

Table 5. Analysis of potential changes in physical habitat in the Lower Ophi River (between Saleyards bridge and SH1 bridge) using NIWA's instream habitat model outputs and proposed PC7 (Tables 14(v) and 14(w)) and AMWG monthly minimum flows at Saleyards Bridge. Cells shaded blue indicate the AMWG's minimum flow provides more habitat (or no difference) than flow for the equivalent month in the PC7 tables. Cells shaded red indicate the opposite. For the bottom third section, cells shaded blue indicate the 2025 Table 14(w) minimum flow provides more habitat than flow for the equivalent month in the 2030 Table 14(v). Cells shaded red indicate the opposite. (note: for 'Bad algae' columns, blue shaded cells indicate a reduction in habitat and red shaded cells indicate an increase in habitat)

Analysis of potential changes in physical habitat in the Lower Ophi River (between Saleyard Bridge and SH1 Bridge) using NIWA's IFIM model outputs and proposed monthly minimum flows at Saleyard Bridge																										
% habitat gain/loss comparing AMWG flows to PC7 Table 14(v) 2025 flows (cumecs)																										
Month	PC7 Table 14(v)	AMWG	Good algae		Benthic invertebrates					Native fisheries							Sport fisheries					Bad algae				
			Thin films	Short filamentous	Chironomid	Hydrobiosida e caddisfly	Pycnocentros des	Deleatidium	Food producing	SF eel small	SF eel large	LF eel small	LF eel large	Upland bully	Common bully	Canterbury galaxias	Torrentfish	Chinook salmon juvenile	Browt trout juvenile	Brown trout adult	Chinook salmon spawning	Brown trout spawning	Didymo	Phormidium	Long filamentous algae	
Jan	3.50	4.50	16.4%	1.2%	3.8%	4.5%	2.4%	6.2%	7.1%	-12.1%	-19.4%	-7.4%	-9.8%	-1.0%	-9.1%	-13.1%	6.5%	-5.4%	-16.5%	24.4%			3.0%	7.2%	9.2%	
Feb	3.50	4.50	16.4%	1.2%	3.8%	4.5%	2.4%	6.2%	7.1%	-12.1%	-19.4%	-7.4%	-9.8%	-1.0%	-9.1%	-13.1%	6.5%	-5.4%	-16.5%	24.4%			3.0%	7.2%	9.2%	
Mar	7.50	7.00	-8.3%	3.8%	-3.0%	-0.6%	1.9%	0.1%	0.0%	5.5%	-2.9%	2.2%	4.0%	-1.5%	-2.5%	5.3%	5.8%	-1.9%	7.2%	1.5%	6.2%			0.1%	-0.7%	-1.5%
Apr	8.00	7.00	-17.0%	7.8%	-5.9%	-1.0%	4.0%	0.7%	0.3%	10.5%	-7.4%	4.3%	6.8%	-1.8%	-5.4%	10.5%	11.7%	-3.8%	13.8%	4.2%	12.4%			0.4%	-1.2%	-2.2%
May	4.50	4.50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Jun	4.00	4.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Jul	4.00	4.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Aug	4.50	4.50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Sept	6.00	6.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Oct	8.50	8.00	-6.9%	4.7%	-3.3%	-0.2%	2.4%	0.9%	0.5%	5.2%	-5.7%	2.5%	0.5%	0.8%	-2.1%	5.4%	6.8%	-1.3%	7.4%	3.7%			0.4%	-0.2%	0.0%	
Nov	7.00	7.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%
Dec	6.00	6.00	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%

