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Memo

Date 2 October 2014
To James Duggleby - Senior Hydrogeologist: AGL Upstream Investments Pty Ltd
Copy Andrea Madden
From Becky Rollins
Ref 2201007A-GGP-Y15-Q1 RevA
Subject Gloucester Gas Project - FY15 Q1 Monitoring Update - September 2014

The following presents updated hydrographs for all Gloucester Gas Project groundwater monitoring bores and hydrograph and salinity traces for surface water monitoring sites to September 2014. Full analysis and discussion of these results will be presented in the comprehensive 2015 Annual Report which will detail all groundwater and surface water level and quality results from the 2014/15 monitoring period.

For the FY15 Q1 period:

- The loggers at WKMB01 and WKMB02 failed and were replaced in September and August 2014.
- The logger at S4MB01 has failed and will be replaced in October 2014.

Figures 1 - 8: Groundwater hydrographs for Stage 1 and 2 nested monitoring bore sites

Figure 9: Surface water levels and EC comparison of all monitoring sites

Figure 10: Groundwater levels at the PL03 Vibrating Wire Piezometer

Figures A.1 – A.16: Individual Stage 1 groundwater monitoring bore hydrographs

Figures A.17 – A.21: Individual Stage 2 groundwater monitoring bore hydrographs

Figures A.22 – A.25: Individual surface water level and EC monitoring hydrographs

Figure A.26: Individual PL03 Vibrating Wire Piezometer hydrographs

Table 1 shows quarterly gas monitoring results from TGMB01 and TGMB02 on the Tiedman property.

Yours sincerely



Becky Rollins
Hydrogeologist

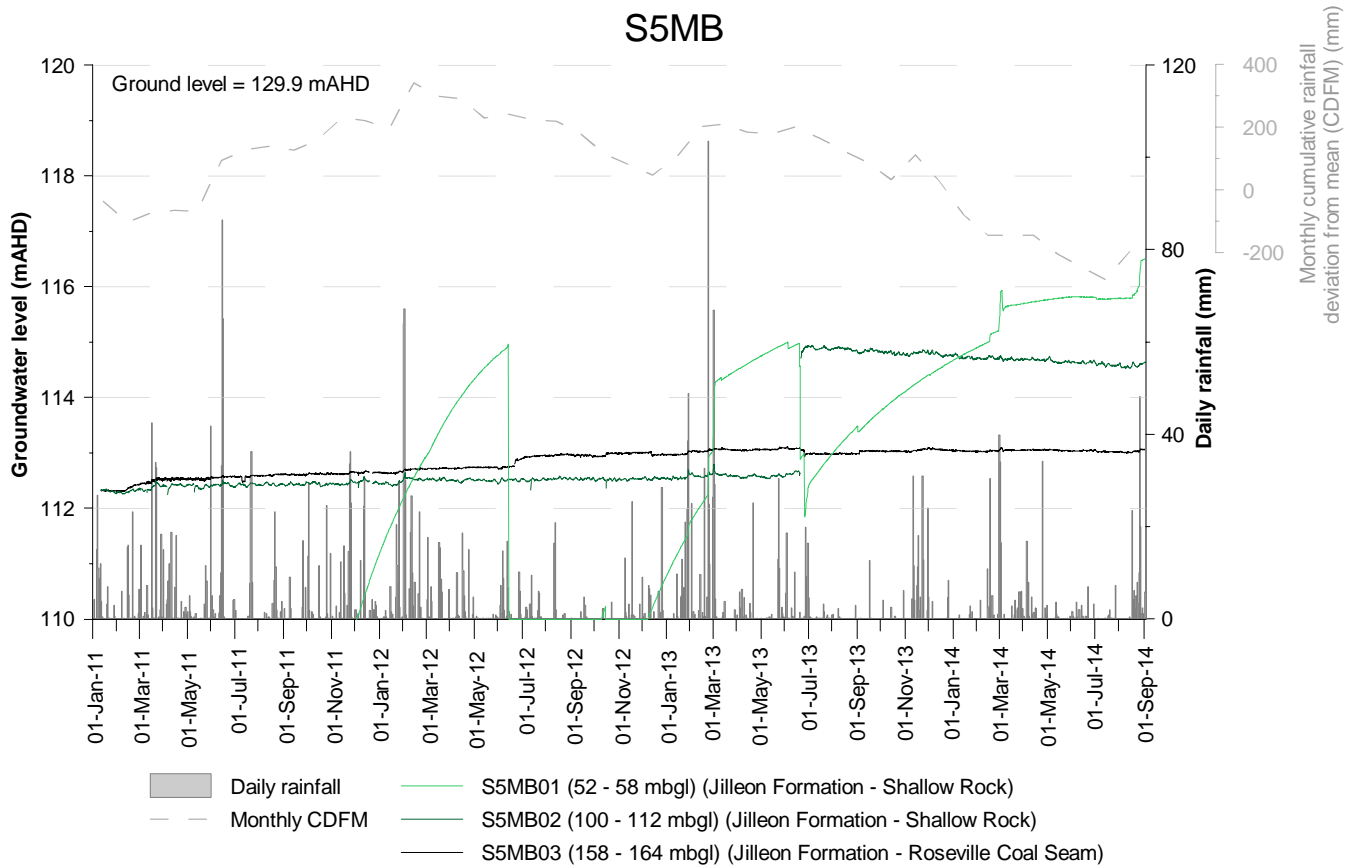
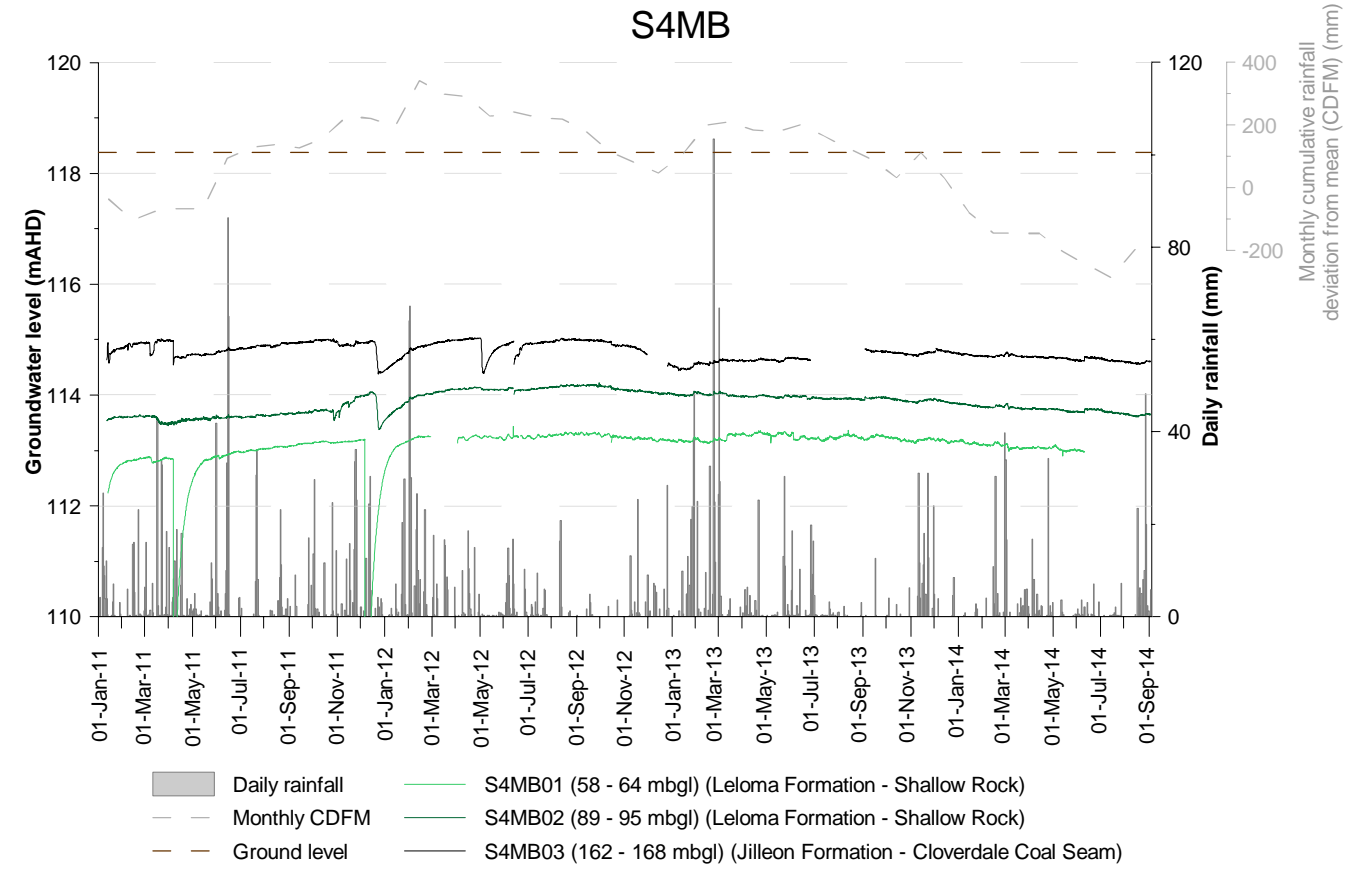


Figure 1: S4 and S5 monitoring bores

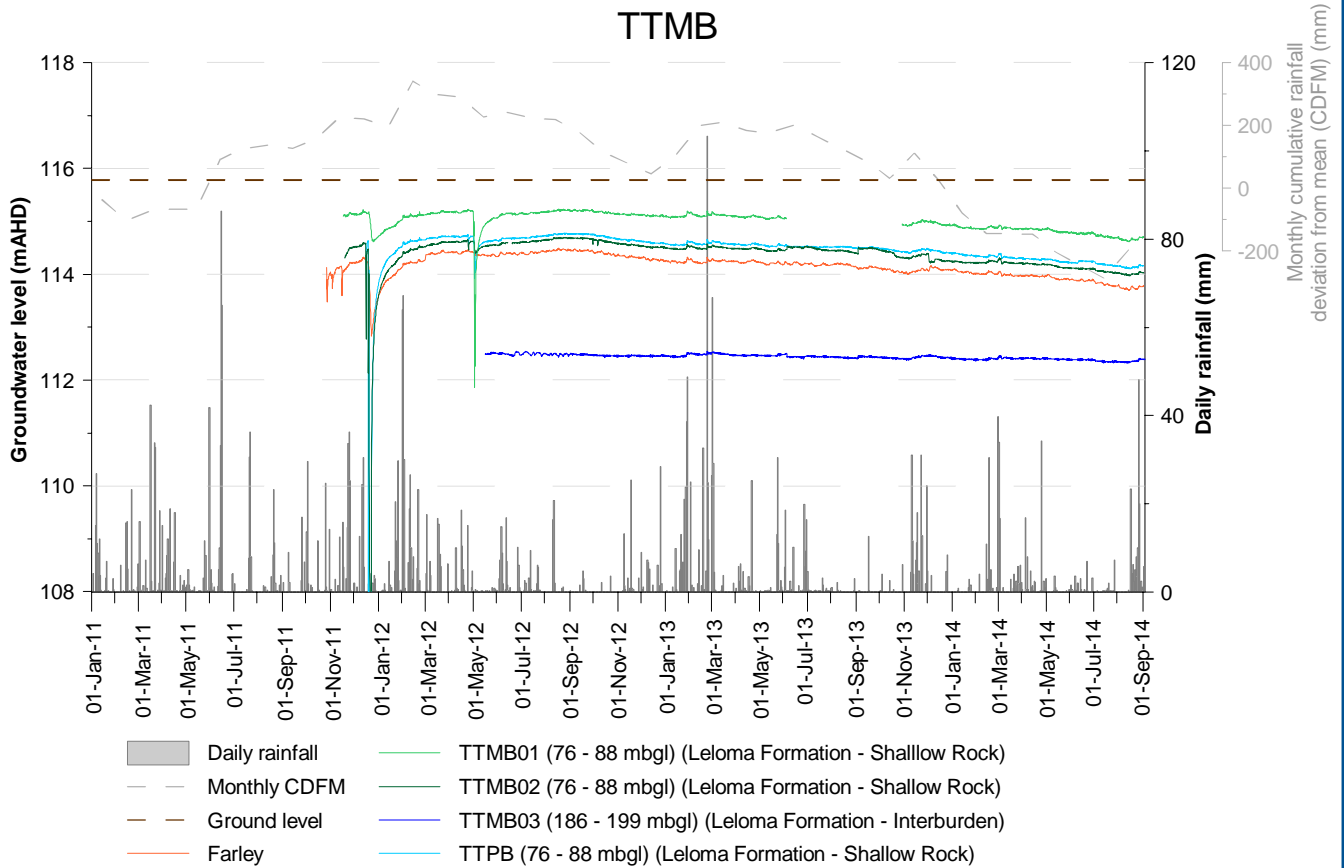
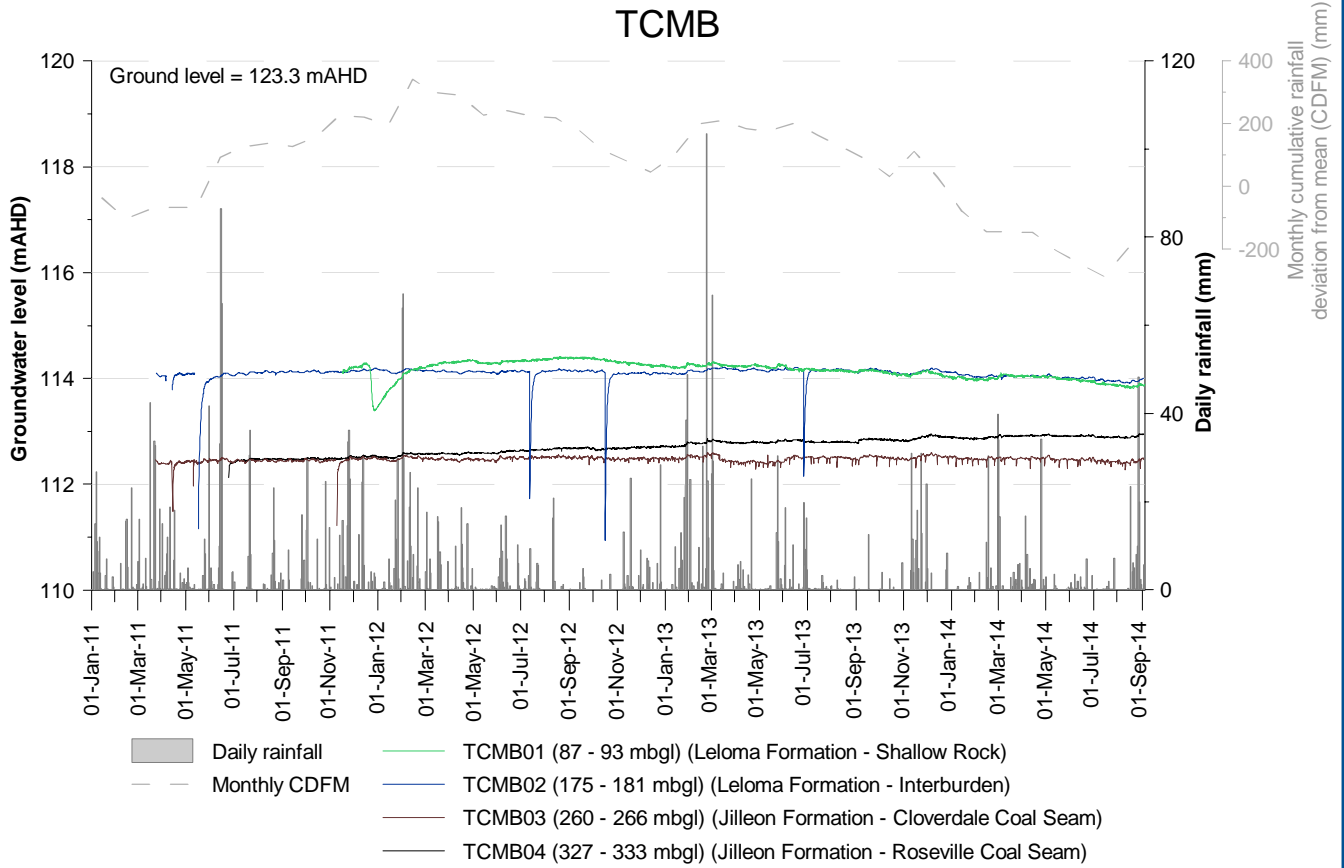


Figure 2: TCMB and TTMB monitoring bores

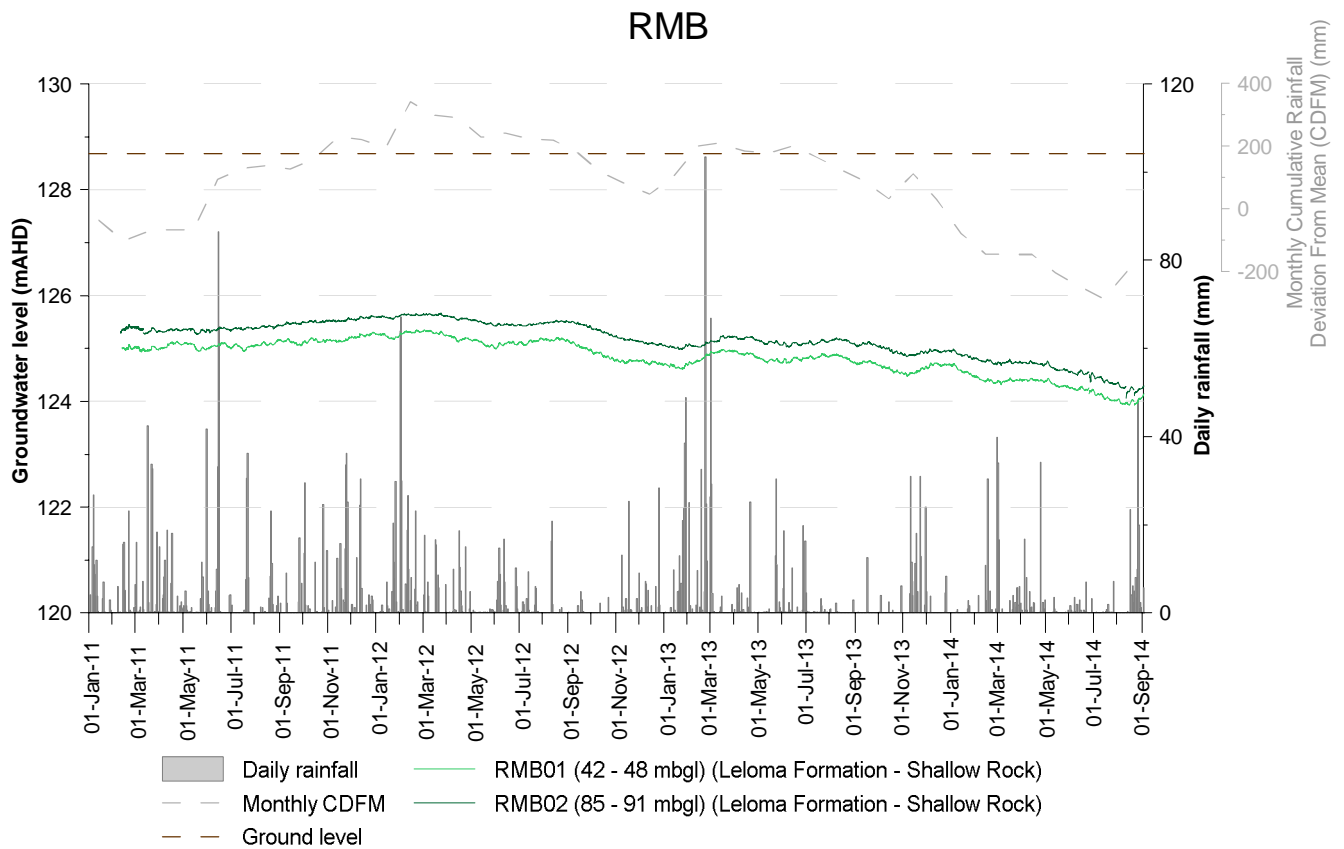
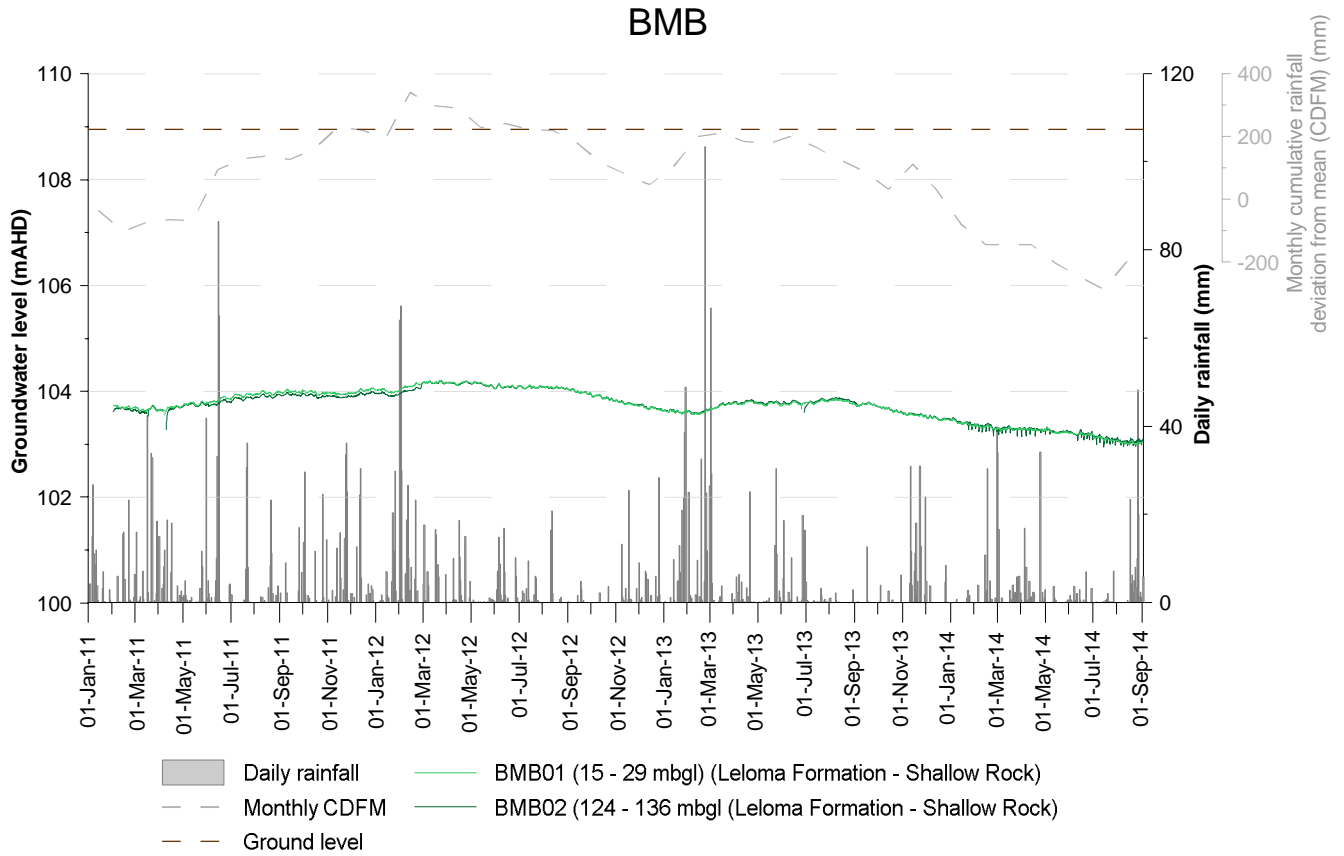


