



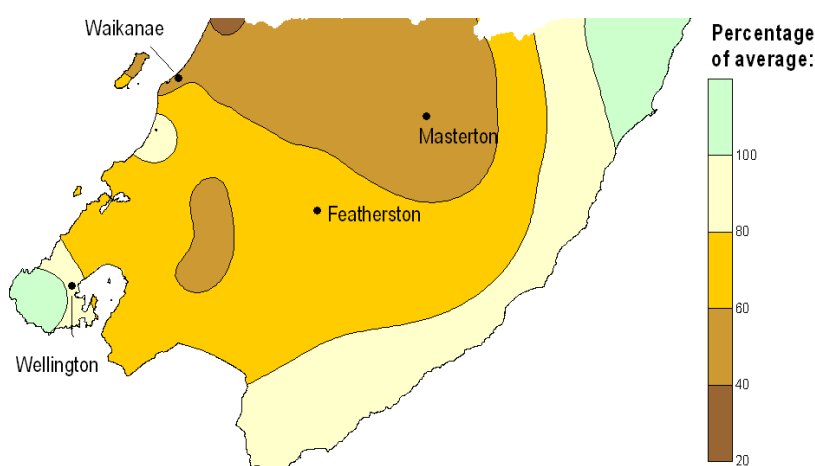
October 2010 hydrological summary

Environmental Monitoring and Investigations Department

Rainfall in October

Rainfall was well below average in October across a large majority of the Wellington region. Central and western areas were particularly dry with only 40–80% of the long-term average rainfall for the Kapiti Coast, Tararua Range, Hutt Valley and Wairarapa Plains (see map below). Rainfall was about, or slightly above, average for the eastern Wairarapa and the south coast around Wellington City.

Overall, October was generally a very settled month in the Wellington region (and across the country) due to the presence of a higher number of anticyclones than is typical for this time of year. There were more dry than wet days in the month across the region and only two sustained rain events; one was associated with a very cold southerly front on 10–12 October and the other with a northwesterly front that swept through about a week later. Neither of these events produced particularly significant rainfall totals.



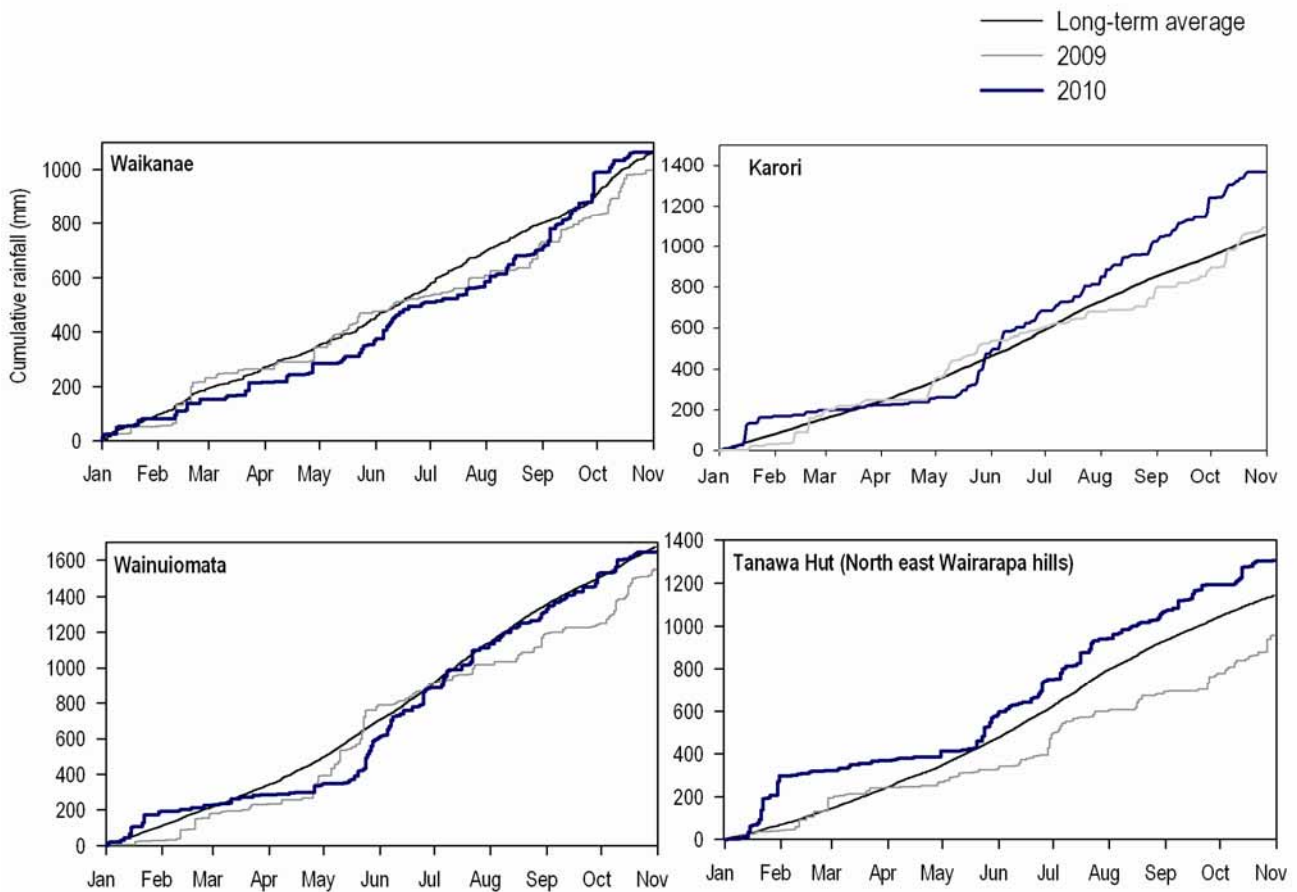
Rainfall in October 2010 as a percentage of the long-term average for this month

