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Memo

Date 30 June 2016

To James Duggleby

From Sean Daykin

Ref 2200566A-RES-MEM-003 RevB

Subject Gloucester Gas Project - FY16 Monitoring Update - June 2016

This memo presents updated hydrographs for all Gloucester Gas Project groundwater monitoring bores and hydrograph and salinity traces (measured as electrical conductivity (EC)) for surface water monitoring sites until each was decommissioned in June 2016 (last sites were decommissioned on 22 June 2016).

For this monitoring period:

- The dataloggers at S5MB02, S5MB03 and TCMB03 failed to connect and could not be downloaded. These dataloggers have been replaced with functioning loggers.
- The dataloggers at S5MB01, WRMB01B, WRMB01C, FKMB01A, FKMB01B (from 7 May 2016), BWMB01D (from 17 May 2016) and WKMB06B (from 7 April 2016) failed and erroneous groundwater level data has been omitted from the hydrographs.
- VWP WKMB05 was decommissioned on 12 May 2016.
- The low level stream gauge datalogger at TSW01 has been washed away during flooding.
- The stream gauge datalogger at ASW01 failed to connect and has been replaced with a functioning logger.
- Water quality sampling took place in February 2016. Drops in water levels at S4MB and WKMB monitoring locations are in response to sampling.

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

Figures 9 and 10: Water levels and electrical conductivity for all surface water monitoring sites.

Figure 11: Groundwater levels at the PL03 Vibrating Wire Piezometer and WKMB05.

Figure 12: Groundwater levels at NS729R.

Figures A.1 – A.22: Individual Stage 1 and 2 groundwater monitoring bore hydrographs.

Figures A.23 – A.30: Individual surface water level and electrical conductivity hydrographs.

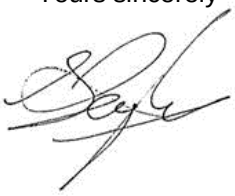
Figure A.31: Individual PL03 Vibrating Wire Piezometer hydrographs.

Figures A.32 – A.34: Individual hydrographs from WKMB05 sensors.

Figure A.35: Individual hydrograph for NS725R

All groundwater and surface water monitoring sites have now been decommissioned and no further monitoring rounds will take place. A final groundwater monitoring status report for the Gloucester Gas Project, covering the 2016 water year, for will be published in the coming months.

Yours sincerely



Sean Daykin
Senior Hydrogeologist

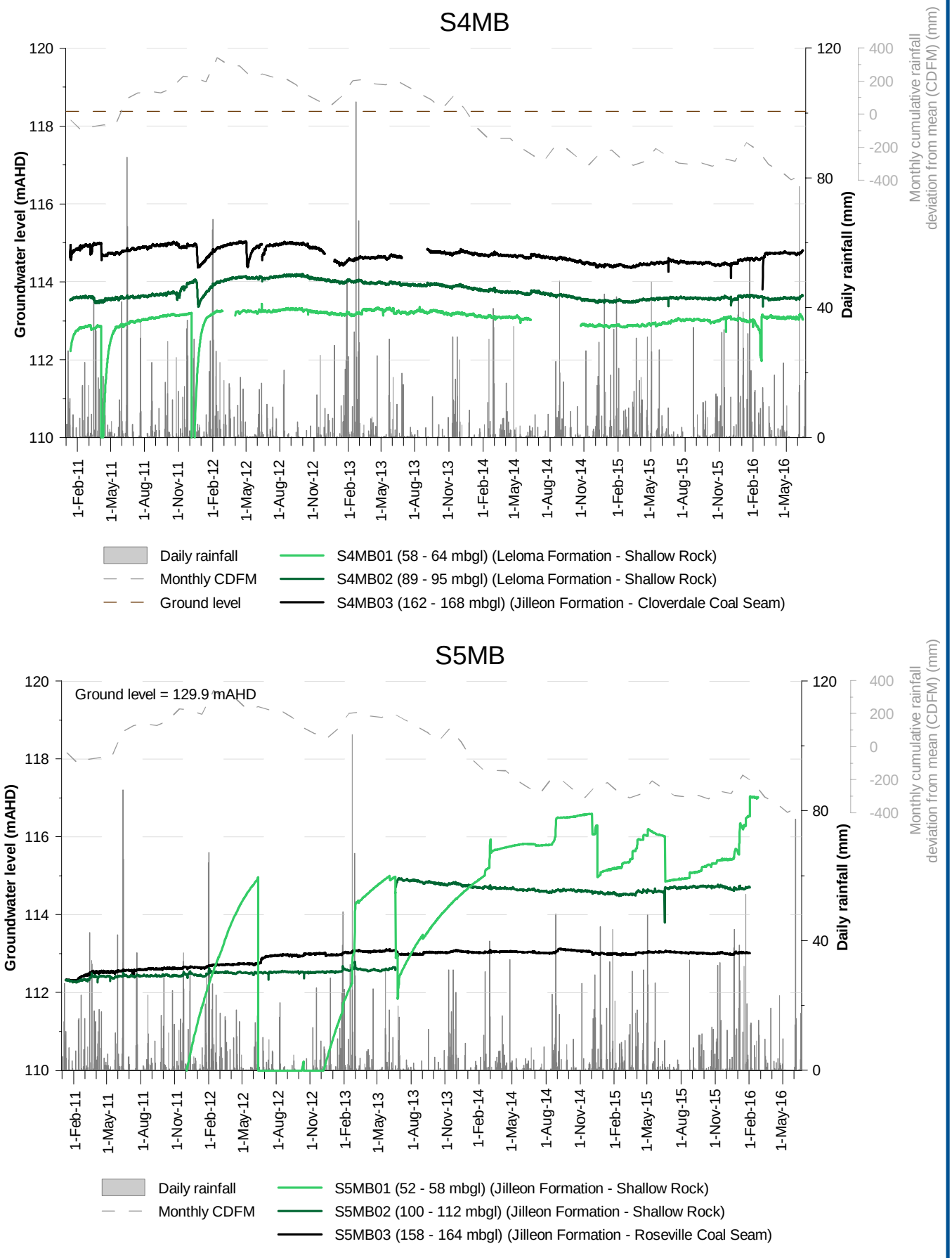
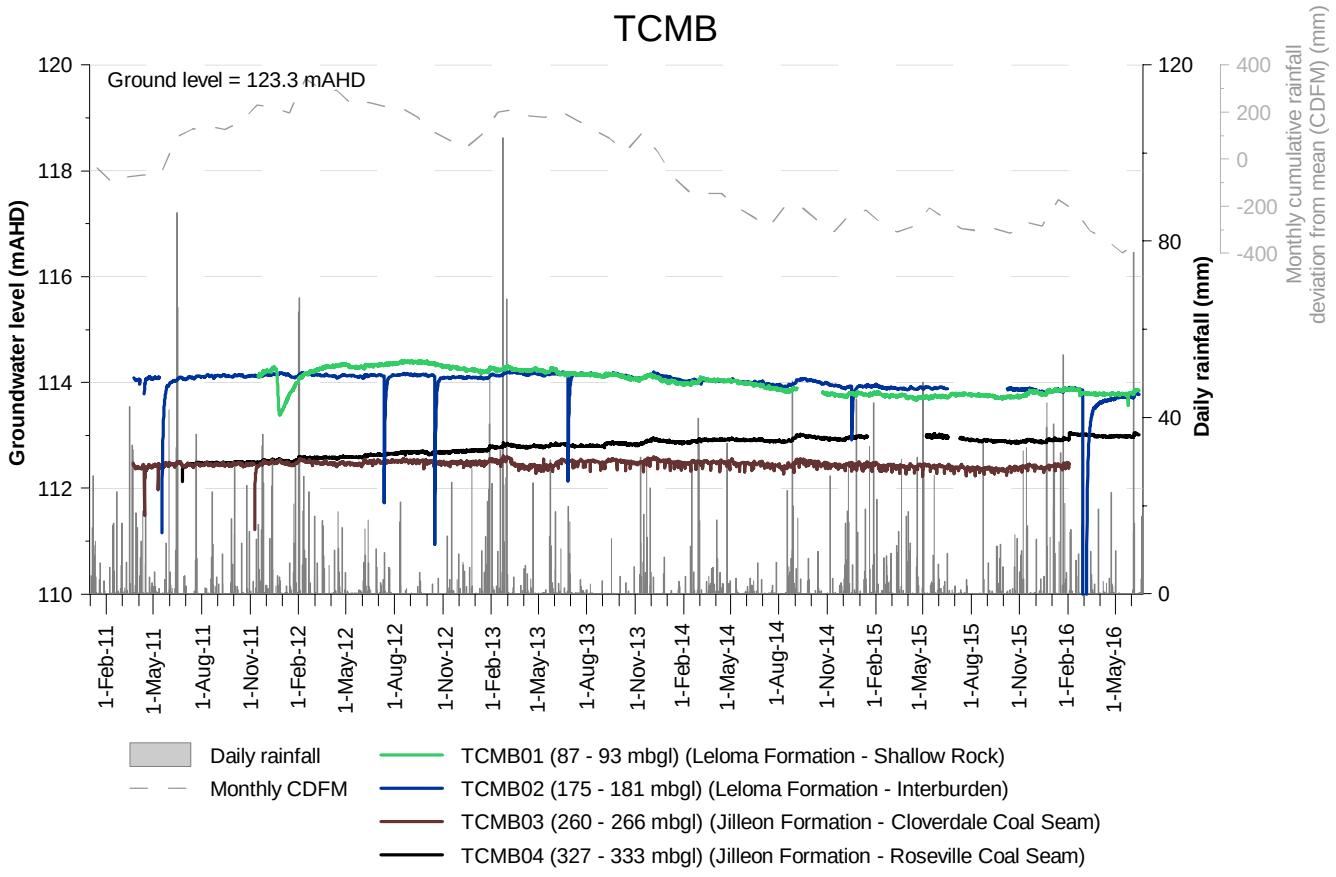


Figure 1: S4MB and S5MB monitoring bores



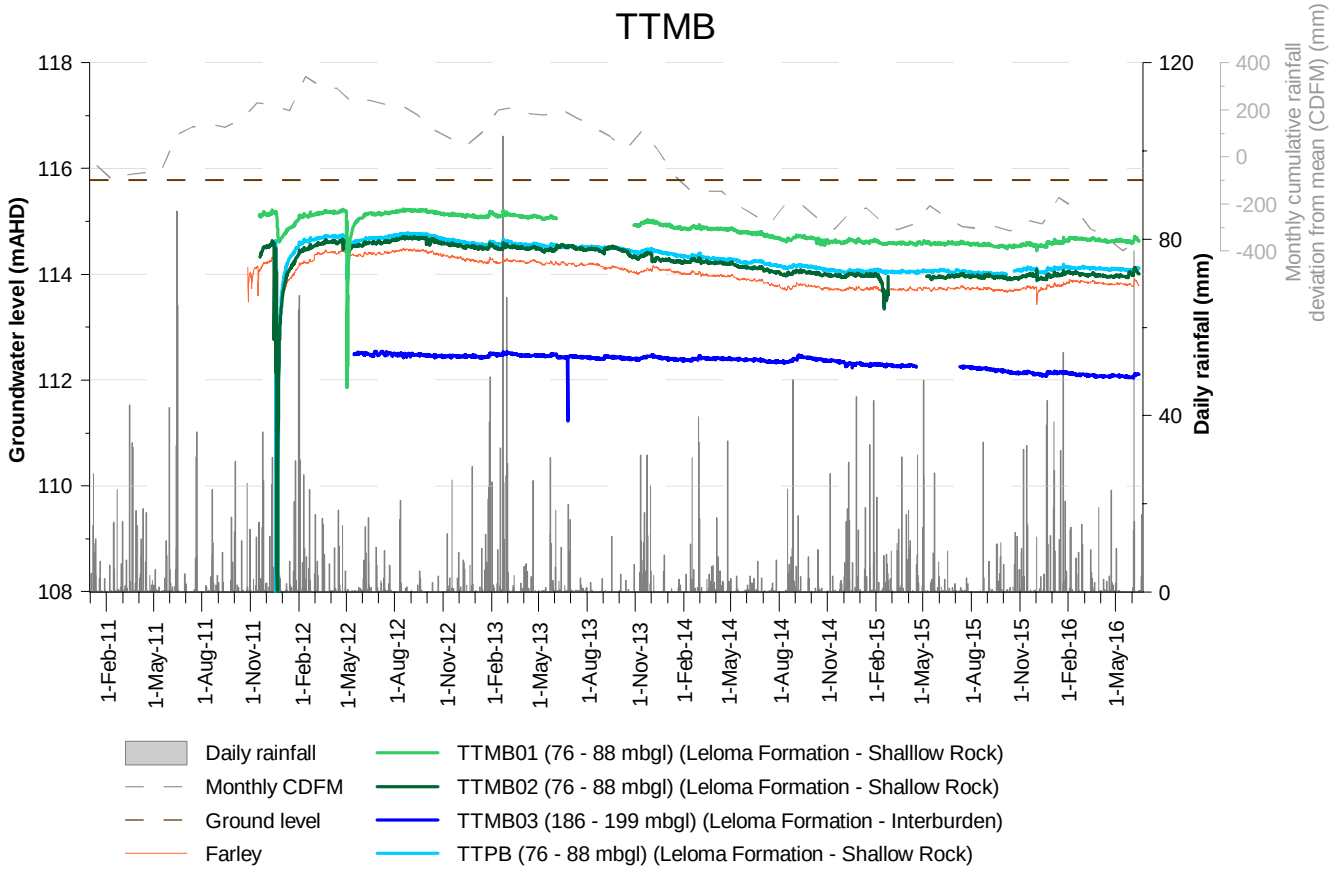


Figure 2: TCMB and TTMB monitoring bores

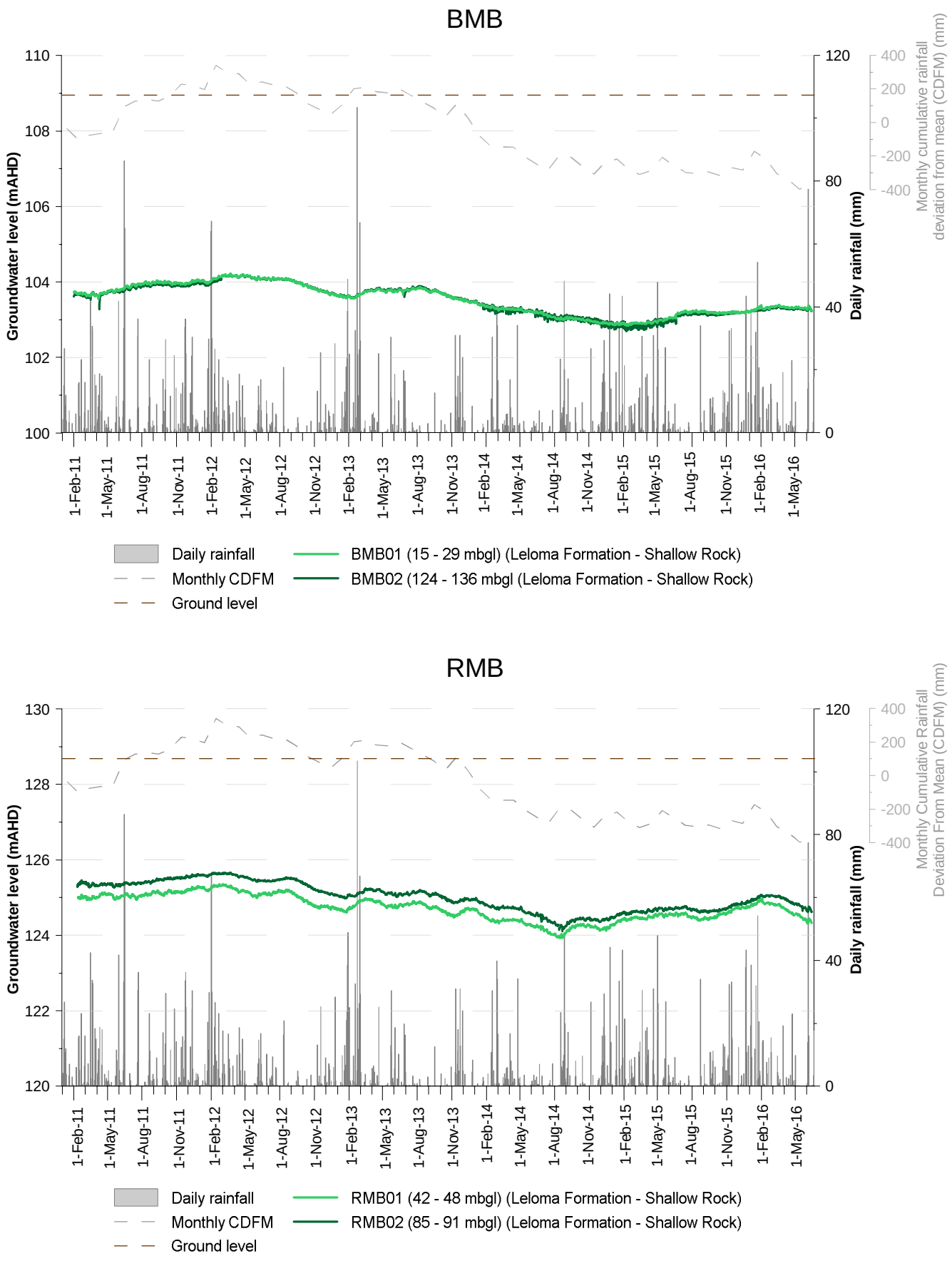
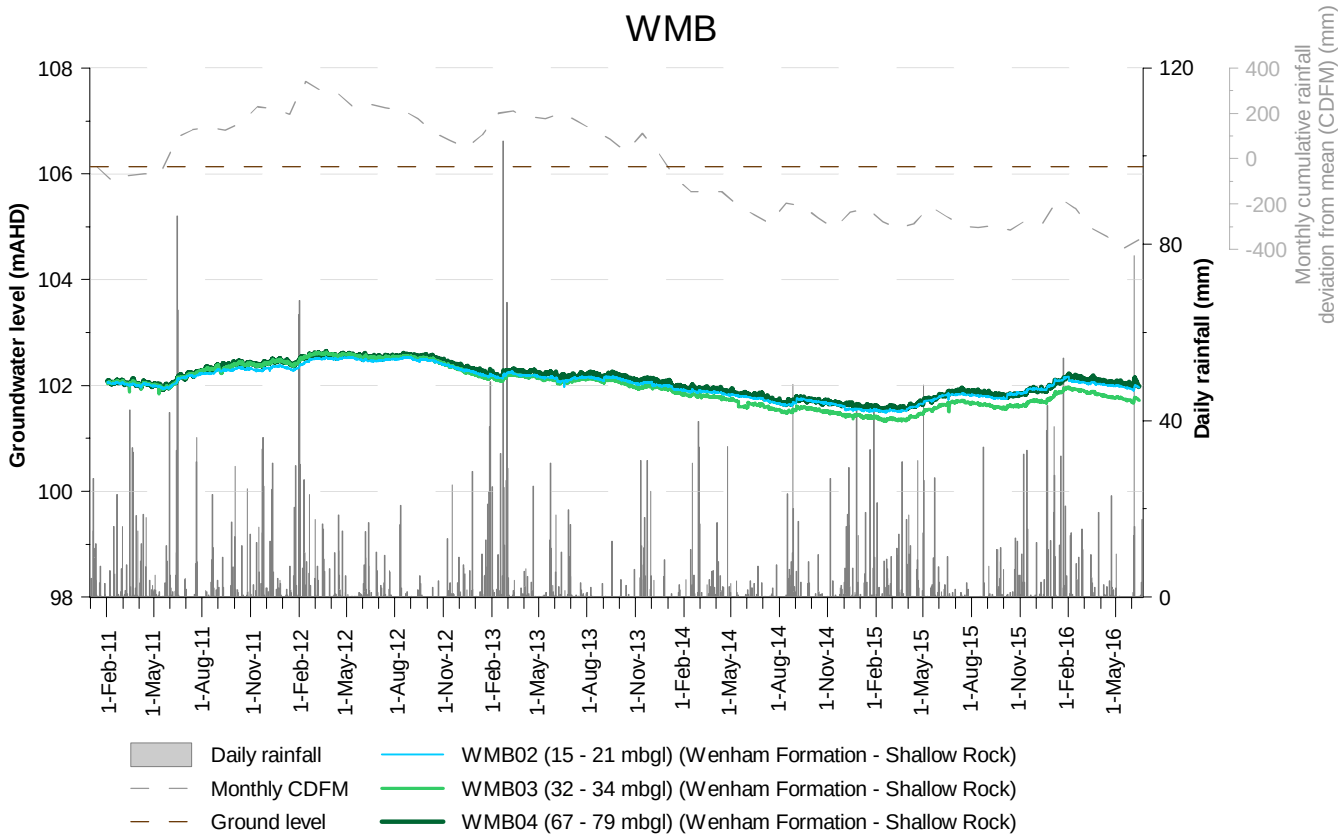