Figure 3: BMB and RMB monitoring bores

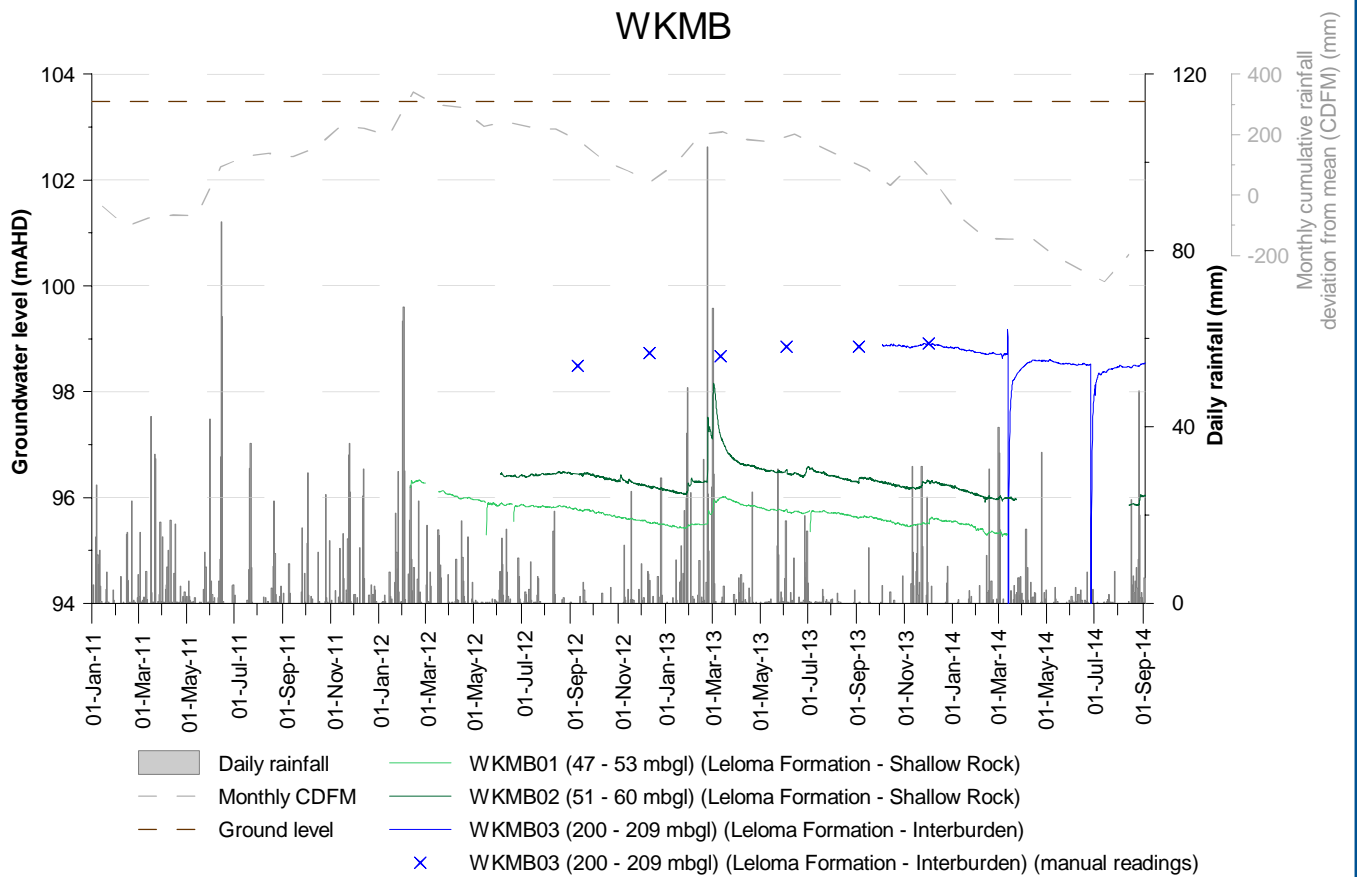
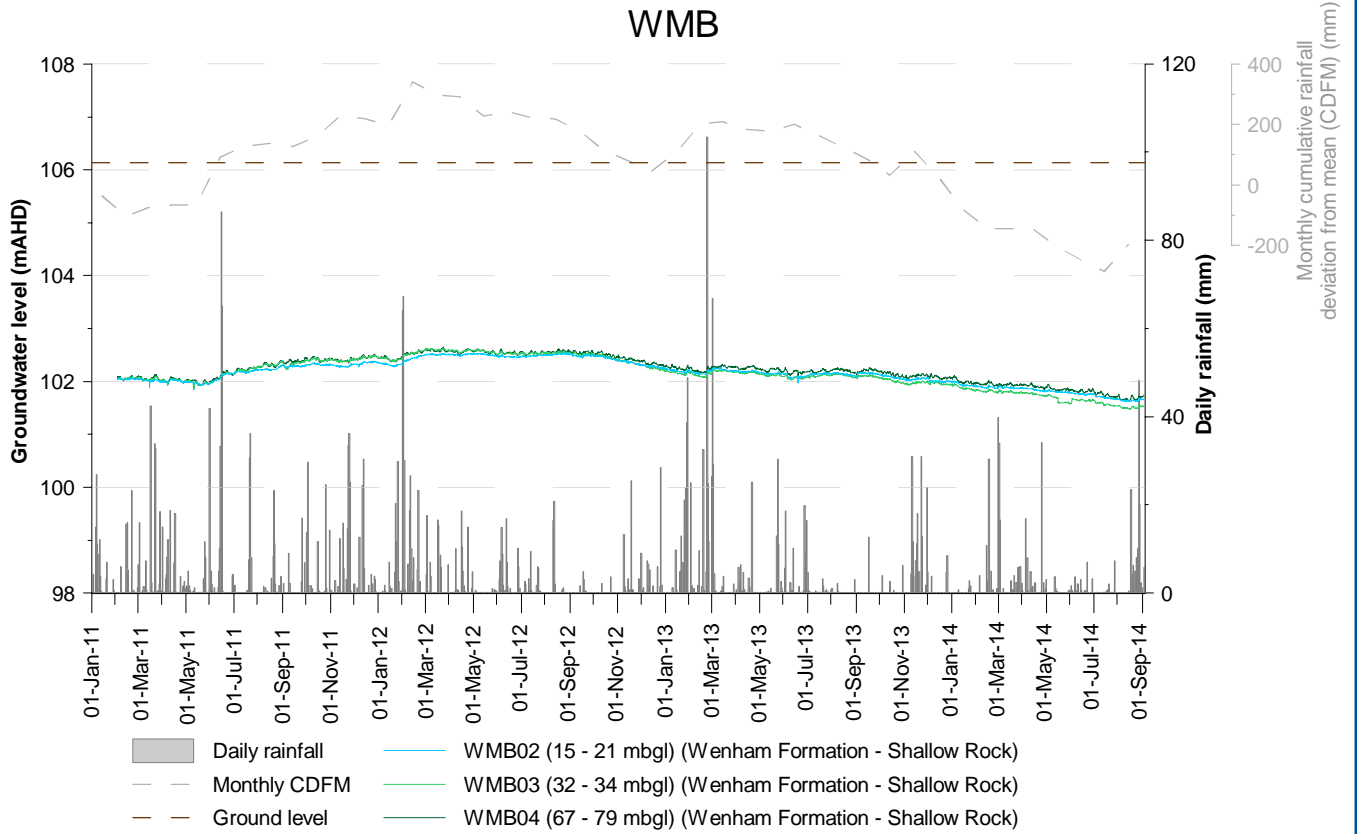


Figure 4: WMB and WKMB monitoring bores

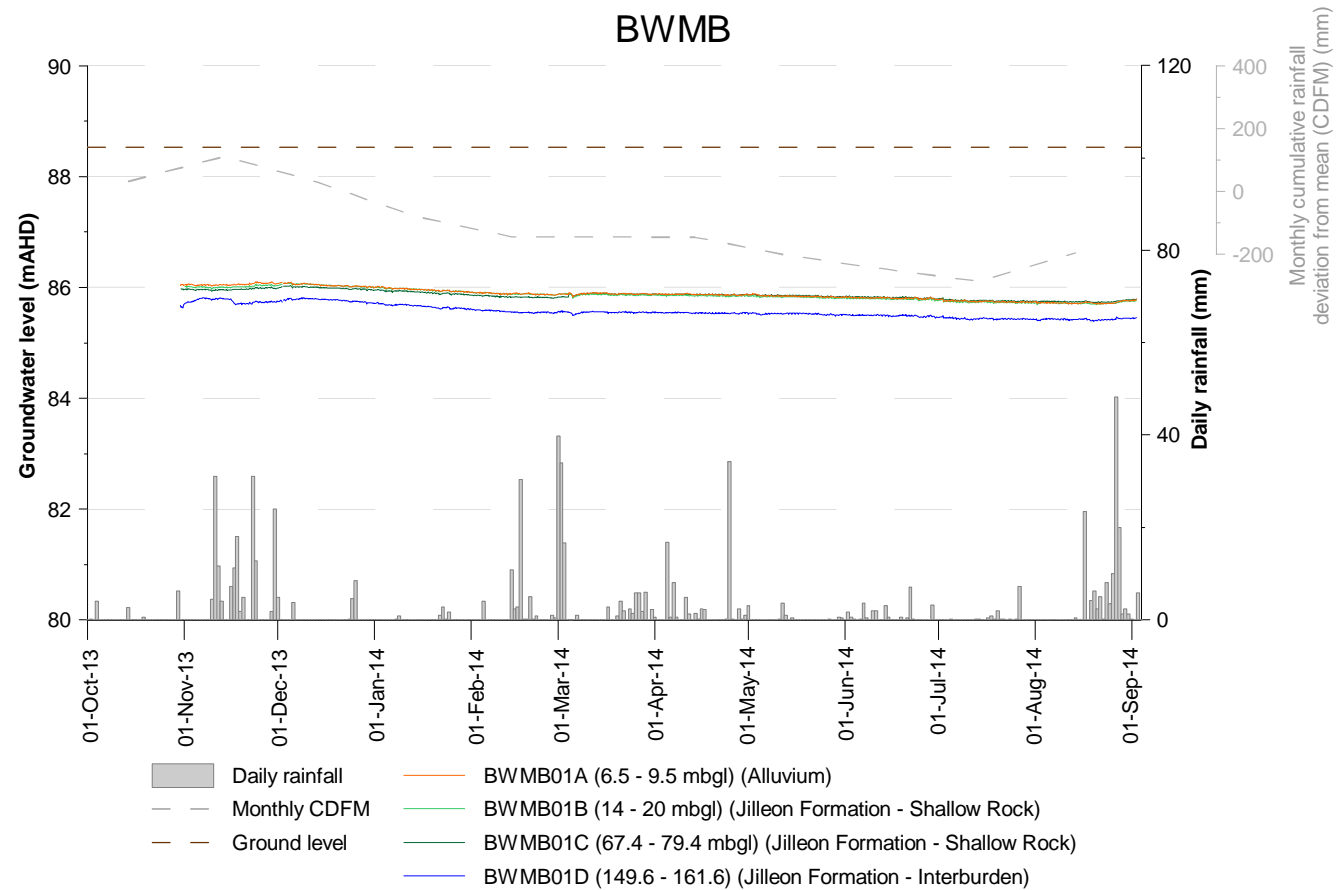
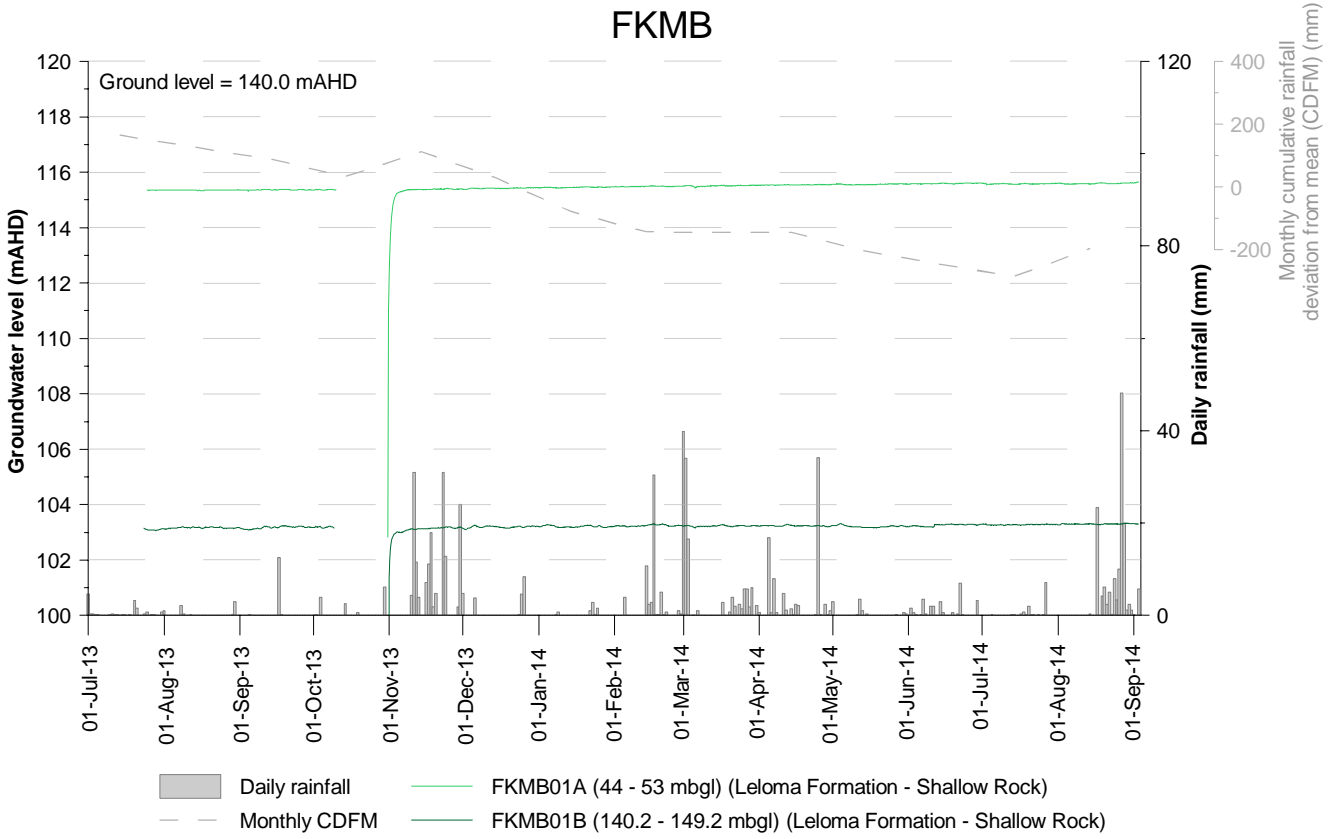


Figure 5: FKMB and BWMB monitoring bores

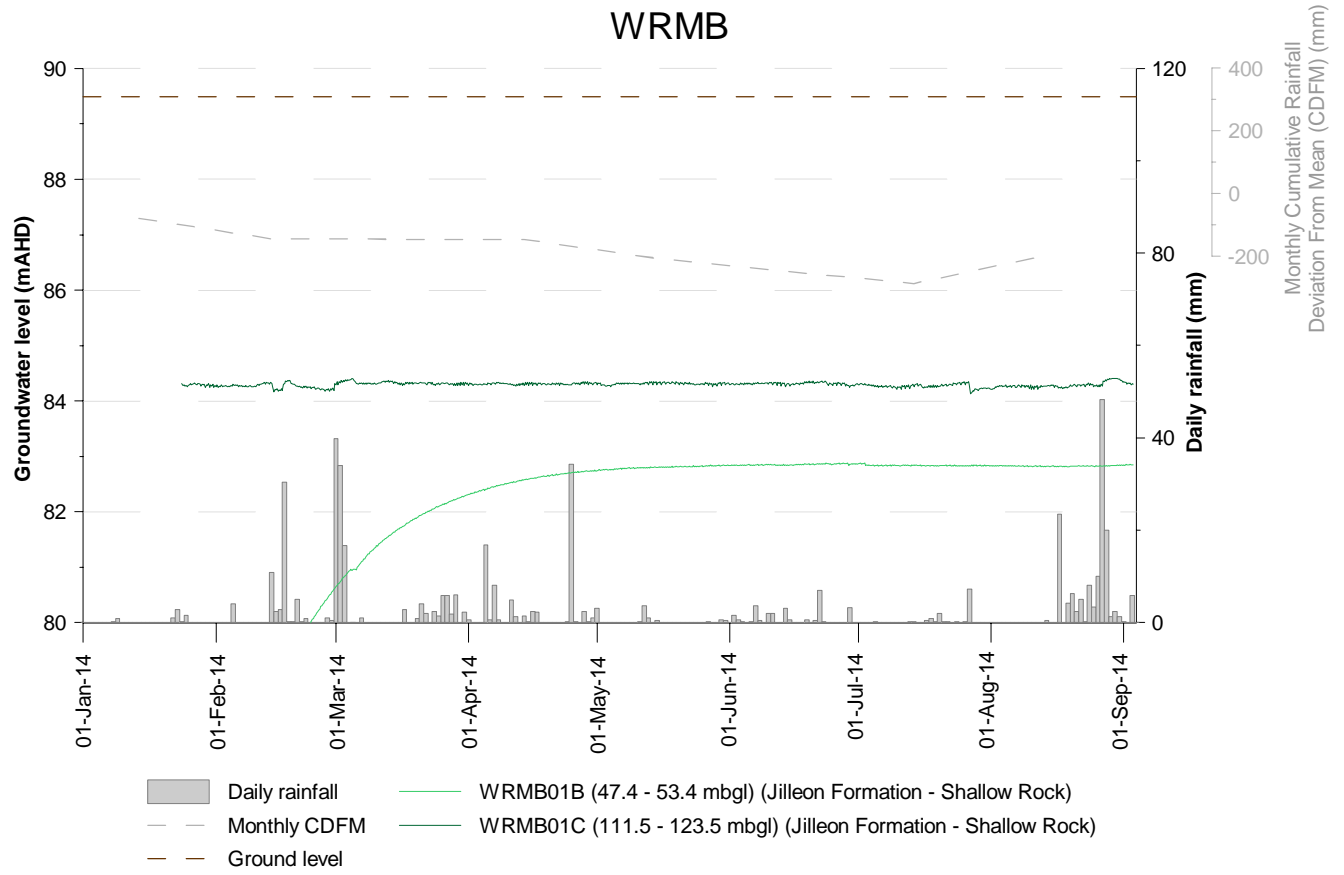


Figure 6: WRMB monitoring bores

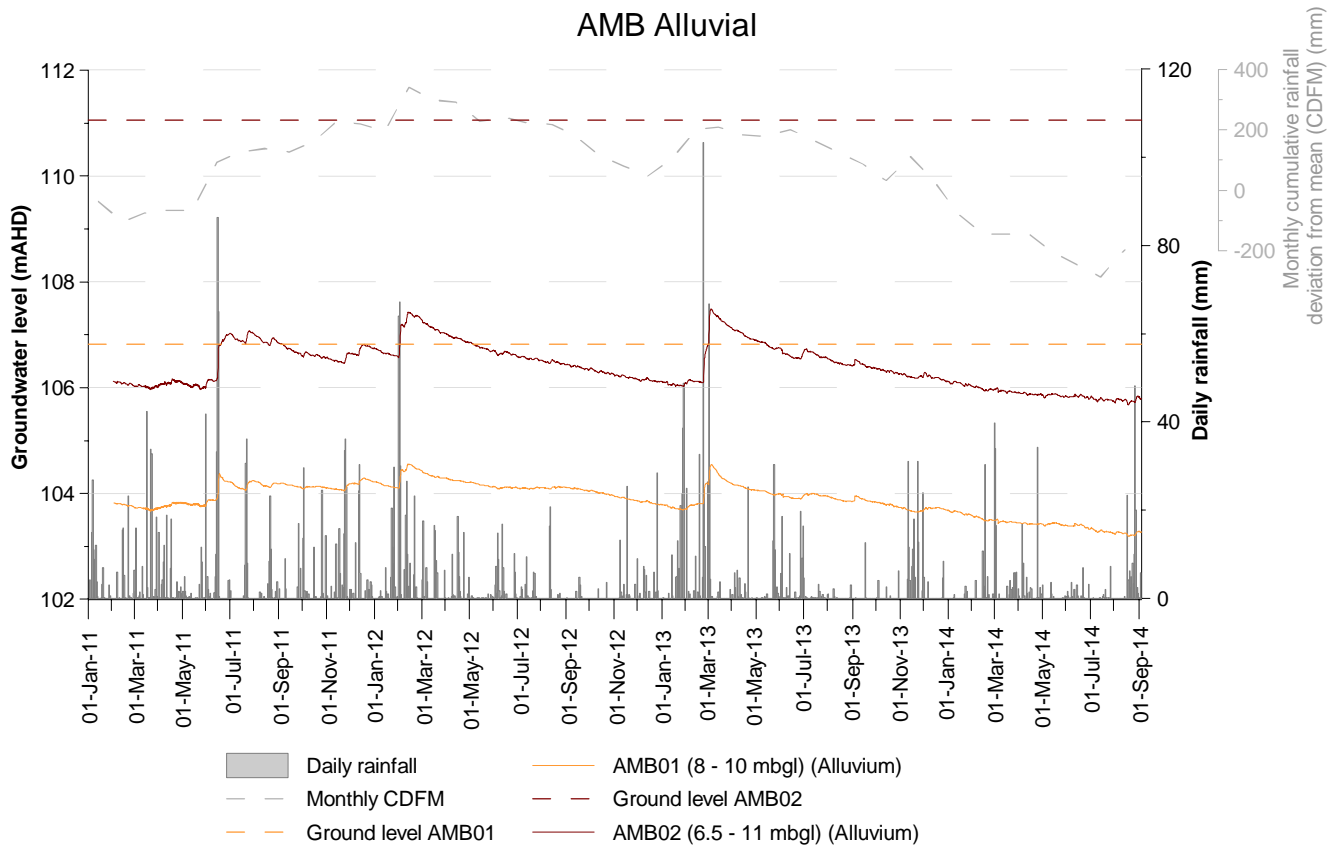
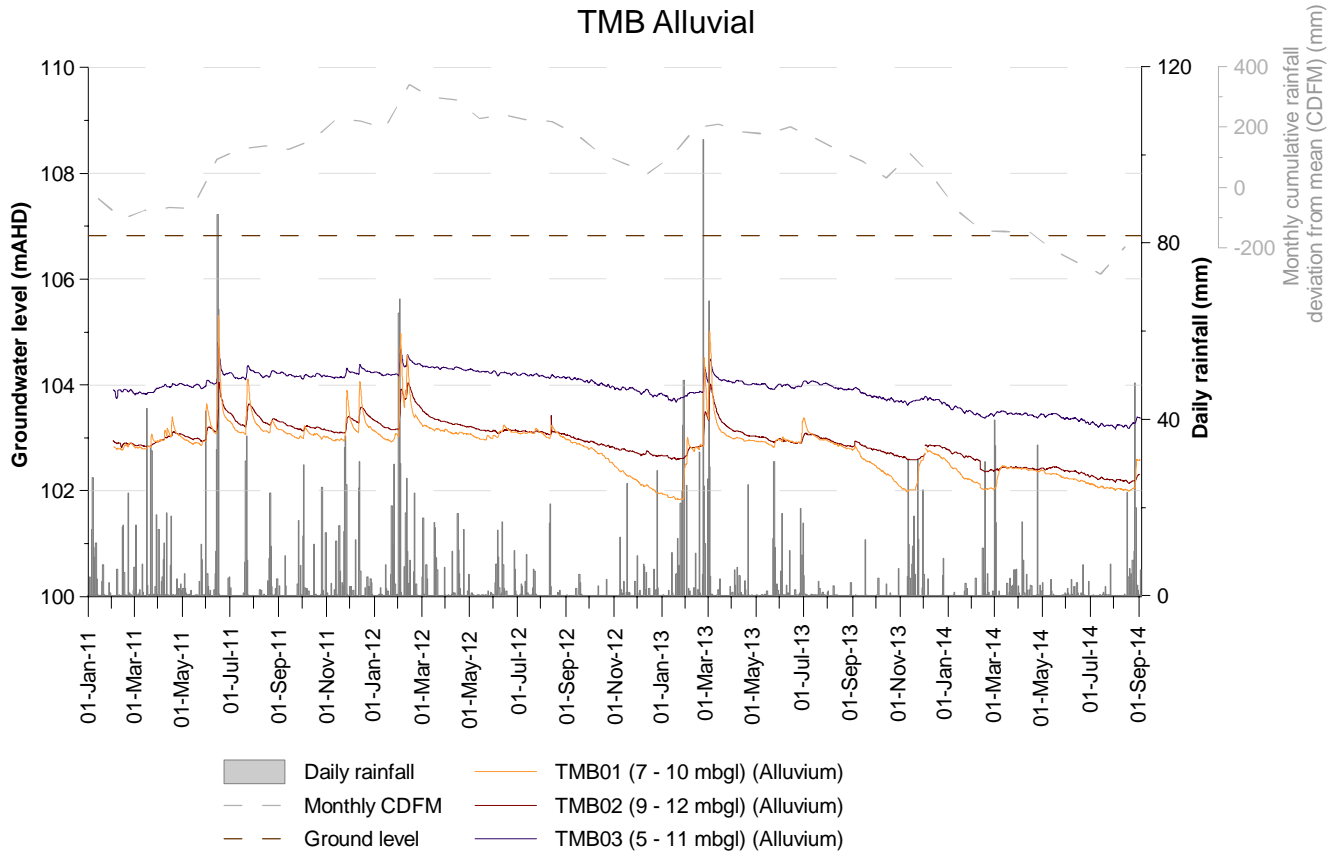


