

February 2007 Monthly Flow and Rainfall Report

General

February 2007 was a very dry month throughout the Otago region and in inland areas it was also very hot. Towards the East Coast, it was often cloudy and considerably cooler, but still dry. Soil moisture levels have become quite low causing grass and crop growth to slow or in some areas stop where there is no irrigation water available.

The weather pattern was a series of mainly weak weather systems which brought southwest wind changes in between ridges of high pressure and anticyclones and only a few good rainfalls were reported anywhere during the month. The weather systems were also quite slow moving and there were several instances of fronts becoming stalled over the south of the South Island adding to the cloudiness around the coast but bringing very little in the way of significant rain.

North Otago

The inland northwest parts of North Otago received little or no rain during the month. Omarama recorded rain on only 1 day and that total was 0.6mm.

Total falls at the indicator sites (average monthly totals in brackets) included

Omarama	0.6mm (38.9mm)	98% below average
Waikoura	14.0mm(39.0mm)	64% below average
Oamaru	16.0mm (48.8mm)	68% below average
Kauru, the Dasher	75.6mm (67.0mm)	47% below average
Islay Downs	13.5mm (52.0mm)	74% below average
Palmerston	14.9mm (48.7mm)	69% below average
Stoneburn	15.5mm (58.0mm)	73% below average

Oamaru Airport recorded 17.0mm.

Significant falls included: on 8/9 February the Dasher 15.8mm, Islay Downs 13.4mm; and on 22 February, the Dasher 10.5mm.

As a result of the warm temperatures and lack of rain, river flows steadily declined throughout the month. Average monthly flows were well below their long term averages and by the end of the month, irrigation restrictions were in place on the Kakanui and Shag Rivers, although complete cut-offs had not occurred.

Farmers report a very dry month with a lot of cloud around coastal areas but very hot inland. Rain is needed now to get grass growing again since growth in non-irrigated areas had stopped due to lack of moisture.

Central Otago

February was very dry in this area with monthly rainfall totals being very low in most of the area while parts of the Maniototo received no rain at all during the month. Total falls at the indicator sites (average monthly totals in brackets) included:

Lindis Crossing	2.0mm (34.4mm)	94% below average
Alexandra	7.2mm (31.0mm)	77% below average
Blackstone Hill	13.5mm (58.0mm)	77% below average
Ranfurly	0mm (37.0mm)	100% below average
Tima	25.0mm (62.0mm)	60% below average

The only significant fall during the month was the 20mm recorded at Tima on 8/9 February.

River flows were well below their long term averages throughout the month. They began at below average levels and slowly declined as the month progressed.

Farmers report that the dry conditions have resulted in little or no growth on non-irrigated land and rain is needed soon to ensure some growth in the months leading up to winter.

Lakes Wanaka, Wakatipu and Hawea and Surrounding Areas

Very low rainfalls for this area were recorded during the month. Makarora Station received only 20% of its average monthly rainfall while Hawea Flat recorded its driest February since 1973 and the driest December to February rainfall total since 1976.

Total falls at the indicator sites (average monthly totals in brackets) included:

Makarora Station	23.6mm (134.0mm)	80% below average
Hunter Valley Station	9.6mm (61.0mm)	84% below average
Hawea Flat	7.0mm (48.9mm)	86% below average
Routeburn Station	45.9mm (131.0mm)	65% below average
Queenstown	22.0mm (58.1mm)	62% below average

Rainfalls recorded at other sites in this area included: Halfway Bay 21.0mm, Glenfinnan 21.7mm.

Significant falls during the month included on 8/9 February Makarora Station 18.2mm, Routeburn Station 36.2mm, and Queenstown 13.1mm.

River flows were low throughout the month with no significant rises recorded.

Levels in Lakes Wanaka and Wakatipu at the beginning of the month were 277.38m and 310.01m, 0.1m and 0.05m above average respectively. Both lakes declined steadily throughout the month and by the end of February, Wanaka was 0.6m below average and Wakatipu was 0.3m below average.

Lake Hawea was held steady at around 345.15m, 0.85m below full.

Farmers report conditions are becoming very dry and some rain is required urgently to allow grass growth to occur before winter.

Strath Taieri, Lower Taieri and Dunedin

February was a very dry month in this area. Total falls at the indicator sites (average monthly totals in brackets) included:

Garthmyl Middlemarch	7.7mm (49.0mm)	84% below average
Musselburgh Dunedin	22.8mm (62.0mm)	63% below average
Lee Flat	19.1mm (62.0mm)	69% below average
Maungatua	27.3mm (70.3mm)	61% below average
Dunedin Airport	27.0mm (55.0mm)	51% below average
Pine Hill	28.0mm (65.0mm)	61% below average
Sullivan's Dam	35.0mm (87.0mm)	59% below average

Other rain gauge totals included Ross Creek 21.2mm, and Southern Reservoir 32.6mm.

The most significant falls occurred on 8/9 February. On those days, Dunedin Airport 20.2mm, Musselburgh 14.4mm, Maungatua 19.3mm and Pine Hill 17.5mm.

River flows were below their longterm averages throughout the month and all steadily declined during the month. By the end of the month flows were quite low for this time of the year. In the Strath Taieri, abstraction permits with high minimum flows would have faced restrictions during the month.

Farmers report conditions are becoming very dry and rain is needed urgently to improve the very slow growth that was occurring by the end of February.

South and West Otago

Rainfalls in this area were around 60% below average. Total falls at the indicator sites (average monthly totals in brackets) included:

Tuapeka Mouth	29.0mm (62.6mm)	54% below average
Balclutha	24.0mm (58.0mm)	59% below average
Waikoikoi	30.8mm (71.0mm)	55% below average
Slopedown	41.2mm (101.5mm)	59% below average
Clarks Flat	32.5mm (75.0mm)	57% below average
Moa Flat	46.5mm (70.0mm)	36% below average

Significant falls during the month included: on 1/2 February, Slopedown 13.5mm; and on 8/9 February, Balclutha 21.0mm, Waikoikoi 23.6mm, Slopedown 18.9mm.

Average monthly river flows including the Clutha were well below their long term averages. Flows steadily declined in all rivers as the lack of rain began to bite. By the end of the month, flows were quite low for this time of the year. The Clutha was very low mainly due to the low outflows from the well below average Lakes Wanaka and Wakatipu.

Farmers report a very dry month. Grass growth had slowed considerably and rain was needed to boost growth during autumn.

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