

November 2006 Monthly Flow and Rainfall Report

General

November was an unsettled, windy, at times unseasonably cool, and in some places wet month. Generally rainfalls were average to well above average but the windy cool conditions negated its effect to a large extent. Rain throughout the whole region at the end of the month has now set the region up and with some warmth and sunshine, growth should be good.

The weather pattern during the month was one of a series of fronts, troughs, and westerly quarter airstreams with few calm, settled periods of anticyclonic weather. Some particularly heavy rainfalls occurred especially around the lakes which all showed significant rises during the month. The low river flows in the rest of the region which were threatening irrigation supplies in September and October were banished as the rain spread throughout the Otago region and caused all rivers to rise. Long periods of gusty westerly quarter winds also occurred during the month along with the odd cold southerly outbreak which brought snow to 300 – 400m at times. Temperatures were well below average throughout Otago, causing grass and crop growth to be slow. A period of rain throughout Otago at the end of the month followed by calmer and warmer weather resulted in much better growth.

North Otago

Rainfalls in this area varied from close to average to well above average with good rain at the end of the month setting the region up well for soil moisture. Total falls at the indicator sites (average monthly total in brackets) included:

Omarama	95.0mm (46.2mm)	116% above average
Waikoura	99.8mm (45.0mm)	122% above average
Oamaru Airport	102.2mm (54.0mm)	89% above average
Kauru the Dasher	98.8mm (76.0mm)	30% above average
Islay Downs	66.6mm (46.4mm)	44% above average
Palmerston	62.4mm(44.8mm)	39% above average
Stoneburn	66.0mm (60.0mm)	10% above average

The new Oamaru raingauge recorded 128.7mm.

Heavy falls during the month included: on 8 November, Waikoura 22.5mm, Oamaru Airport 18.6mm, Oamaru 15.2mm; on 14 November, Oamaru 25.2mm, Islay Downs 18.0mm; and on 29 November, Omarama 53.1mm, Waikoura 25.0mm, Oamaru 29.2mm, Oamaru Airport 23.6mm, Islay Downs 19.2mm.

Average monthly river flows were close to their long term averages for the month with no irrigation restrictions required at any stage. Flows did go higher at times when the heavier rain occurred but no flooding occurred.

Farmers report that generally growth was slow through most of the month, but picked up at the end of the month. There was a lot of cool drying winds keeping temperatures down and all were hoping for more warmth in December.

Central Otago

Rainfalls were well above average in this region and the greater rainfalls were welcome in this area as it has been very dry for many months. Total falls at the indicator sites (average monthly totals in brackets) included:

Lindis Crossing	134.5mm (43.9mm)	206% above average
Cromwell	(Not Available)	
Alexandra	66.8mm (29.8mm)	124% above average
Blackstone Hill	133.7mm (56.3mm)	137% above average
Ranfurly	67.2mm (39.0mm)	72% above average
Tima	68.5mm (52.4mm)	31% above average

Significant falls during the month included: on 13/14 November, Lindis Crossing 15.0mm, Blackstone Hill 31.1mm, Ranfurly 15.6mm; on 16/17 November, Lindis Crossing 25.0mm, Alexandra 18.9mm; and on 29/30 November, Lindis Crossing 89mm, Alexandra 30.5mm, Blackstone Hill 67.6mm, Ranfurly 29.6mm, Tima 37.5mm.

Average monthly river flows in this region were close to or above average due to the heavier bursts of rain and some replenishment of irrigation storage dams was able to occur. The Manuherikia had a rise of more than 1.2m on 30 November but no significant flooding occurred.

Farmers report a cool windy month with slow grass growth. The rain at the end of the month at the top end of the Manuherikia catchment and the Upper Clutha Valley has ended the soil moisture problem at present and throughout the region there is enough soil moisture to allow good growth when there is sufficient warmth.

Lakes Wanaka, Wakatipu and Hawea and Surrounding Areas

November was a month of very heavy rain at times in this area. The result was some flooding in the rivers and significant rises in lake levels. Rainfalls were generally between 100% - 200% above average in this area as shown by the indicator sites (average monthly totals in brackets) included:

Makarora Station	344.9mm (182.6mm)	89% above average
Hunter Valley Station	171.0mm (79.0mm)	117% above average
Hawea Flat	163.9mm (54.2mm)	202% above average
Routeburn Station	390.0mm (163.0mm)	139% above average
Queenstown	170.1mm (71.8mm)	137% above average

Other raingauge totals included Halfway Bay Station 221.5mm and Matukituki 172.5mm.