Figure 7: TMB and AMB Alluvial monitoring bores

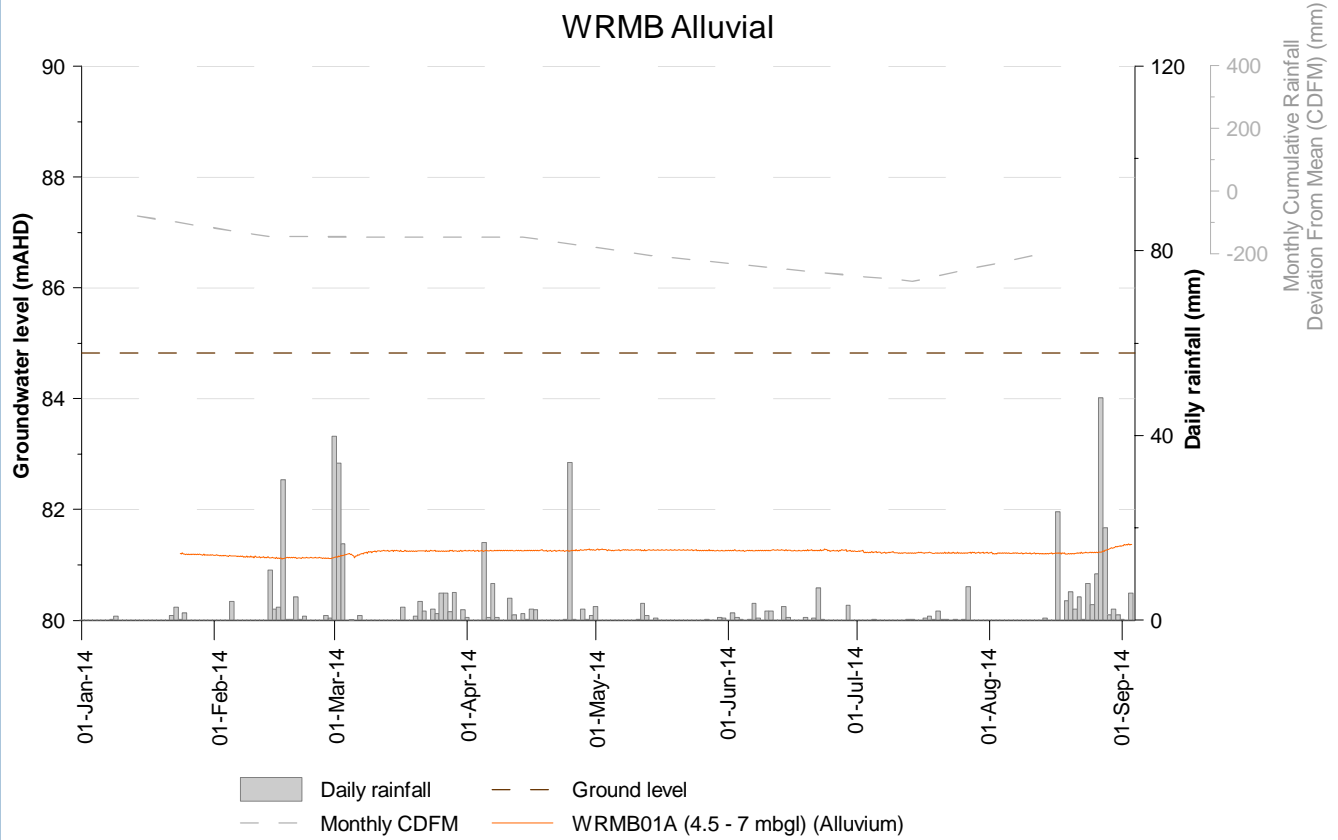
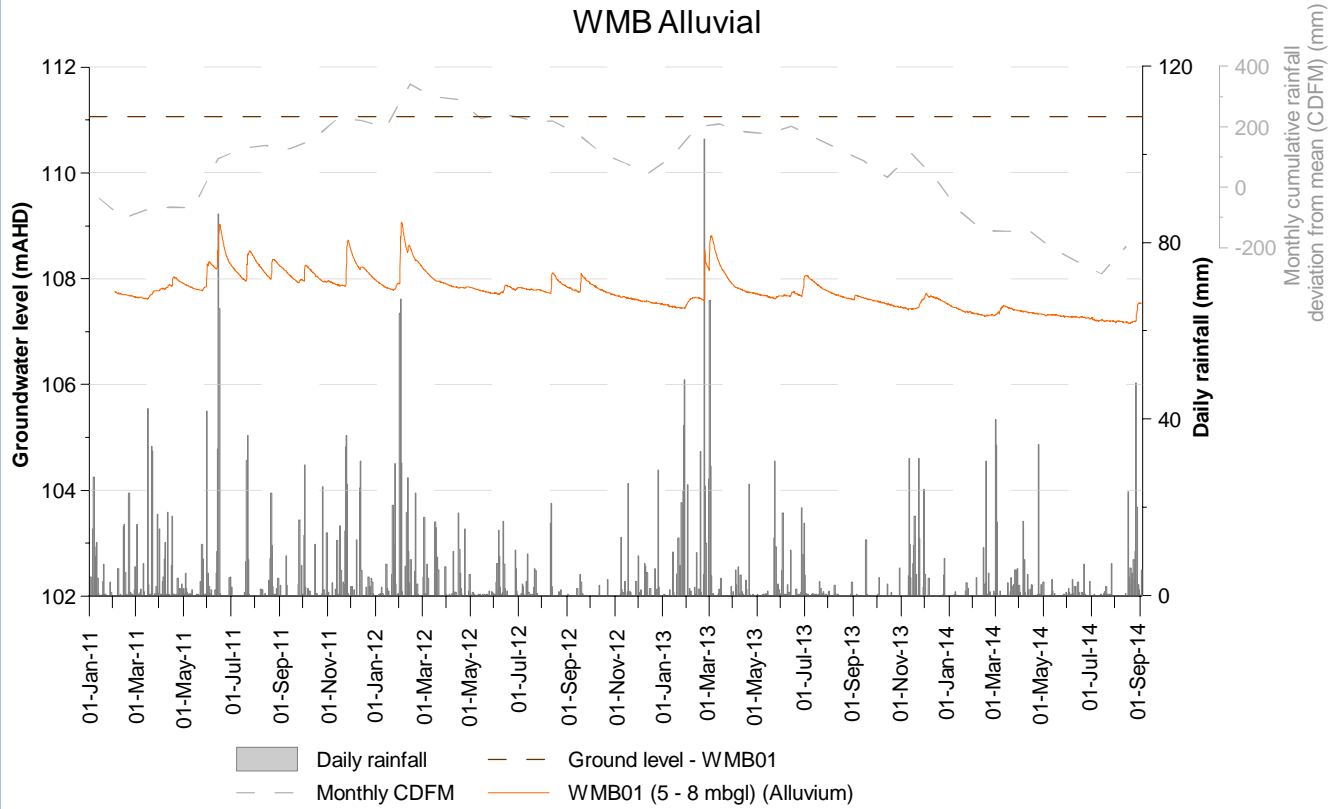


Figure 8: WMB and WRMB Alluvial monitoring bores

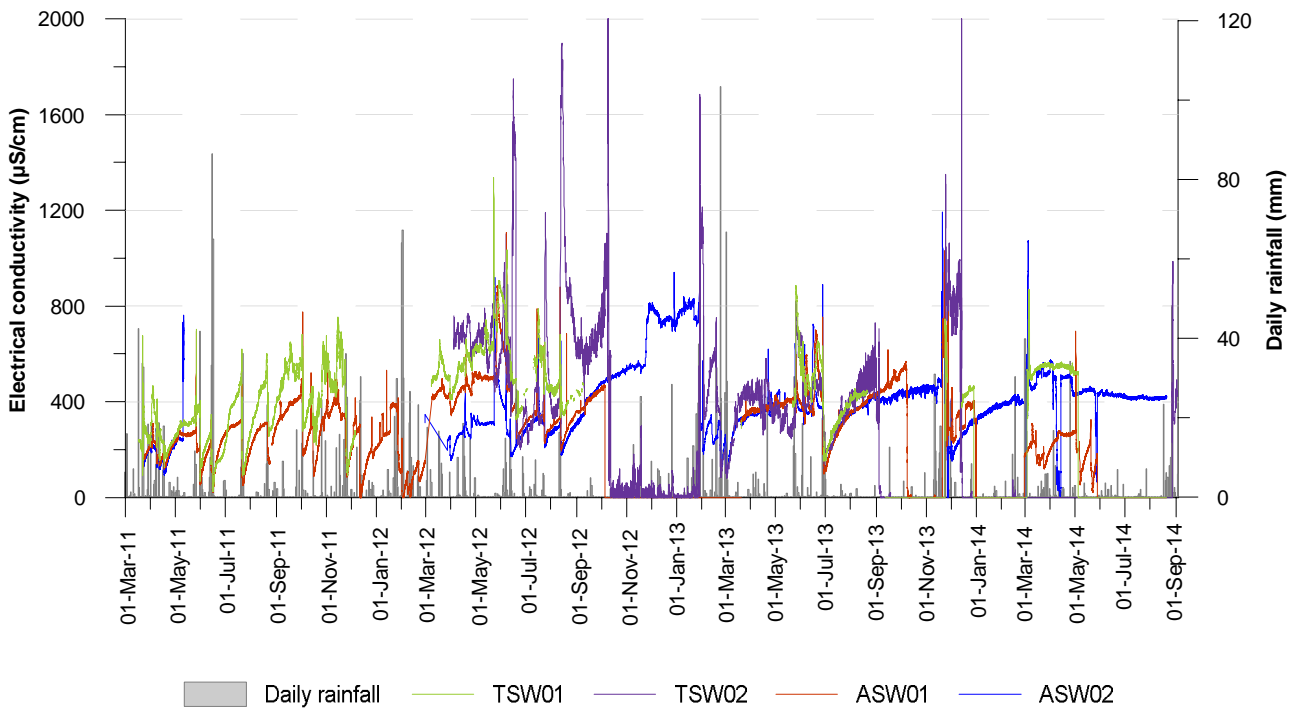
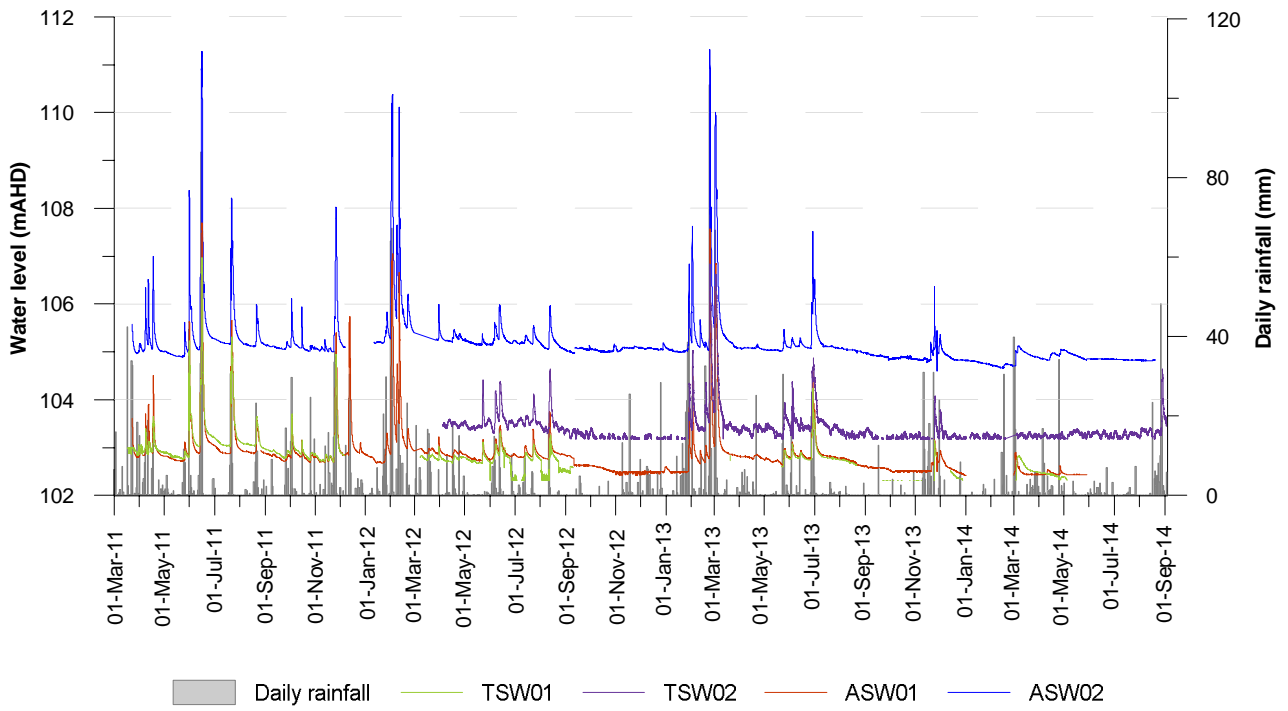


Figure 9: TSW01, TSW02, ASW01 and ASW02 Surface water levels and Electrical Conductivity