% habitat gain/loss comparing AMWG flows to PC7 Table 14(w) 2030 flows (cumecs)																											
Month	PC7 Table 14(w)	AMWG	Good algae		Invertebrates					Native fisheries							Sport fisheries					Bad algae					
			Thin films	Short filamentous	Chironomid	Hydrobiosida e caddisfly	Pycnocentros des	Deleatidium	Food producing	SF eel small	SF eel large	LF eel small	LF eel large	Upland bully	Common bully	Canterbury galaxias	Torrentfish	Chinook salmon juvenile	Browt trout juvenile	Brown trout adult	Chinook salmon spawning	Brown trout spawning	Didymo	Phormidium	Long filamentous algae		
Jan	3.80	4.50	12.2%	0.8%	2.4%	3.1%	1.5%	4.5%	4.8%	-9.3%	-14.3%	-5.5%	-8.2%	0.1%	-6.8%	-9.2%	3.6%	-4.5%	-12.2%	18.0%			1.9%	5.0%	10.4%		
Feb	3.80	4.50	12.2%	0.8%	2.4%	3.1%	1.5%	4.5%	4.8%	-9.3%	-14.3%	-5.5%	-8.2%	0.1%	-6.8%	-9.2%	3.6%	-4.5%	-12.2%	18.0%			1.9%	5.0%	10.4%		
Mar	7.80	7.00	-12.6%	5.7%	-4.5%	-0.8%	2.9%	0.3%	0.2%	8.0%	-5.2%	3.2%	5.5%	-1.8%	-4.0%	8.0%	8.8%	-2.9%	10.6%	2.7%			0.3%	-1.0%	-1.9%		
Apr	9.00	7.00	-30.5%	16.8%	-12.9%	-1.3%	8.9%	3.0%	1.6%	19.5%	-20.7%	9.3%	6.3%	1.1%	-8.9%	20.0%	23.8%	-5.7%	26.6%	11.7%			1.4%	-1.1%	-1.8%		
May	5.30	4.50	-17.1%	1.6%	-1.3%	-2.0%	0.1%	-3.9%	-2.5%	9.4%	11.3%	4.4%	11.0%	-6.2%	1.7%	8.5%	1.9%	1.4%	11.0%	-14.3%	14.1%	15.9%			-0.3%	-2.7%	-12.3%
Jun	4.80	4.00	-14.2%	-0.2%	-1.6%	-2.7%	-1.0%	-4.5%	-4.1%	8.7%	12.0%	5.2%	8.9%	-2.8%	5.1%	7.7%	-1.3%	3.7%	11.0%	-19.2%	12.7%	18.7%			-1.3%	-4.2%	-15.2%
Jul	4.80	4.00	-14.2%	-0.2%	-1.6%	-2.7%	-1.0%	-4.5%	-4.1%	8.7%	12.0%	5.2%	8.9%	-2.8%	5.1%	7.7%	-1.3%	3.7%	11.0%	-19.2%	12.7%	18.7%			-1.3%	-4.2%	-15.2%
Aug	5.20	4.50	-17.1%	1.6%	-1.3%	-2.0%	0.1%	-3.9%	-2.5%	9.4%	11.3%	4.4%	11.0%	-6.2%	1.7%	8.5%	1.9%	1.4%	11.0%	-14.3%	14.1%	15.9%			-0.3%	-2.7%	-12.3%
Sept	6.60	6.00	-13.7%	4.8%	-3.4%	-1.2%	2.1%	-1.3%	-0.8%	8.4%	3.1%	3.0%	9.7%	-4.0%	-4.6%	7.0%	6.5%	-3.8%	10.0%	-3.0%			0.2%	-1.8%	-7.6%		
Oct	9.40	8.00	-15.3%	14.7%	-9.6%	-0.3%	8.0%	3.9%	2.0%	14.3%	-19.9%	8.2%	-3.5%	5.5%	-3.8%	15.4%	20.3%	-2.0%	21.8%	12.2%			1.7%	0.4%	1.0%		
Nov	7.30	7.00	-3.7%	1.9%	-1.5%	-0.3%	0.9%	0.0%	0.0%	2.8%	-1.3%	1.1%	2.3%	-0.9%	-1.3%	2.5%	2.9%	-0.9%	3.7%	0.6%			0.0%	-0.4%	-0.9%		
Dec	6.30	6.00	-4.5%	1.5%	-1.0%	-0.4%	0.6%	-0.6%	-0.3%	3.0%	1.6%	1.1%	3.5%	-1.5%	-1.8%	2.6%	2.0%	-1.5%	3.5%	-1.5%			0.1%	-0.6%	-2.7%		

