, LSS	147	42-126	0.7	1	1 sculpin had a rank 4 in the caudal fin
Location	Dates sampled	Methods Seine	E-fishing	Species sampled	Number examined	Size range (mm)	GBT rate %	GBT rank	Comments
IHR	4/27	X	X	NPM, COT	126	45-125	0.8	1	
MCN	4/26		X	NPM, COT, TSS, SPD, LSS	54	42-126	1.9	4	1 sculpin had a rank 4 in the caudal fin
BON	4/29	X	X	NPM, COT, TSS, SPD, LSS	93	45-111	0	0	4 sculpin had GBT on head but not in fins
Species codes: NPM=northern pikeminnow, PEA=peamouth, LSS=largescale sucker, BLS=bridgelip sucker									
SUC = sucker spp., COT=sculpin spp., SPD=speckled dace, TSS=three-spine stickleback, MWN=mountain whitefish									
WST=white sturgeon, LAM=Pacific lamprey, CHM=chiselmouth, RSS=redside shiner,									
SDR=sand roller, LND=Longnose dace									
GBT rate: The percentage of fish with GBT of all fish examined									
GBT rank: 0=no bubbles, 1 = 1-5%, 2 = 6-25%, 3 = 26-50%, 4 = >50% of fins or eyes occluded									