Figure 3: BMB and RMB monitoring bores



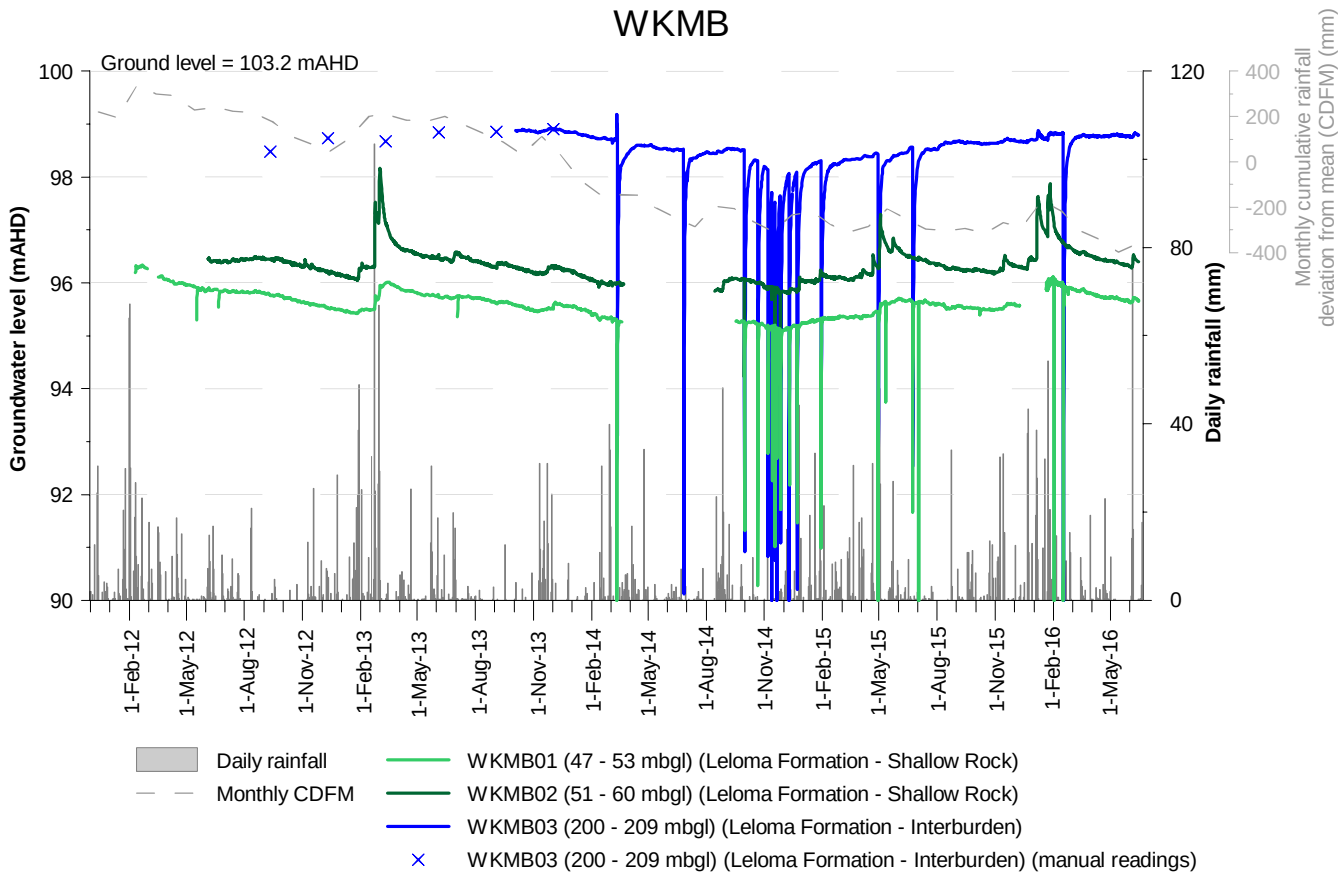
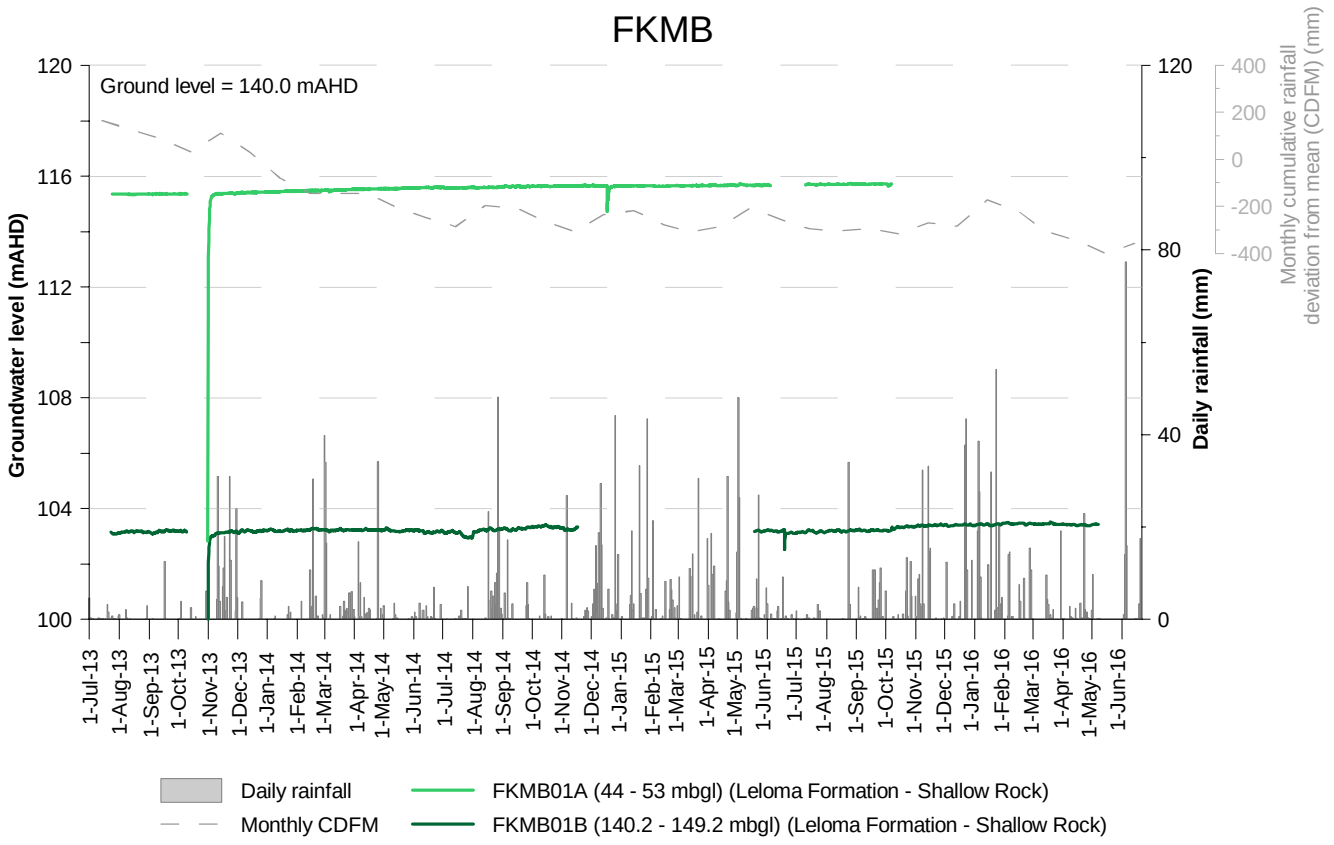