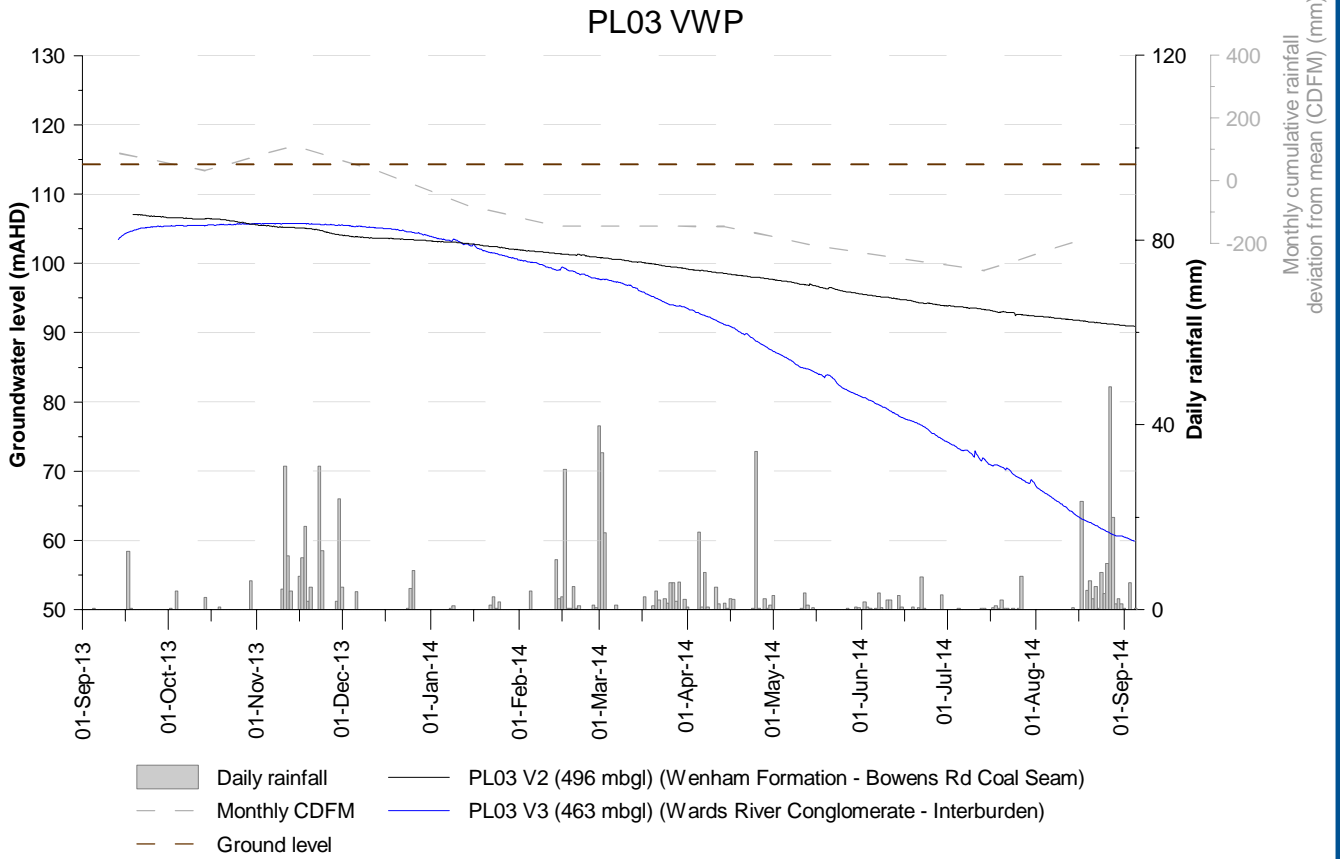


Figure 10: PL03 VWP

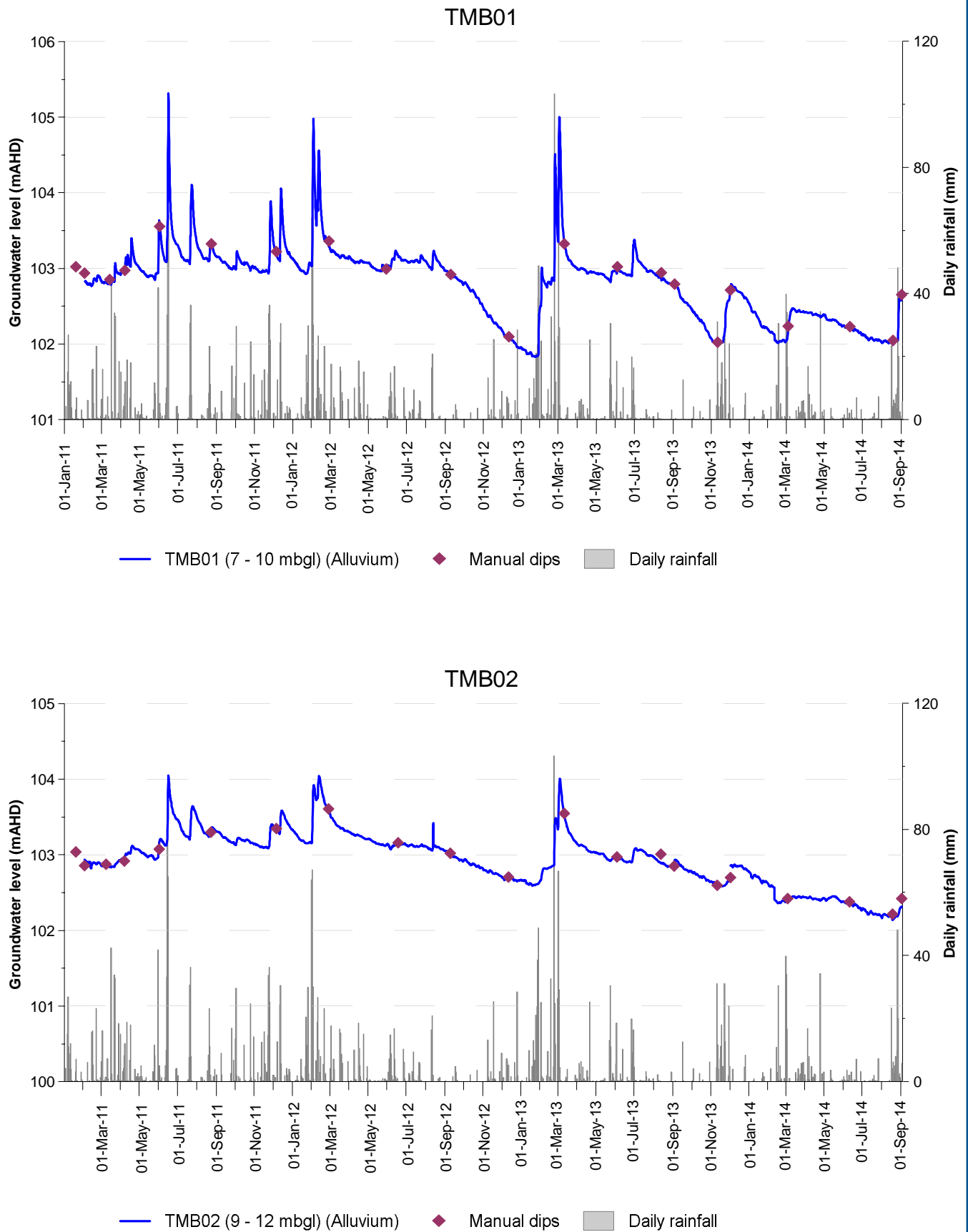


Figure A.1: TMB01 and TMB02 monitoring bores

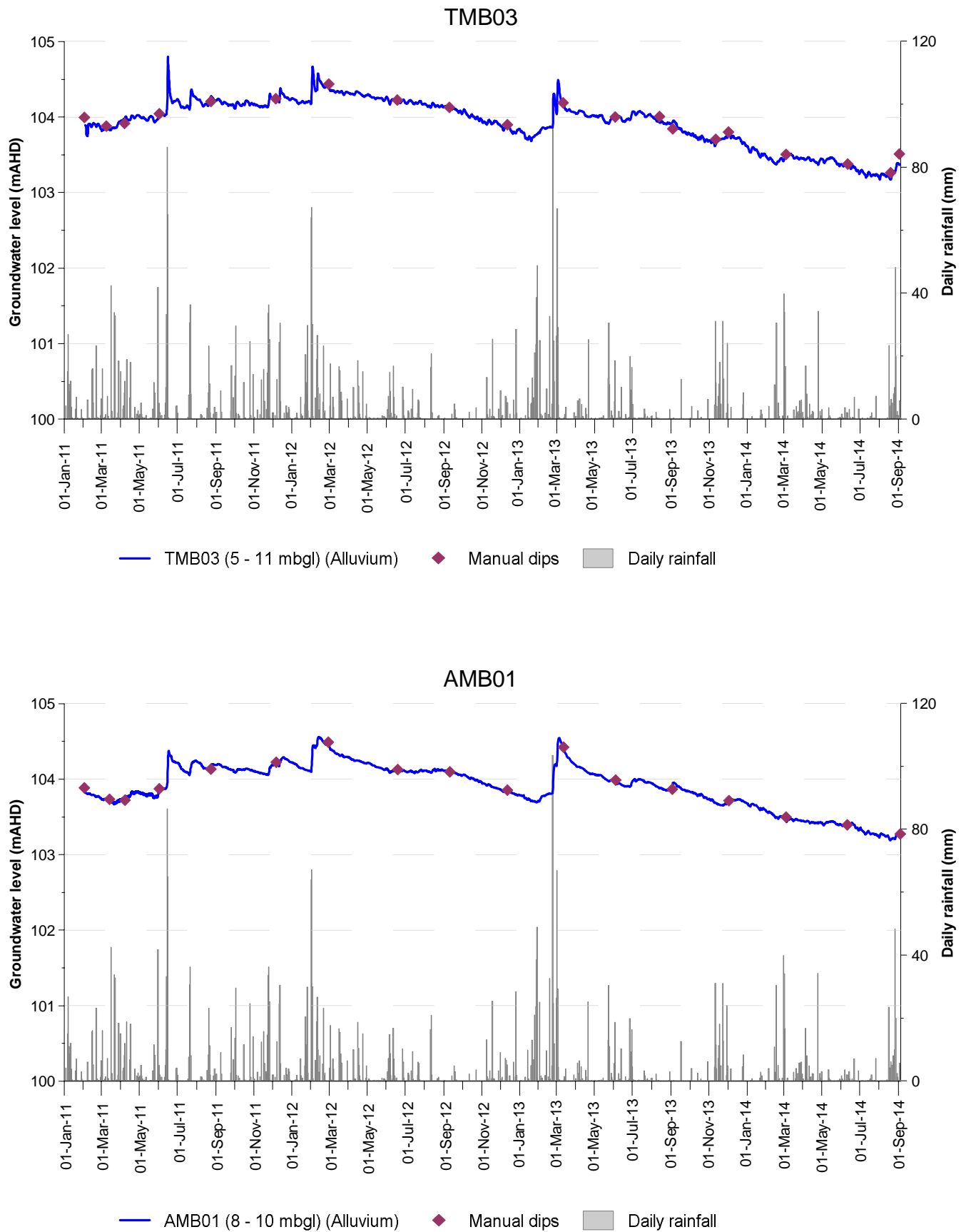


Figure A.2: TMB03 and AMB01 monitoring bores

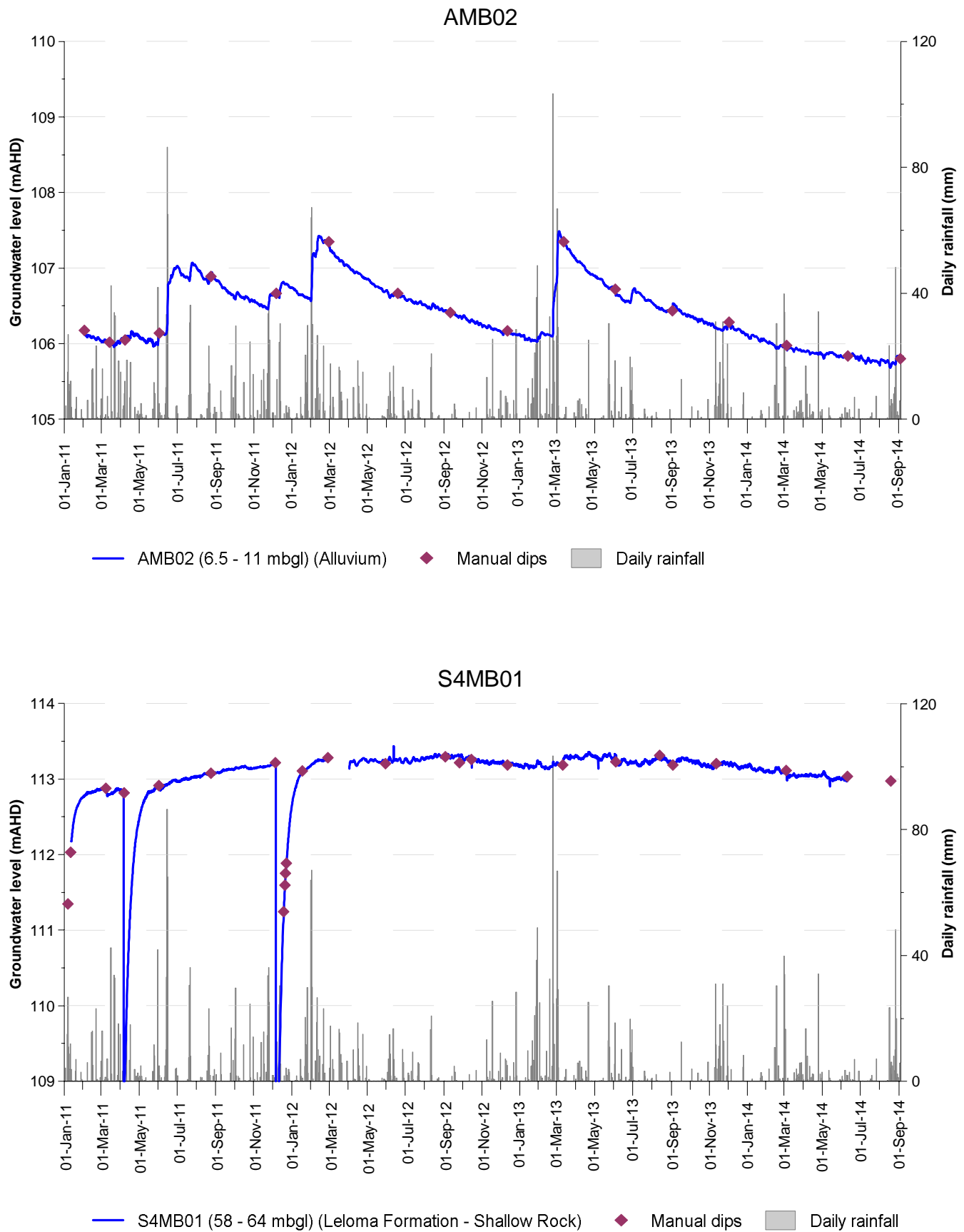


Figure A.3: AMB02 and S4MB01 monitoring bores

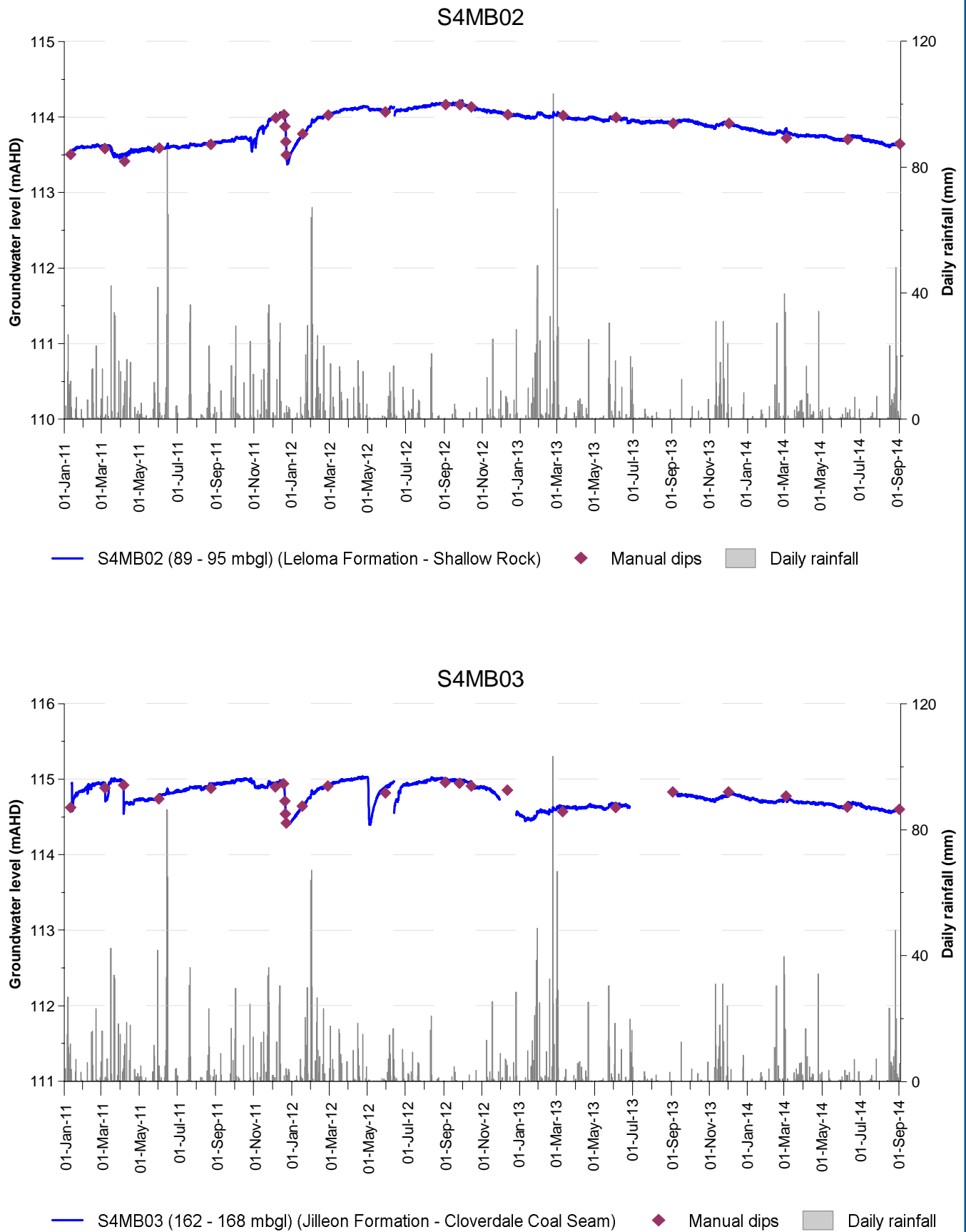


Figure A.4: S4MB02 and S4MB03 monitoring bores

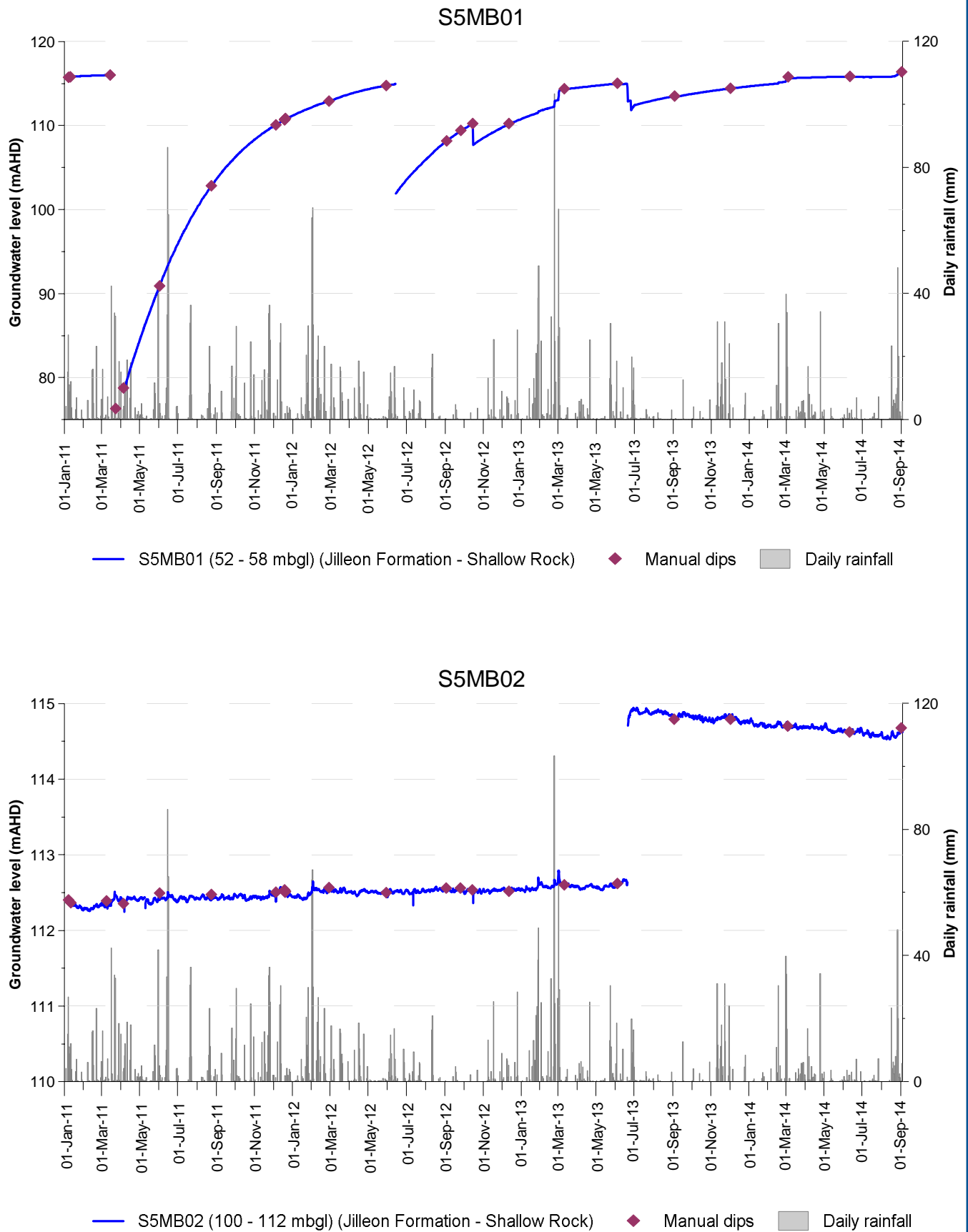


Figure A.5: S5MB01 and S5MB02 monitoring bores

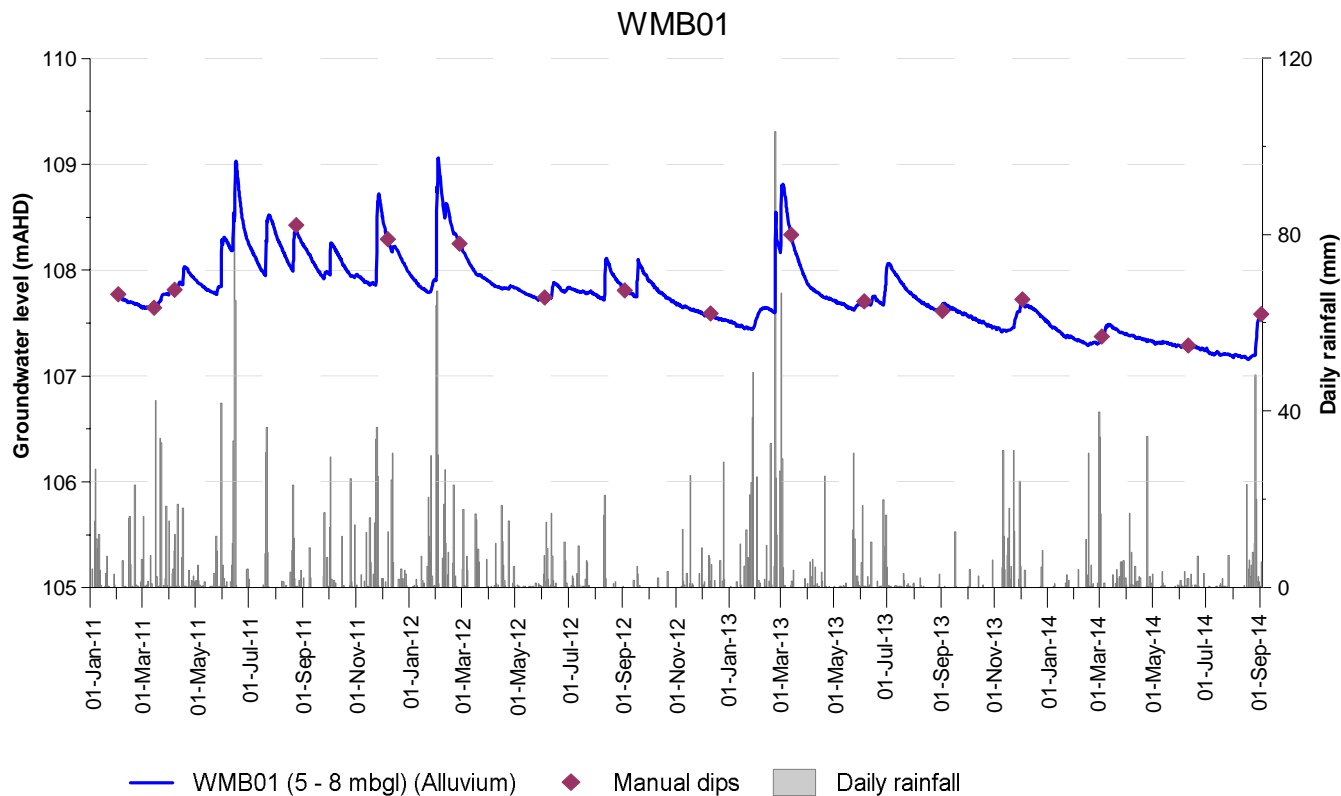
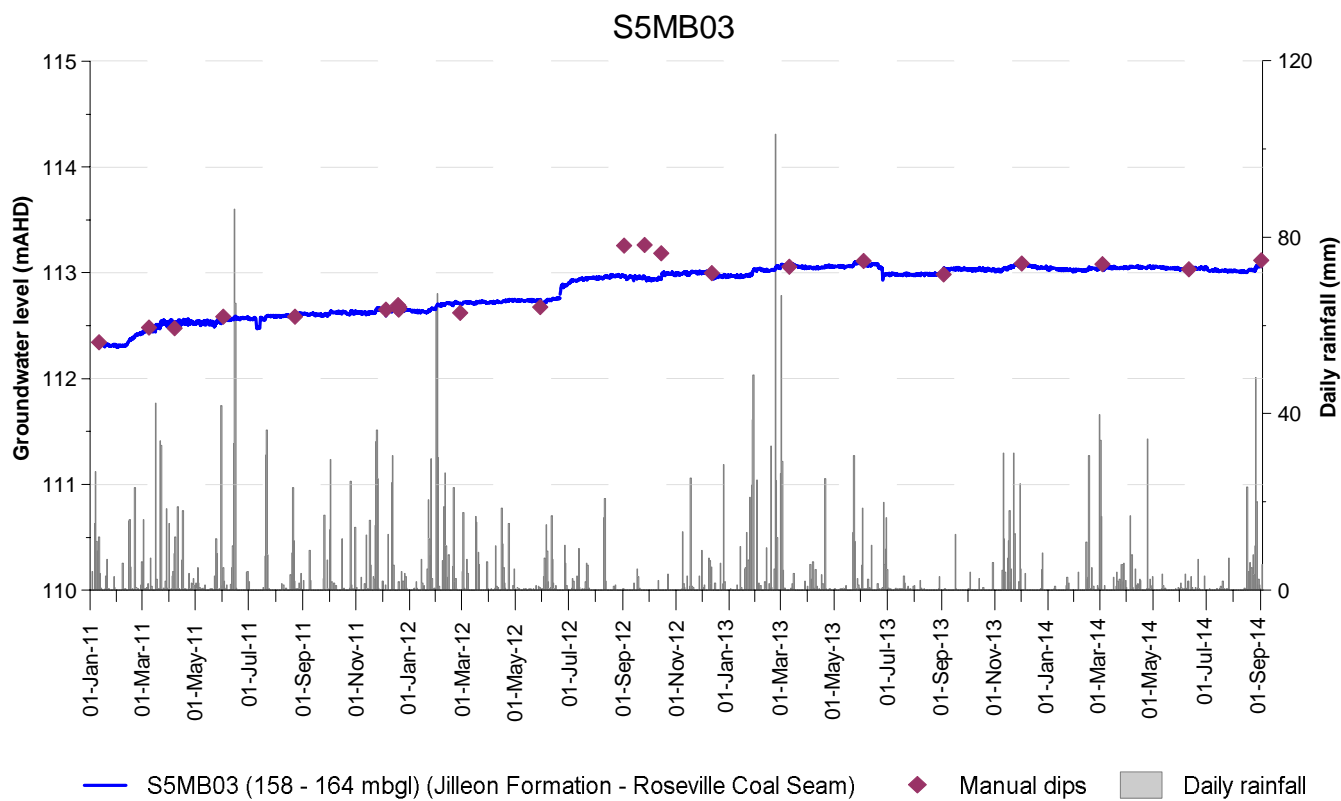