% habitat gain/loss comparing Table 14(w) 2030 flows to Table 14(v) 2025 flows (cumecs)																										
Month	PC7 Table 14(v)	PC7 Table 14(w)	Good algae		Invertebrates					Native fisheries							Sport fisheries					Bad algae				
			Thin films	Short filamentous	Chironomid	Hydrobiosida e caddisfly	Pycnocentros des	Deleatidium	Food producing	SF eel small	SF eel large	LF eel small	LF eel large	Upland bully	Common bully	Canterbury galaxias	Torrentfish	Chinook salmon juvenile	Browt trout juvenile	Brown trout adult	Chinook salmon spawning	Brown trout spawning	Didymo	Phormidium	Long filamentous algae	
Jan	3.50	3.80	5.1%	0.4%	1.4%	1.5%	1.0%	1.8%	2.5%	-2.5%	-4.3%	-1.7%	-1.4%	-1.1%	-2.1%	-3.4%	3.2%	-0.9%	-3.6%	8.4%			1.2%	2.4%	-1.3%	
Feb	3.50	3.80	5.1%	0.4%	1.4%	1.5%	1.0%	1.8%	2.5%	-2.5%	-4.3%	-1.7%	-1.4%	-1.1%	-2.1%	-3.4%	3.2%	-0.9%	-3.6%	8.4%			1.2%	2.4%	-1.3%	
Mar	7.50	7.80	4.0%	-2.0%	1.4%	0.2%	-1.0%	-0.2%	-0.2%	-2.6%	2.2%	-1.0%	-1.6%	0.3%	1.4%	-2.8%	-3.2%	1.0%	-3.6%	-1.3%			-0.1%	0.2%	0.4%	
Apr	8.00	9.00	11.5%	-9.7%	6.5%	0.3%	-5.1%	-2.3%	-1.3%	-10.0%	12.3%	-5.2%	0.5%	-2.8%	3.4%	-10.6%	-13.7%	1.8%	-14.9%	-7.8%			-1.0%	-0.1%	-0.5%	
May	4.50	5.30	17.1%	-1.6%	1.3%	2.0%	-0.1%	3.9%	2.5%	-9.4%	-11.3%	-4.4%	-11.0%	6.2%	-1.7%	-8.5%	-1.9%	-1.4%	-11.0%	14.3%			0.3%	2.7%	12.3%	
Jun	4.00	4.80	14.2%	0.2%	1.6%	2.7%	1.0%	4.5%	4.1%	-8.7%	-12.0%	-5.2%	-8.9%	2.8%	-5.1%	-7.7%	1.3%	-3.7%	-11.0%	19.2%			1.3%	4.2%	15.2%	
Jul	4.00	4.80	14.2%	0.2%	1.6%	2.7%	1.0%	4.5%	4.1%	-8.7%	-12.0%	-5.2%	-8.9%	2.8%	-5.1%	-7.7%	1.3%	-3.7%	-11.0%	19.2%			1.3%	4.2%	15.2%	
Aug	4.50	5.20	17.1%	-1.6%	1.3%	2.0%	-0.1%	3.9%	2.5%	-9.4%	-11.3%	-4.4%	-11.0%	6.2%	-1.7%	-8.5%	-1.9%	-1.4%	-11.0%	14.3%			0.3%	2.7%	12.3%	
Sept	6.00	6.60	11.5%	-3.9%	2.7%	1.0%	-1.7%	1.1%	0.7%	-7.2%	-2.8%	-2.6%	-8.3%	3.4%	3.9%	-6.1%	-5.3%	3.3%	-8.4%	2.8%			-0.2%	1.5%	6.5%	
Oct	8.50	9.40	7.9%	-10.5%	6.1%	0.1%	-5.8%	-3.0%	-1.5%	-9.6%	13.4%	-5.8%	4.1%	-4.7%	1.7%	-10.6%	-14.4%	0.7%	-15.5%	-8.8%			-1.2%	-0.6%	-1.0%	
Nov	7.00	7.30	3.7%	-1.9%	1.5%	0.3%	-0.9%	0.0%	0.0%	-2.8%	1.3%	-1.1%	-2.3%	0.9%	1.3%	-2.5%	-2.9%	0.9%	-3.7%	-0.6%			0.0%	0.4%	0.9%	
Dec	6.00	6.30	4.5%	-1.5%	1.0%	0.4%	-0.6%	0.6%	0.3%	-3.0%	-1.6%	-1.1%	-3.5%	1.5%	1.8%	-2.6%	-2.0%	1.5%	-3.5%	1.5%			-0.1%	0.6%	2.7%	

Key for good algae, invertebrates and fish	
Red	Habitat loss >5%
Light Red	Habitat loss between <0 and 5%
Light Blue	Habitat gain between 0% and 5%
Dark Blue	Habitat gain >5%

Key for bad algae	
Red	Habitat loss >5%
Light Red	Habitat loss between <0 and 5%
Light Blue	Habitat gain between 0% and 5%
Dark Blue	Habitat gain >5%