Figure 4: WMB and WKMB monitoring bores



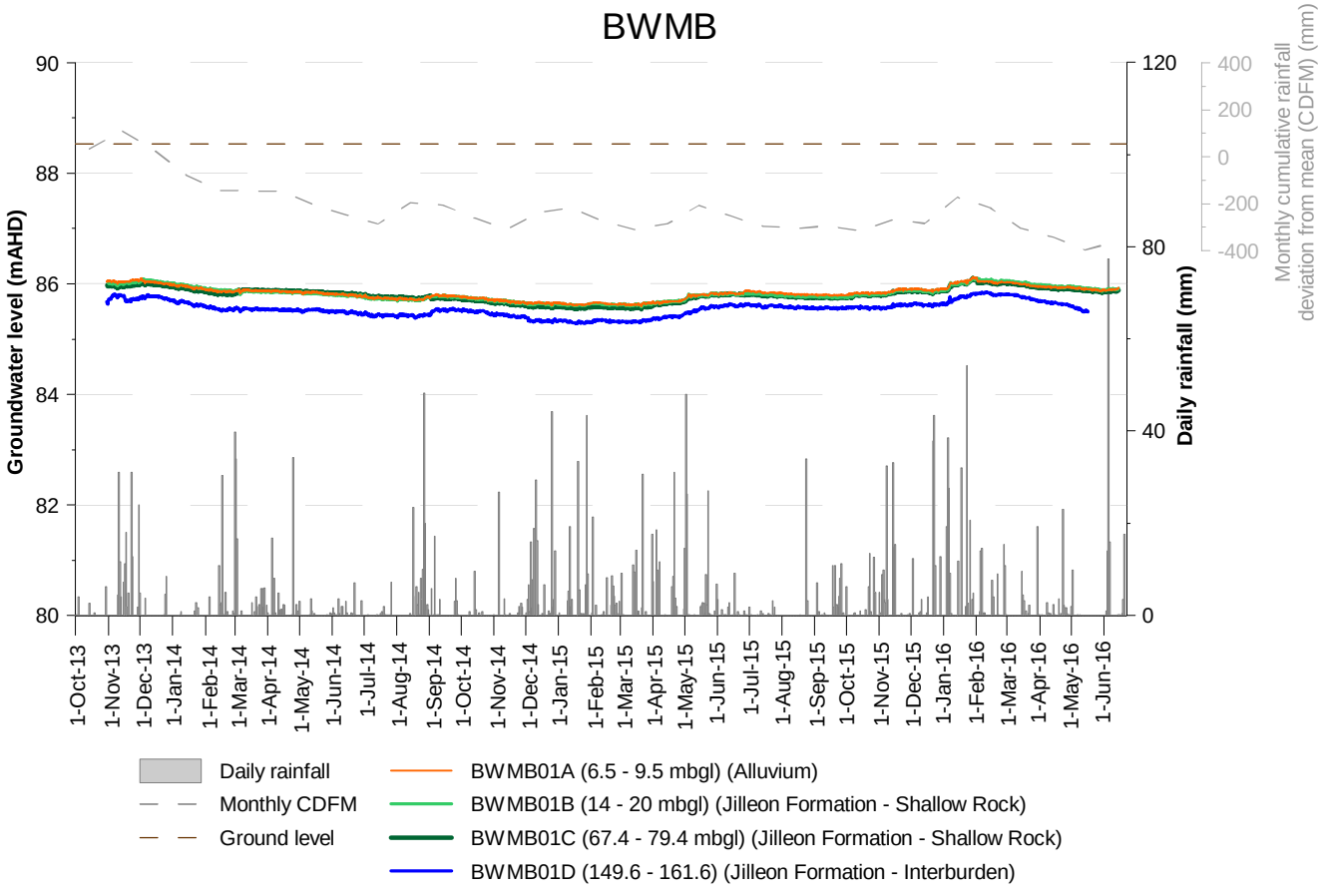


Figure 5: FKMB and BWMB monitoring bores

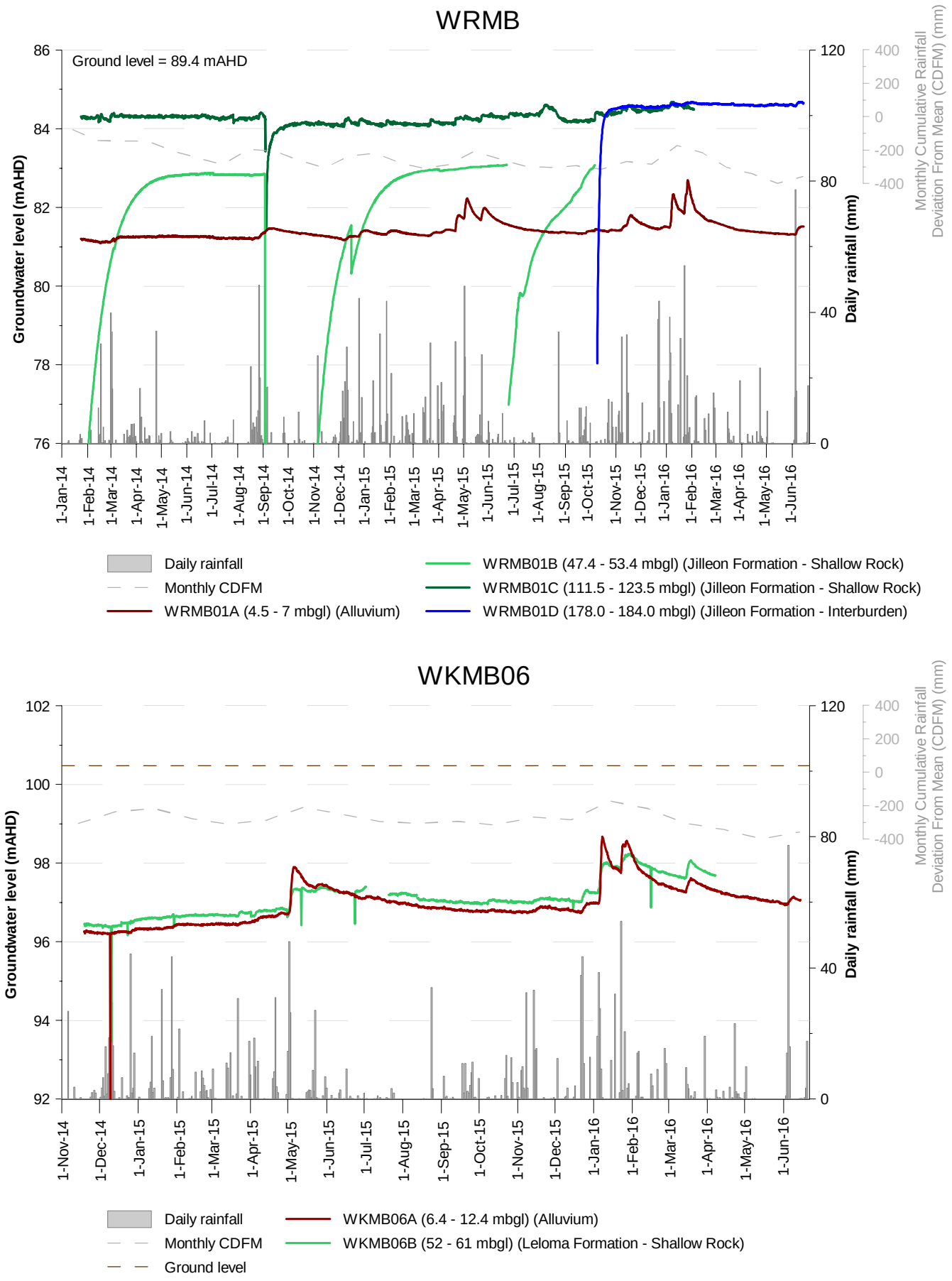


Figure 6: WRMB and WKMB06 monitoring bores

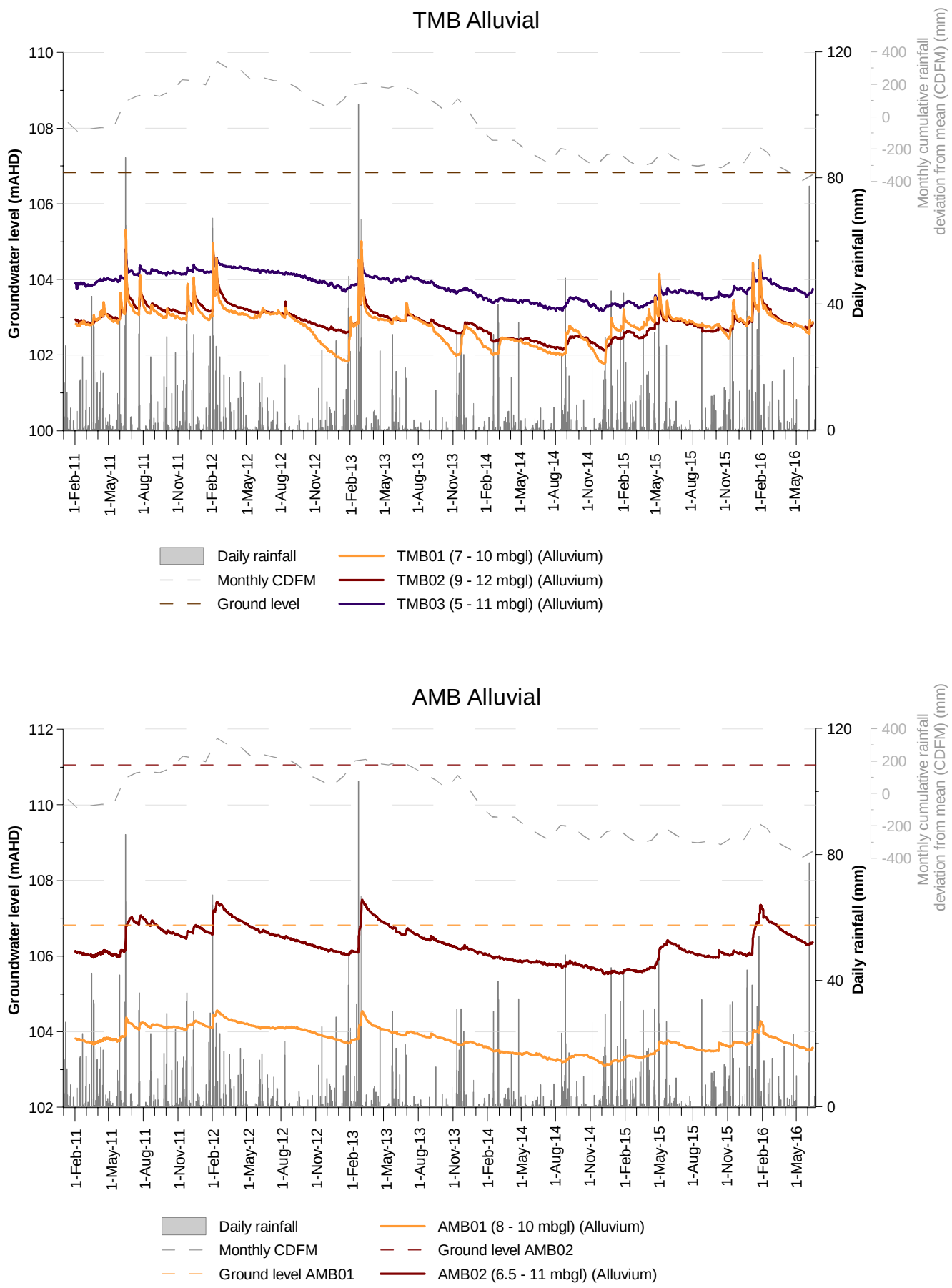


Figure 7: TMB and AMB Alluvial monitoring bores

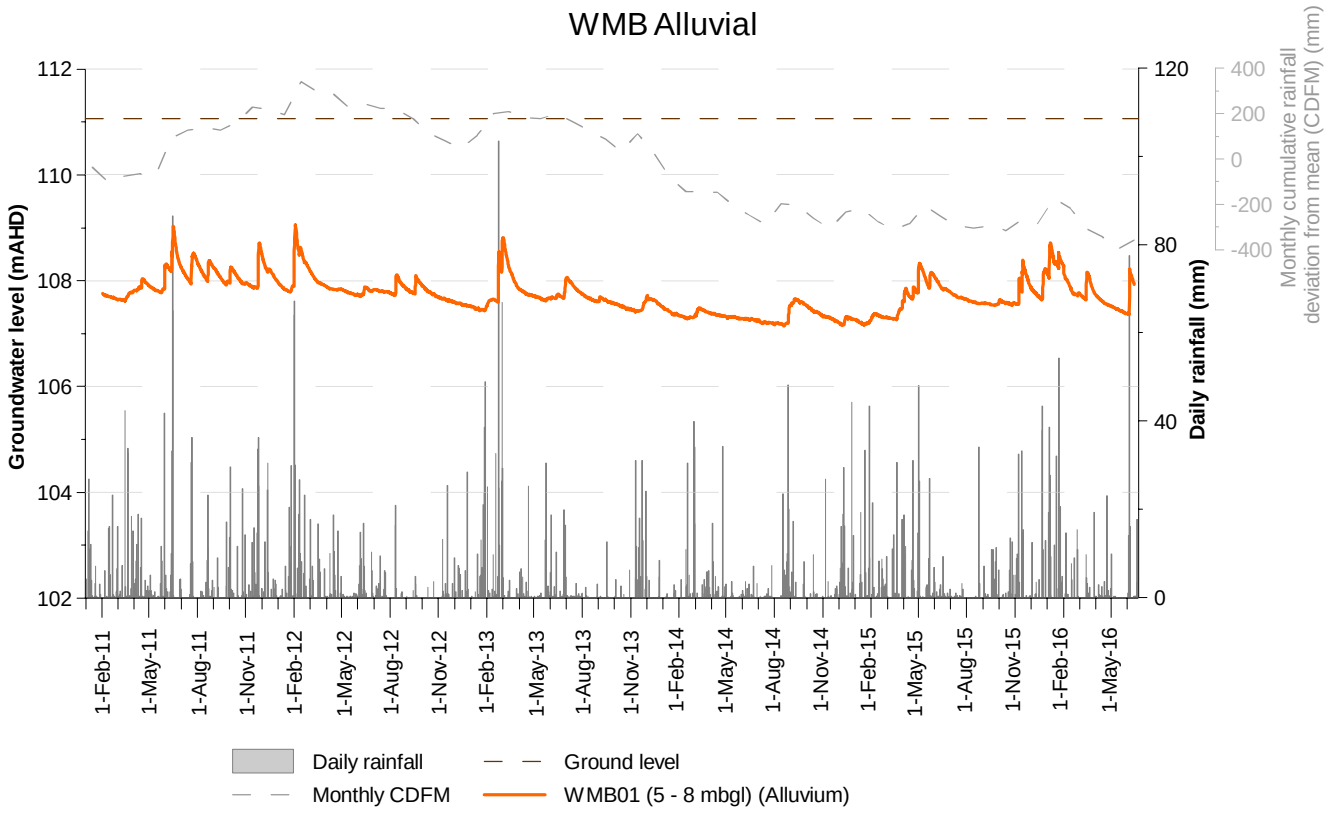


Figure 8: WMB Alluvial monitoring bore

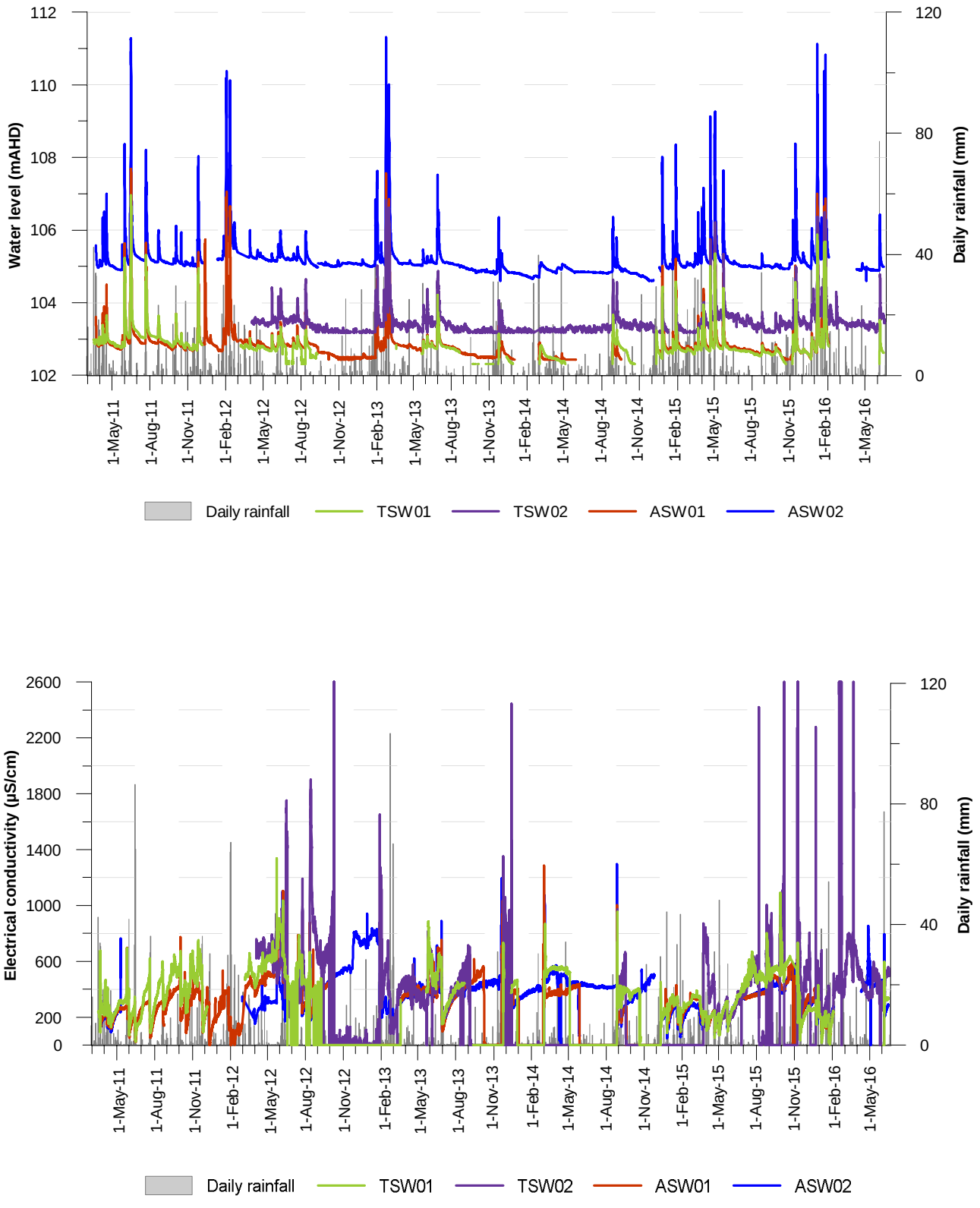


Figure 9: TSW01, TSW02, ASW01 and ASW02 surface water levels and electrical conductivity

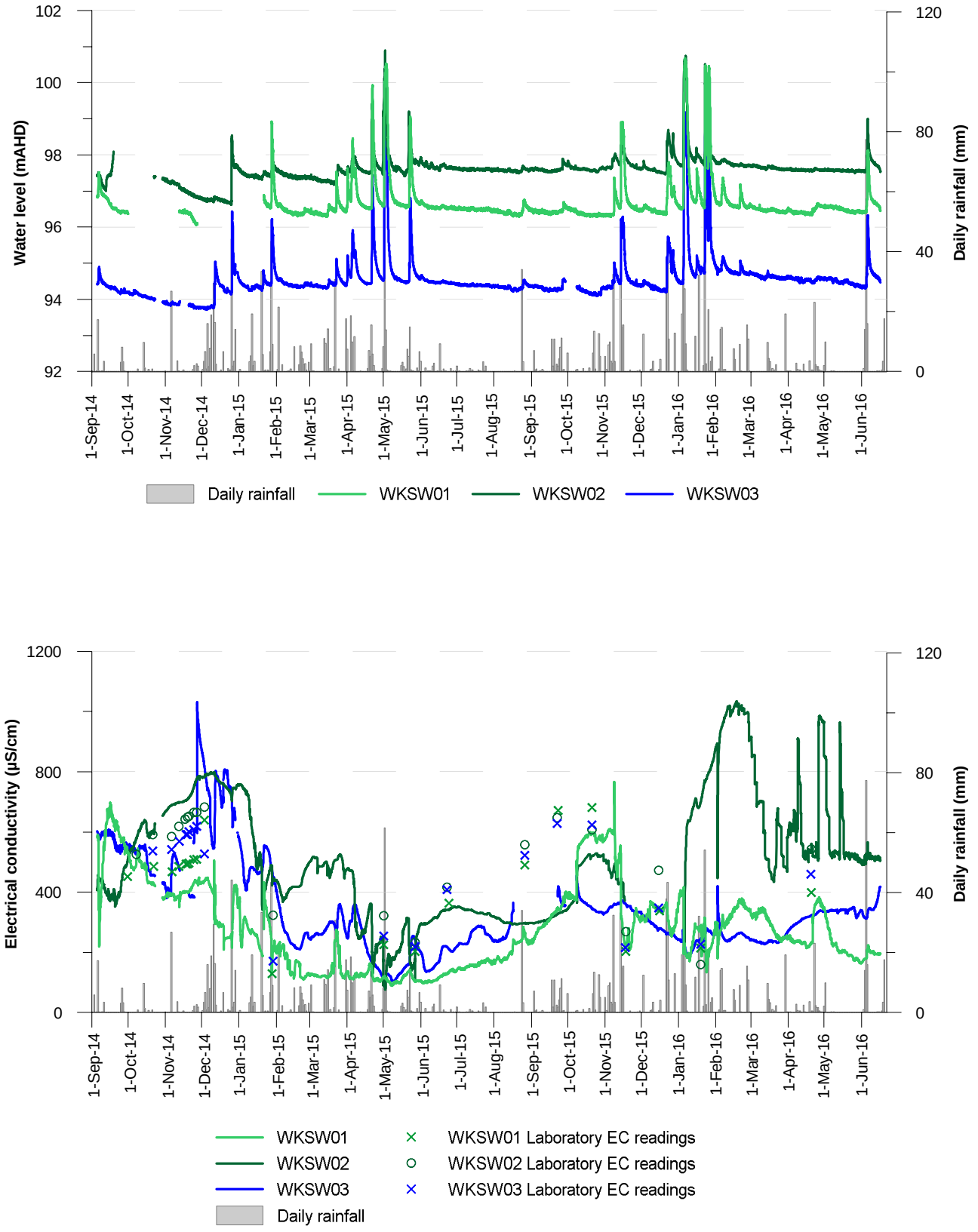
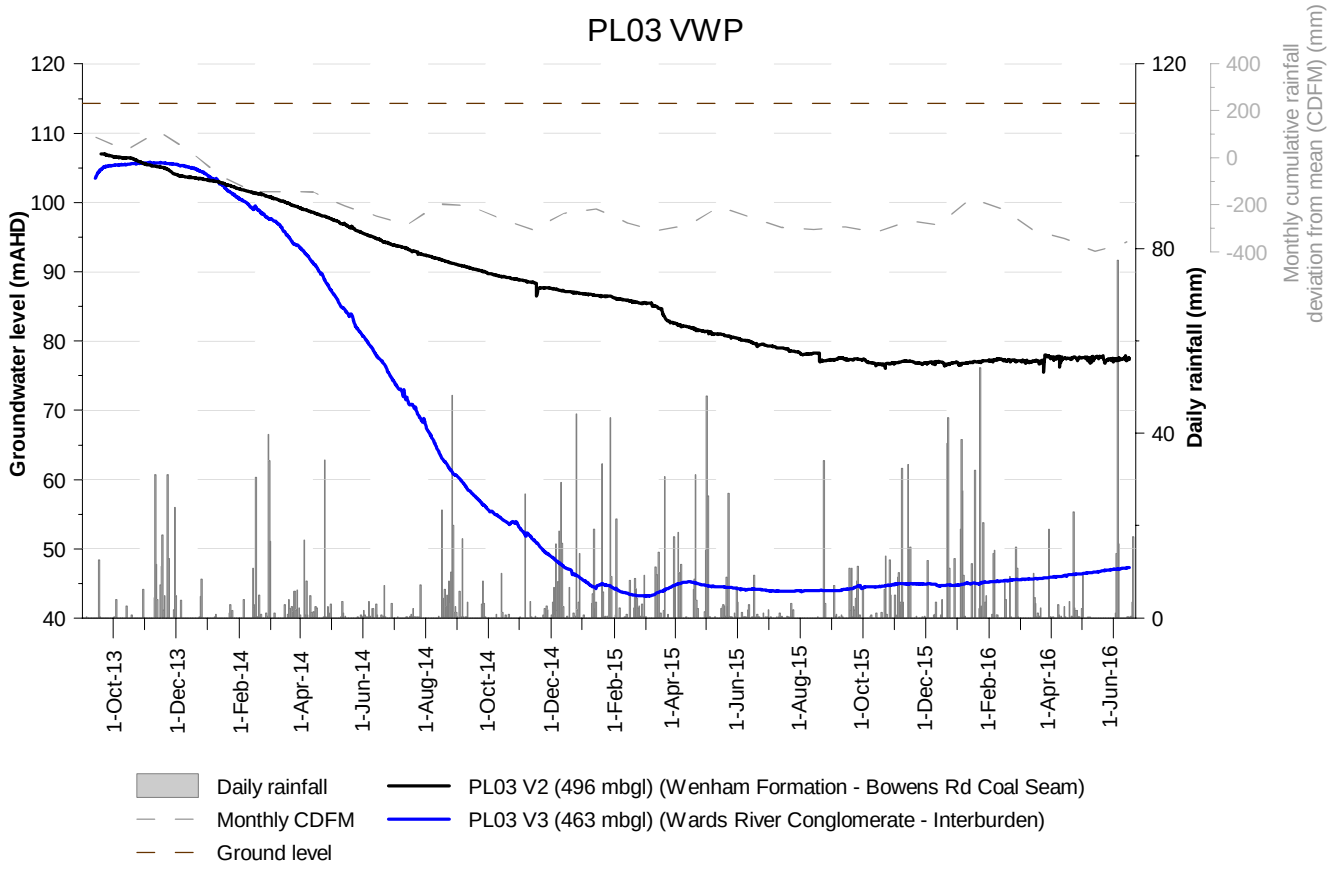


Figure 10: WKSW01, WKSW02 and WKSW03 surface water levels and electrical conductivity