Figure A.6: S5MB03 and WMB01 monitoring bores

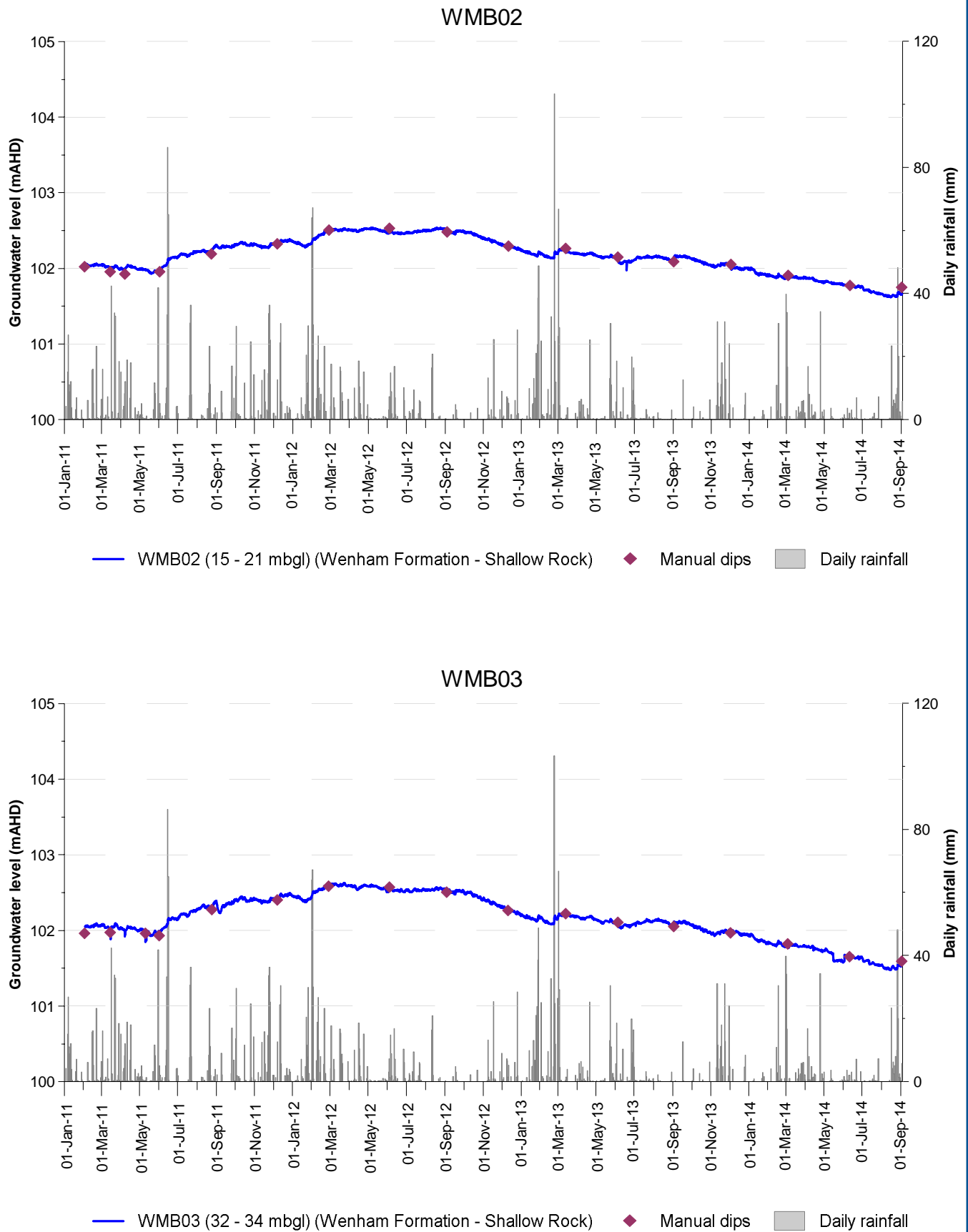


Figure A.7: WMB02 and WMB03 monitoring bores

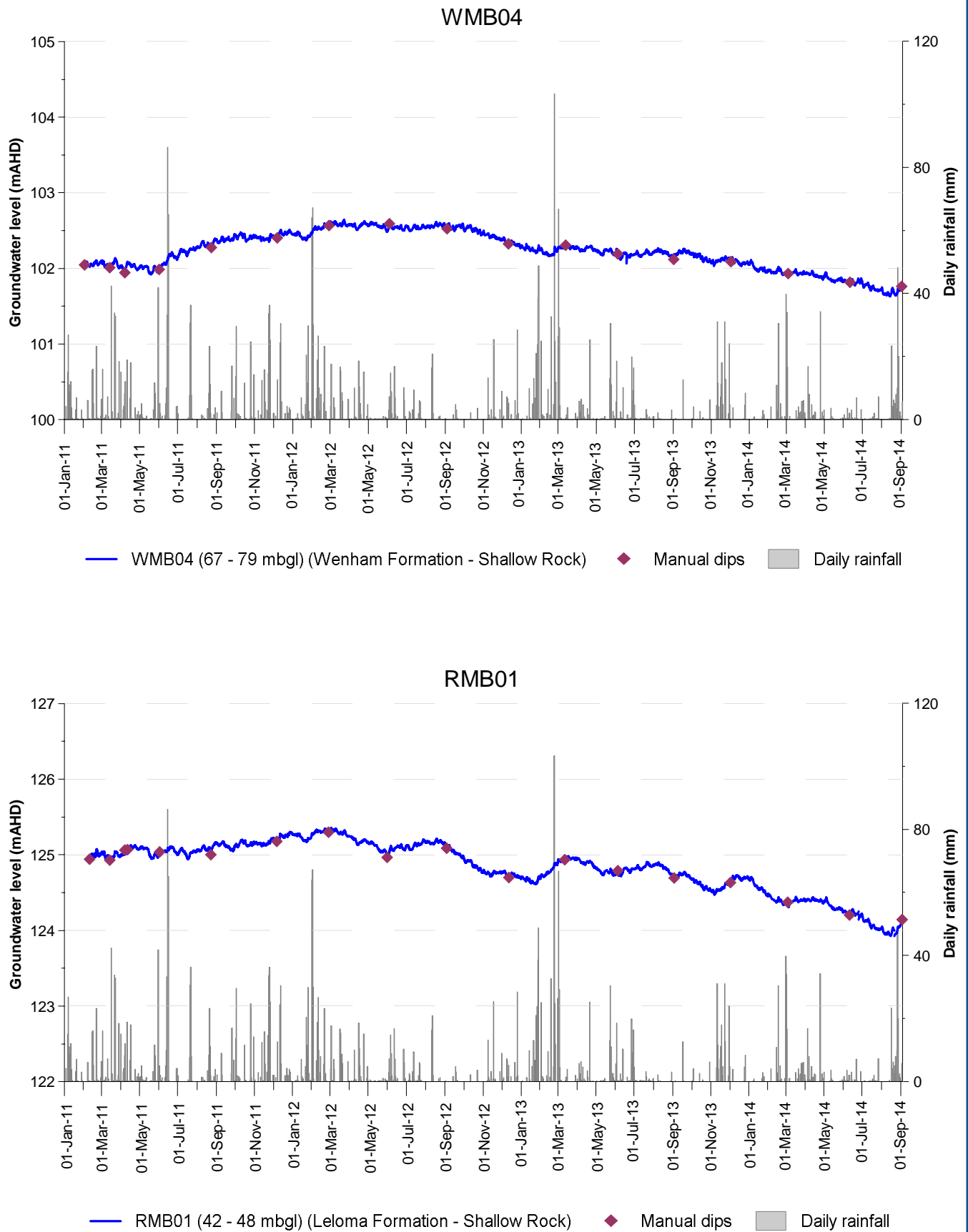


Figure A.8: WMB04 and RMB01 monitoring bores

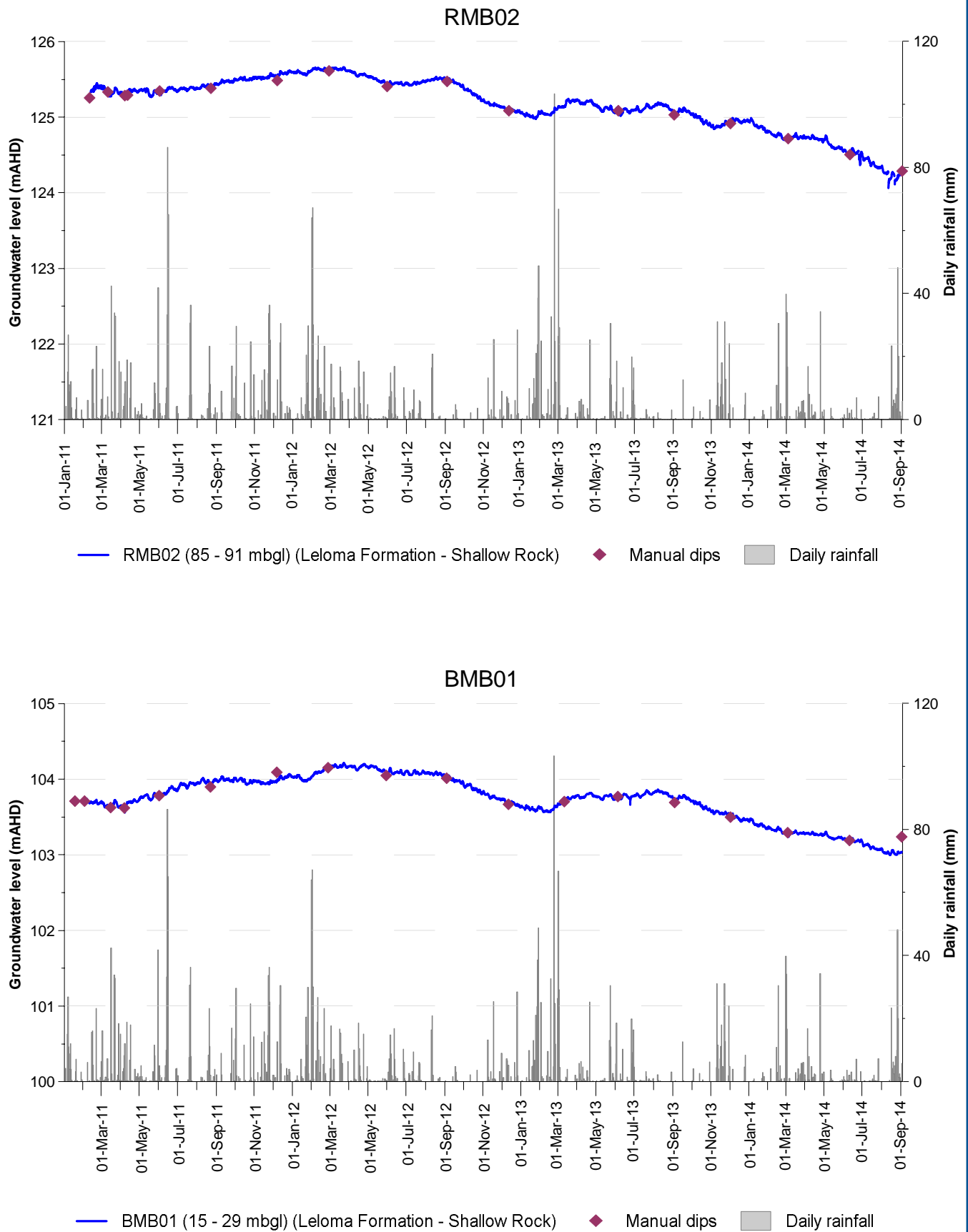


Figure A.9: RMB02 and BMB01 monitoring bores

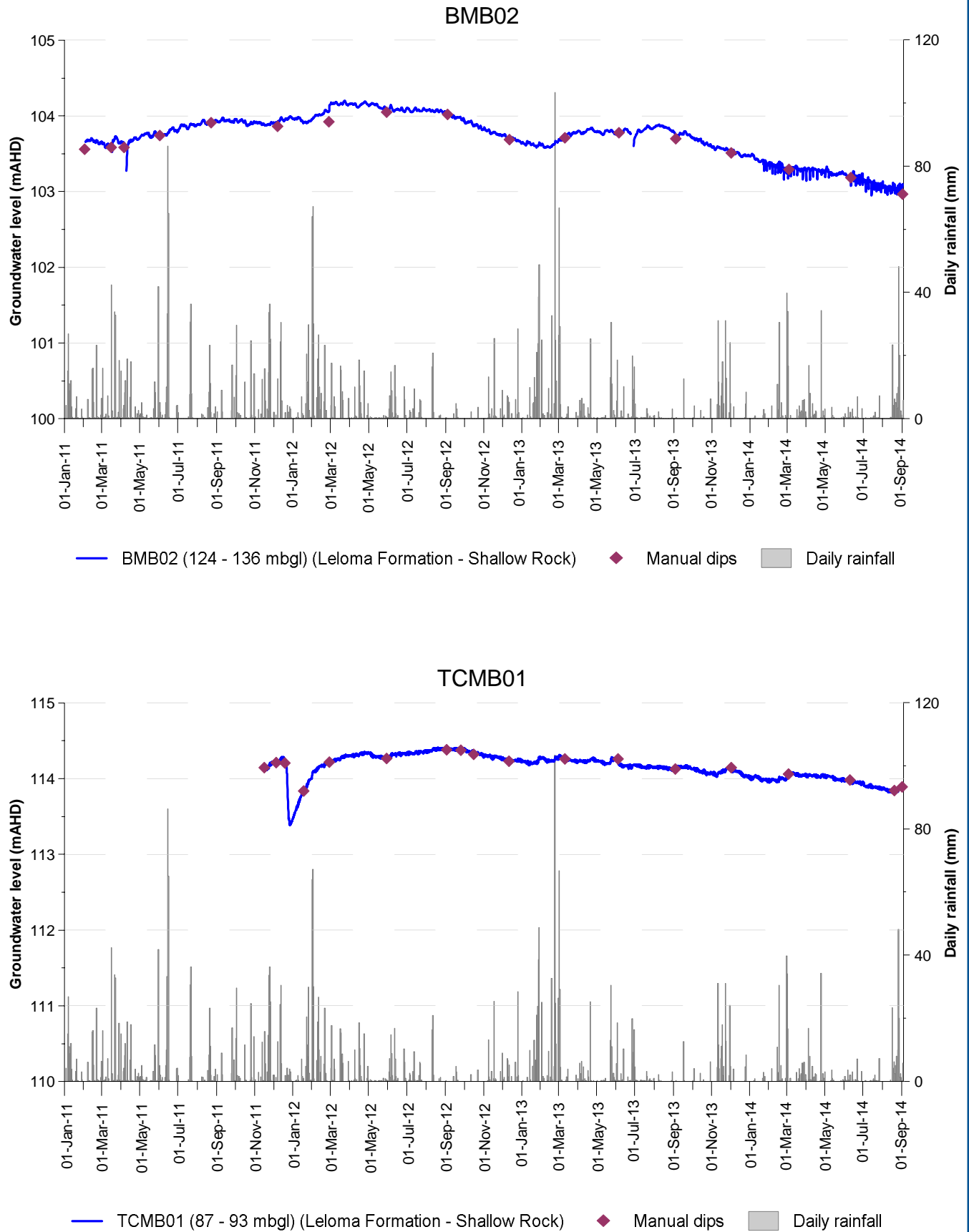


Figure A.10: BMB02 and TCMB01 monitoring bores

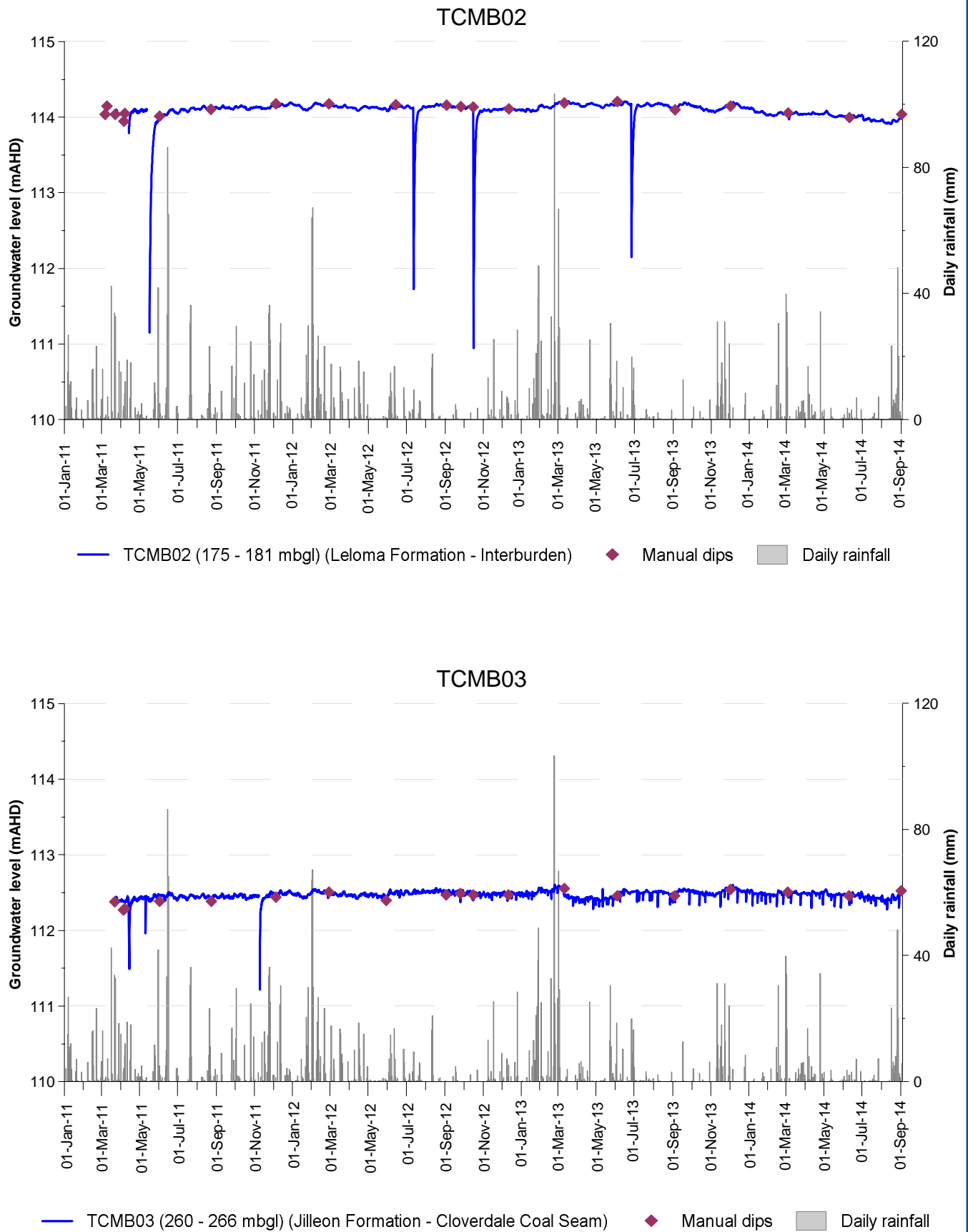


Figure A.11: TCMB02 and TCMB03 monitoring bores

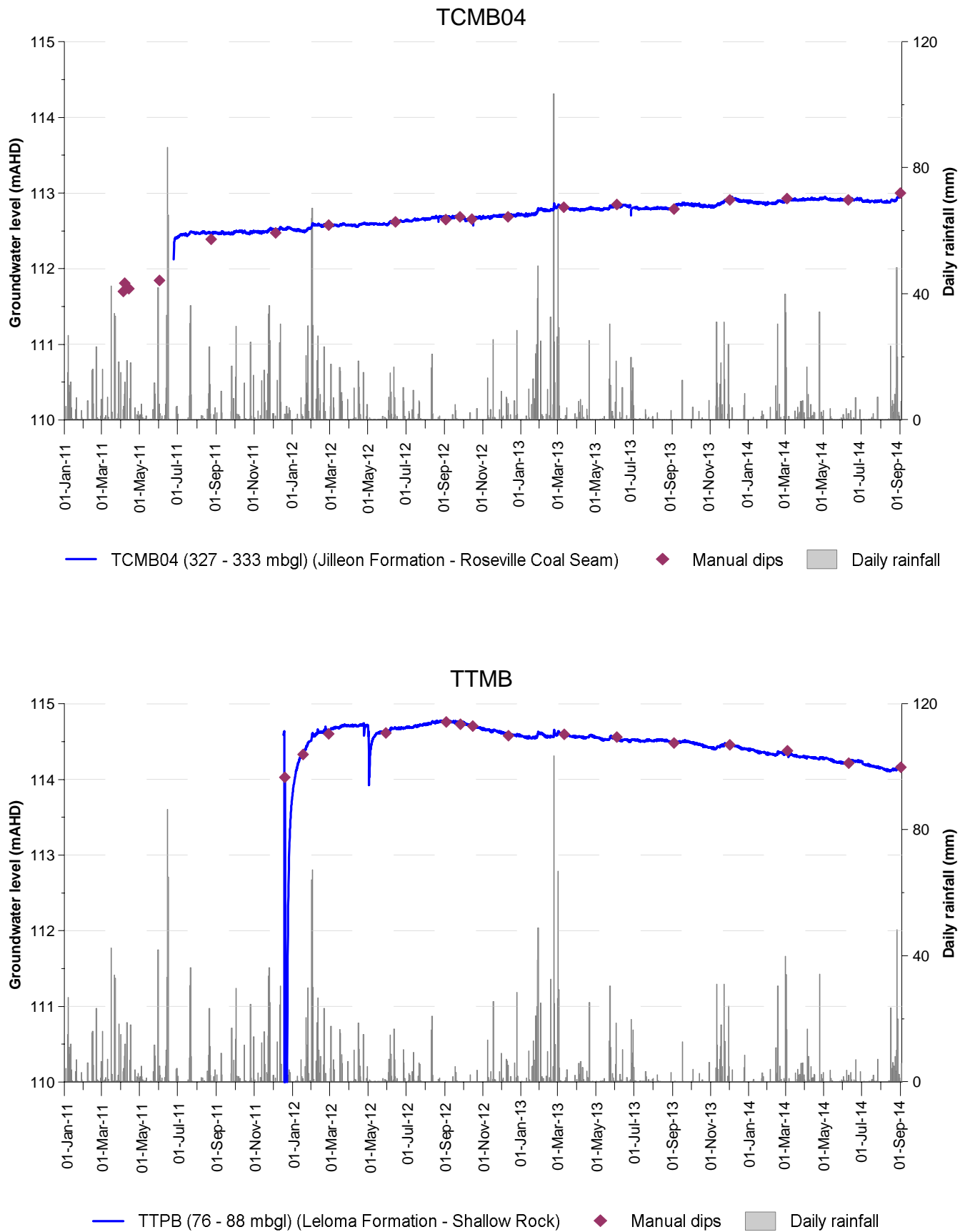


Figure A.12: TCMB04 and TTMB monitoring bores

