

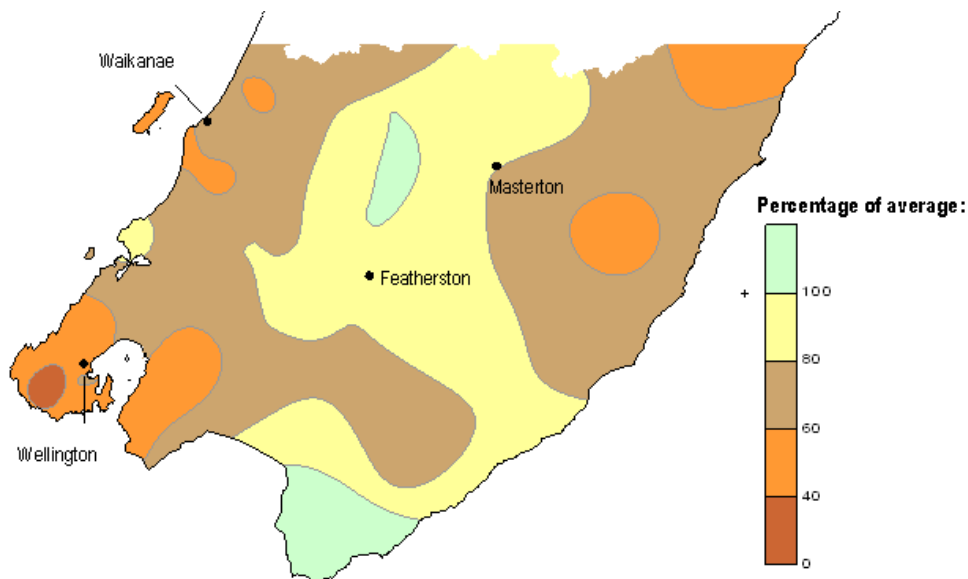


March 2010 hydrological summary

Environmental Monitoring and Investigations Department

Rainfall in March

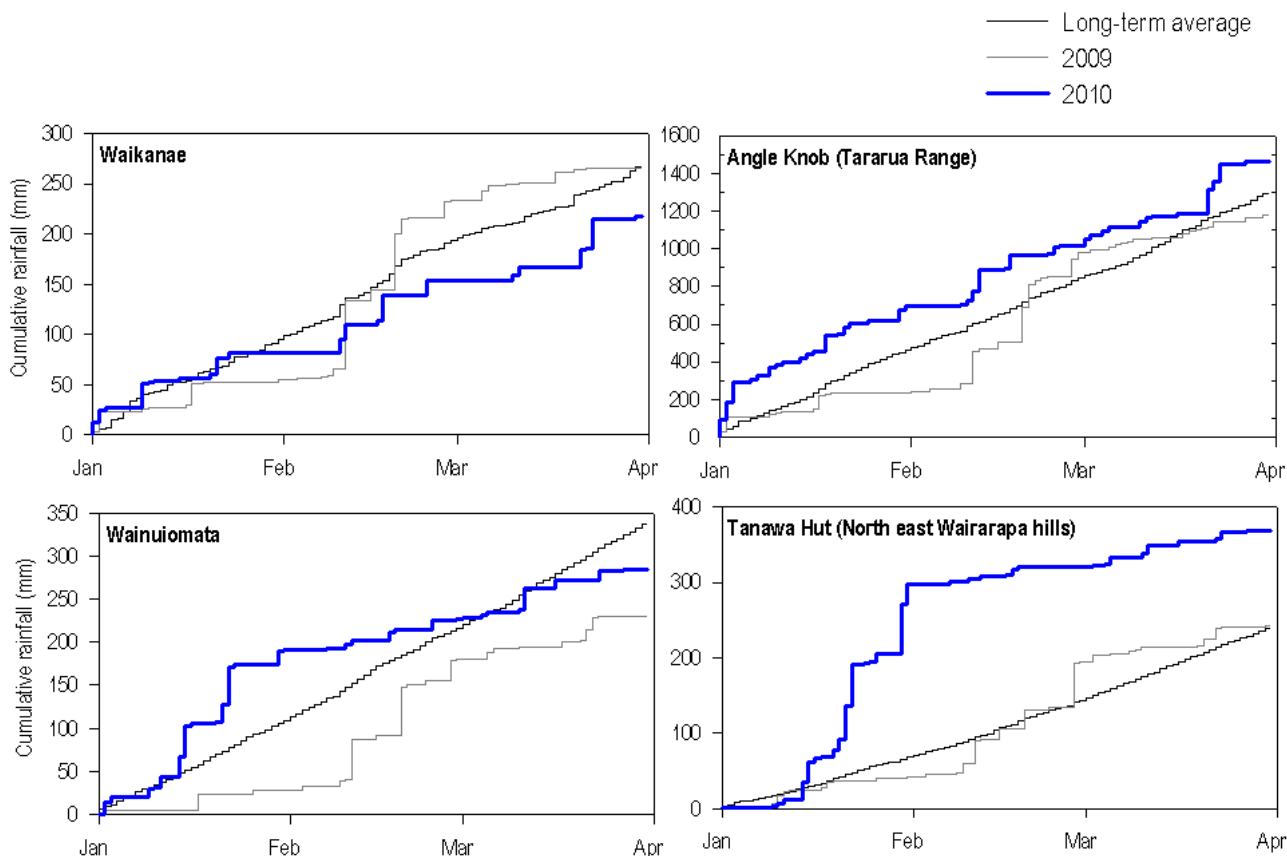
Rainfall in March 2010 was below average across much of the Wellington region, with parts of the Kapiti Coast, south coast around Wellington city and northeastern Wairarapa receiving less than half their normal amount (see map below). Central Wairarapa and the eastern Tararua Range received about average rainfall for March while the south Wairarapa coast received well above normal amounts (e.g., more than twice the long term March average at Ngawihi).