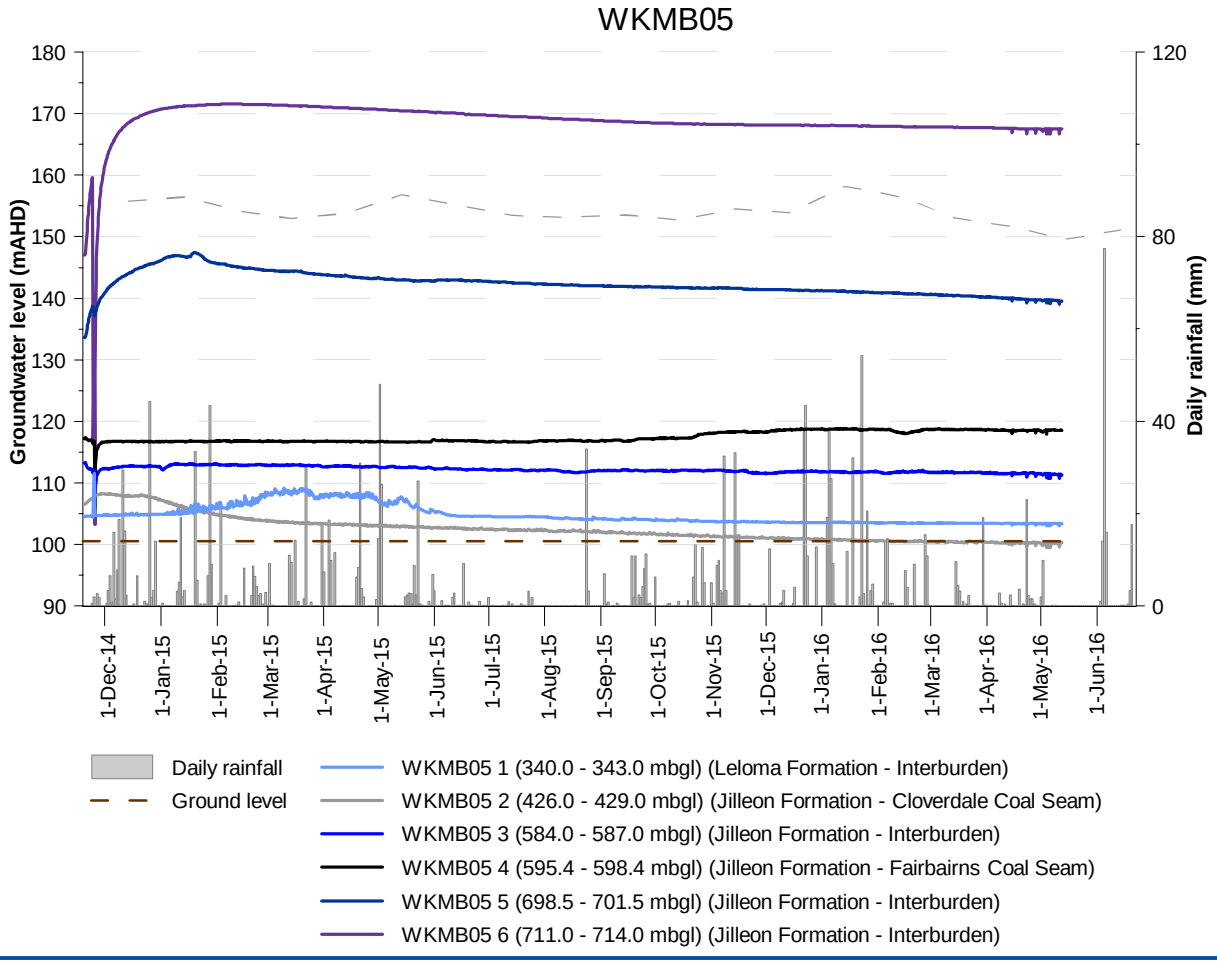


Figure 11: PL03 vibrating wire piezometer and WKMB05 multizone monitoring well

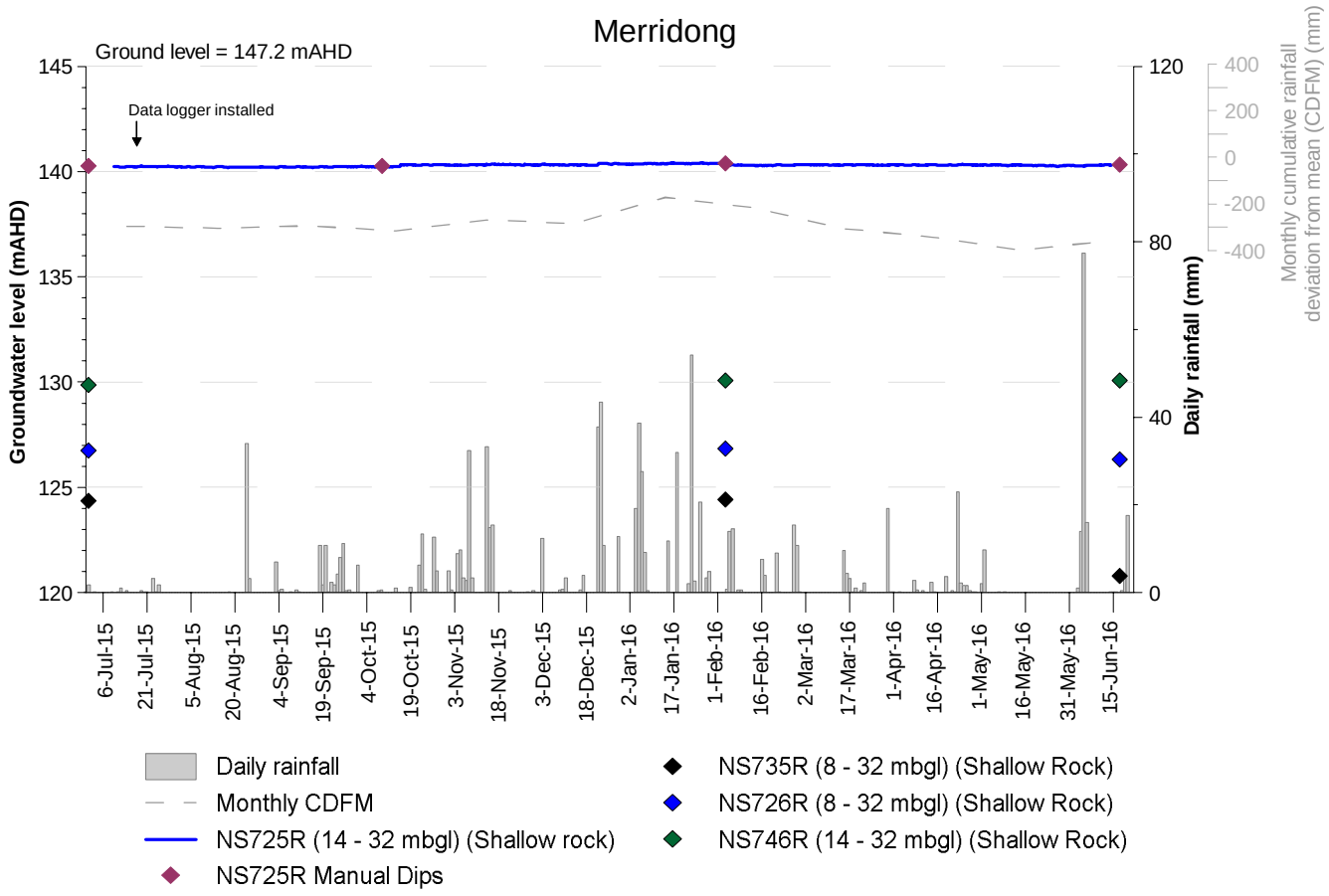


Figure 12: Merridong monitoring bores

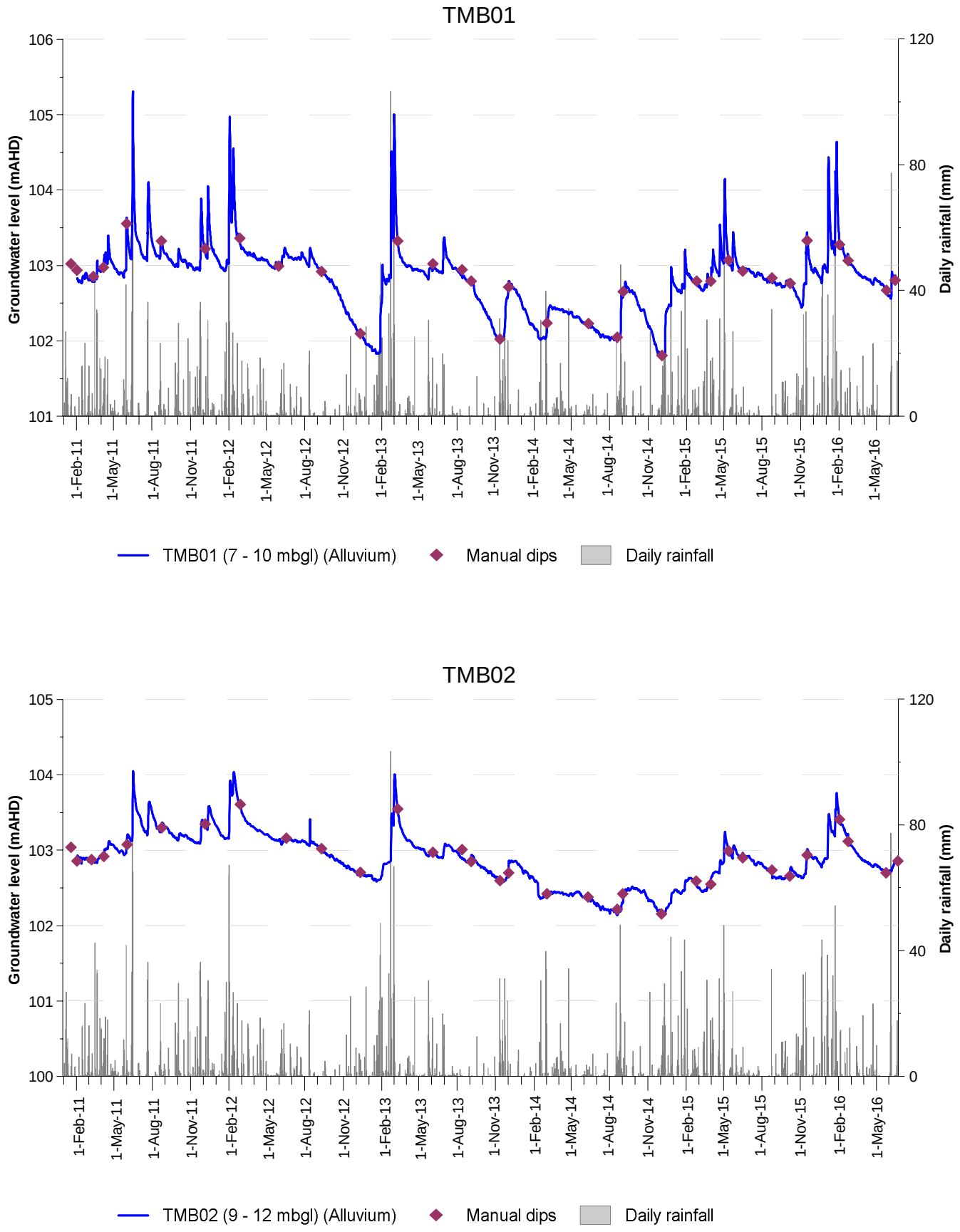


Figure A.1: TMB01 and TMB02 monitoring bores

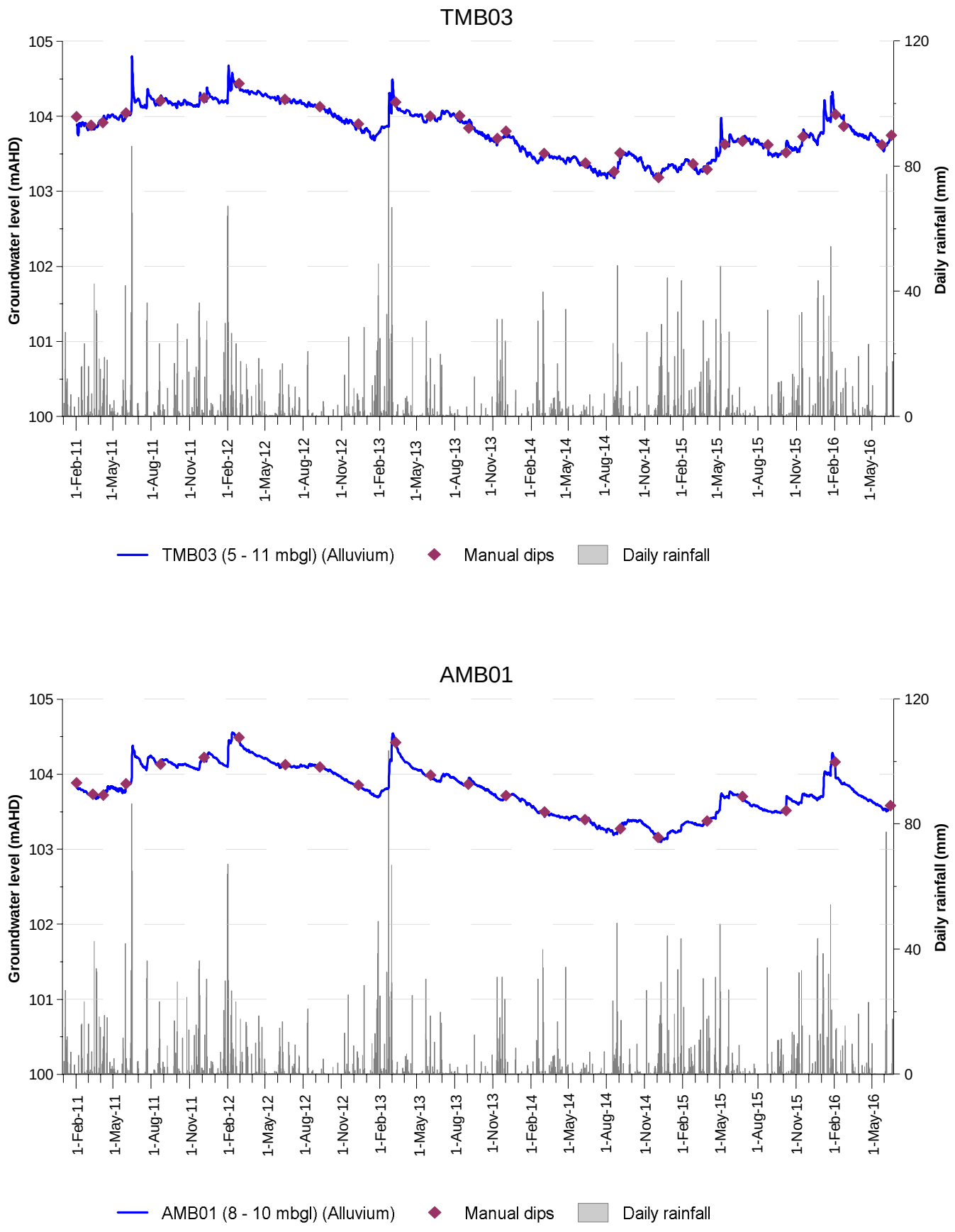


Figure A.2: TMB03 and AMB01 monitoring bores

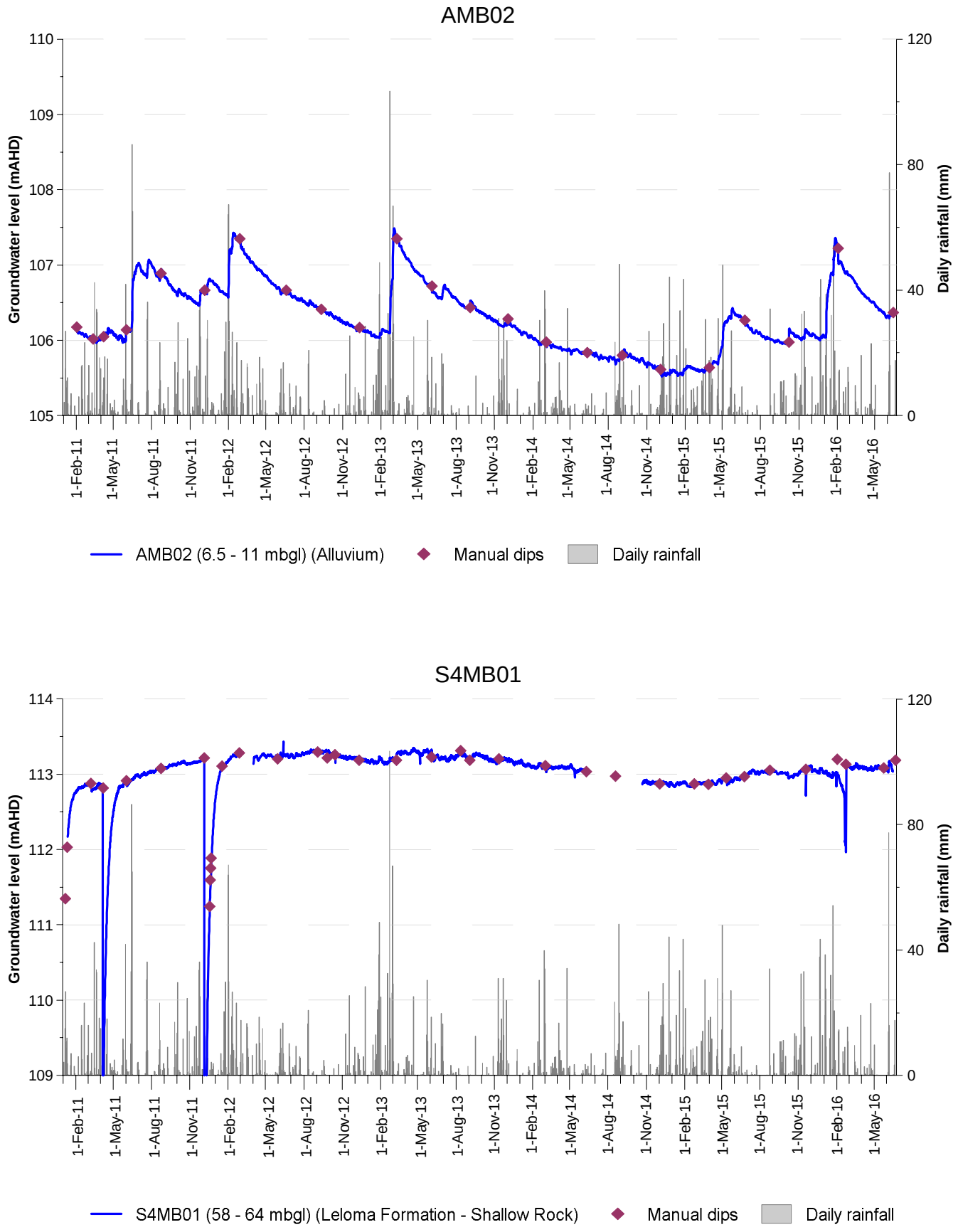


Figure A.3: AMB02 and S4MB01 monitoring bores