Rainfall in the year to date

Despite the dry October, rainfall for the year to date remains higher than average at most monitoring sites across the region (see table below and graphs on the next page). Rainfall has been particularly high – around 130% of the long-term average – for the south coast around Wellington City and eastern Wairarapa.

Year-to-date rainfall statistics for selected monitoring sites in the Wellington region

	Rainfall for October at monitoring site (mm)	Rainfall for 2010 to end of October (mm)	Percentage of long-term average for year to date
Waikanae	77.0	1,056.5	97%
Karori	126.6	1,371.4	130%
Kaitoke	148.0	2,000.5	105%
Wainuiomata	119.5	1,644.0	98%
Featherston ('Alloa')	65.2	1,010.4	117%
Northeast Wairarapa ('Tanawa Hut')	109.5	1,300.0	114%
Tararua Range ('Angle Knob')	455.0	6,162.5	106%



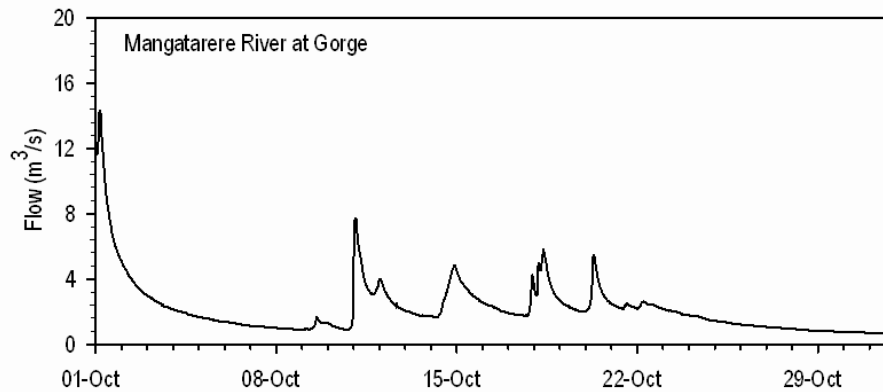
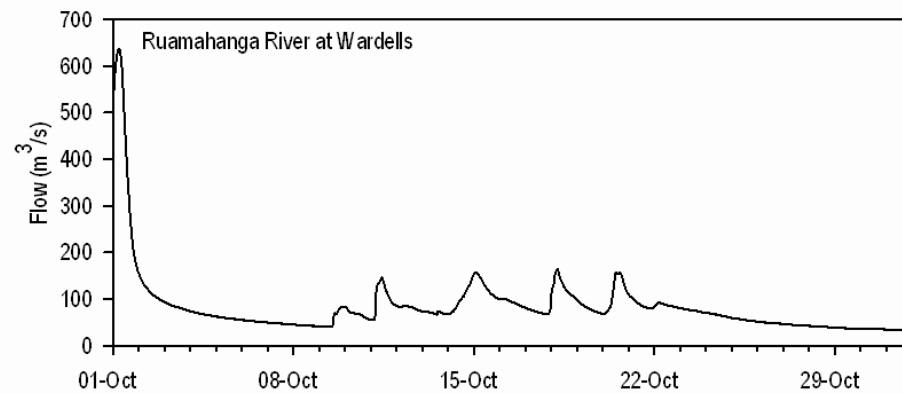
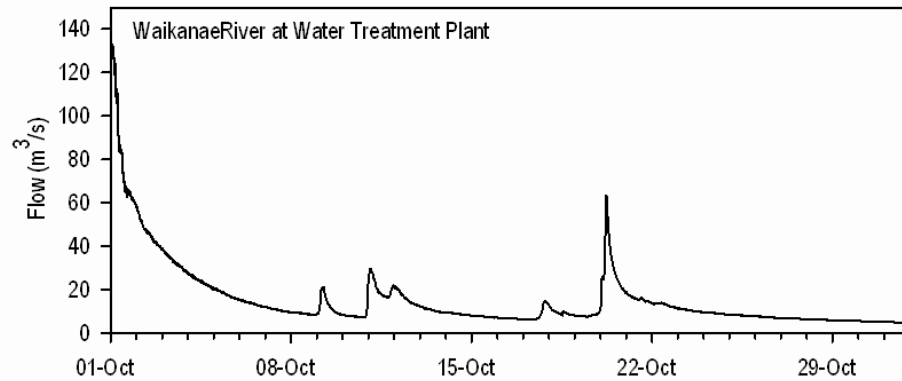
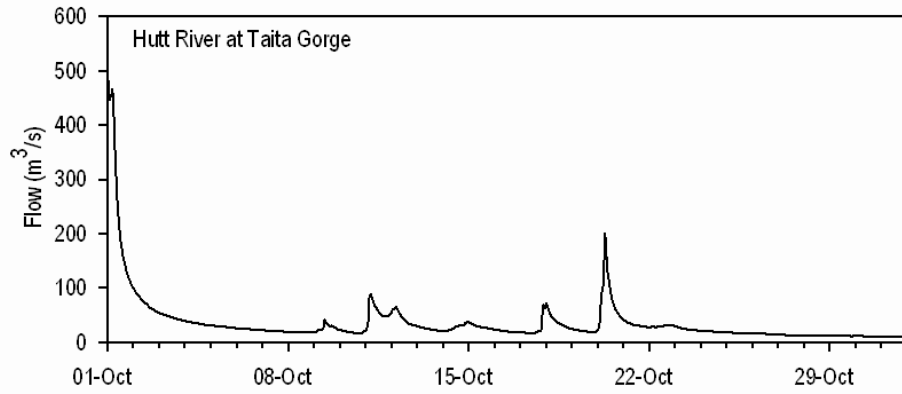
Cumulative rainfall for 2010 to date at selected sites in the Wellington region