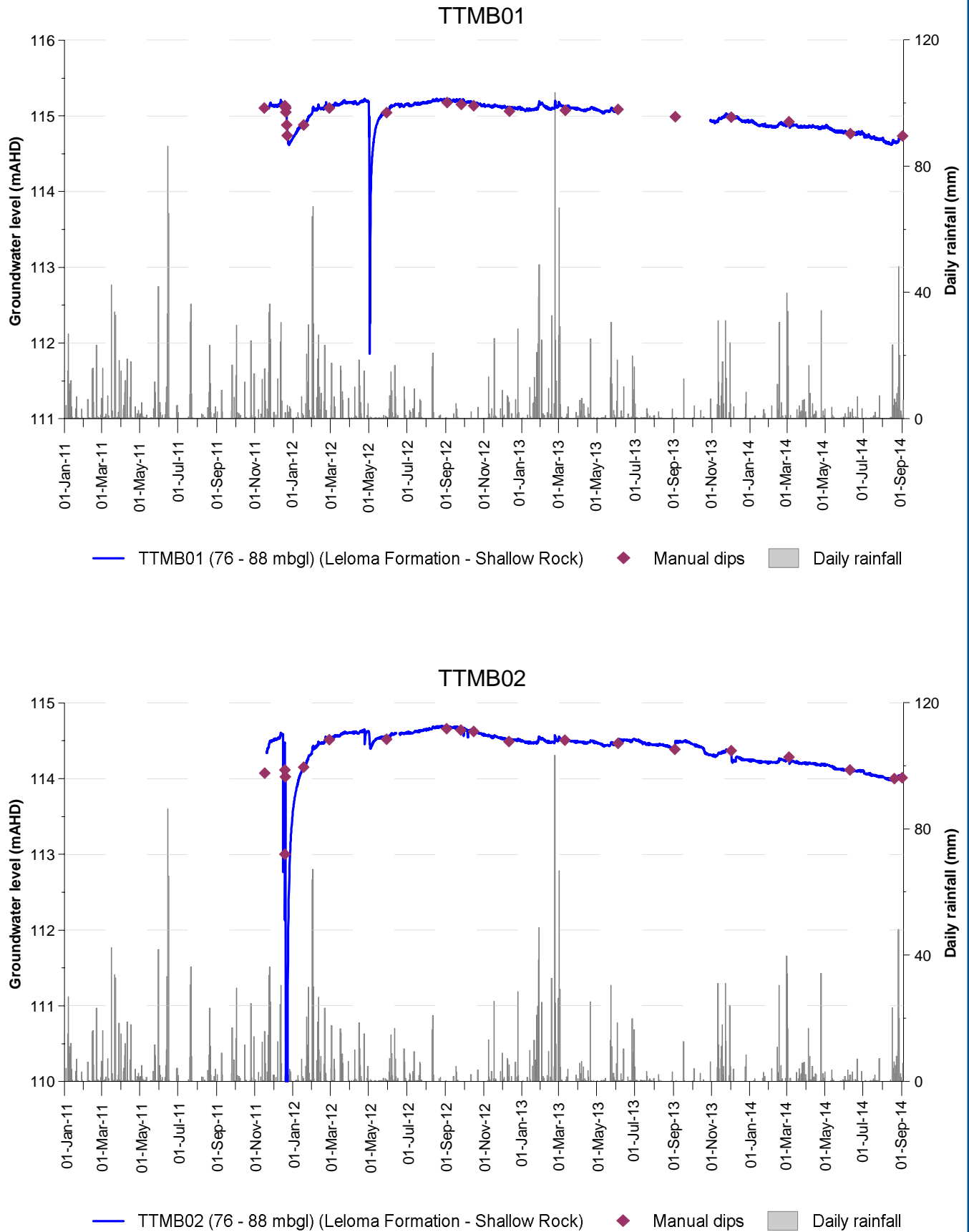


Figure A.13: TTMB01 and TTMB02 monitoring bores

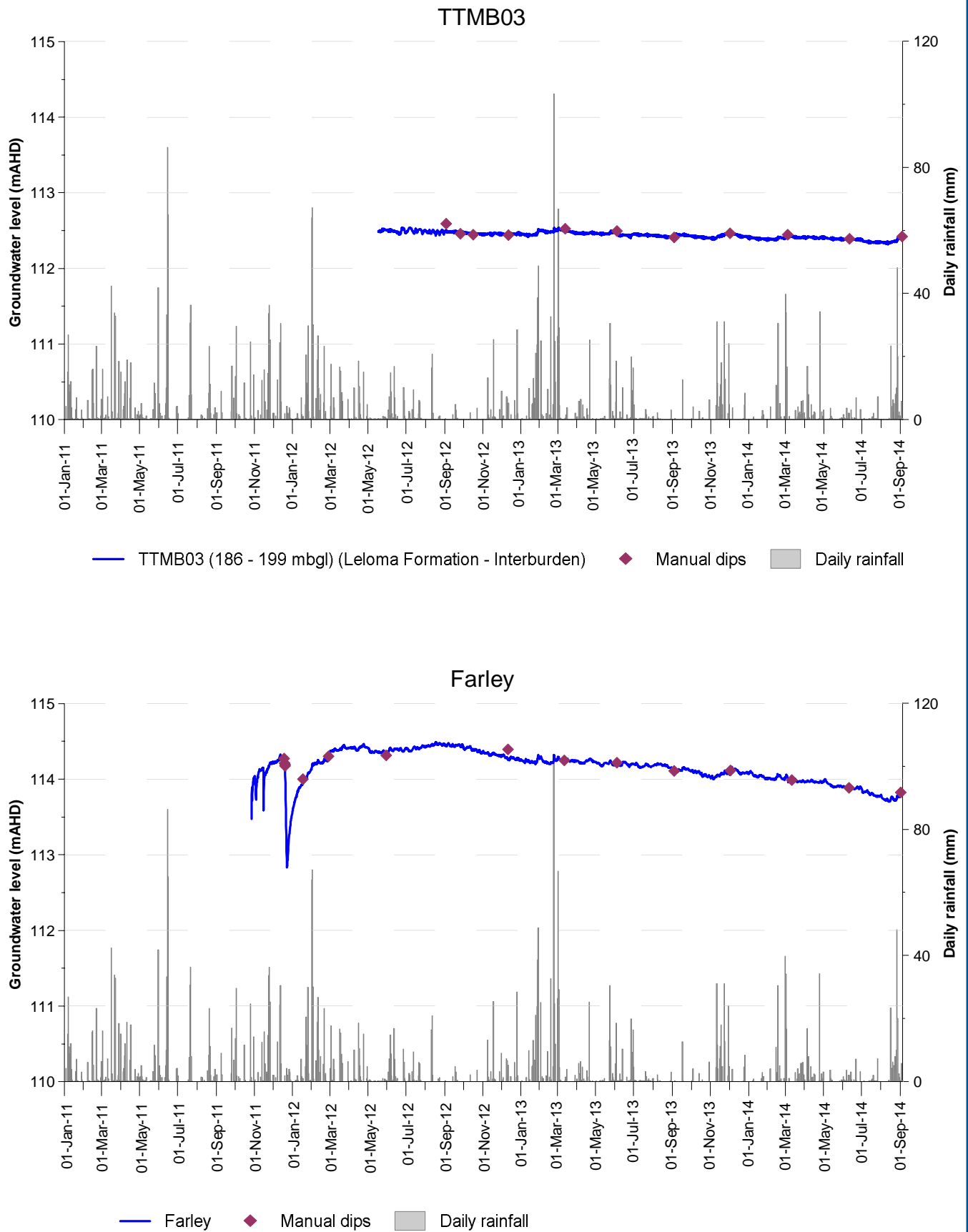


Figure A.14: TTMB03 and Farley monitoring bores

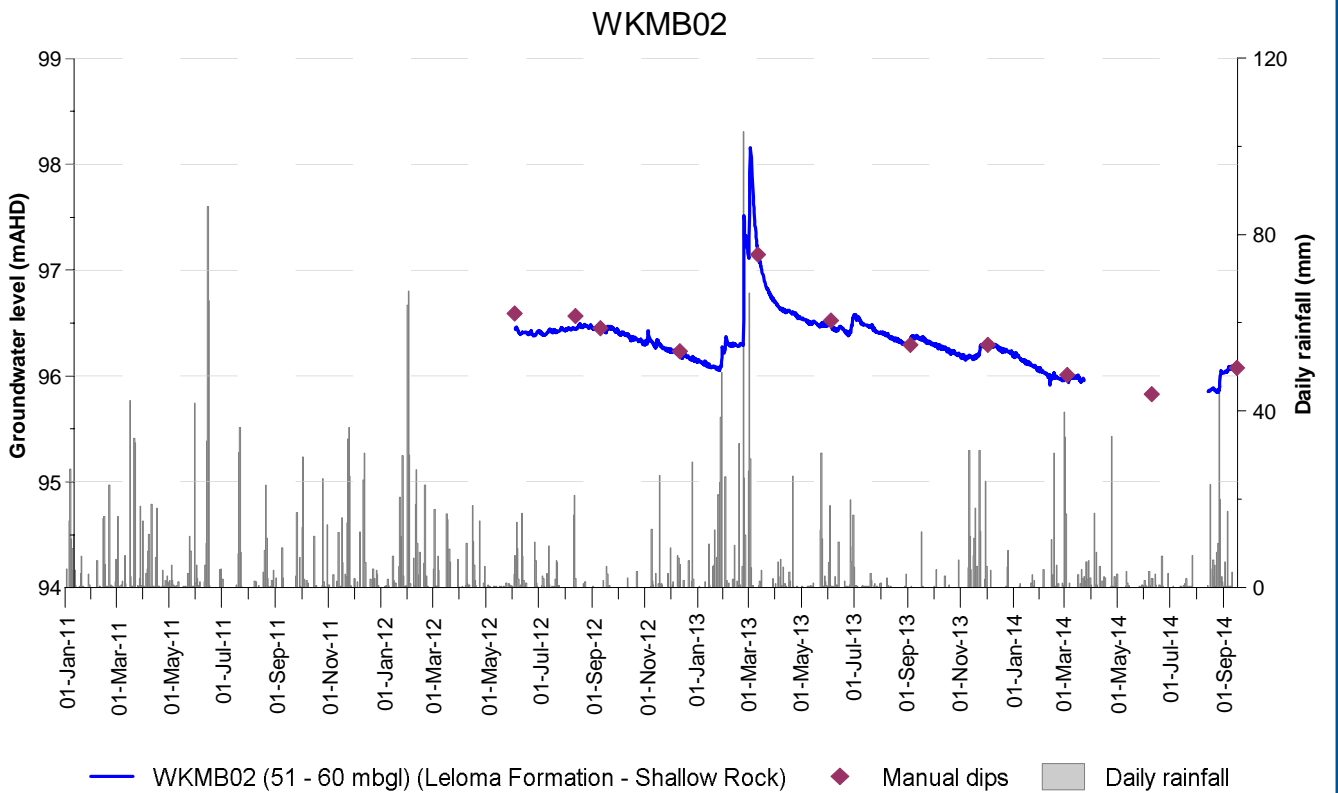
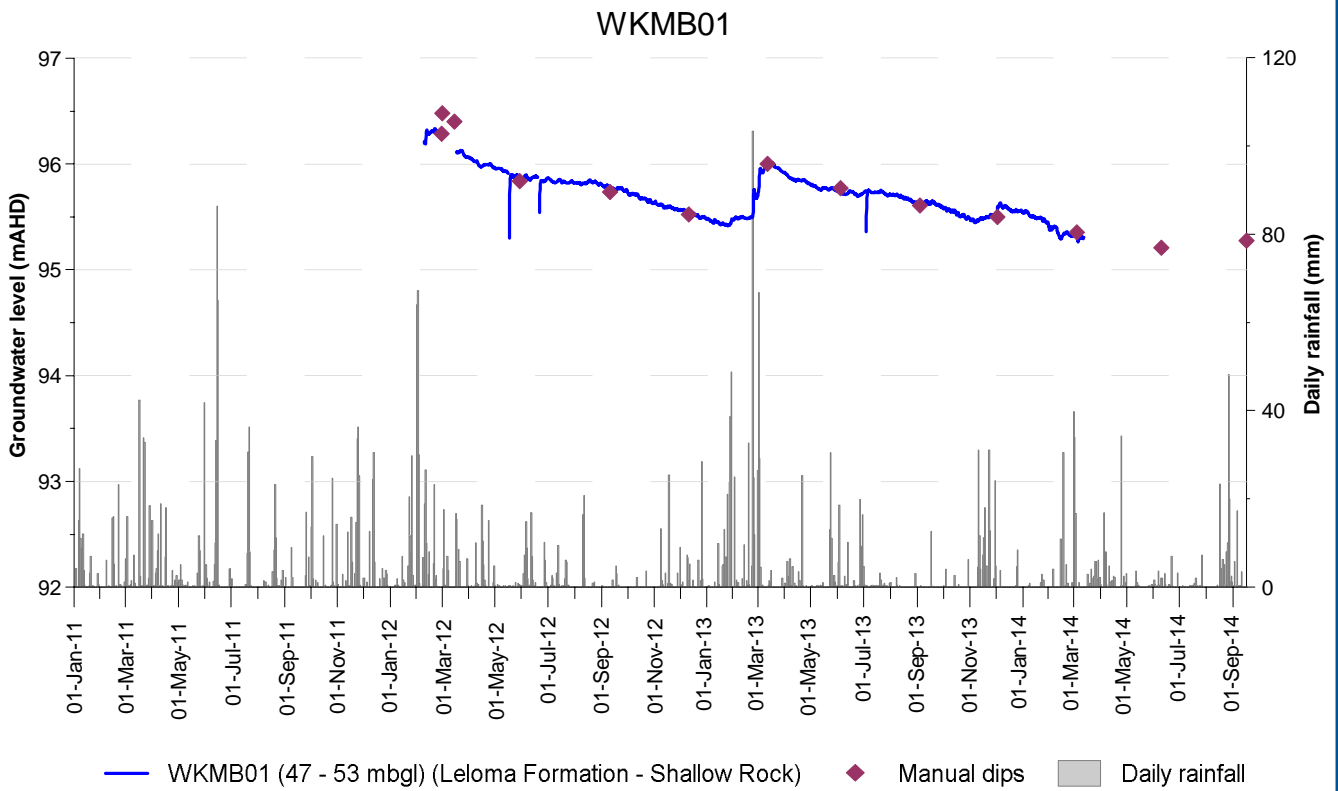


Figure A.15: WKMB01 and WKMB02 monitoring bores

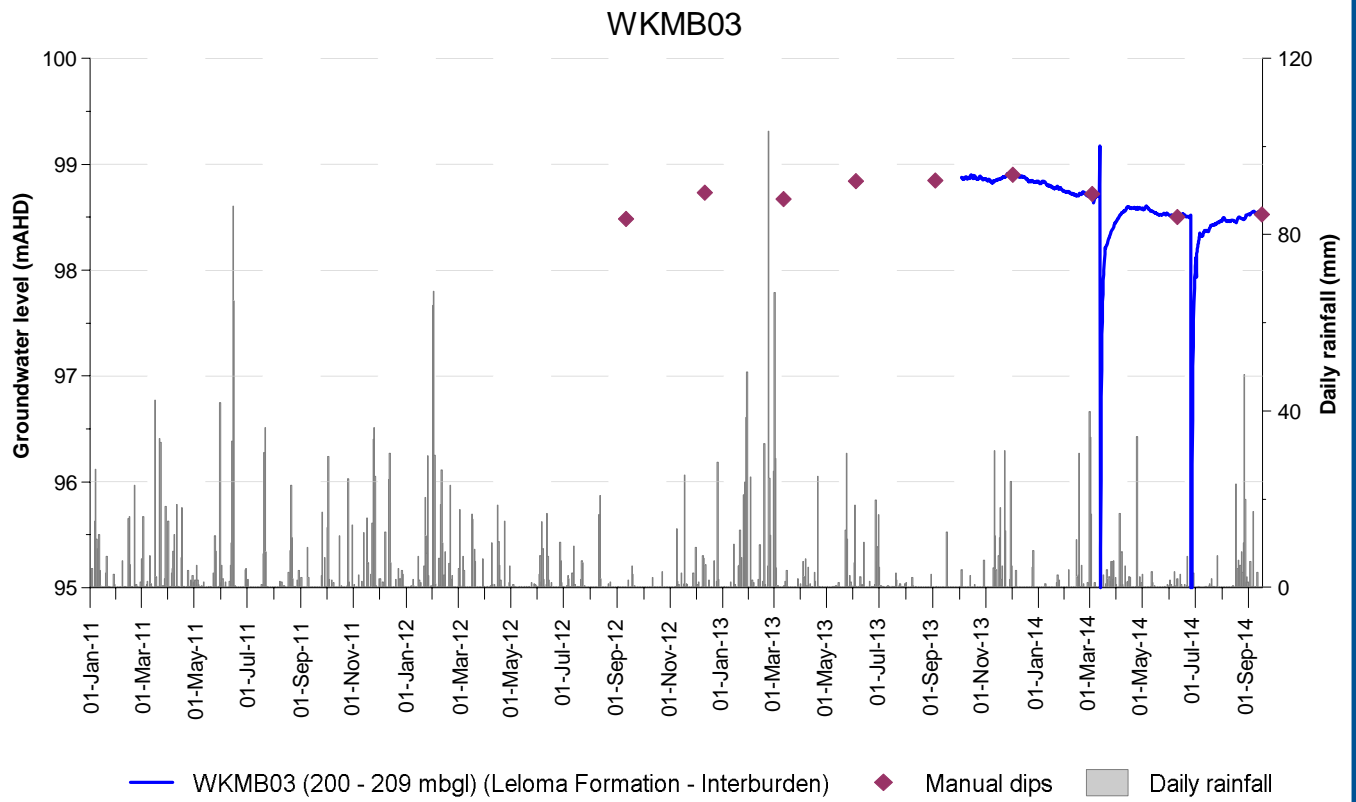


Figure A.16: WKMB03 monitoring bore

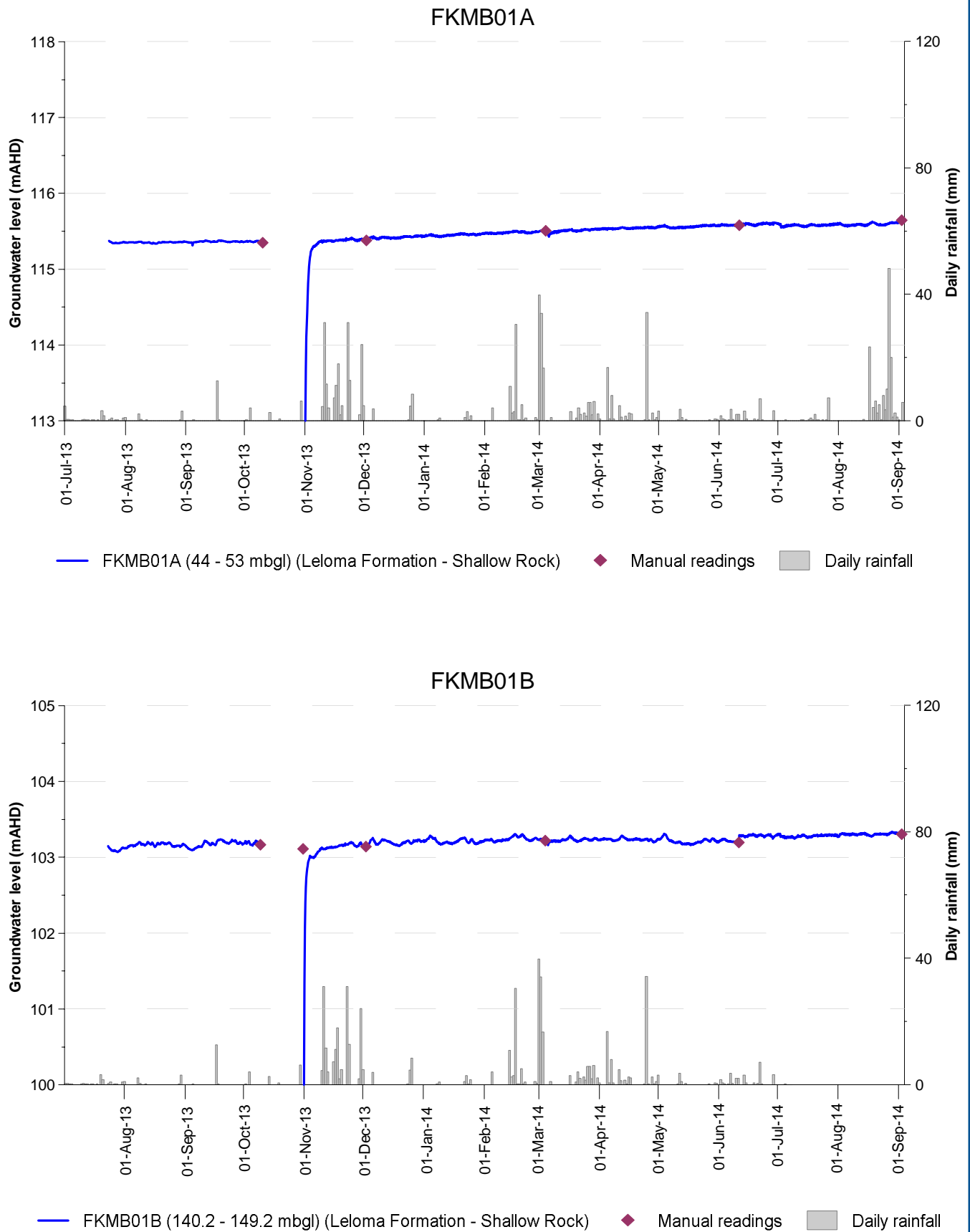


Figure A.17: FKMB01A and FKMB01B monitoring bores

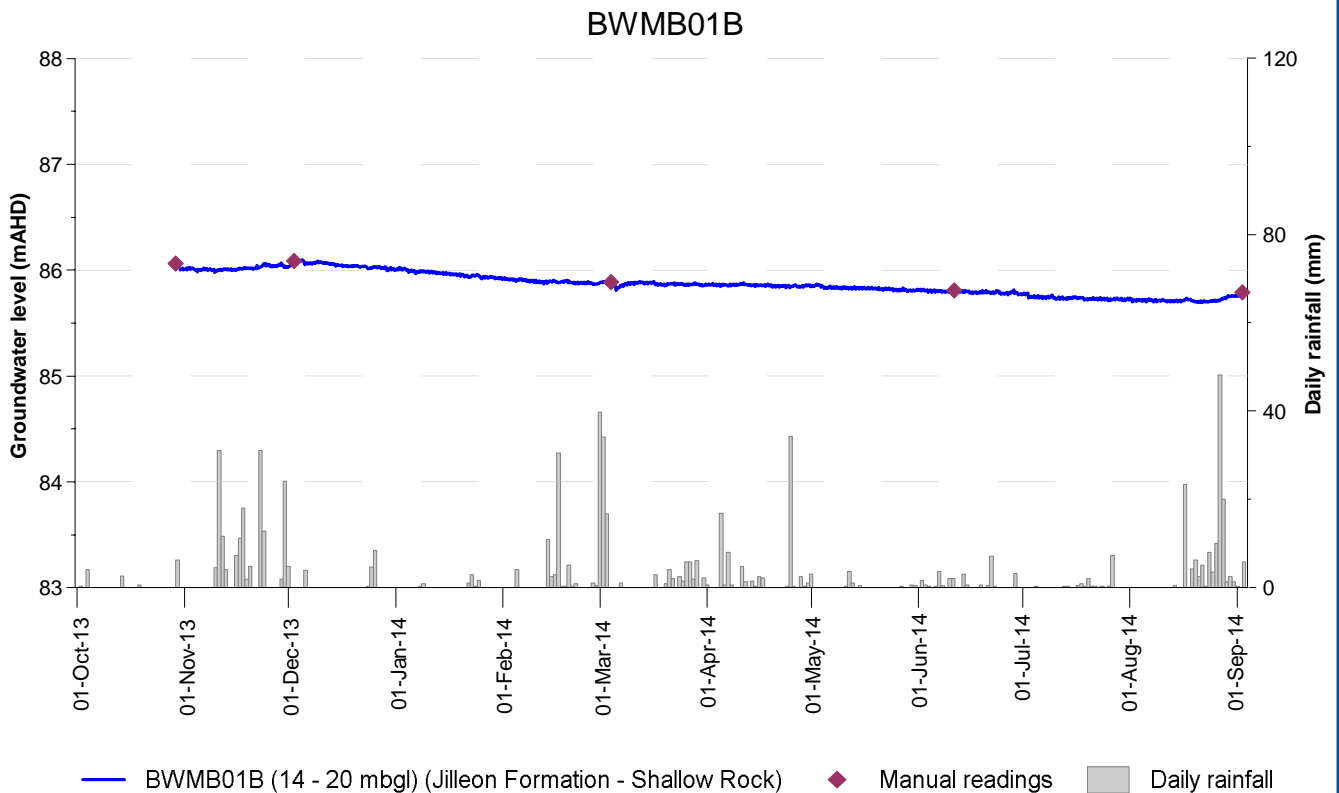
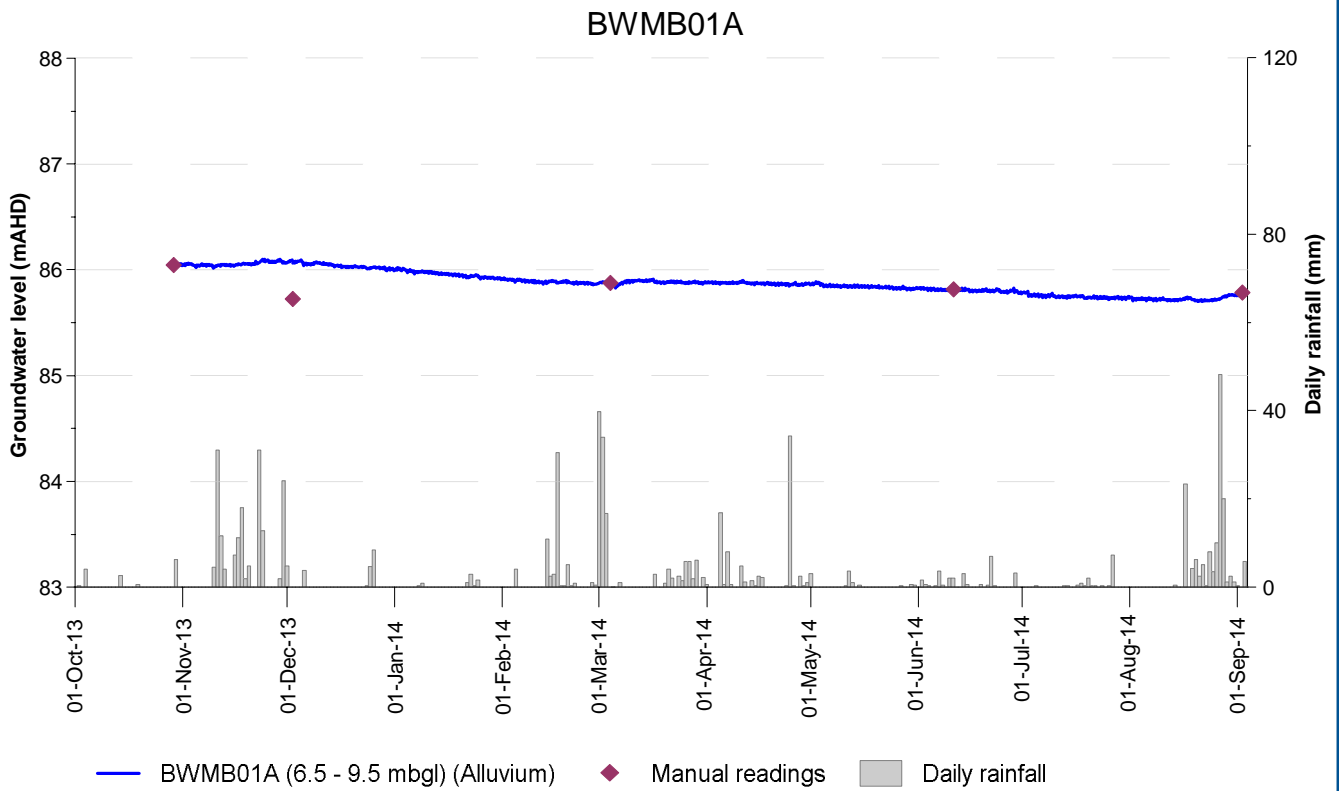