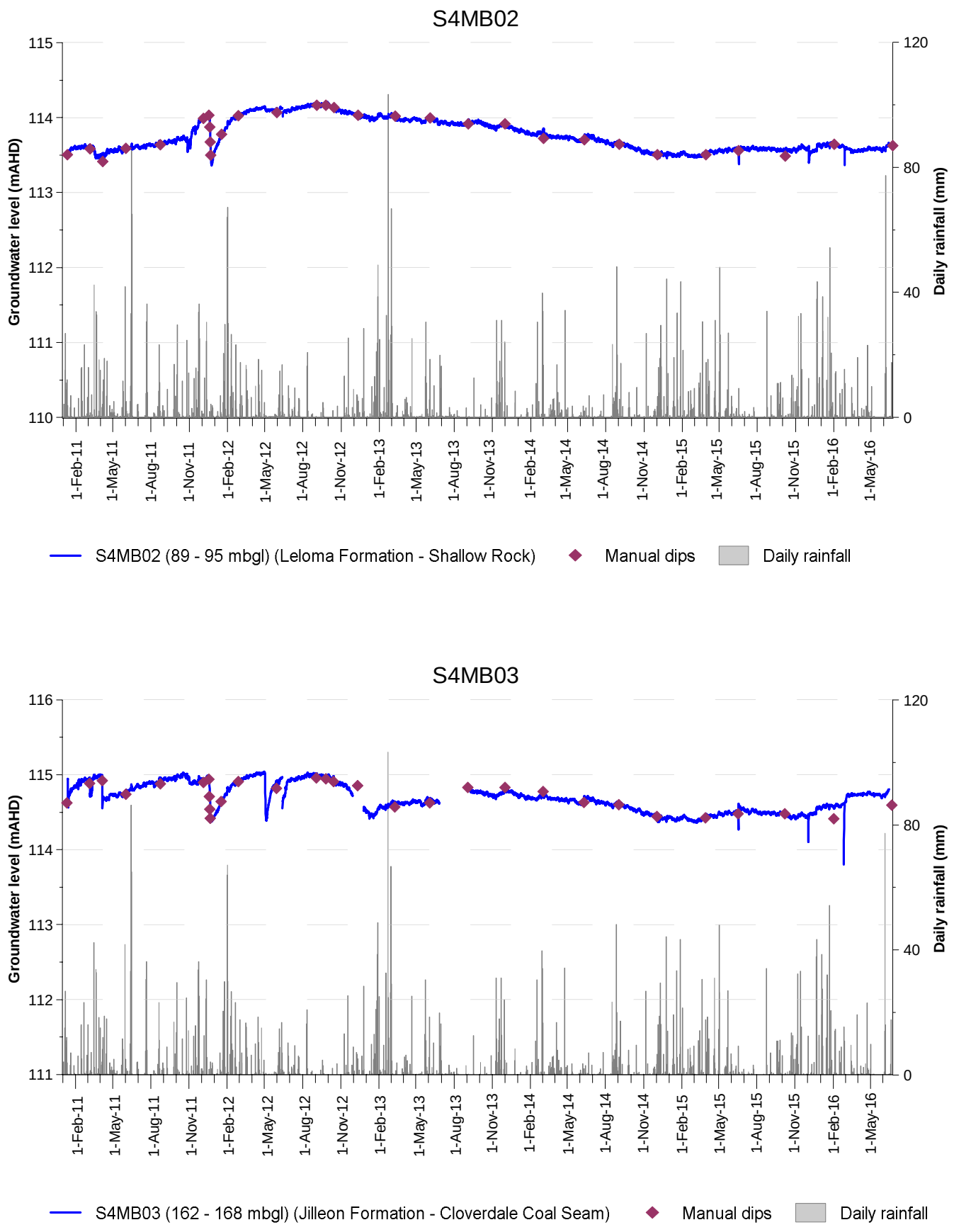


Figure A.4: S4MB02 and S4MB03 monitoring bores

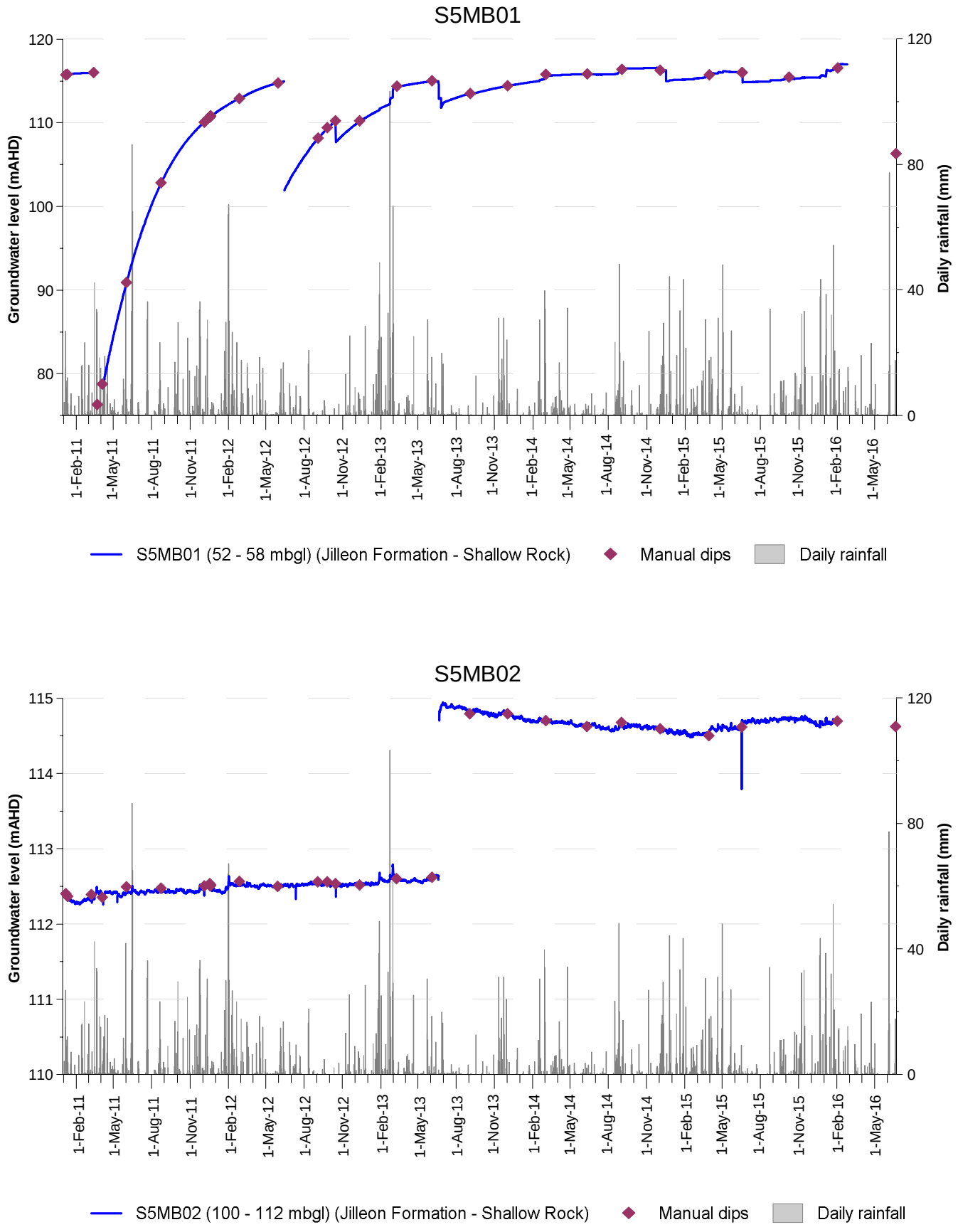


Figure A.5: S5MB01 and S5MB02 monitoring bores

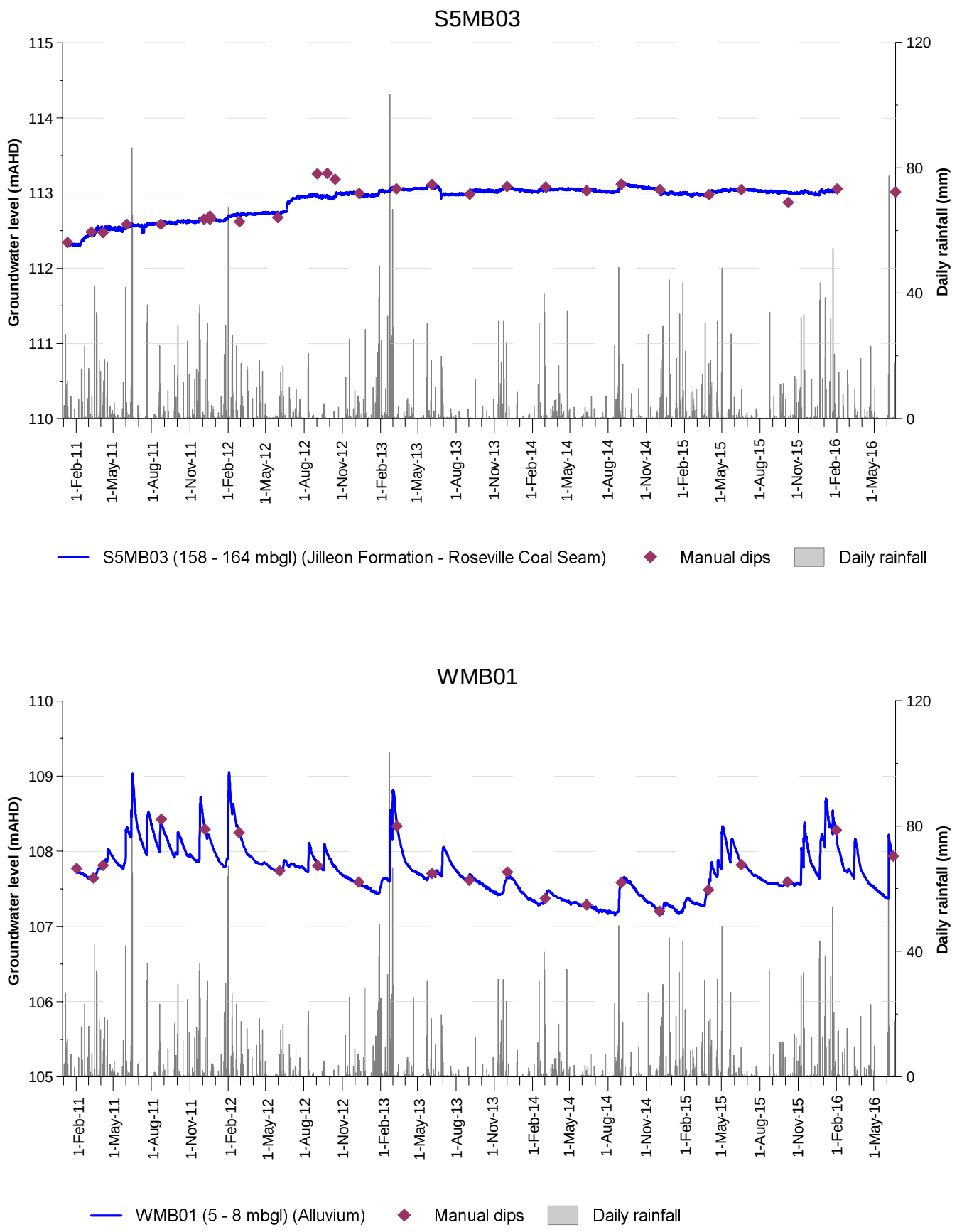


Figure A.6: S5MB03 and WMB01 monitoring bores

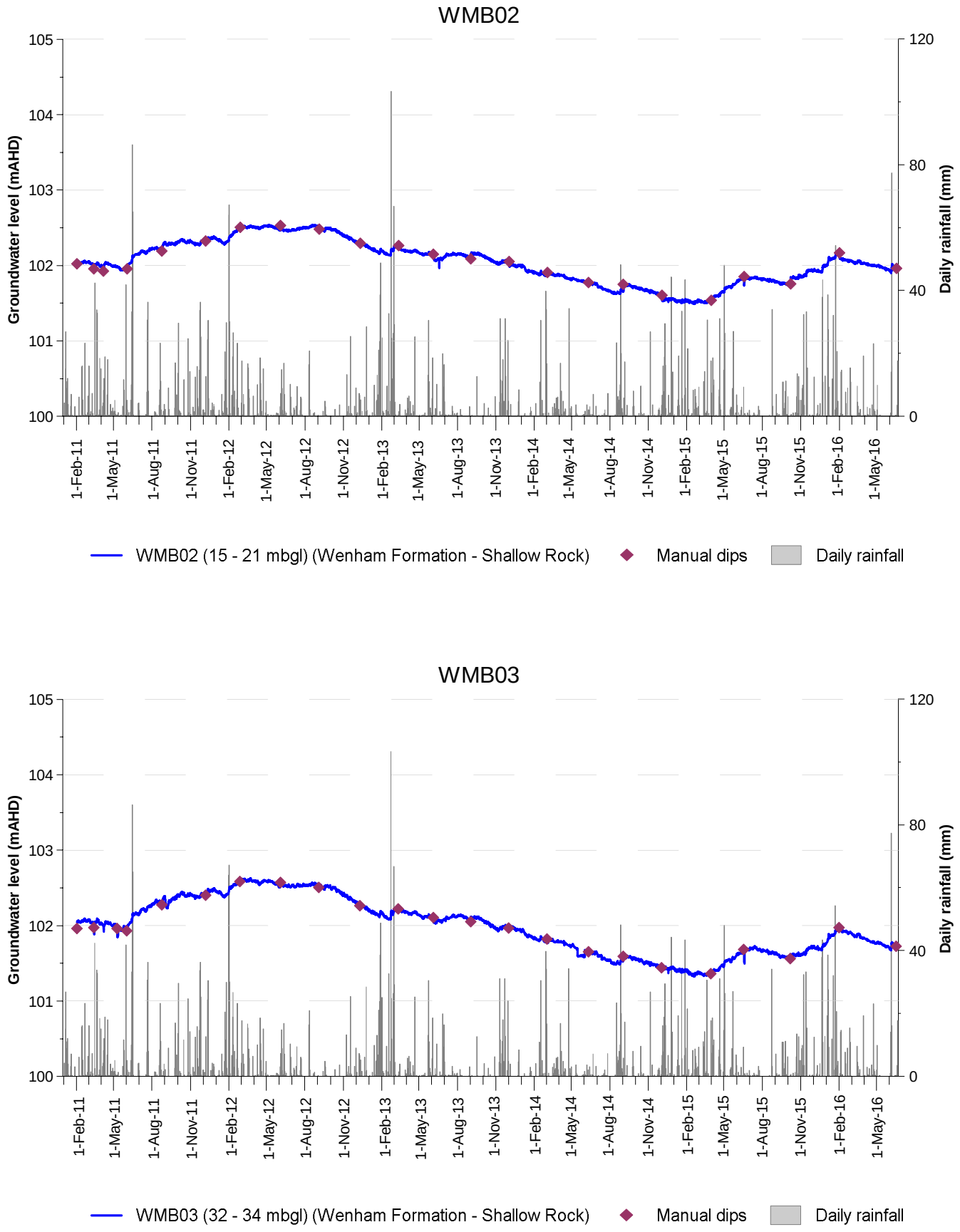


Figure A.7: WMB02 and WMB03 monitoring bores

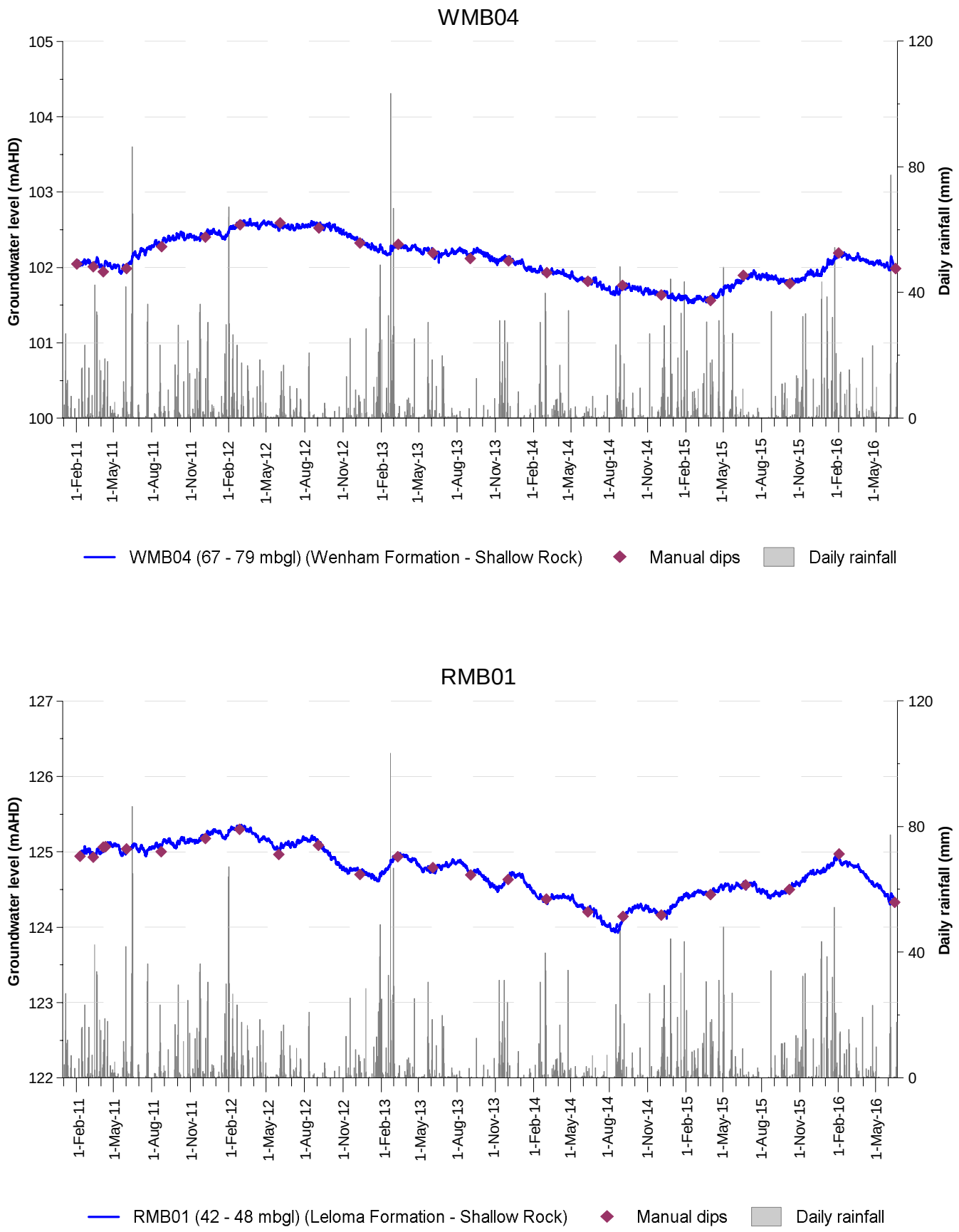
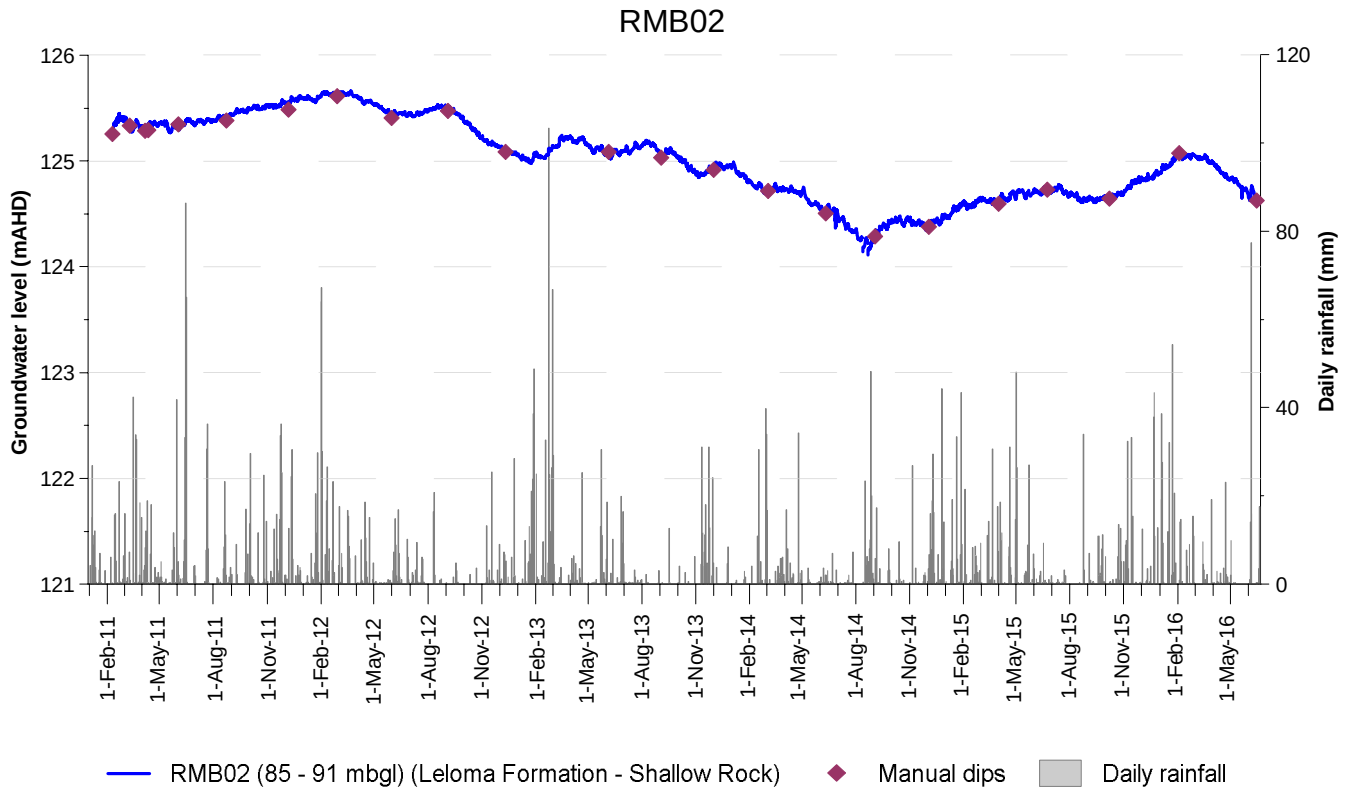


