

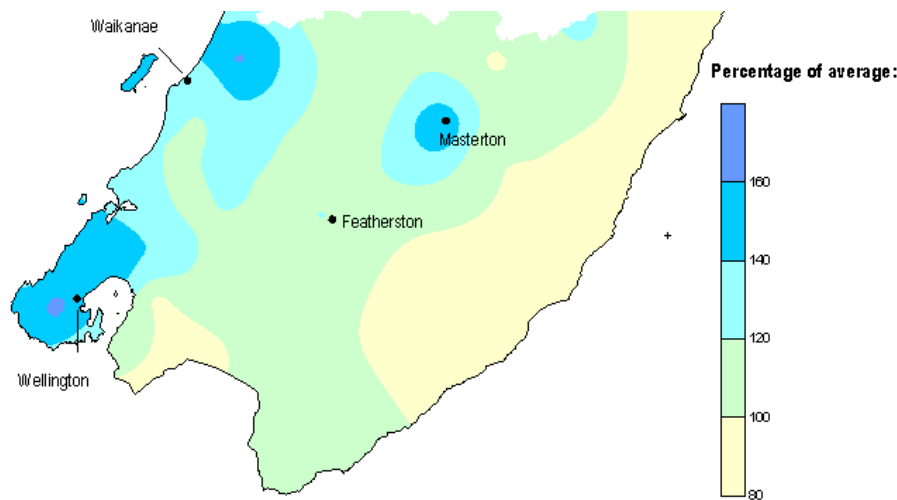


August 2010 hydrological summary

Environmental Monitoring and Investigations Department

Rainfall in August

August was a wet month for most of the Wellington region (and New Zealand) as a result of lower than normal air pressure over the Tasman Sea. Rainfall was particularly high in the west –on the Kapiti Coast and south coast around Wellington city– but also around Masterton (see map below). Monitoring sites in these areas recorded up to 160% of their long term August average. Only the eastern Wairarapa and pockets of the south coast experienced drier than normal conditions. This was due to the predominance of northerly and westerly airflows across the region during the month.



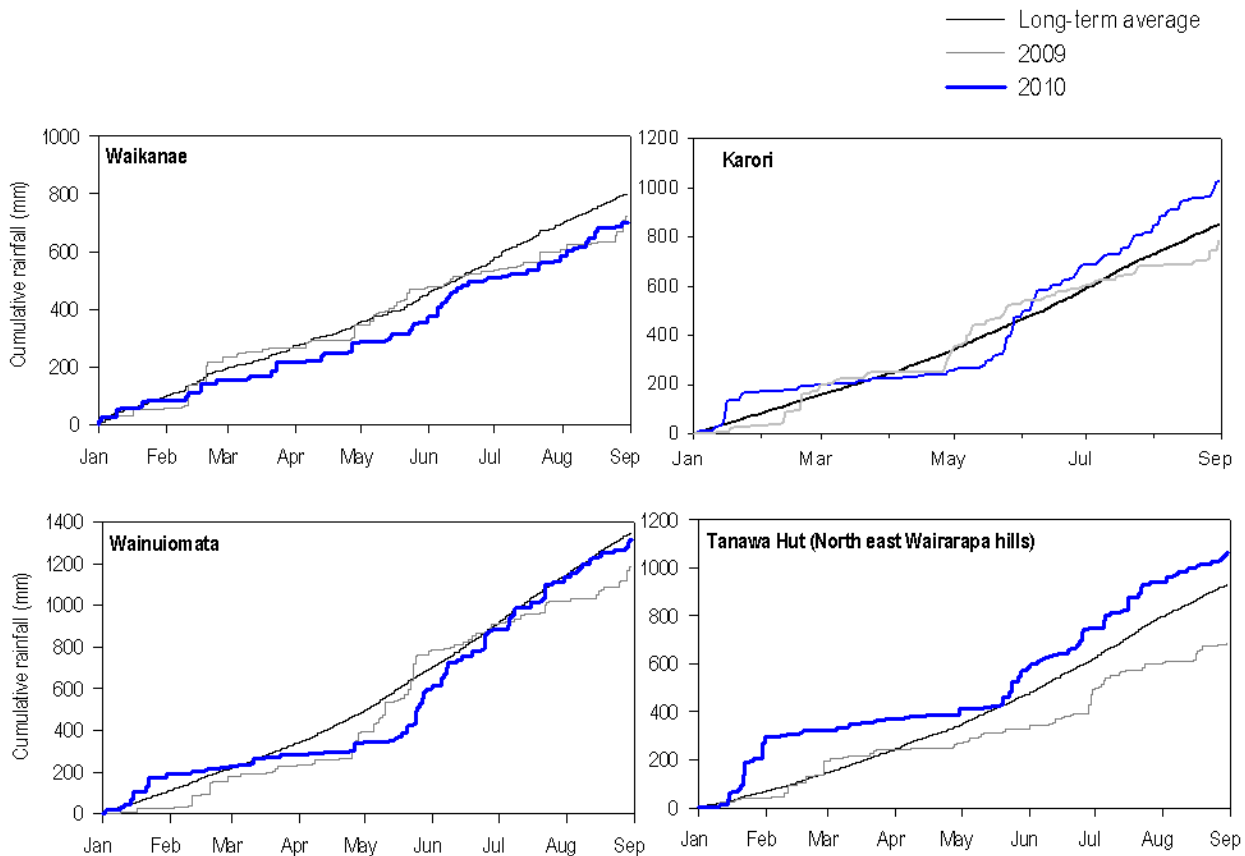
Rainfall in August 2010 as a percentage of the long-term average for this month