Figure A.18: BWMB01A and BWMB01B monitoring bores

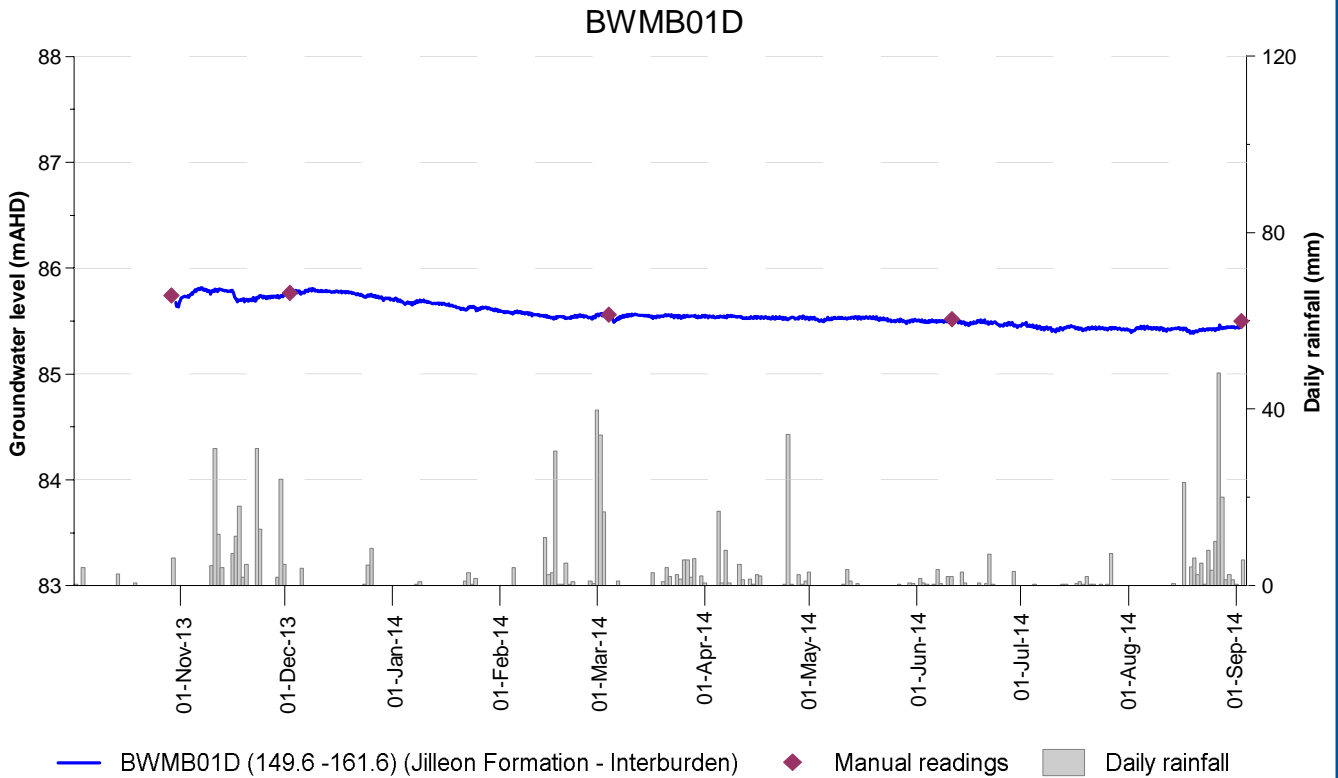
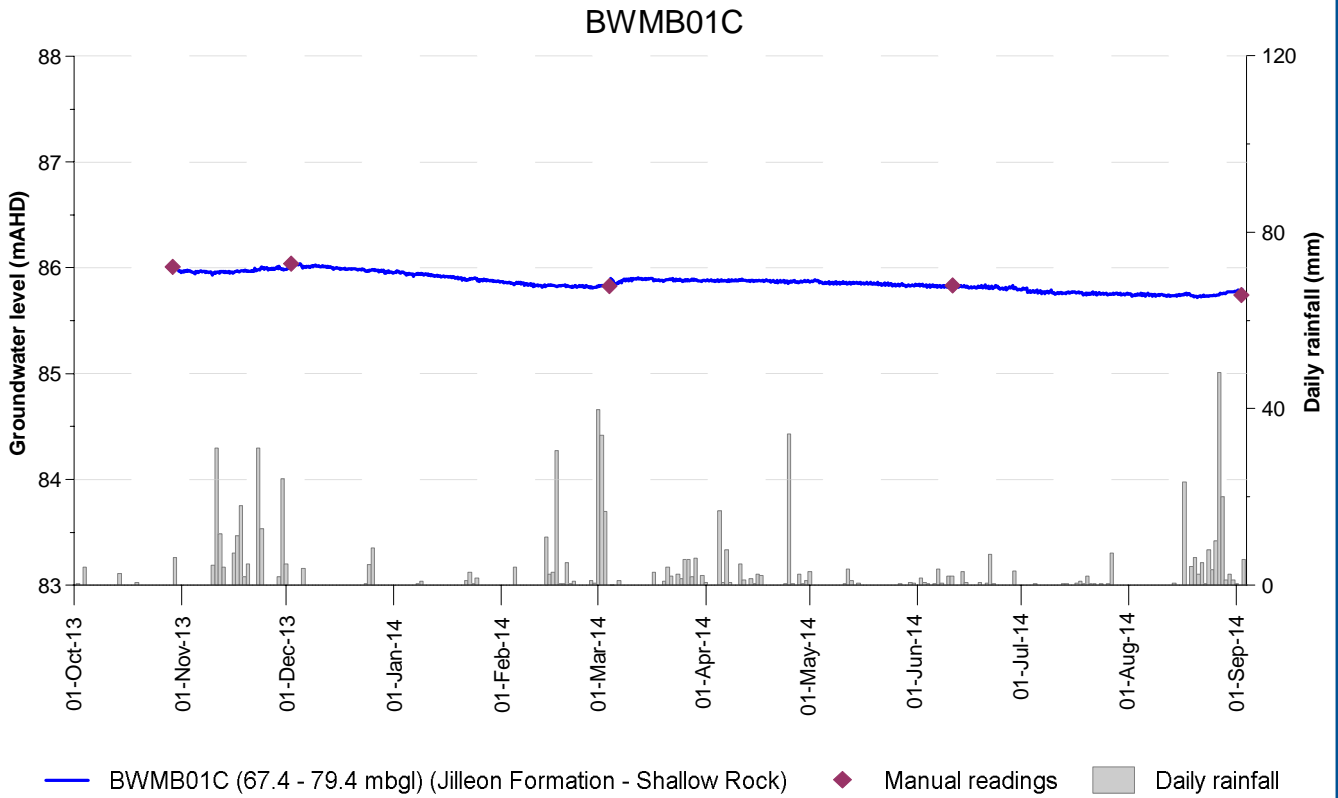


Figure A.19: BWMB01C and BWMB01D monitoring bores

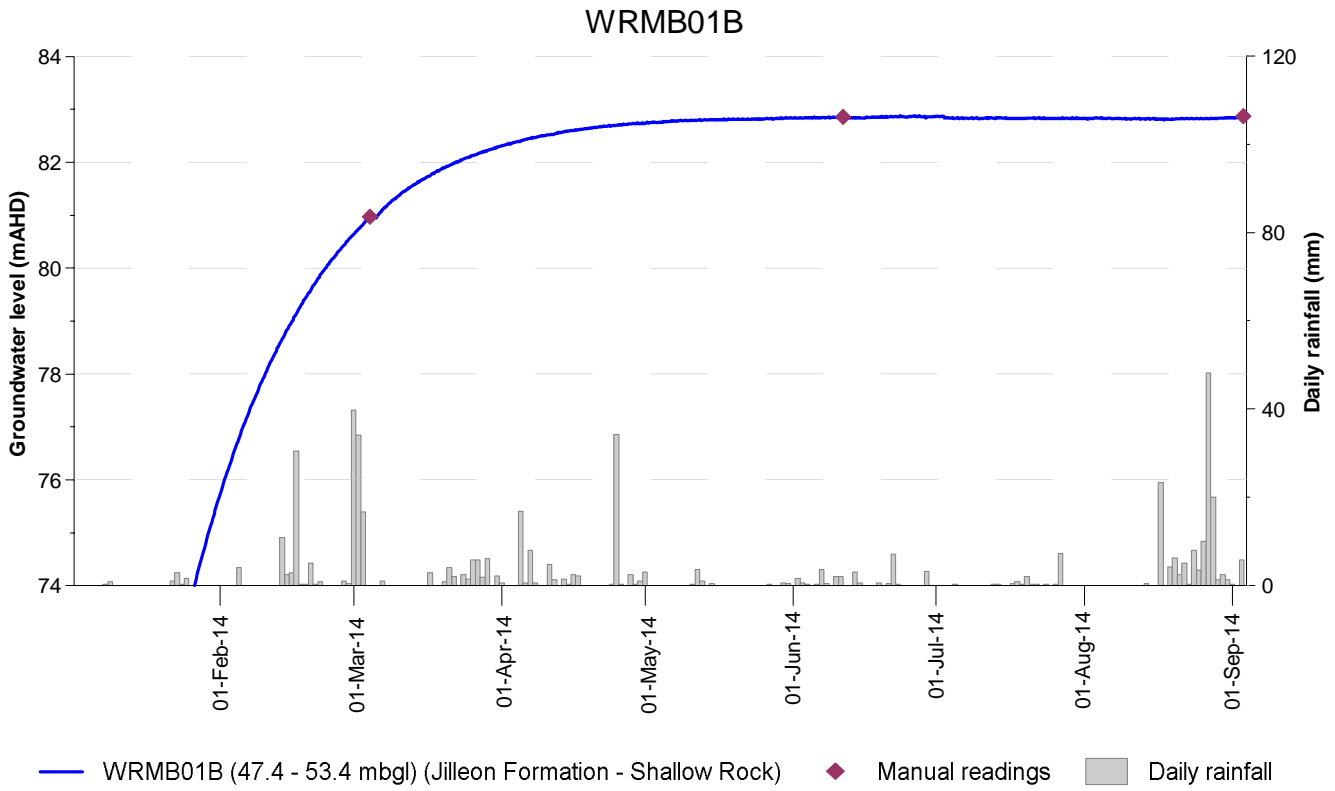
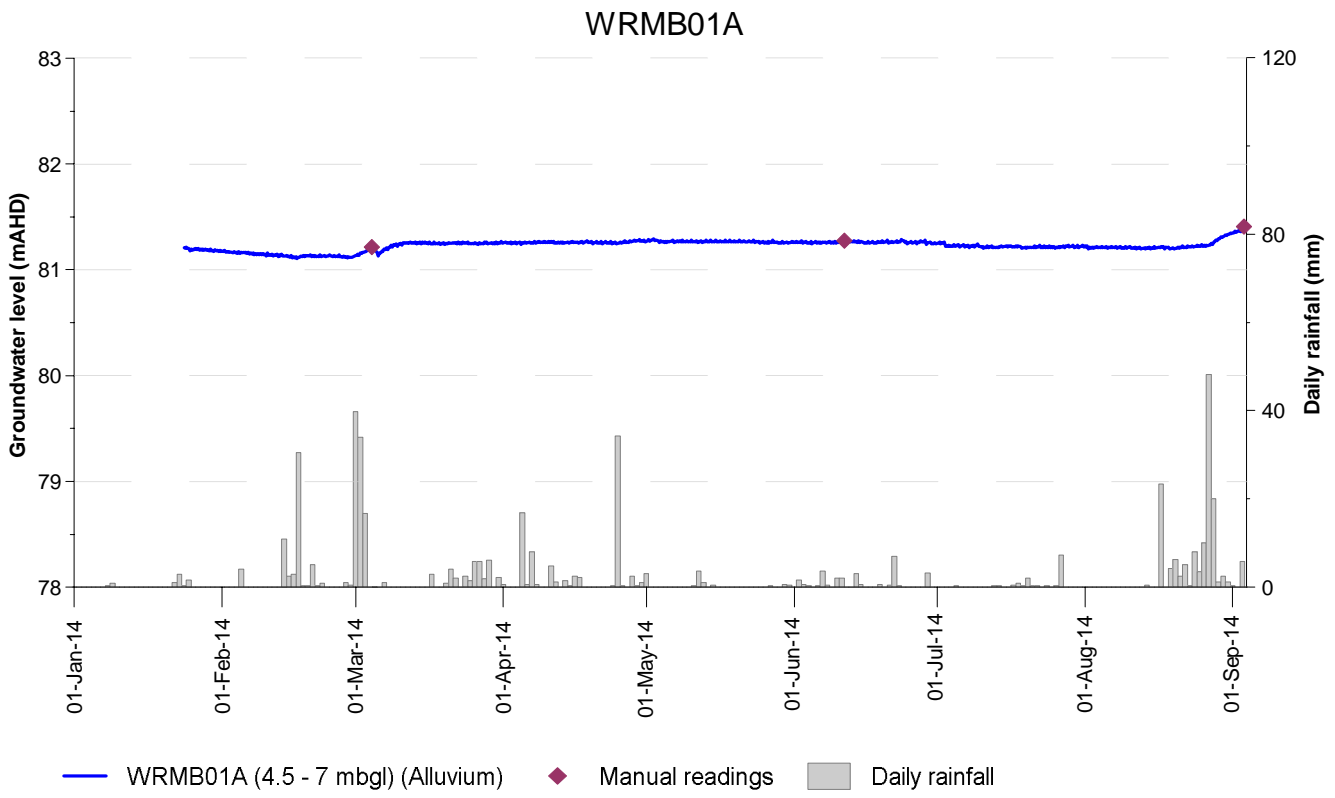


