

# Forks River at Balmoral

M:\22163\Data Tables\71129\Forks River at Balmoral.xls]Summary

All values are flows in cubic metres per second

Date: 13/12/04

Site No.71129

Version: 1

Catchment Area (km<sup>2</sup>)

98

Data period

1962 - 2004

## Low Flow Statistics (Provided by Environment Canterbury, 2004)

Mean Annual Low Flow (MALF) (m <sup>3</sup> /s)	<b>1.32</b>
5 Year Low Flow (m <sup>3</sup> /s)	1.08
10 Year Low Flow (m <sup>3</sup> /s)	1.03

## Monthly Statistics

### Full Record Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Means
90% Highest (m <sup>3</sup> /s)	5.69	3.88	3.46	3.93	3.49	3.48	2.60	3.10	4.26	6.04	7.96	7.18	4.01
<b>Mean Flow (m<sup>3</sup>/s)</b>	<b>4.07</b>	<b>2.88</b>	<b>2.64</b>	<b>2.50</b>	<b>2.39</b>	<b>2.37</b>	<b>1.88</b>	<b>2.02</b>	<b>2.57</b>	<b>3.97</b>	<b>5.35</b>	<b>5.57</b>	<b>3.19</b>
Median Flow (m <sup>3</sup> /s)	3.74	2.77	2.58	2.15	2.31	2.19	1.75	1.75	1.86	3.66	5.12	5.39	3.18
10% Lowest (m <sup>3</sup> /s)	2.53	1.97	1.69	1.41	1.36	1.35	1.22	1.16	1.23	2.18	3.12	3.63	2.45

### 1980 - 2003 Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Means
90% Highest (m <sup>3</sup> /s)	5.7	3.9	4.5	3.9	3.4	4.1	2.6	2.9	4.2	6.1	8.0	7.1	4.0
<b>Mean Flow (m<sup>3</sup>/s)</b>	<b>4.2</b>	<b>2.9</b>	<b>2.8</b>	<b>2.6</b>	<b>2.4</b>	<b>2.6</b>	<b>2.0</b>	<b>2.1</b>	<b>2.5</b>	<b>4.2</b>	<b>5.5</b>	<b>5.7</b>	<b>3.3</b>
Median Flow (m <sup>3</sup> /s)	4.0	2.8	2.6	2.4	2.3	2.5	2.0	1.9	1.9	4.4	5.1	5.4	3.3
10% Lowest (m <sup>3</sup> /s)	2.6	2.1	1.8	1.5	1.5	1.3	1.2	1.4	1.4	2.2	3.9	4.1	2.6