Rainfall in the year to date

Overall, rainfall for the first eight months of 2010 was variable across of the region with respect to long term averages. Rainfall was below average on the Kapiti Coast, above average around Wellington city and in the eastern Wairarapa and about average elsewhere including central areas and the Tararua Range (see table below and graphs on the next page).

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

	Rainfall for August at monitoring site (mm)	Rainfall for 2010 to end of August (mm)	Percentage of long-term average for year to date
Waikanae	133.5	697.0	85%
Karori	207.0	1,029.2	121%
Kaitoke	270.5	1,408.5	93%
Wainuiomata	199.5	1,313.0	98%
Featherston ('Alloa')	125.0	775.4	93%
North east Wairarapa ('Tanawa Hut')	120.5	1,059.5	114%
Tararua Range ('Angle Knob')	753.5	4,130.5	105%



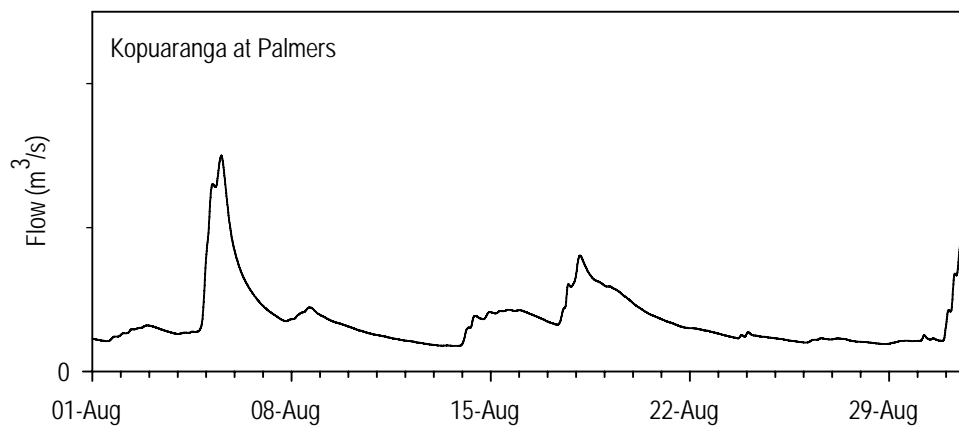
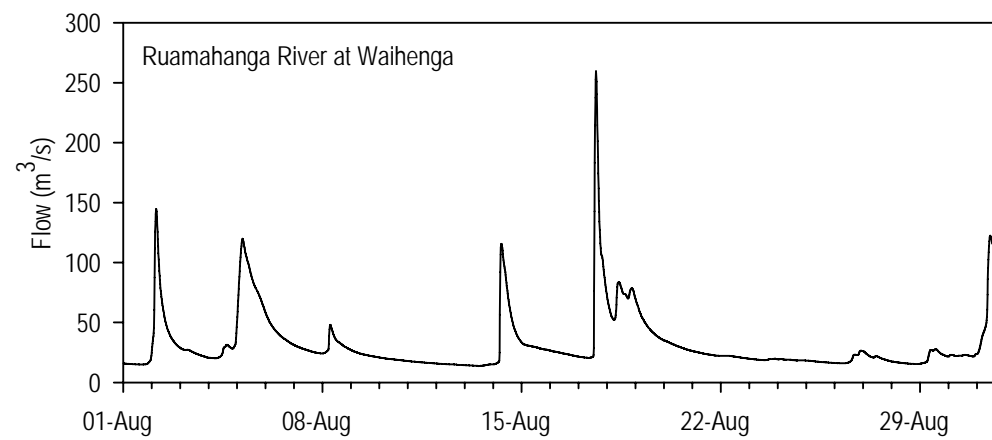
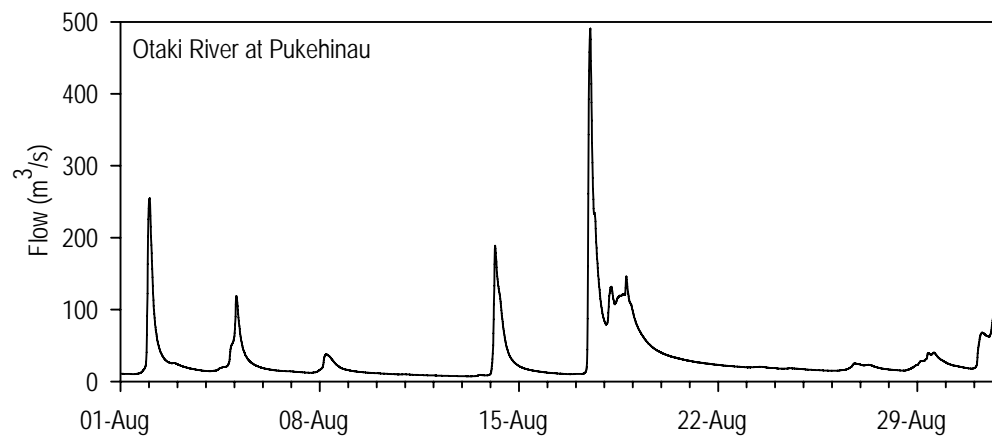
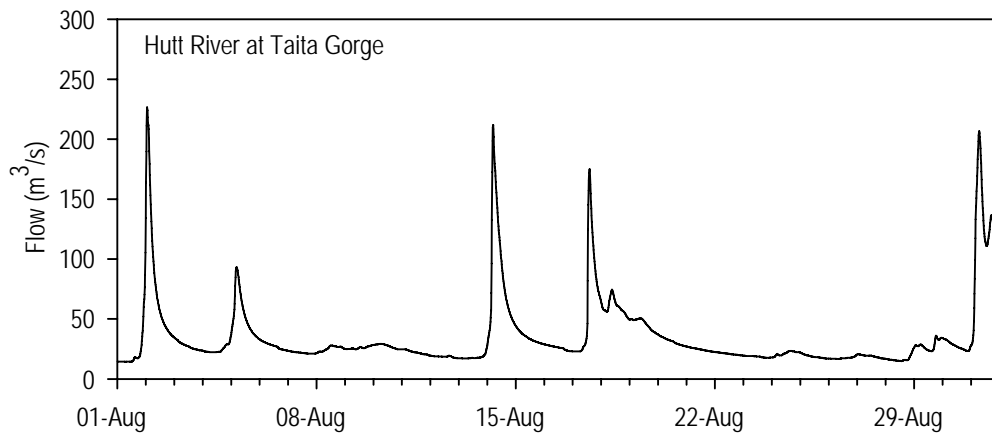
Cumulative rainfall for 2010 to date at selected sites in the Wellington region