Figure A.8: WMB04 and RMB01 monitoring bores



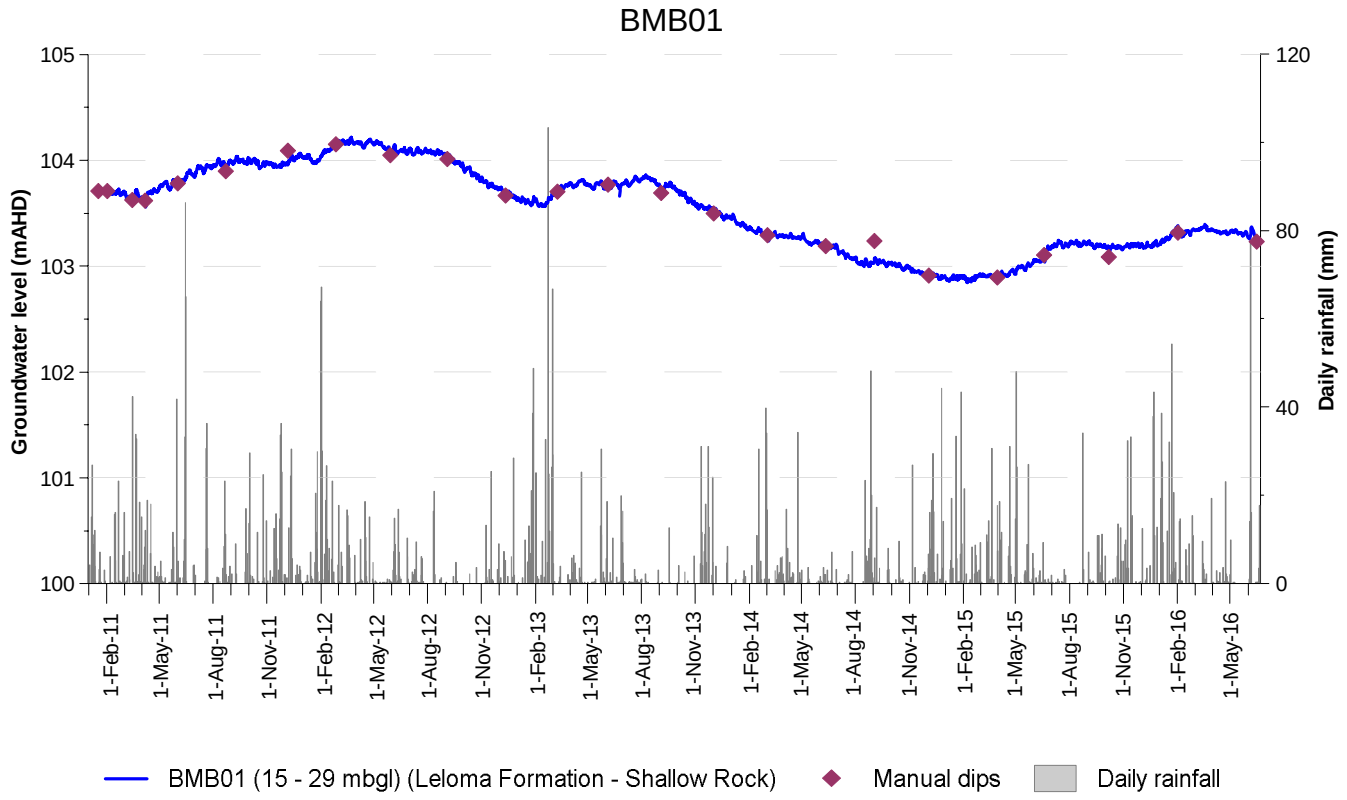


Figure A.9: RMB02 and BMB01 monitoring bores

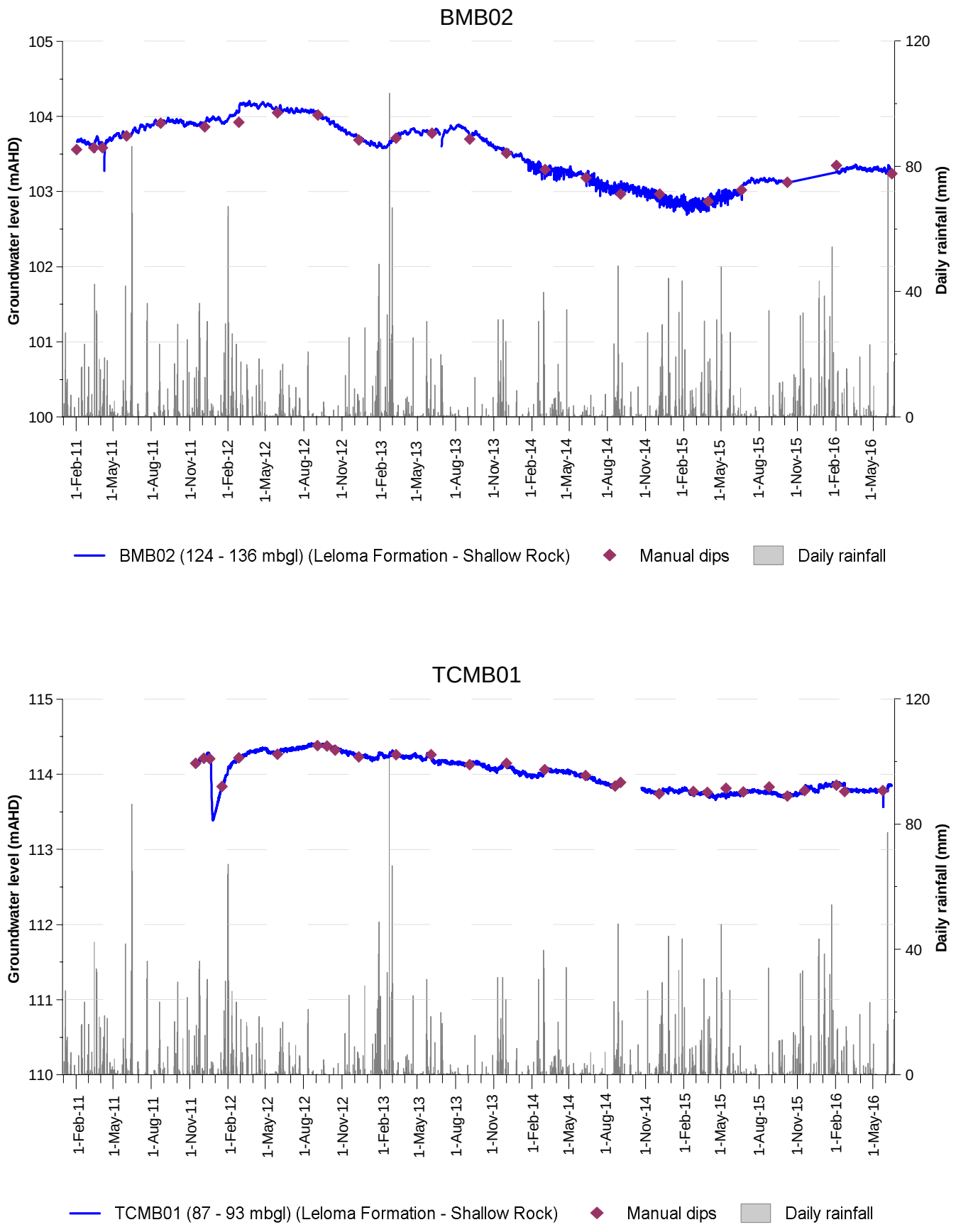
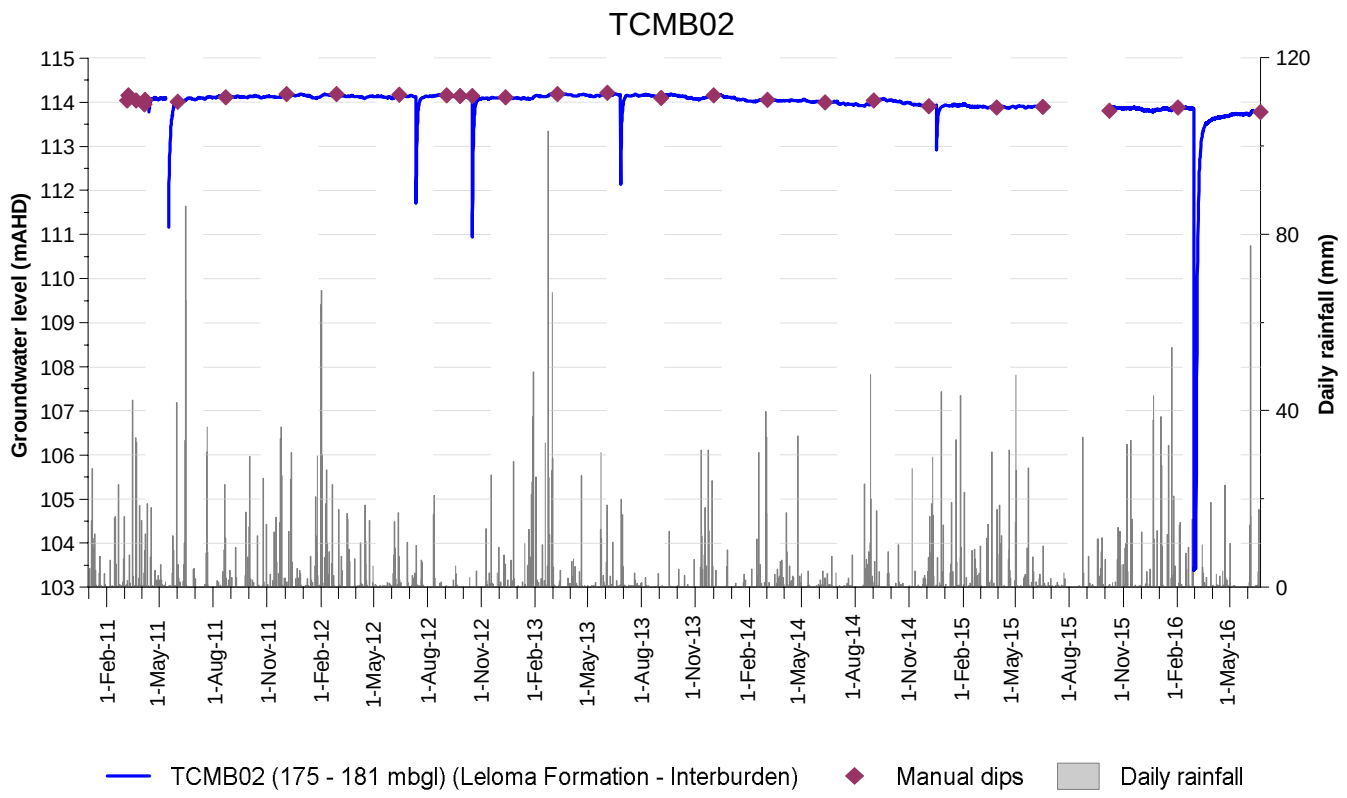


Figure A.10: BMB02 and TCMB01 monitoring bores



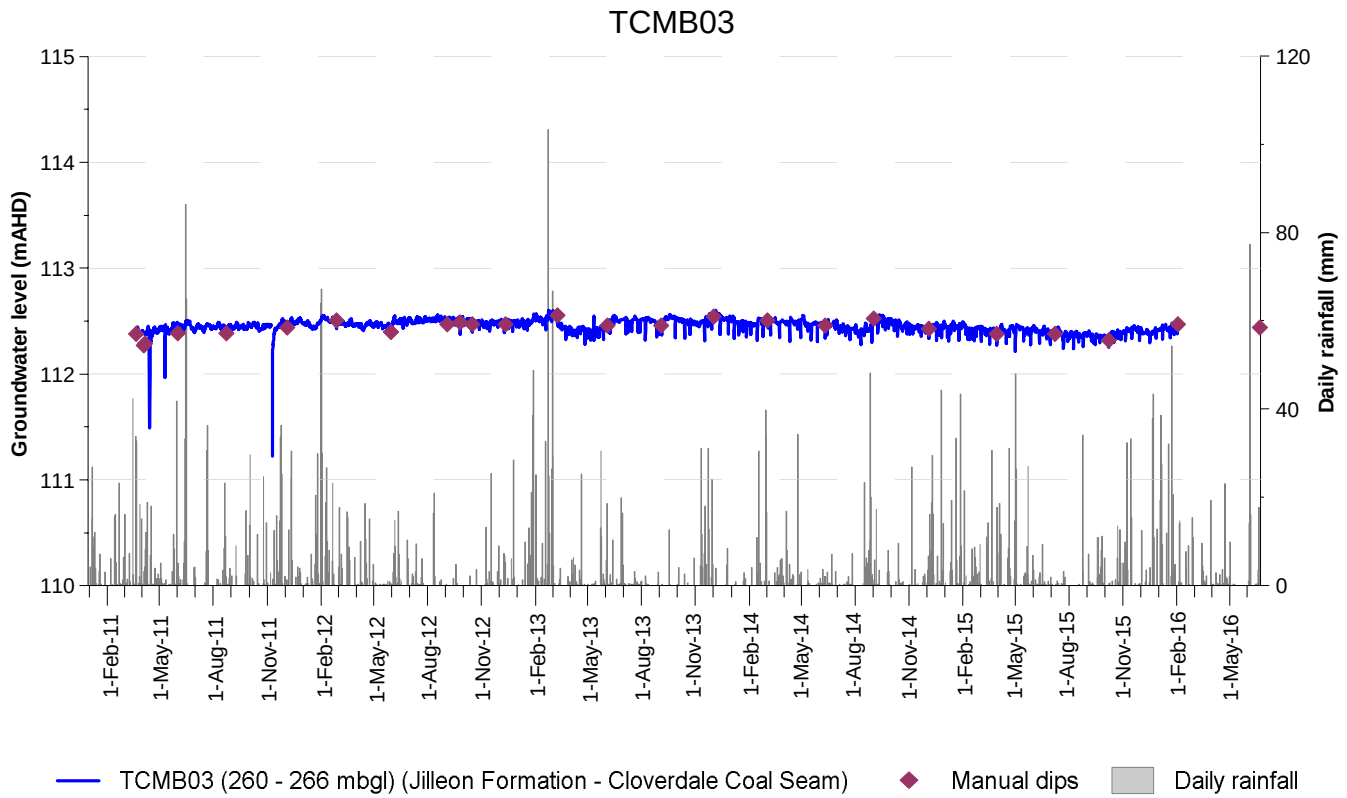
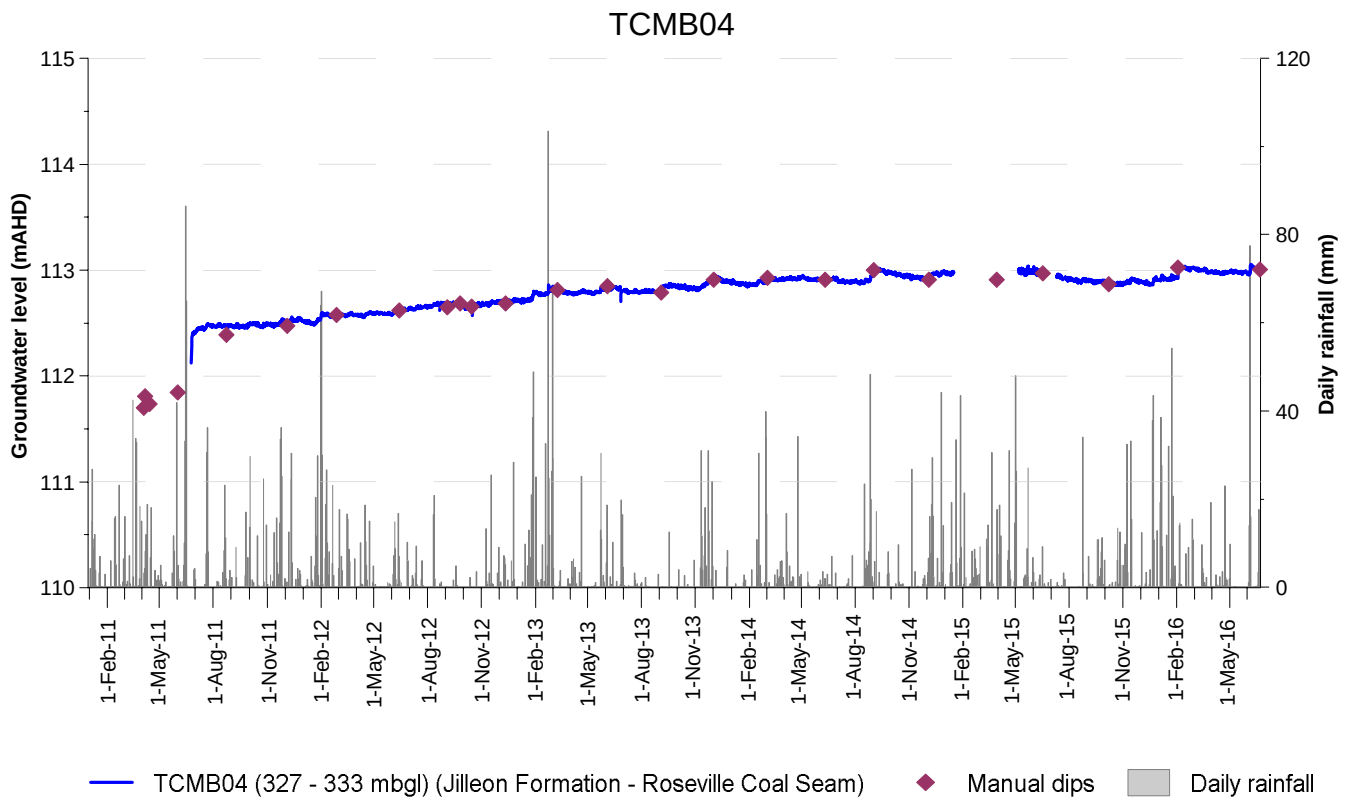