## Seasonal Statistics

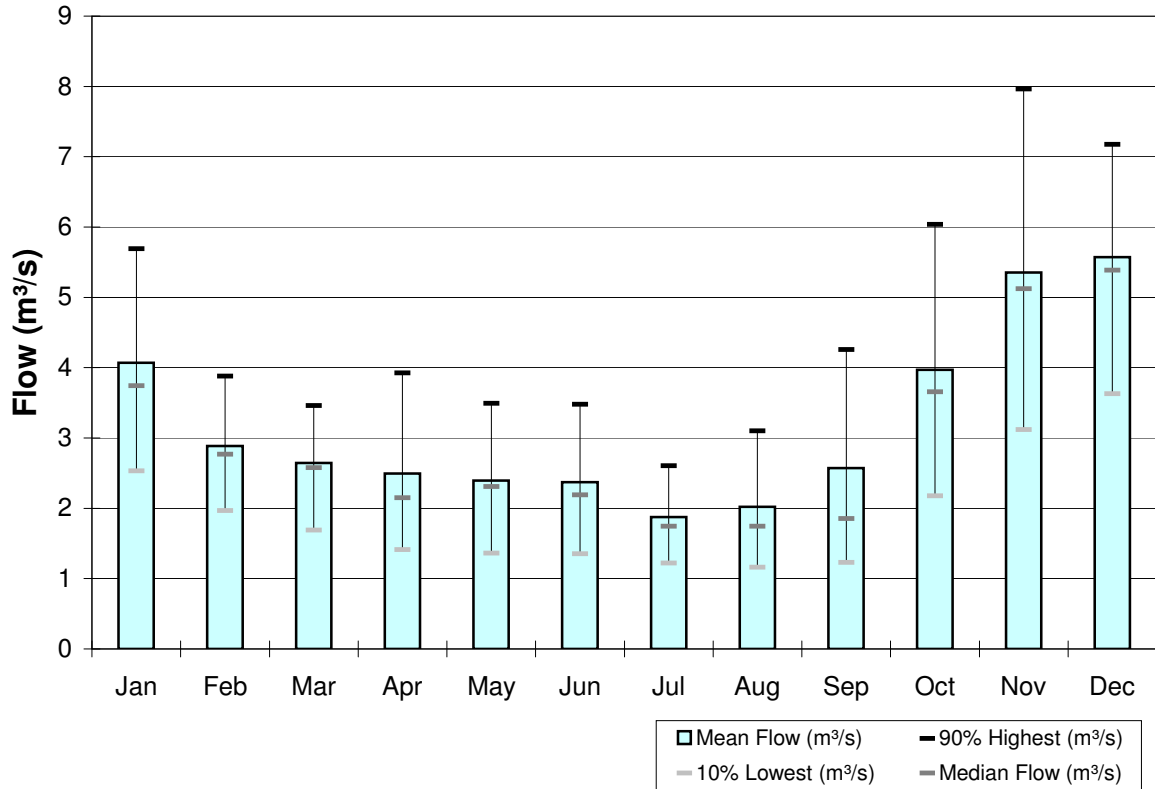
### Full Record Statistics

	Summer	Autumn	Winter	Spring	
90% Highest (m <sup>3</sup> /s)	5.5	3.5	2.7	5.5	Summer = Dec, Jan, Feb Autumn = Mar, Apr, May Winter = Jun, Jul, Aug Spring = Sep, Oct, Nov
Mean Flow (m <sup>3</sup> /s)	<b>4.2</b>	<b>2.5</b>	<b>2.1</b>	<b>3.9</b>	
Median Flow (m <sup>3</sup> /s)	4.0	2.4	2.0	3.9	
10% Lowest (m <sup>3</sup> /s)	3.2	1.6	1.4	2.7	