River flows during August

River flows were generally above the long-term average for August in the Hutt Valley and other central areas and were below average elsewhere in the region (see table below). Rivers on the Kapiti Coast showed a variable pattern; for example, mean flow in the Waikanae River was higher than normal for August, consistent with the high monthly rainfall on the coast. However the Otaki River had a lower than normal mean flow despite the high rainfall total. This may have been due to relatively small amounts of rainfall being distributed fairly evenly throughout the month –rain fell on 26 days in August in the Otaki River catchment– and being largely absorbed by the vegetation and soil rather than reaching the river. Many rivers in the region had their peak flows for the month around the 17th August, however, there were no significant floods associated with this event.

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

	Average river flow for August 2010	Percentage of long-term August average	Highest flow during July (raw data)
Otaki River at Pukehinau	31.81 m ³ /s	92%	490 m ³ /s on 17 Aug
Akatarawa River at Cemetery	8.12 m ³ /s	115%	72 m ³ /s on 14 Aug
Hutt River at Taita Gorge	35.03 m ³ /s	106%	227 m ³ /s on 02 Aug
Wainuiomata River at Manuka Track	1.51 m ³ /s	121%	6.3 m ³ /s on 01 Aug
Waingawa River at Kaituna	12.26 m ³ /s	95%	159 m ³ /s on 17 Aug
Waiohine River at Gorge	29.73 m ³ /s	102%	445 m ³ /s on 17 Aug
Ruamahanga River at Wardells	33.29 m ³ /s	91%	260 m ³ /s on 17 Aug
Ruamahanga River at Waihenga	94.67 m ³ /s	73%	477 m ³ /s on 17 Aug



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

Climate outlook

NIWA's climate outlook for August to October 2010 suggests that air temperatures are likely to be near average or above average across the region. Seasonal rainfall totals, soil moisture levels and stream flows are likely to be either normal or below normal in the west. In the Wairarapa, seasonal rainfall totals and soil moisture levels are likely to be either normal or above normal while stream flows are likely to be normal. NIWA advise that the equatorial Pacific is now in a La Niña state. La Niña conditions are likely to continue through the remainder of 2010 (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.