Figure A.11: TCMB02 and TCMB03 monitoring bores



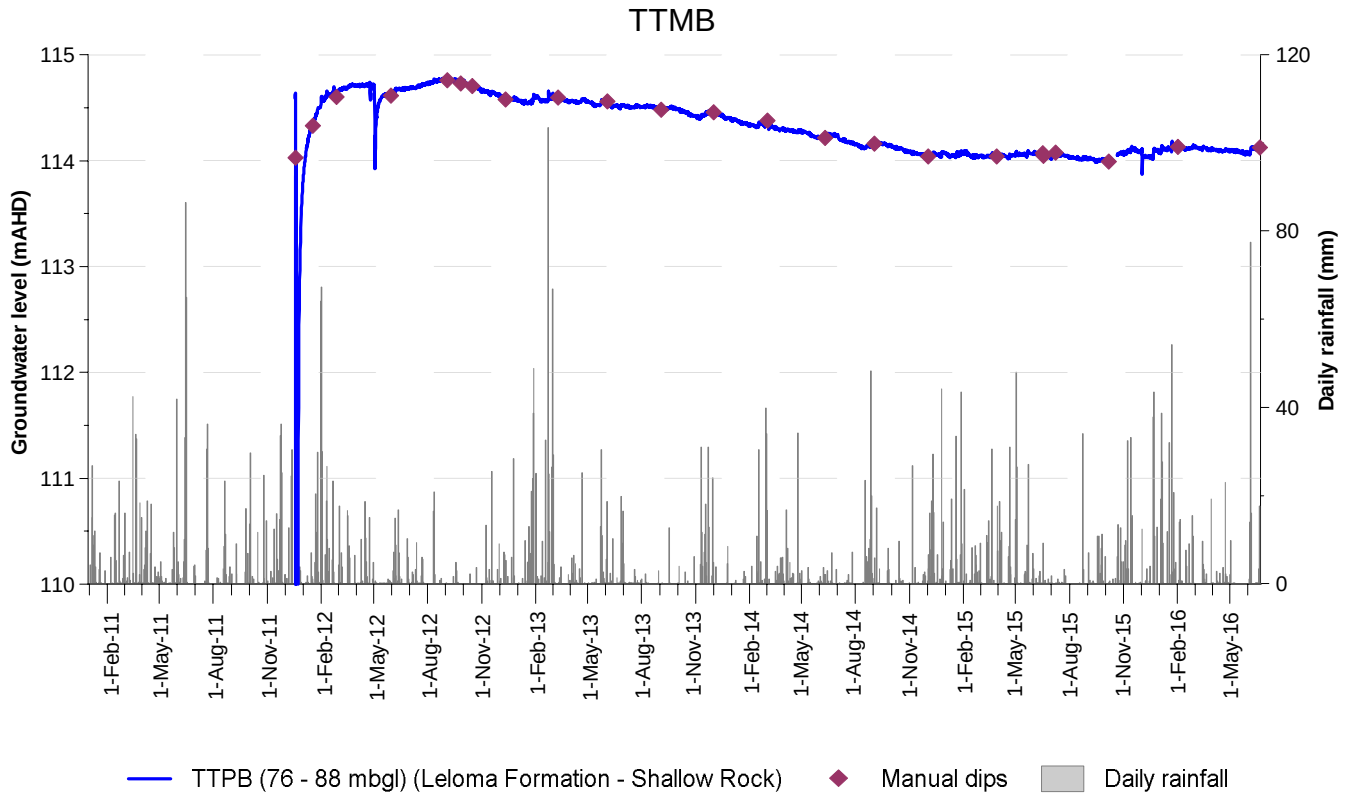


Figure A.12: TCMB04 and TTMB monitoring bores

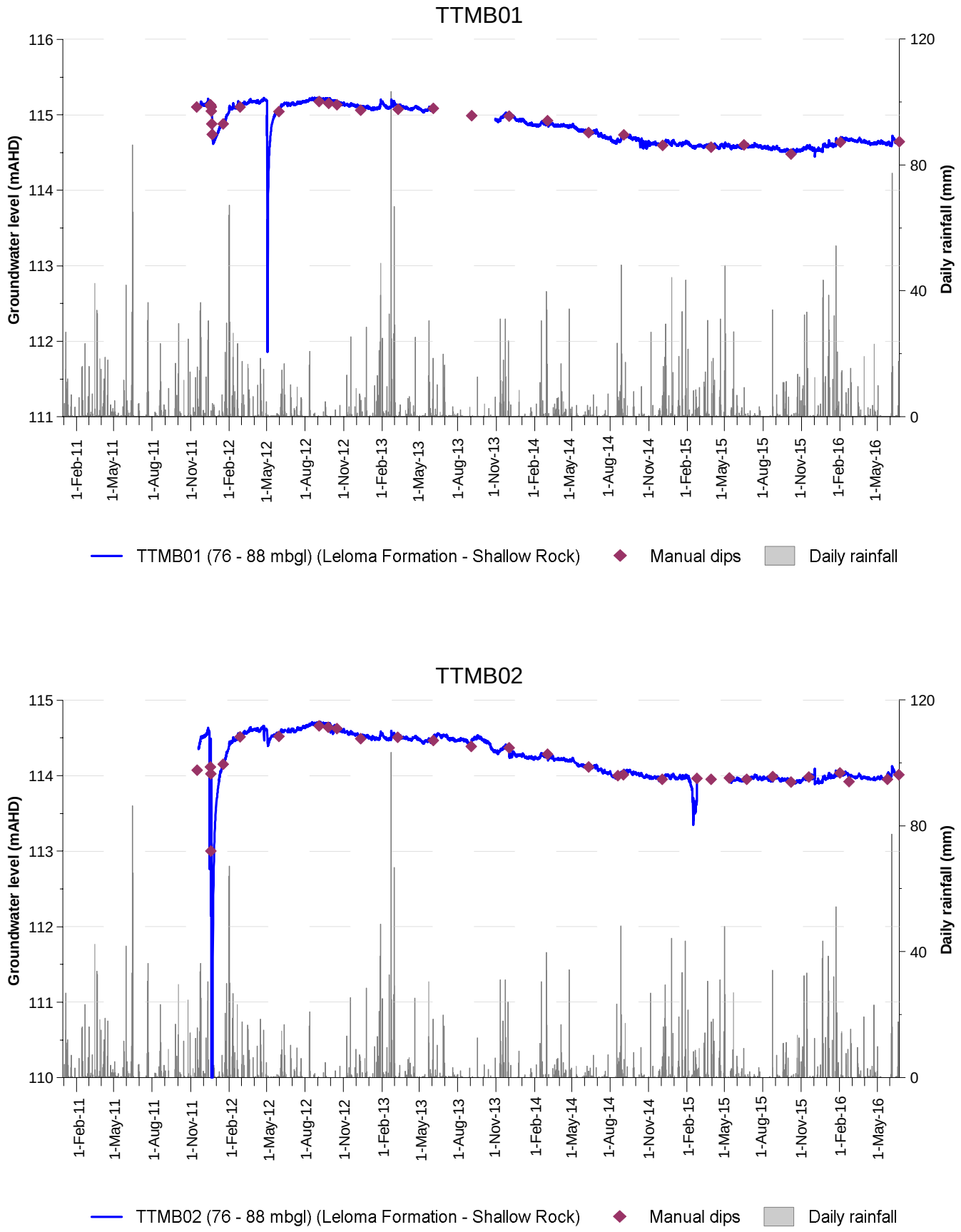


Figure A.13: TTMB01 and TTMB02 monitoring bores

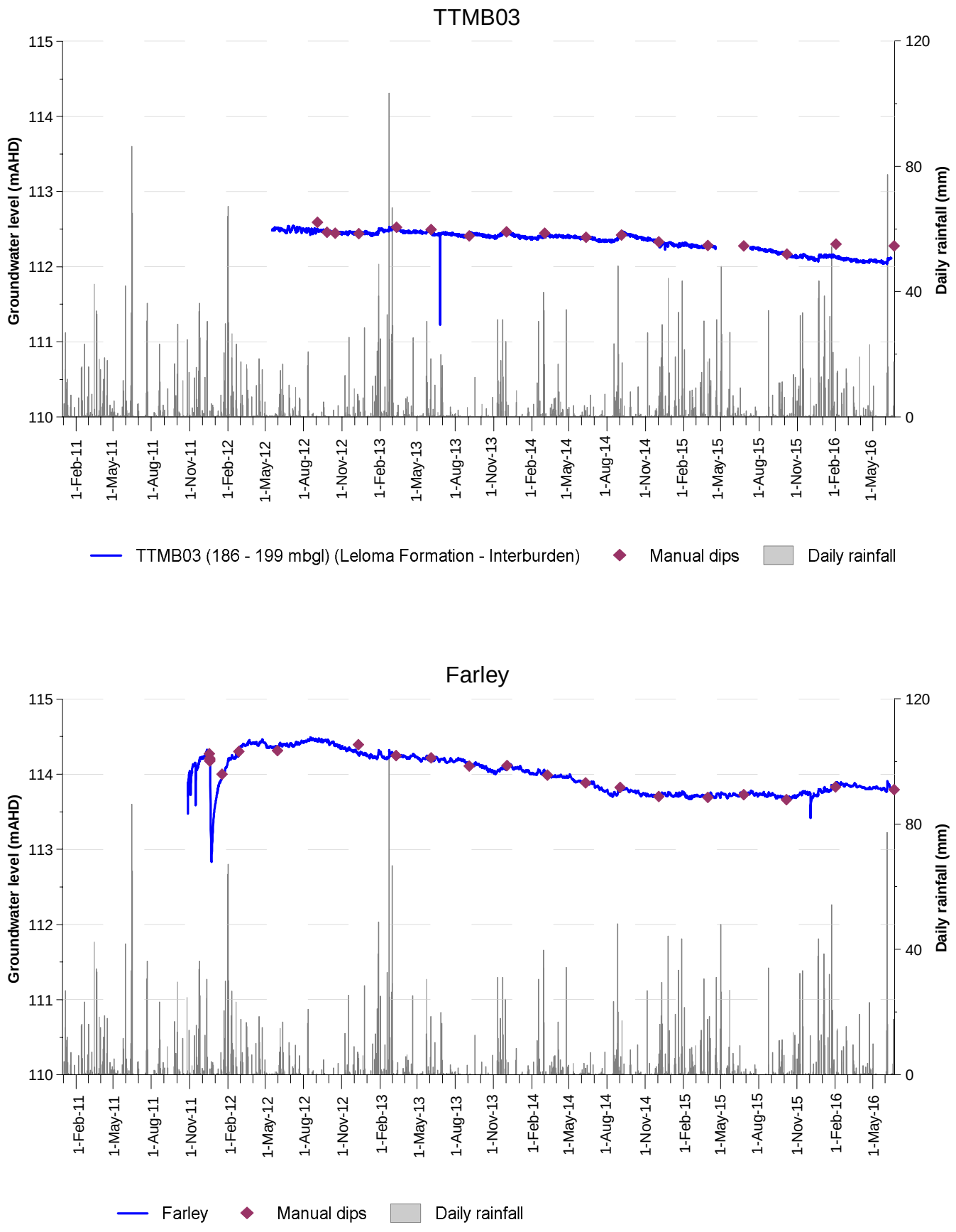


Figure A.14: TTMB03 and Farley monitoring bores

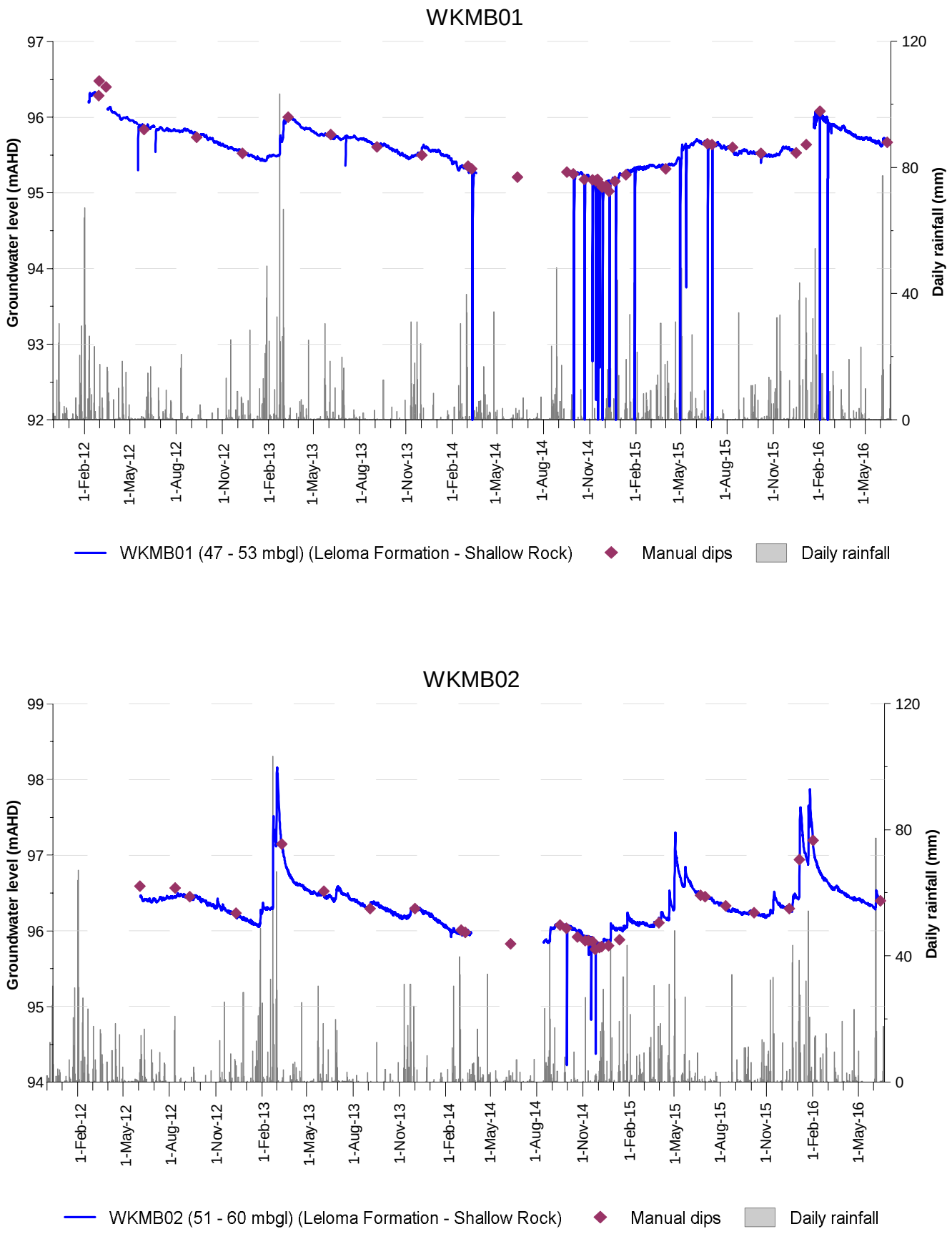


Figure A.15: WKMB01 and WKMB02 monitoring bores

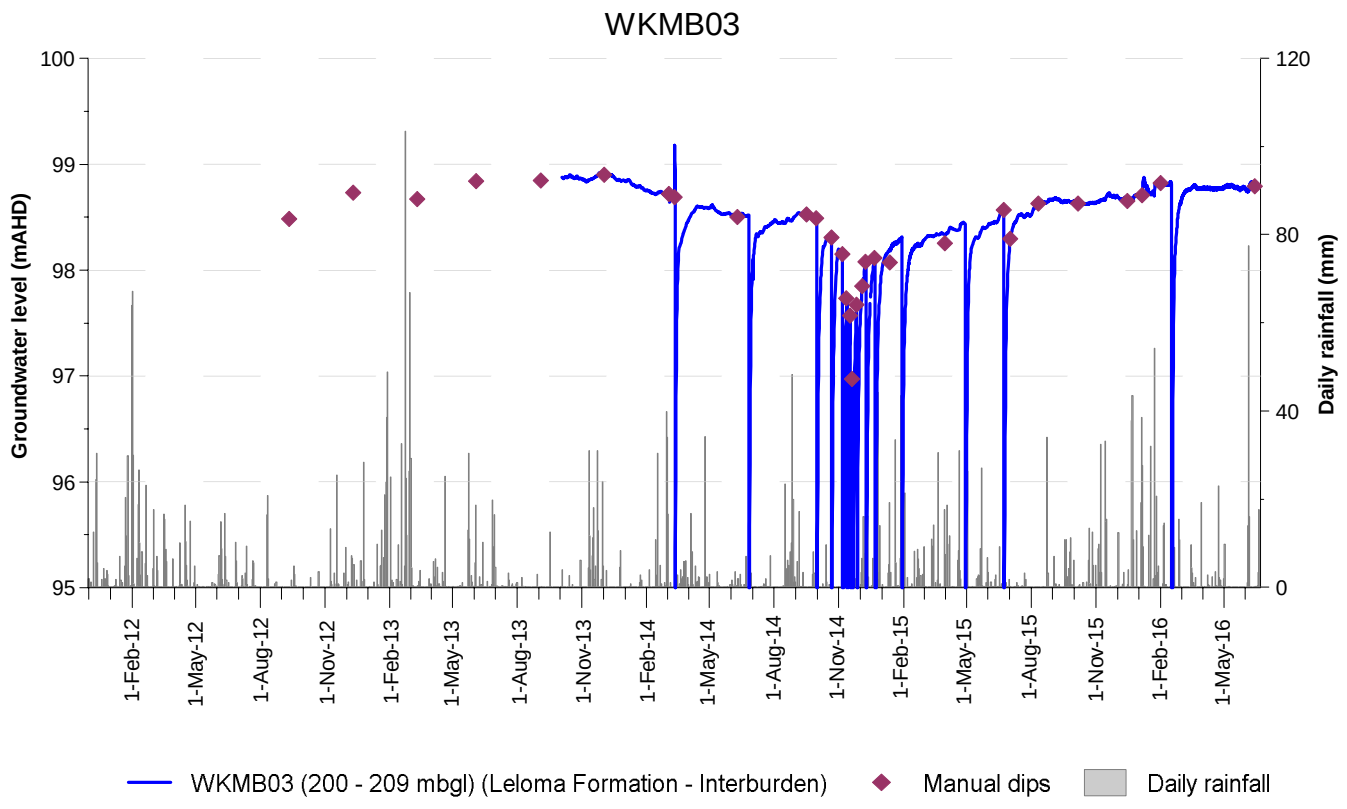
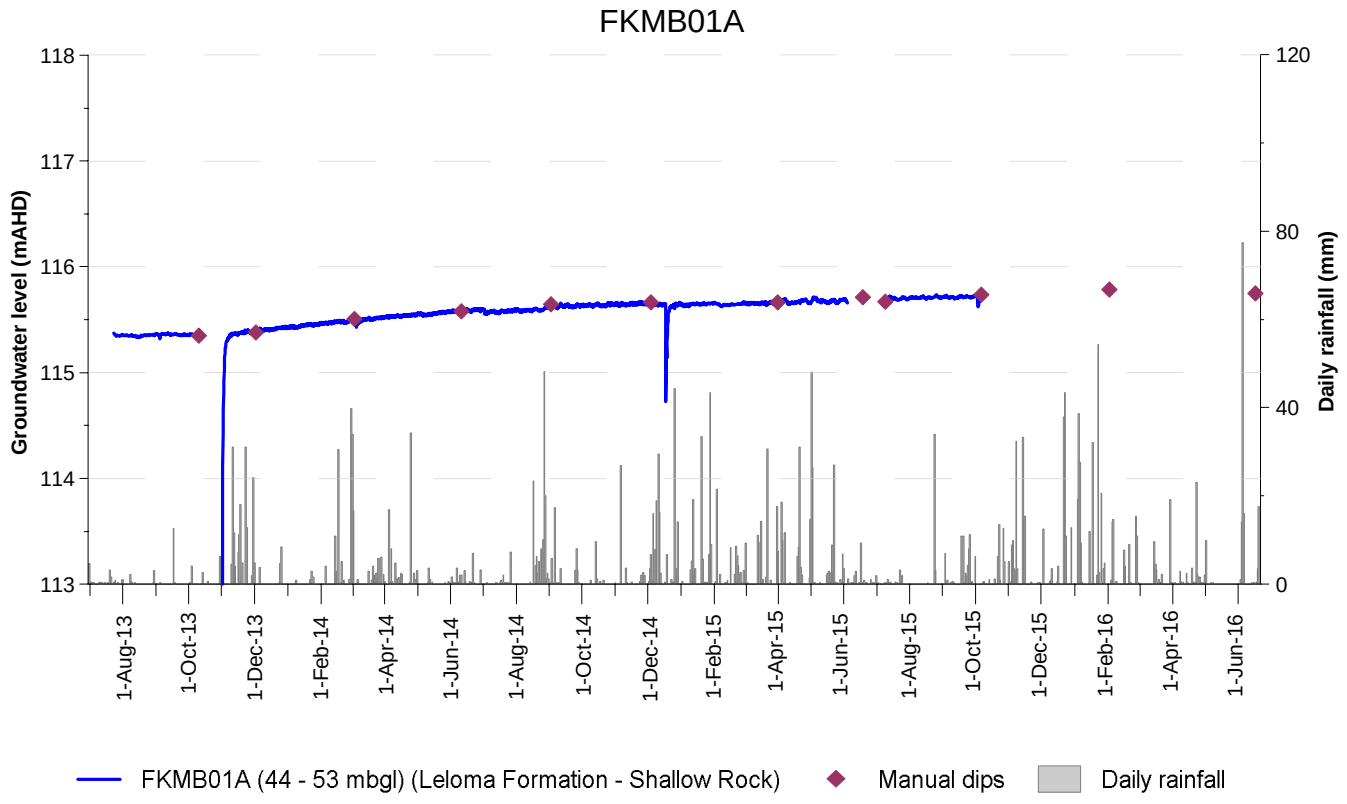