The year to date has been drier than average in the west and wetter than average in the east (see table below), with the effects of an unusually high rainfall in January still being felt in many parts of Wairarapa. For example, the total rainfall received to date this year at the Tanawa Hut monitoring station in north east Wairarapa is one and a half times the long-term average even though less than half the normal amount of rain fell in this area in March.

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

	Rainfall for March at monitoring site (mm)	Rainfall for 2010 to end of March (mm)	Percentage of long-term average for year to date
Waikanae	61.0	214.5	77%
Karori	23.8	223.6	92%
Kaitoke	116.0	411.0	95%
Wainuiomata	59.5	284.5	84%
Featherston ('Alloa')	66.2	218.2	103%
North east Wairarapa ('Tanawa Hut')	47.0	368.5	153%
Tararua Range ('Angle Knob')	450.0	1,464.5	114%



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

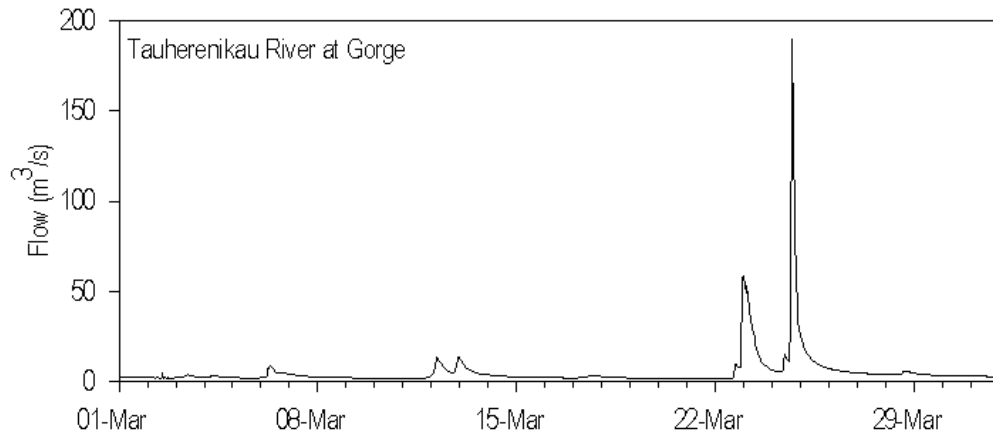
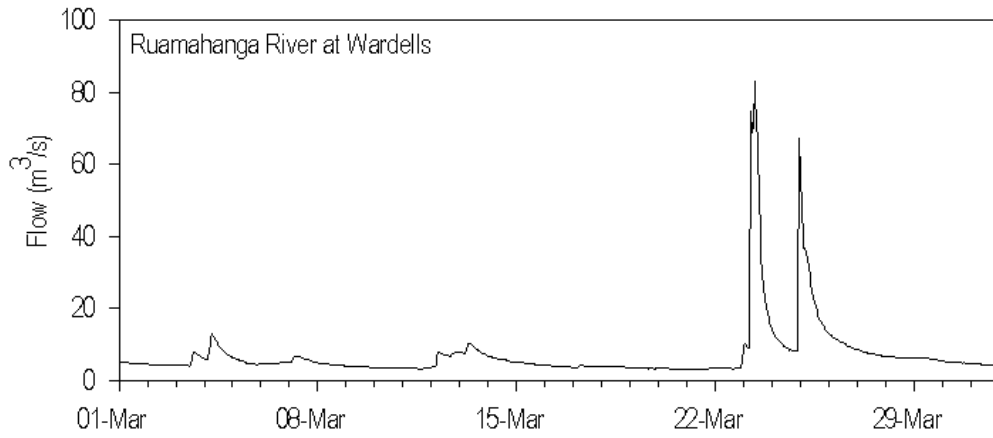
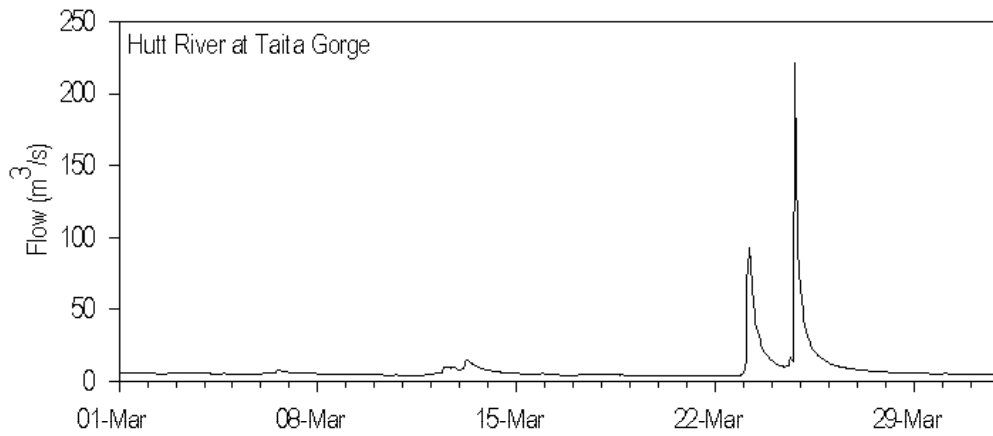
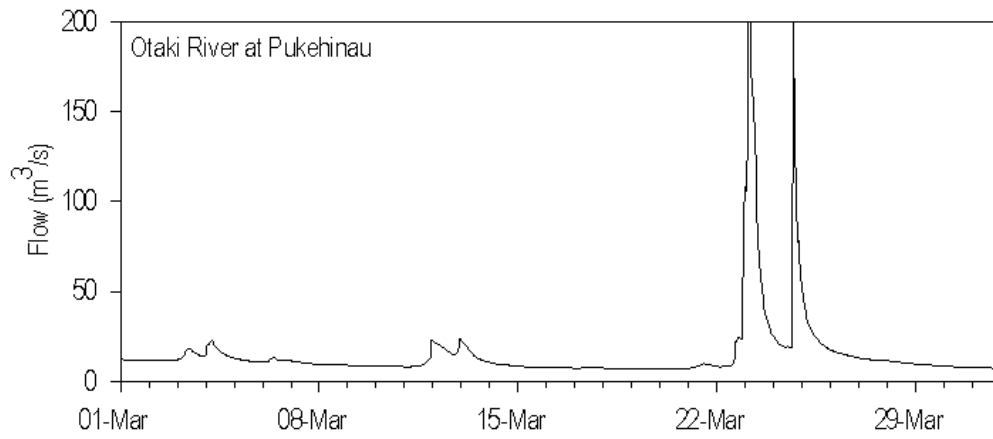
River flows during March

River flows were below average across the region in March (see table below), and generally stable or in gradual recession during the month. The only recession below management alert levels on a major waterway occurred on the Waingawa River between the 18th and 22nd of March. However, this dip was short-lived due to subsequent rainfall and did not trigger any water take restrictions.