Figure A.20: WRMB01A and WRMB01B monitoring bores

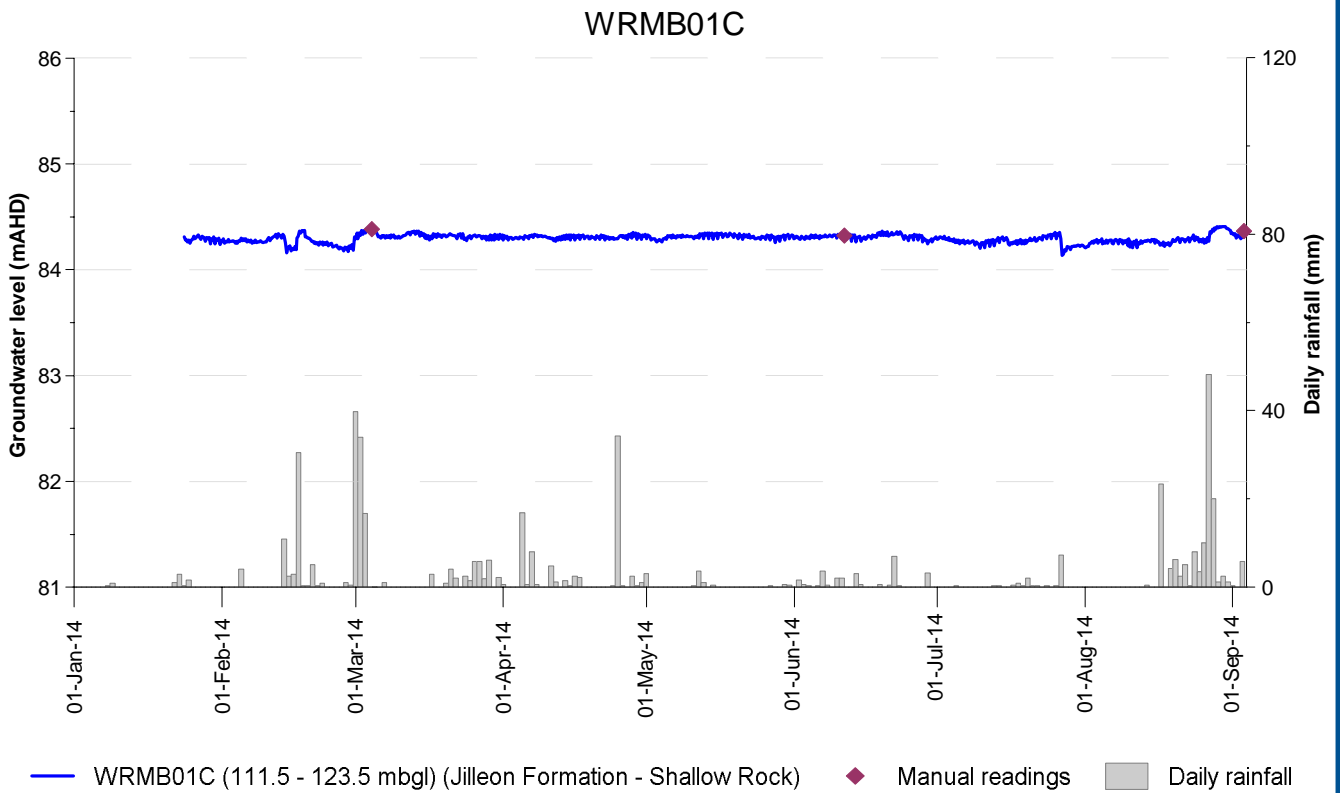


Figure A.21: WRMB01C monitoring bore

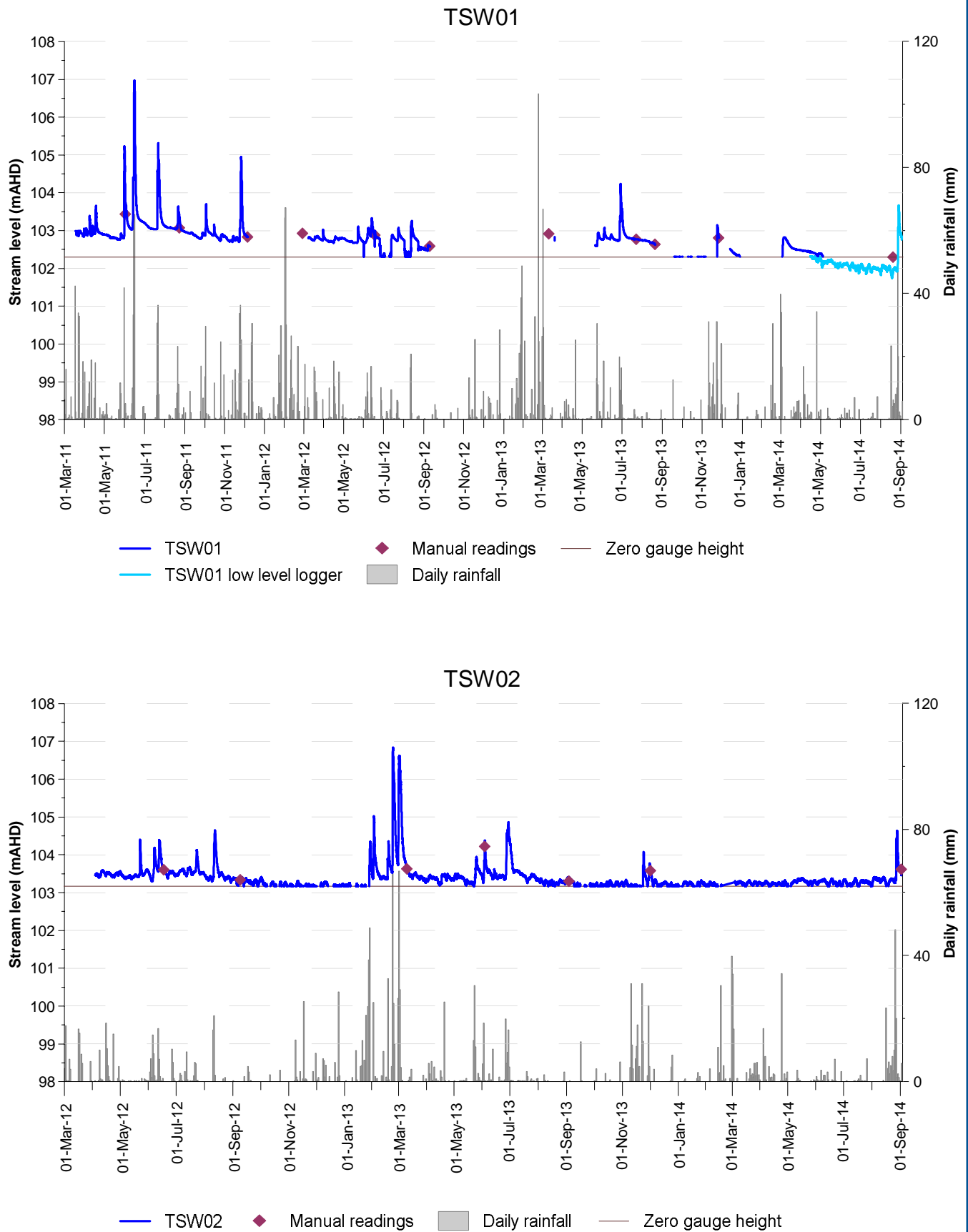


Figure A.22: TSW01 and TSW02 stream levels

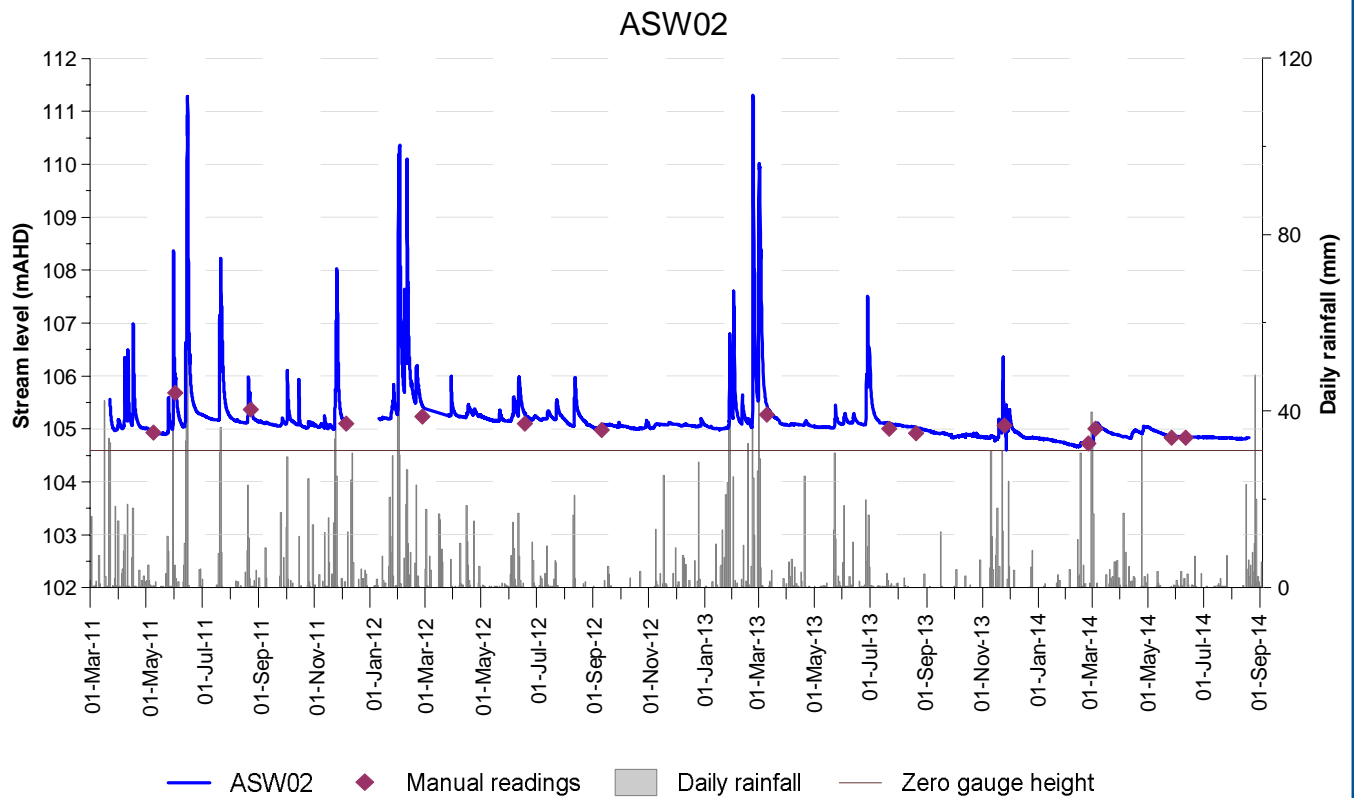
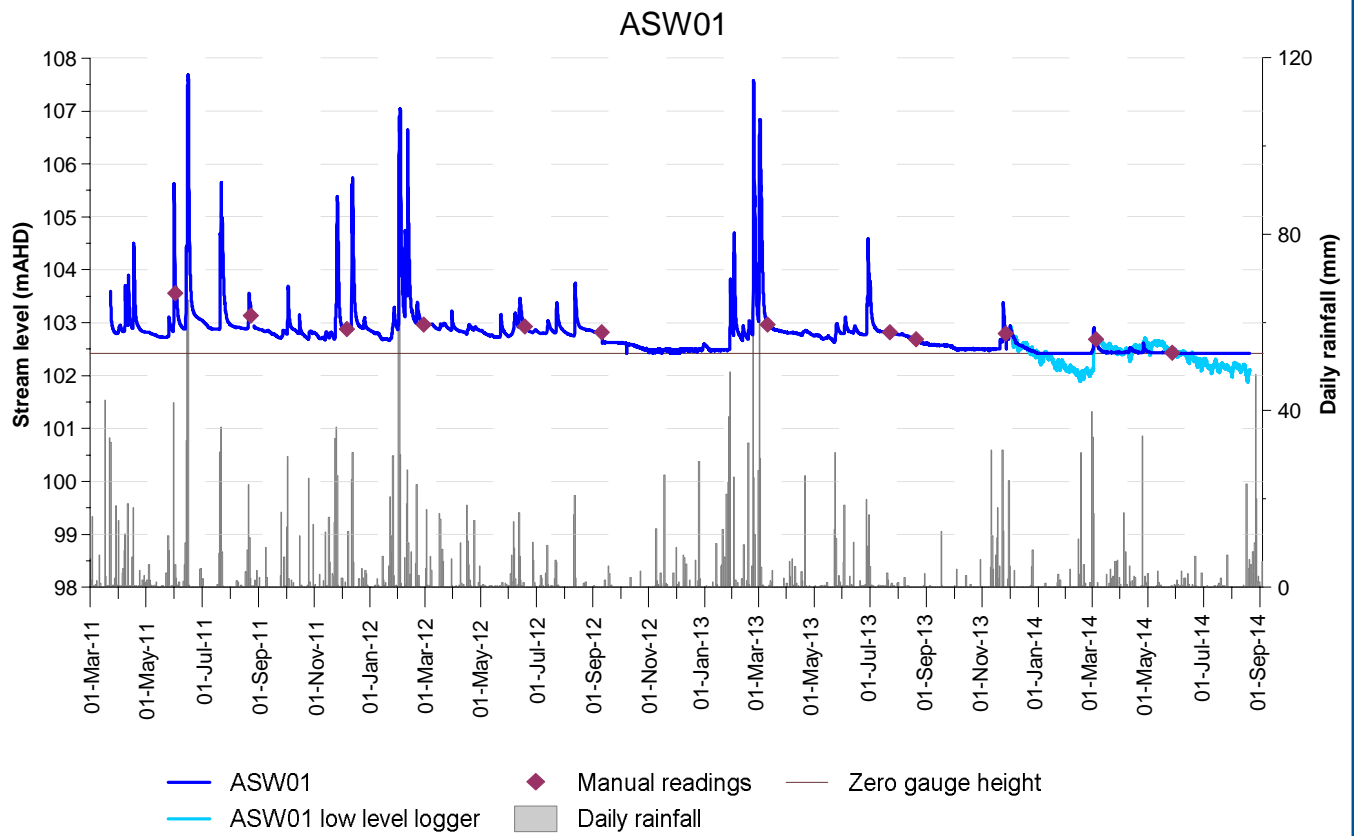


Figure A.23: ASW01 and ASW02 stream levels

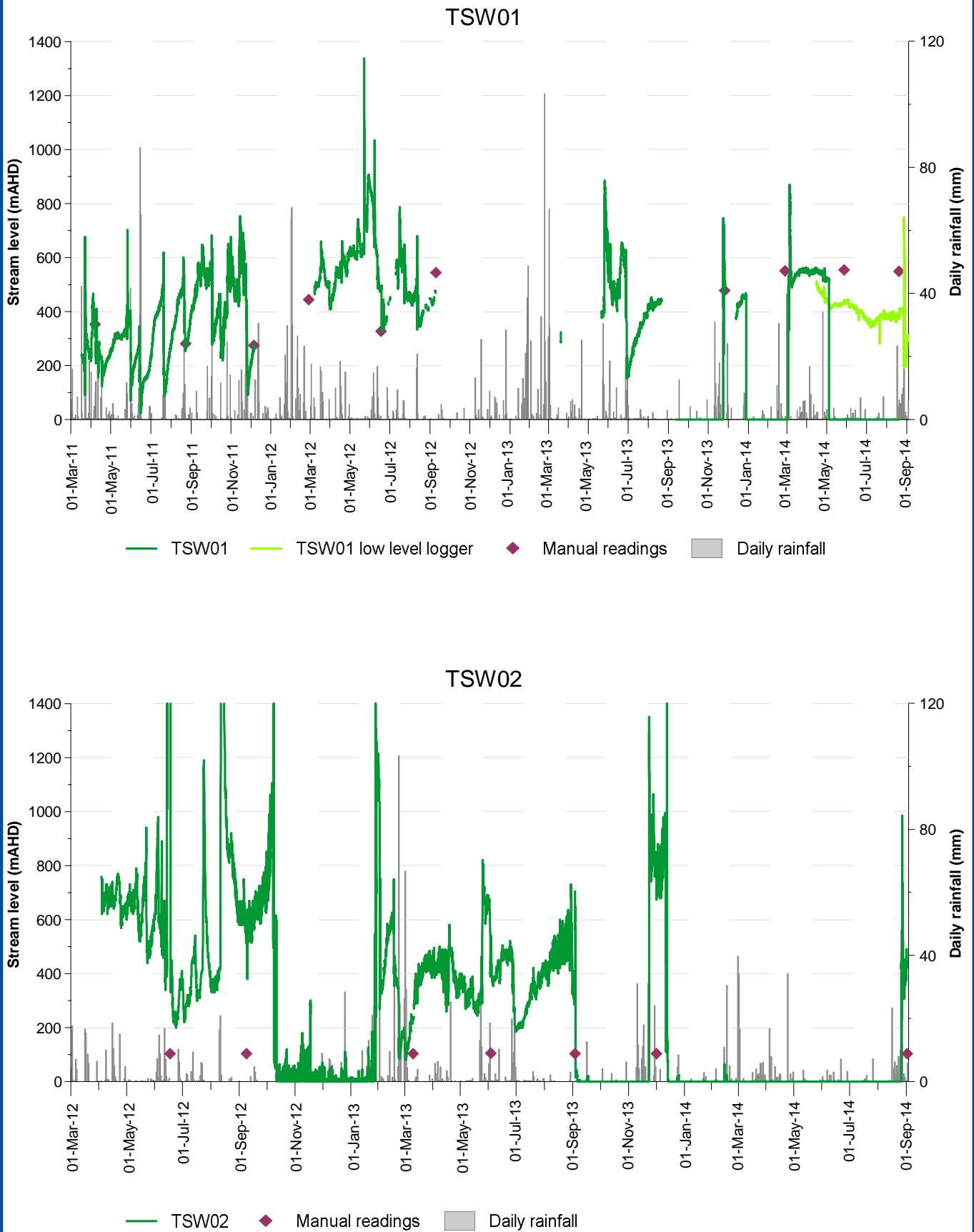
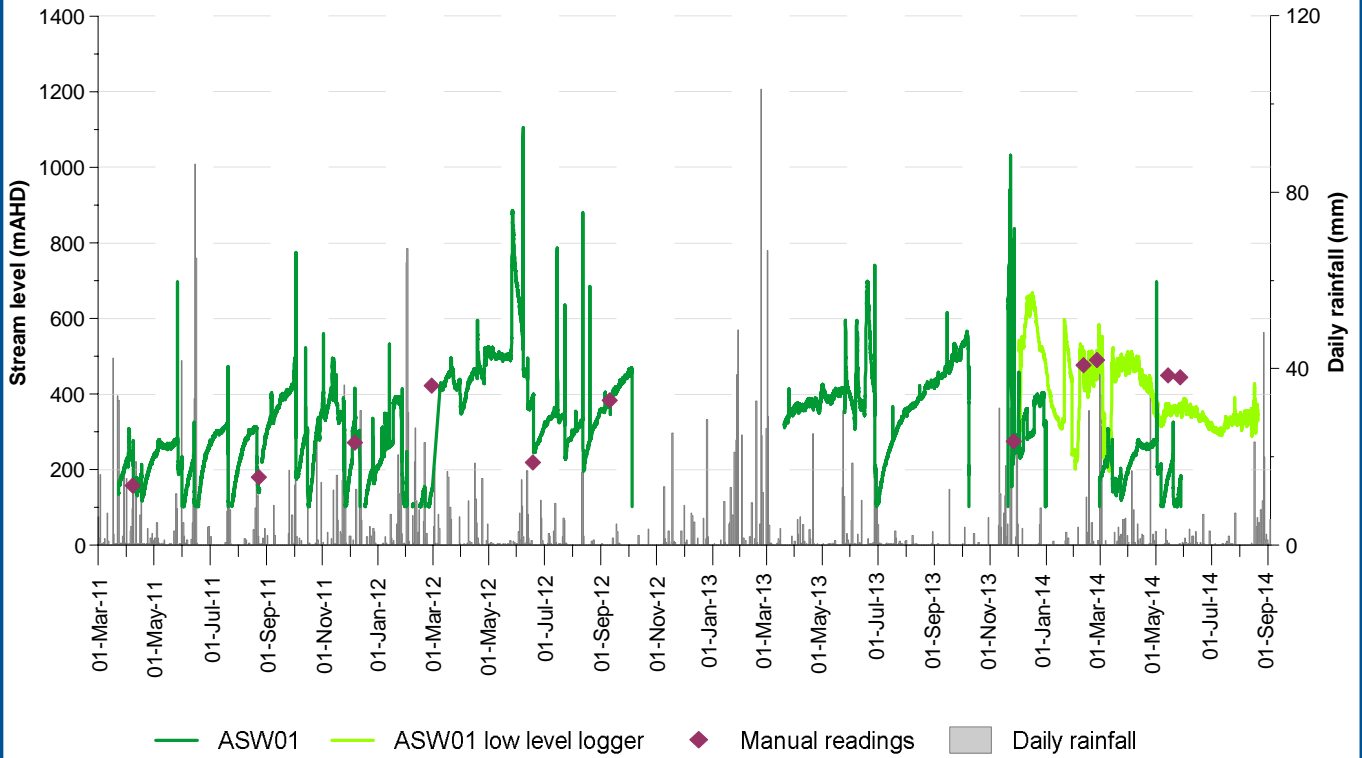


Figure A.24: TSW01 and TSW02 Electrical Conductivity

ASW01



ASW02

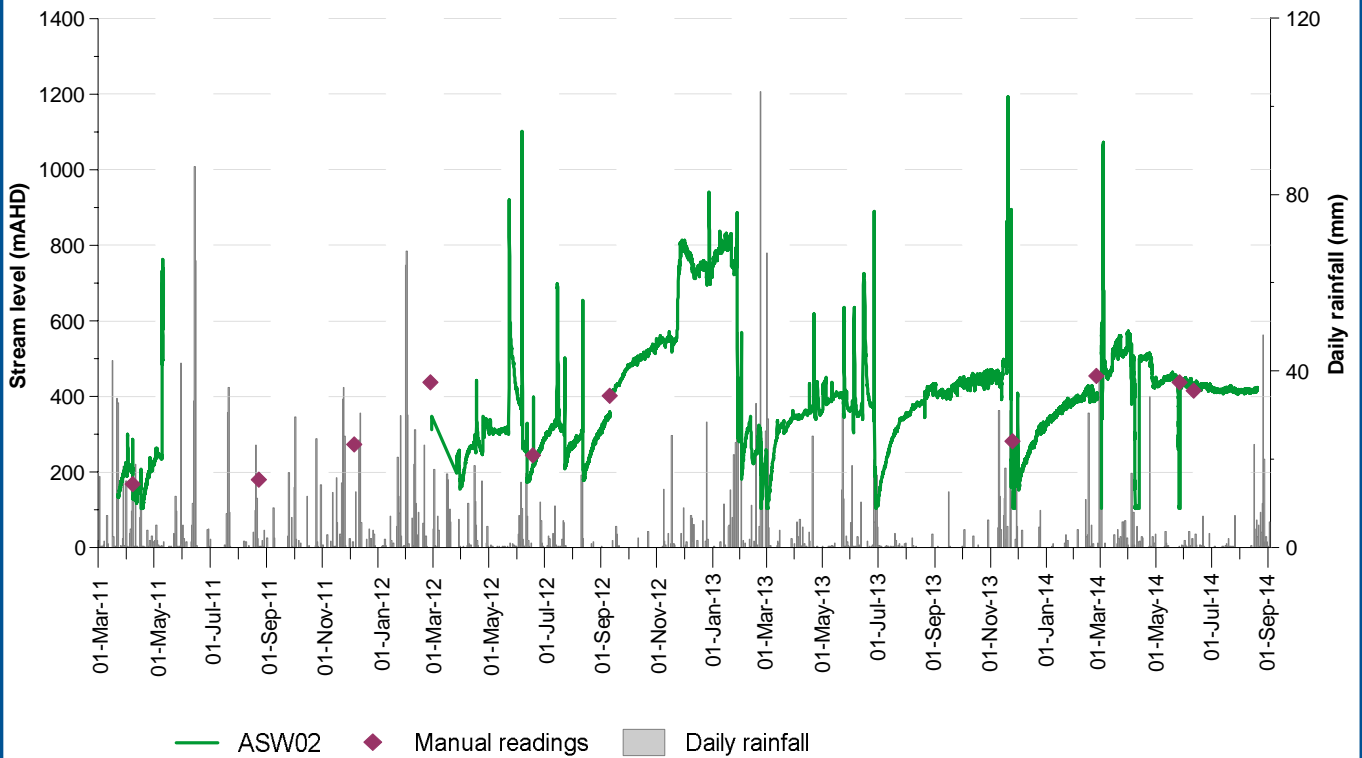
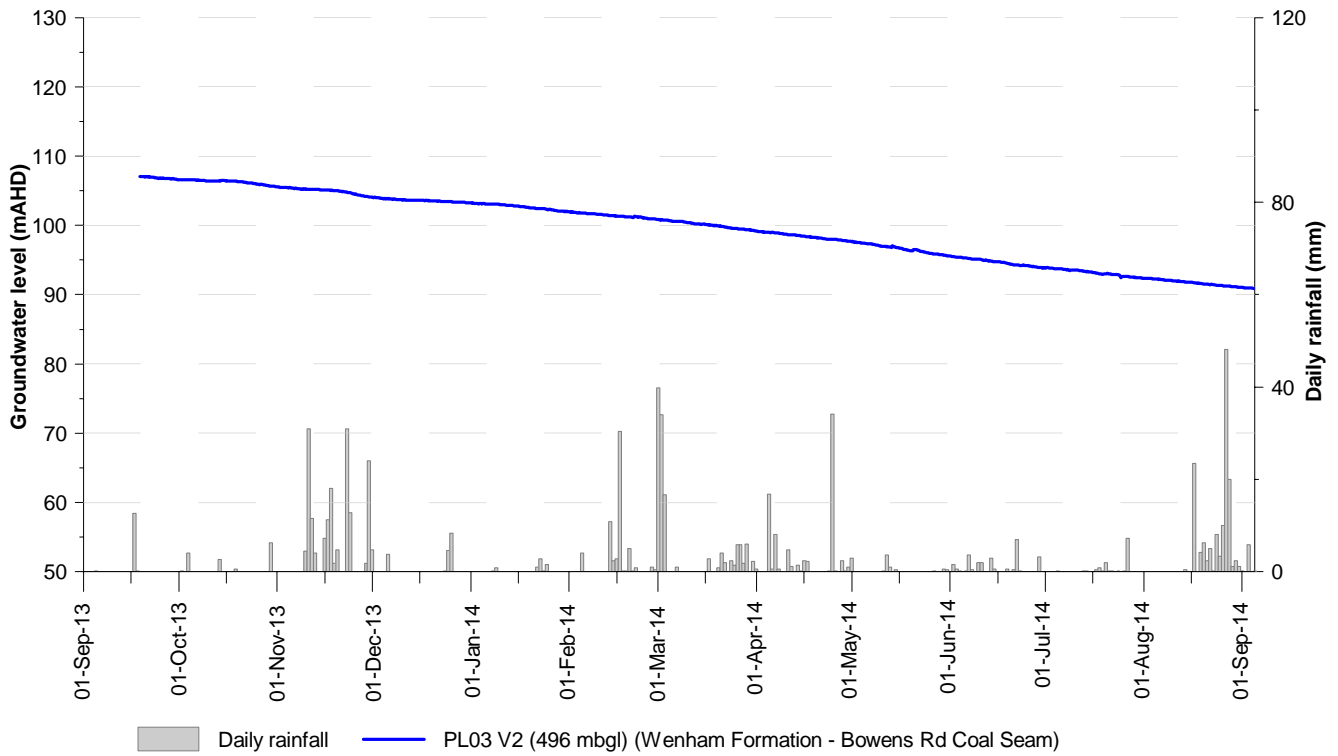


Figure A.25: ASW01 and ASW02 Electrical Conductivity

PL03 V2 VWP



PL03 V3 VWP

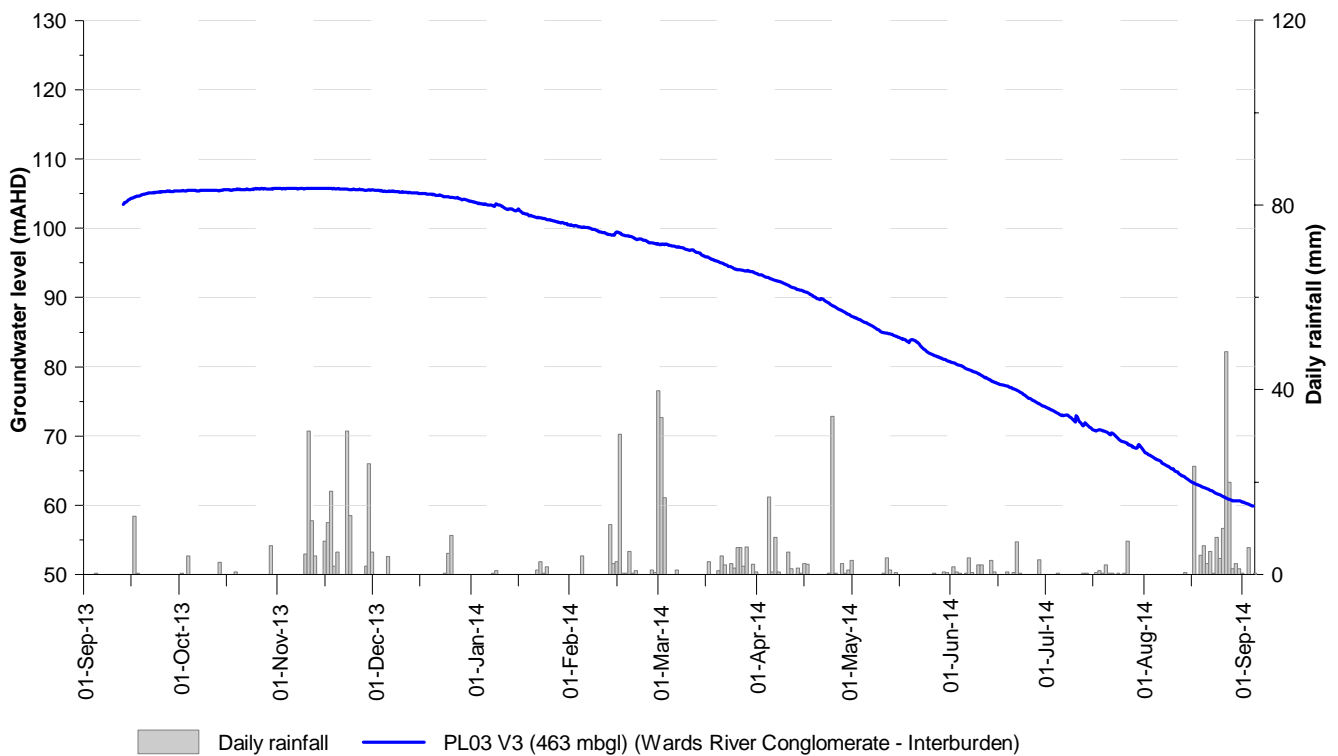


Figure A.26: PL03 VWP

Table 1 - Shallow gas monitoring

TGMB01			
Date/Time	Dip (mBGL)	GW level (mAHD)	Methane (% LEL)
3/12/2013 9:30	not dipped	n/a	0
11/03/2014 15:05	DRY	DRY	0
10/06/2014 14:20	DRY	DRY	0
4/09/2014 10:50	DRY	DRY	0

	GL (mAHD)	TOC (mAHD)
TGMB01	133.66	134.43
TGMB02	133.83	134.63

TGMB02			
Date/Time	Dip (mBGL)	GW level (mAHD)	Methane (% LEL)
3/12/2013 9:30	not dipped	n/a	0
11/03/2014 15:05	DRY	DRY	0
10/06/2014 14:20	DRY	DRY	0
4/09/2014 10:50	DRY	DRY	0