River flows during October

Many rivers were in steep recession at the beginning of October after a significant rainfall event in the last days of September (described in the September summary report). Notwithstanding this event, and compared with the preceding winter months, river flows were subdued in October across the region, especially in the Wairarapa and on the Kapiti Coast. Only minor freshes occurred and mean flows were generally lower than average for the time of year (see table below). This was a result of the unusually settled weather described earlier. Only monitoring sites in the central valley catchments (e.g., Akatarawa and Wainuiomata) recorded flows that were above long-term October averages, although no significant events occurred.

River flow statistics for October 2010 at some of Greater Wellington's flow monitoring locations

	Average river flow for October 2010 (m ³ /s)	Percentage of long-term October average	Highest flow during October (raw data)
Otaki River at Pukehinau	26.81	59%	185 m ³ /s on 20 th Oct
Akatarawa River at Cemetery	9.91	113%	101.6 m ³ /s on 20 th Oct
Hutt River at Taita Gorge	35.85	97%	199.6 m ³ /s on 20 th Oct
Wainuiomata River at Manuka Track	1.30	106%	4.71 m ³ /s on 11 th Oct
Waingawa River at Kaituna	10.59	77%	52.5 m ³ /s on 17 th Oct
Waiohine River at Gorge	23.70	70%	135.0 m ³ /s on 11 th Oct
Ruamahanga River at Wardells	20.04	62%	67.3 m ³ /s on 20 th Oct
Ruamahanga River at Waihenga	83.69	76%	163.8 m ³ /s on 18 th Oct



River flows recorded during October 2010 at selected Greater Wellington monitoring locations

Climate outlook

NIWA's climate outlook for October to December 2010 indicates a moderate to strong La Niña event is presently underway, with further intensification possible this year. La Niña conditions are likely to continue through to at least autumn 2011. Late spring (October–December) temperatures are likely to be above average across the region. Rainfall, soil moisture and stream flow are likely to be near normal or below normal in the Wairarapa and near normal in the west (see <http://www.niwa.co.nz/our-science/climate/publications/all/seasonal-climate-outlook>).

More information

This summary is based on data from selected monitoring locations in the Wellington region. Greater Wellington monitors rainfall, river flows, groundwater levels and soil moisture at many locations that may not be mentioned in this summary report. Maps of site locations and up-to-date data can be found at www.gw.govt.nz/monitoring.

Disclaimer: This report is based on data that have not yet been quality checked. In particular, flow data may be subject to change following adjustment of rating curves. Event return periods are early estimations only. Greater Wellington accepts no responsibility for any interpretation or use of the provisional data in this report.