The highest river flows of the month occurred as a result of back to back rainfall events on the 23rd and 24th of March. While these were the highest flows experienced in many rivers since early January they were still well below mean annual flood volumes. The dramatic southerly front on the afternoon of Friday 12 March failed to produce much rainfall and only minor freshes were observed in most waterways.

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

	Average river flow for March 2010	Percentage of long-term March average	Highest flow during March (raw data)
Waikanae River at Water Treatment Plant	2.27 m ³ /s	83%	55.72 m ³ /s on 24 March
Akatarawa River at Cemetery	1.87 m ³ /s	55%	18.91 m ³ /s on 23 March
Hutt River at Taita Gorge	8.31 m ³ /s	56%	230.35 m ³ /s on 24 March
Wainuiomata River at Manuka Track	0.26 m ³ /s	52%	2.11 m ³ /s on 24 March
Waingawa River at Kaituna	4.81 m ³ /s	66%	82.63 m ³ /s on 24 March
Waiohine River at Gorge	12.98 m ³ /s	57%	270.27 m ³ /s on 23 March
Ruamahanga River at Wardells	7.18 m ³ /s	60%	83.18 m ³ /s on 23 March
Ruamahanga River at Waihenga	25.57 m ³ /s	57%	205.81 m ³ /s on 24 March