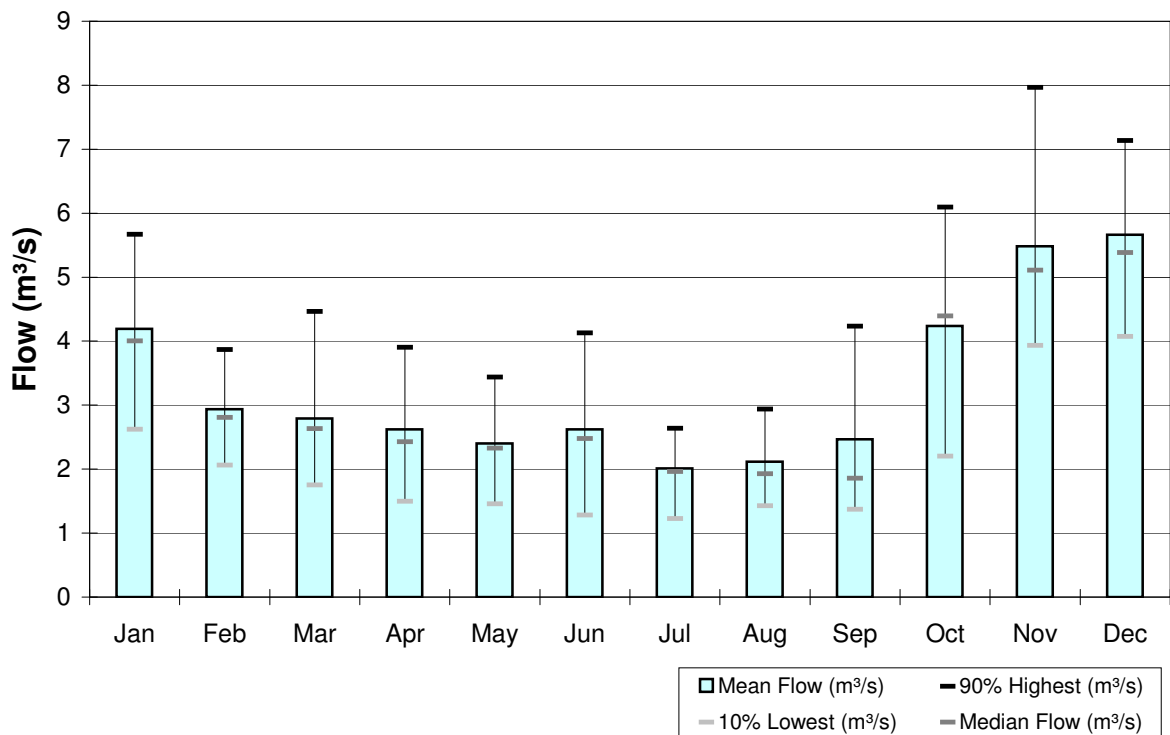
### 1980 - 2003 Statistics

	Summer	Autumn	Winter	Spring
90% Highest (m <sup>3</sup> /s)	5.8	3.4	2.8	5.2
Mean Flow (m <sup>3</sup> /s)	<b>4.4</b>	<b>2.6</b>	<b>2.2</b>	<b>4.0</b>
Median Flow (m <sup>3</sup> /s)	4.1	2.5	2.3	4.0
10% Lowest (m <sup>3</sup> /s)	3.2	1.7	1.6	2.9

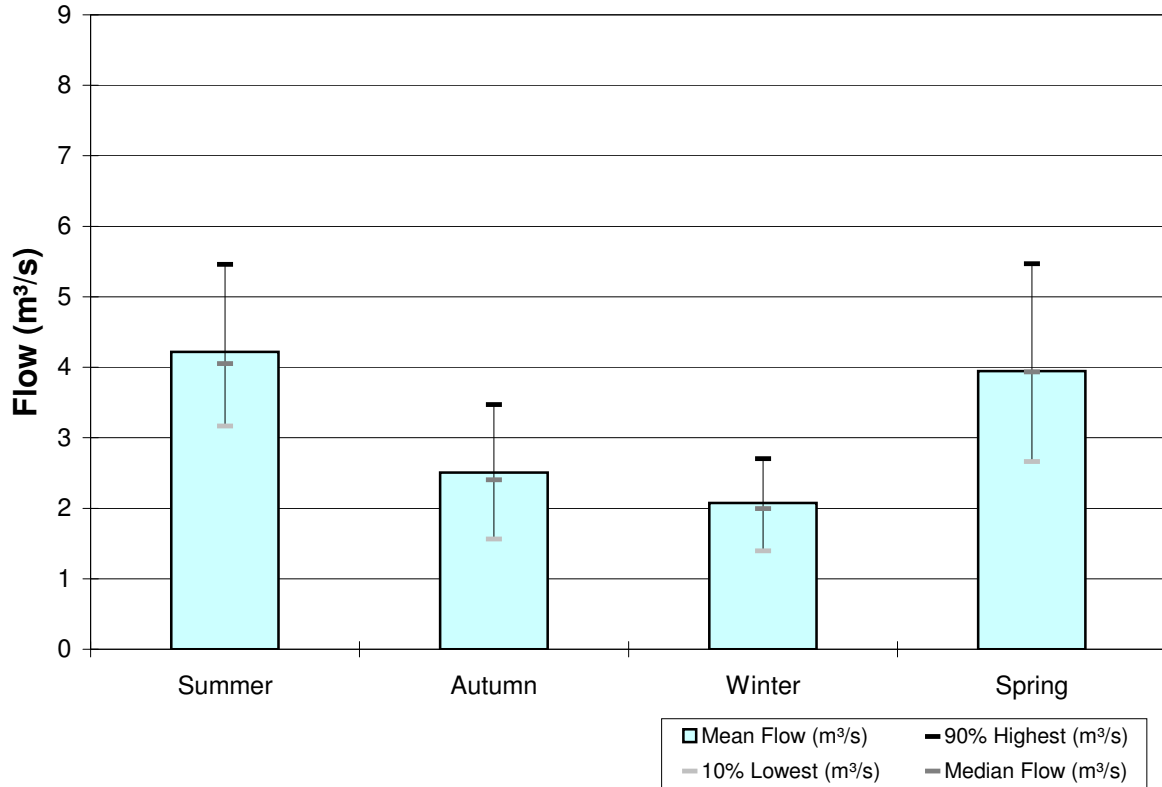
**SITE 71129 Forks River at Balmoral - MONTHLY FLOWS  
FULL RECORD (Aug 1962 - Jun 2004)**