Heavy falls included: on 11 November, Routeburn Station 35.3mm; on 13 November, Makarora Station 65.3mm, Hunter Valley Station 42.0, Routeburn Station 66.5mm; on 16/17 November, Makarora Station 82.5mm, Hunter Valley Station 39.5mm, Hawea Flat 30.6mm, Routeburn Station 88.0mm; and on 29 November, Makarora Station 106.3mm, Hunter Valley Station 87.0mm, Hawea Flat 80.1mm, Routeburn Station 101.0mm, Queenstown 77.5mm.

Average monthly river flows were well above their long-term averages for the month and minor flooding occurred. Most rivers recorded rises of between 1 and 2m on several occasions, but there were no significant problems.

The levels in Lakes Wanaka and Wakatipu increased significantly during the month. Lake Wanaka began the month at 277.60m, (average for November) while Wakatipu began at 310.24m (0.1m above average). Both generally slowly declined for the first 14 days of the month but once the heavier rains began, both started rising. By the end of the month, Wanaka had reached 278.45m, 0.8m above average and Wakatipu had reached 310.76m, 0.6m above average.

Lake Hawea began the month at 341.48m, 4.5m below full, and ended the month at 343.34m, 2.6m below full, a total rise of 1.85m.

Farmers report a cool, wet and windy month with slow growth. All are hoping for less rain and wind and more heat to help boost grass and crop growth.

Strath Taieri, Lower Taieri and Dunedin

Rainfall totals were generally close or slightly above average for November in this area. Total falls at the indicator sites (average monthly total in brackets) included:

Garthmyl Middlemarch	64.3mm (51.0mm)	26% above average
Musselburgh Dunedin	71.0mm (66.9mm)	6% above average
Lee Flat	71.3mm (68.0mm)	5% above average
Maungatua	77.1mm (56.7mm)	36% above average
Sullivans Dam	109.5mm (94.0mm)	20% above average
Dunedin Airport	55.0mm (54.0mm)	2% above average
Riccarton Road	73.0mm (56.4mm)	29% above average

Other raingauge totals in the area included: Southern Reservoir 94.3mm, Ross Creek 84.4mm, Pine Hill 77.1mm, and Deep Stream 63.5mm.

Significant falls during the month included: on 14 November, Middlemarch 11.0mm, Maungatua 11.0mm, Sullivans Dam 15.0mm; and on 29 November Middlemarch 21.3mm, Dunedin Airport 16.6mm, Musselburgh 18.4mm, Lee Flat 19.0mm, Maungatua 21.3mm, Sullivans Dam 29.0mm.

Average monthly river flows were close to or below average but no low flows and no significant rises occurred.

Farmers in this area report a cool windy month causing slow grass growth until the end of the month when some rain and warmth helped boost growth.

South and West Otago

Rainfall totals varied from close to average to more than 60% above average in this area. Total falls at the indicator sites (average monthly totals in brackets) included:

Tuapeka Mouth	100.9mm (62.0mm)	63% above average
Balclutha	55.5mm (59.6mm)	7% below average
Waikoikoi	98.0mm (76.6mm)	28% above average
Slopedown	163.8mm (110.6mm)	48% above average

Clarks Flat (near Lawrence) recorded 94.5mm and Moa Flat 115.5mm for the month.

Significant falls during the month included: Slopedown 13.0mm on 9 November; on 13 November, Tuapeka Mouth 14.4mm, Moa Flat 16.5mm; on 14/15 November Waikoikoi 24.2mm; and on 29/30 November, Tuapeka Mouth 38.9mm, Balclutha 16.5mm, Waikoikoi 35.6mm, Slopedown 47.5mm and Moa Flat 55.0mm.

Average monthly river flows were below their long-term averages for the month but were typical for this time of the year. A rise of about 1m in the Pomahaka at Burkes Ford was recorded on 15 November but no flooding occurred.

Farmers report a cool, windy month with slow grass growth. Warmth and sunshine are needed now along with a little rain during December to help boost grass and crop growth.

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* Data sources – Private individuals, Dunedin City Council, Otago Regional Council, NIWA