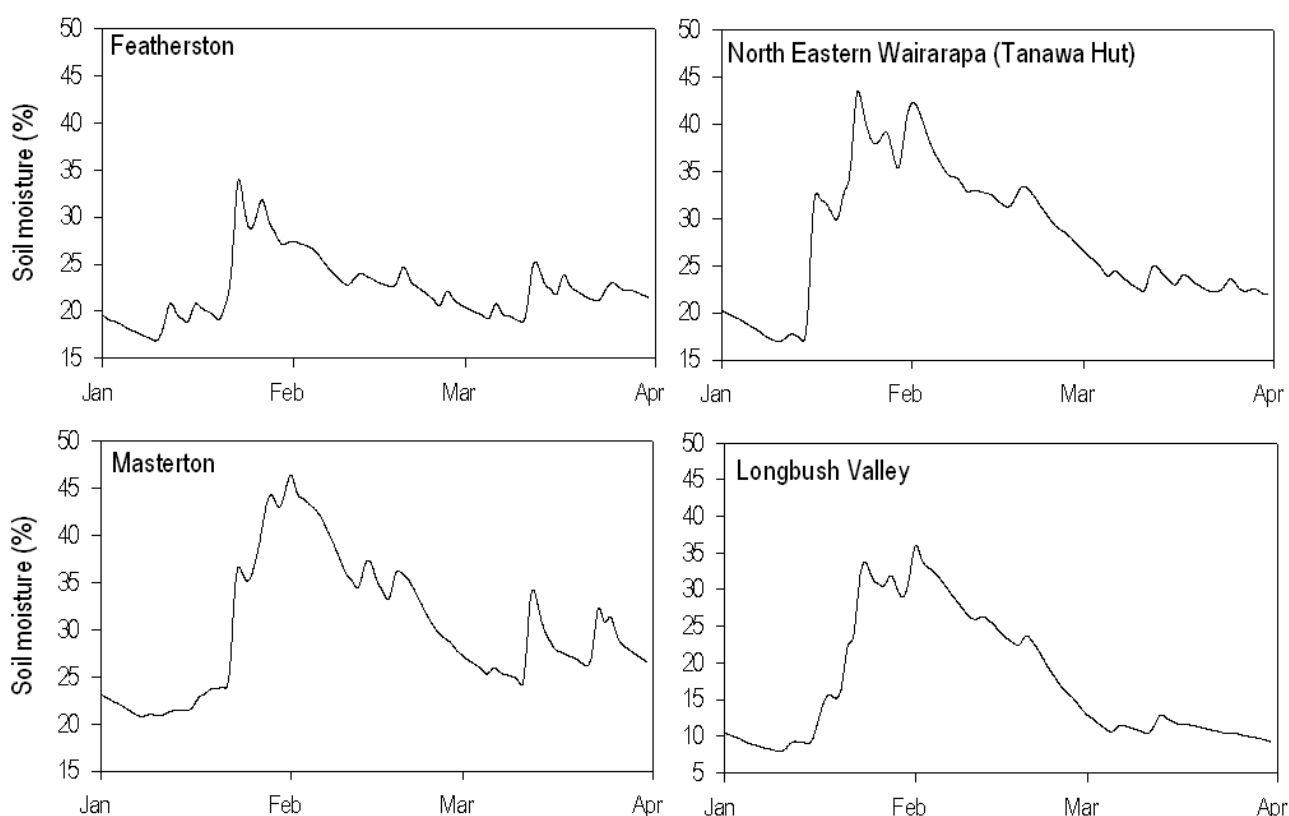


River flows recorded during March 2010 at selected Greater Wellington monitoring locations

Soil moisture in March

Soil moisture in the Wairarapa at the beginning of March was still unusually high for this time of year as a result of high rainfall in January. During March, the pattern of drying out reflected rainfall patterns for the month with stable moisture content or only slight drying in the west and central parts of Wairarapa (see graphs for Featherston and Masterton monitoring sites below) and more pronounced drying out in the east (Tanawa Hut and Longbush Valley) where rainfall was well below average.

Overall, soil moisture in Wairarapa for March was similar to the average for this month over the past decade.



Soil moisture content recorded at monitoring sites in the Wairarapa to date in 2010

Climate outlook

NIWA's climate outlook for March to May 2010 favours normal rainfall and temperatures in Wellington and Wairarapa and slightly below normal stream flows and soil moisture. The current significant El Niño continues in the equatorial Pacific, but is likely to weaken towards neutral conditions by the end of autumn (see http://www.niwa.co.nz/ncc/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. Greater Wellington accepts no responsibility for any interpretation or use of the provisional data in this report.