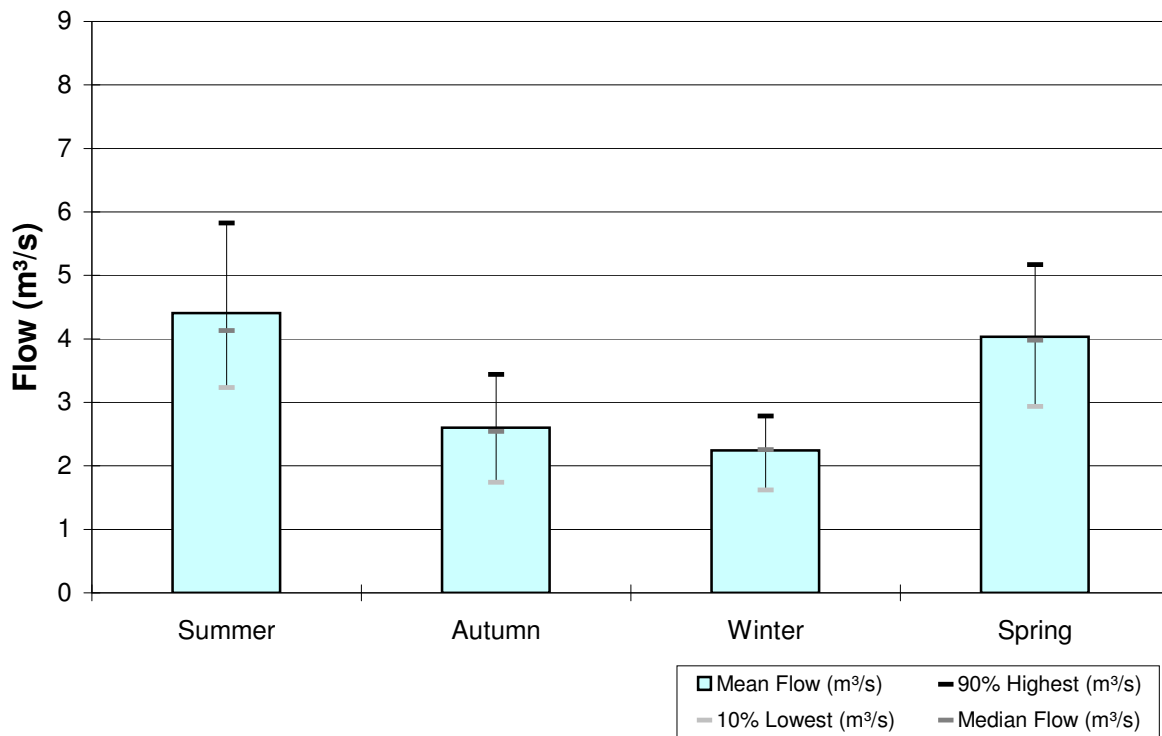
**SITE 71129 Forks River at Balmoral - MONTHLY FLOWS  
JAN 1980 - DEC 2003**



