

DISCHARGE RATE TO RECEIVING WATER BODY FOR THE 5-YEAR ARI EVENT (M3/s)

SUBCATCHMENT	RECEIVING CATCHMENT	TIME OF CONC (hr)	ESTIMATE OF DISCHARGE RATE TO RECEIVING WATER BODY FOR THE 5-YEAR ARI EVENT (m3/s)			Estimated receiving waterway 5 year flow	Estimated % of preproject 5-year catchment flow
			EXISTING	PROPOSED	DIFFERENCE		
EXISTING SWALE TO N D1	TARANAKI	6	0.0006	0.0047	0.004	2.8	0.15%
GOLF D2	TARANAKI	6	0.0055	0.0105	0.005	2.8	0.18%
TARANAKI D2	TARANAKI	6	0.0020	0.0029	0.001	2.8	0.03%
TARANAKI D1	TARANAKI	6	0.0020	0.0097	0.008	2.8	0.28%
PEGASUS N D1	TARANAKI	6	0.0111	0.0170	0.006	2.8	0.21%
EX ASSET RAVENSWOOD D1	TARANAKI	6	0.0025	0.0036	0.001	2.8	0.04%
PEGASUS S D1	TARANAKI	6	0.0049	0.0124	0.008	2.8	0.27%
GOLF D1	TARANAKI	6	0.0119	0.0128	0.001	2.8	0.03%
GARLICK D1	TARANAKI	6	0.0010	0.0088	0.008	2.8	0.28%
WAIHORA D8	WAIHORA	6	0.0081	0.0190	0.011	0.6	1.88%
WAIHORA D7	WAIHORA	6	0.0044	0.0314	0.027	0.6	4.68%
WAIHORA D6	WAIHORA	6	0.0028	0.0198	0.017	0.6	2.95%
WAIHORA D5	WAIHORA	6	0.0046	0.0239	0.019	0.6	3.34%
WAIHORA D4	WAIHORA	6	0.0077	0.0093	0.002	0.6	0.28%
WAIHORA D3	WAIHORA	6	0.0035	0.0189	0.015	0.6	2.67%
WAIHORA D2	WAIHORA	6	0.0158	0.0401	0.024	0.6	4.20%
WAIHORA D1	WAIHORA	6	0.0044	0.0138	0.009	0.6	1.63%
MCINTOSH D2	MCINTOSH	12	0.0028	0.0260	0.023	1.9	1.20%
MCINTOSH D1	MCINTOSH	12	0.0010	0.0089	0.008	1.9	0.41%
CAM D2	CAM	12	0.0010	0.0092	0.008	27.2	0.03%
CAM D1	CAM	12	0.0193	0.0384	0.019	27.2	0.07%
WILSON D2	CAM	12	0.0153	0.0410	0.026	27.2	0.09%
WILSON D1	CAM	12	0.0047	0.0104	0.006	27.2	0.02%
ROSSITER D4	CAM	12	0.0058	0.0138	0.008	27.2	0.03%
ROSSITER D3	CAM	12	0.0132	0.0211	0.008	27.2	0.03%
ROSSITER D2	CAM	12	0.0012	0.0035	0.002	27.2	0.01%
ROSSITER D1	CAM	12	0.0156	0.0225	0.007	27.2	0.03%

Notes: This assessment considers the difference in inflows based on impervious areas for each outfall point and catchment with C values of 0.10 and 0.90 for pervious and impervious fractions, respectively. The time of concentration has been established based on the time to peak in the WDC south ashley model from the time of peak rainfall. Where bioinfiltration swales are proposed (within the Waihora catchment) the assessment considers infiltration through the base of the swales of 50mm/hr. Catchment flows are calculated based on rational method, except for Cam River which is calculated using NIWA NZ flood statistics.

DISCHARGE RATE TO RECEIVING WATER BODY AT CAM RIVER FOR THE 12 HOUR EVENT (M3/s)

ARI	Flow Rate (m3/s)			Approximate Cam River Flow Rate (m3/s)	Increase in Cam River Flow
	Existing Scenario	Proposed Design	Difference		
5-Year	0.020	0.048	0.027	27.2	0.10%
10-Year	0.025	0.082	0.058	36.4	0.16%
20-Year	0.029	0.112	0.083	45.2	0.18%
50-Year	0.036	0.148	0.112	56.6	0.20%

Notes: This assessment considers the difference in inflows for various events at the Cam River crossing with C values of 0.10 and 0.90 for pervious and impervious fractions, respectively. The 12 hour time of concentration has been established based on the time to peak in the WDC districtwide flood model from the time of peak rainfall. Cam River levels sourced from NIWA NZ flood statistics and are uncorrected for climate change impacts to reflect present day conditions