**SITE 71129 Forks River at Balmoral - SEASONAL FLOWS  
FULL RECORD (Aug 1962 - Jun 2004)**



**SITE 71129 Forks River at Balmoral - SEASONAL FLOWS  
JAN 1980 - DEC 2003**



All values are flows in cubic metres per second

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean
1962	?	?	?	?	?	?	?	2.65	2.63	?	?	4.91	?
1963	3.32	2.80	2.96	1.97	2.90	2.30	1.64	1.34	2.13	3.07	3.05	3.32	2.57
1964	3.38	2.12	2.84	1.84	2.44	1.73	1.60	1.62	1.72	2.59	4.73	5.55	2.69
1965	5.93	4.84	2.95	2.50	1.90	?	?	1.51	1.48	2.96	6.12	5.92	?
1966	6.29	2.89	2.56	1.96	1.54	1.26	1.04	1.06	1.22	2.35	4.09	3.90	2.52
1967	4.50	3.72	3.35	3.94	3.07	1.79	2.96	3.25	1.78	2.74	7.96	9.27	4.03
1968	5.00	4.43	3.35	2.54	?	2.36	?	3.00	3.01	5.69	6.14	6.88	?
1969	5.69	3.07	2.38	2.07	1.87	1.58	1.25	1.16	4.56	2.04	3.12	5.78	2.88
1970	3.52	2.15	2.56	2.08	1.36	?	?	2.36	9.80	4.53	5.50	4.33	?
1971	2.20	1.49	1.22	1.09	1.22	2.16	1.52	1.13	1.69	4.96	5.15	5.60	2.46
1972	2.96	1.84	1.56	1.91	2.62	2.01	1.75	1.79	3.84	5.09	8.05	4.63	3.17
1973	3.73	1.96	1.27	1.09	2.31	1.91	1.24	1.08	1.84	3.70	4.81	2.47	2.29
1974	1.91	1.87	2.34	3.11	1.97	1.68	1.61	1.51	1.58	3.06	5.40	3.60	2.47
1975	2.88	3.01	3.19	5.28	3.14	2.35	2.05	3.11	3.11	4.07	4.99	4.47	3.47
1976	3.28	2.51	1.69	1.32	1.23	2.22	1.54	1.18	1.10	1.15	2.31	7.05	2.22
1977	5.07	3.67	1.96	1.42	1.58	1.73	1.40	1.15	1.12	2.55	3.98	4.16	2.48
1978	3.84	2.02	1.39	2.13	3.59	1.99	1.74	3.60	3.81	4.24	5.12	5.72	3.27
1979	3.67	2.44	2.90	3.79	4.99	2.51	1.75	1.70	2.50	6.52	7.34	10.59	4.23
1980	7.18	3.34	3.04	3.35	2.86	3.16	1.66	1.98	3.17	5.01	5.33	5.82	3.83
1981	3.65	2.02	3.17	2.87	3.07	3.47	1.93	1.60	1.69	4.47	4.03	4.22	3.02
1982	3.52	2.17	2.85	1.81	2.02	2.03	1.35	1.44	1.75	2.15	10.07	6.32	3.12
1983	5.67	2.68	2.00	2.35	3.90	2.35	2.66	2.71	3.55	9.03	8.49	7.01	4.38
1984	4.75	3.50	2.56	1.91	1.51	1.25	2.09	2.44	1.73	3.49	6.73	9.80	3.49
1985	6.08	2.63	1.74	1.41	1.34	1.36	1.16	1.58	2.33	2.29	4.15	5.54	2.64
1986	3.42	3.19	4.89	2.99	2.22	3.28	1.98	1.87	1.84	5.21	5.39	4.51	3.40
1987	3.74	3.88	5.26	4.31	3.49	4.38	1.96	1.41	1.33	4.39	5.08	4.02	3.60
1988	2.50	2.95	2.59	1.91	1.72	1.79	1.78	2.42	3.58	?	6.60	4.96	?
1989	2.98	2.41	3.05	2.17	2.54	3.53	2.12	1.44	1.12	1.34	3.00	6.00	2.64
1990	3.95	2.27	1.69	1.40	3.32	2.45	2.56	3.36	1.81	4.88	4.55	6.07	3.21
1991	3.25	5.10	2.23	2.74	1.99	1.48	1.18	3.40	4.27	4.65	3.89	5.67	3.31
1992	4.17	2.16	1.75	2.02	1.43	1.25	1.18	2.54	1.87	3.29	6.62	4.78	2.76
1993	4.04	2.87	2.69	2.49	2.29	5.82	2.21	1.53	1.46	4.45	3.10	5.23	3.18
1994	?	2.93	5.18	2.85	2.36	2.62	2.48	2.53	2.59	2.65	9.89	6.86	?
1995	4.91	2.70	3.47	3.97	2.59	2.50	1.67	1.81	5.32	6.03	5.10	9.55	4.15
1996	4.00	4.29	3.08	5.01	3.05	2.57	1.64	1.51	1.80	6.11	4.09	4.51	3.47
1997	4.76	3.83	3.19	3.33	2.48	1.94	1.73	2.48	1.96	3.12	5.13	4.97	3.24
1998	2.53	2.01	2.46	2.76	2.00	1.62	3.60	3.03	3.01	7.42	5.12	3.60	3.28
1999	2.08	1.56	1.75	1.67	1.87	1.73	1.96	1.42	1.66	3.28	6.68	3.21	2.41
2000	3.72	3.24	1.94	3.75	2.69	5.55	3.15	2.68	4.31	5.46	4.08	7.19	3.98
2001	4.85	2.74	1.80	1.42	1.31	1.22	1.34	1.30	1.11	2.18	4.74	5.14	2.43
2002	5.66	2.46	1.92	2.01	1.75	2.88	2.24	2.72	4.14	3.61	5.20	6.79	3.45
2003	4.96	3.51	2.67	2.36	3.80	2.66	2.58	1.53	1.75	2.96	4.53	4.19	3.12
2004	3.23	3.87	3.64	1.89	2.85	2.38	?	?	?	?	?	?	?