Figure A.16: WKMB03 monitoring bore



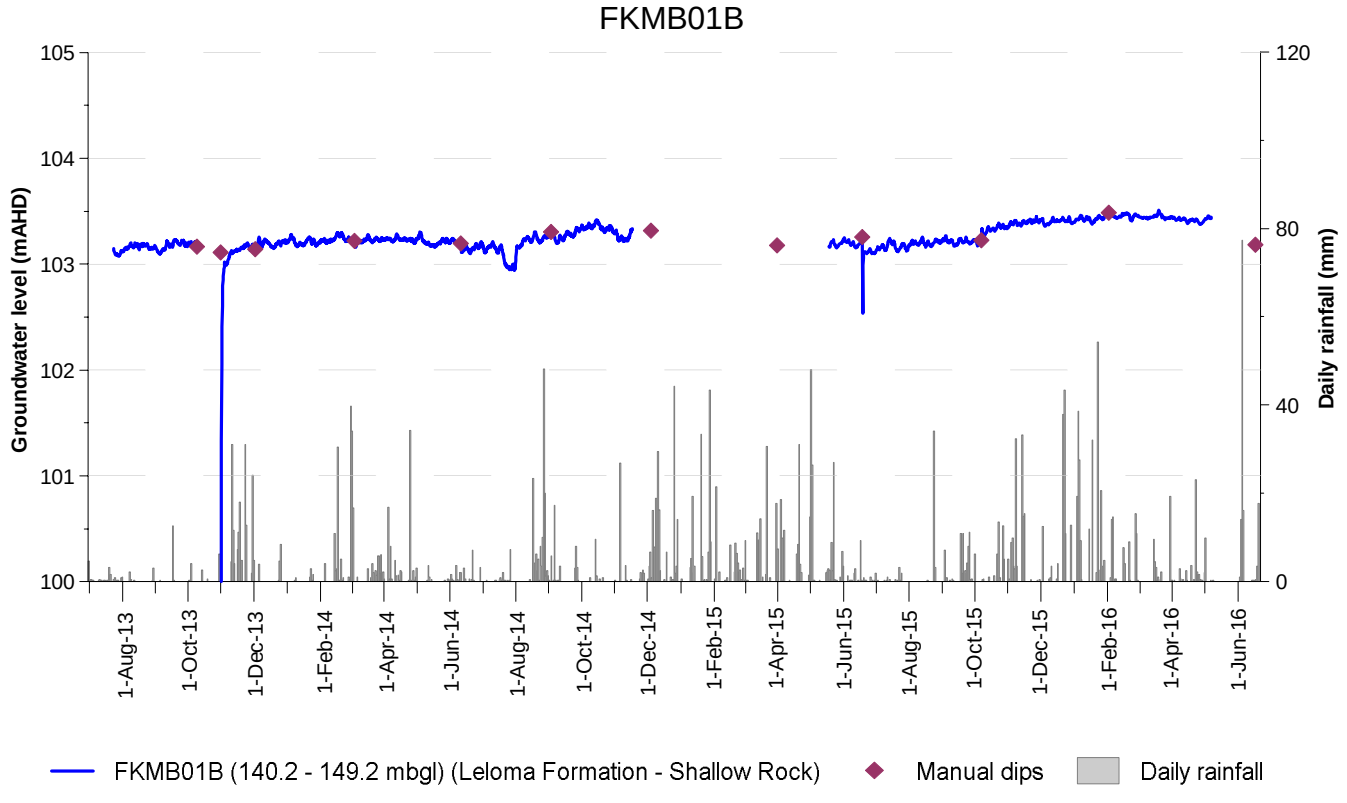
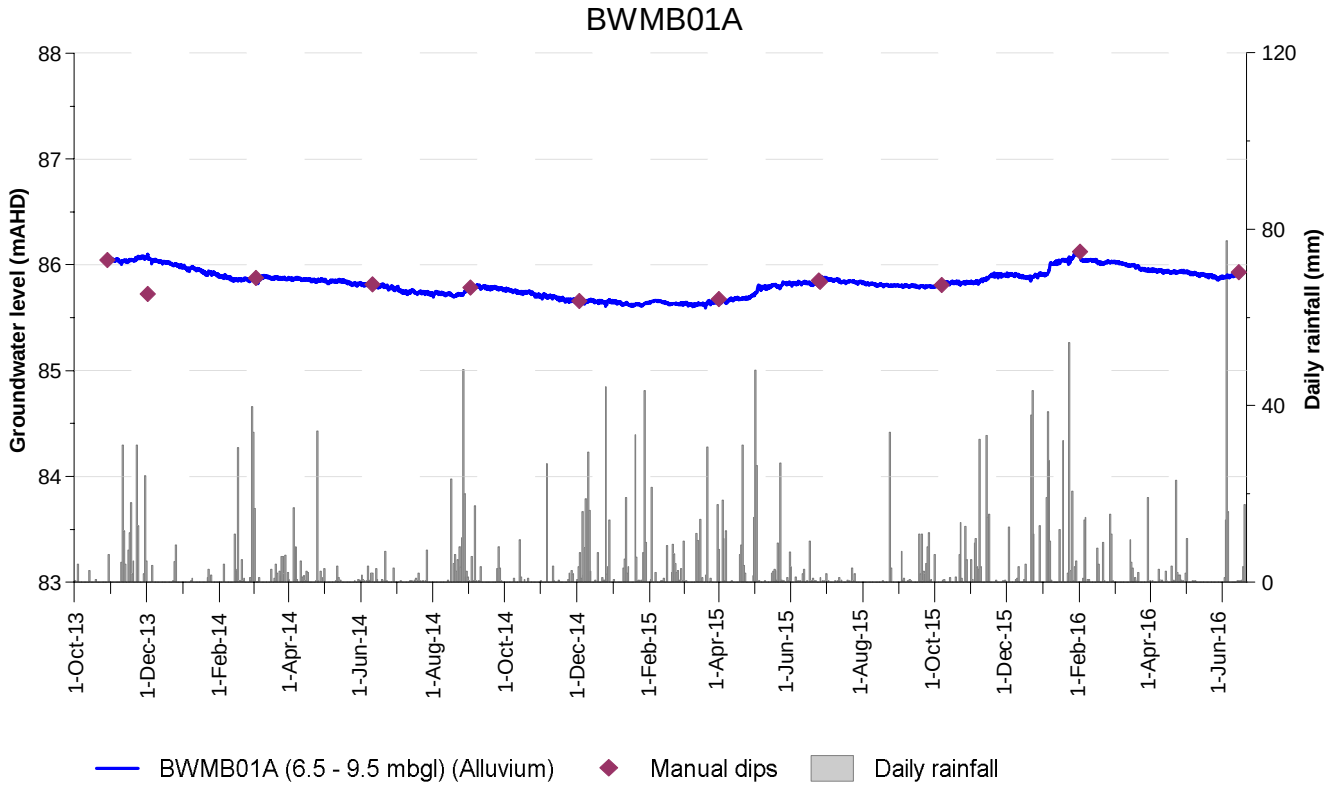


Figure A.17: FKMB01A and FKMB01B monitoring bores



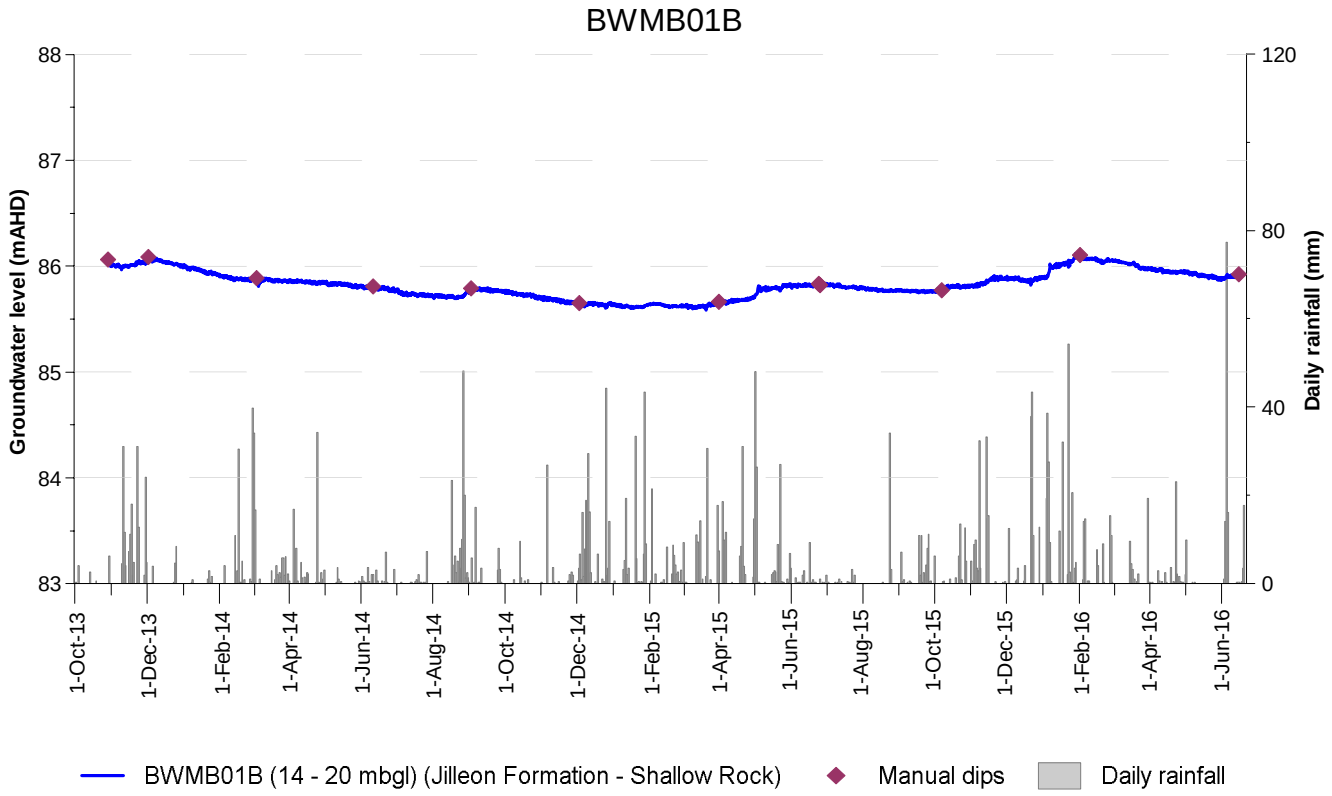


Figure A.18: BWMB01A and BWMB01B monitoring bores

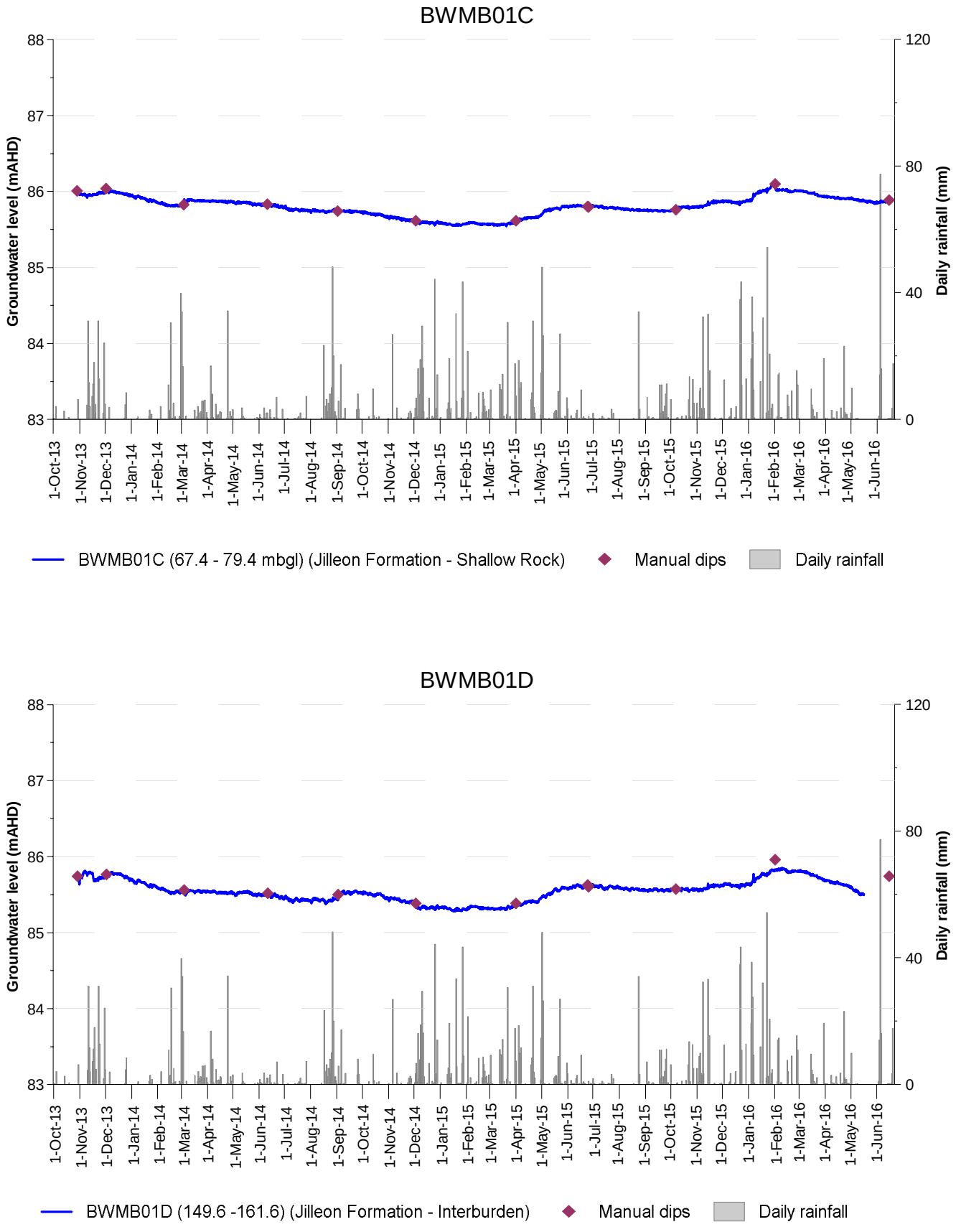


Figure A.19: BWMB01C and BWMB01D monitoring bores

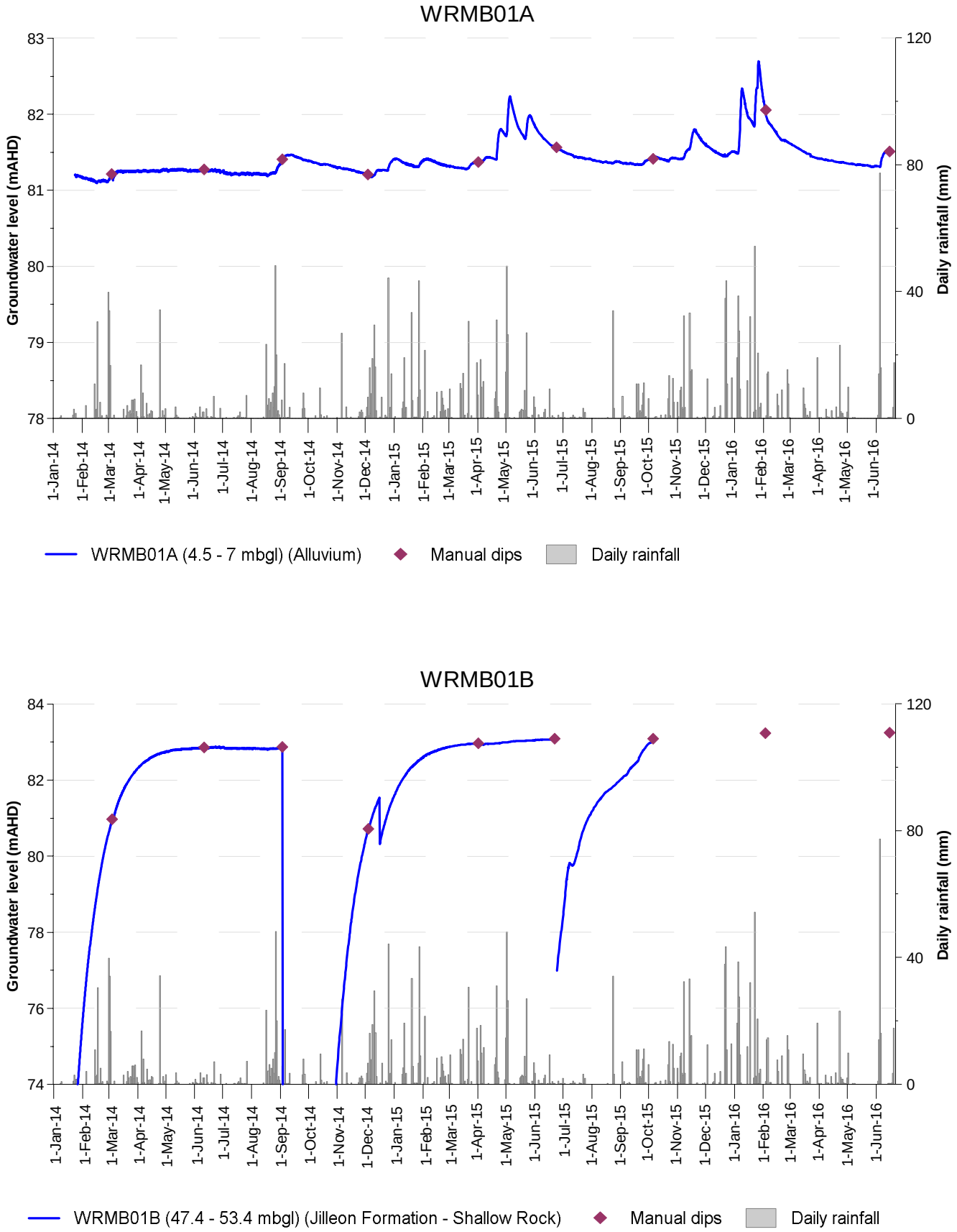
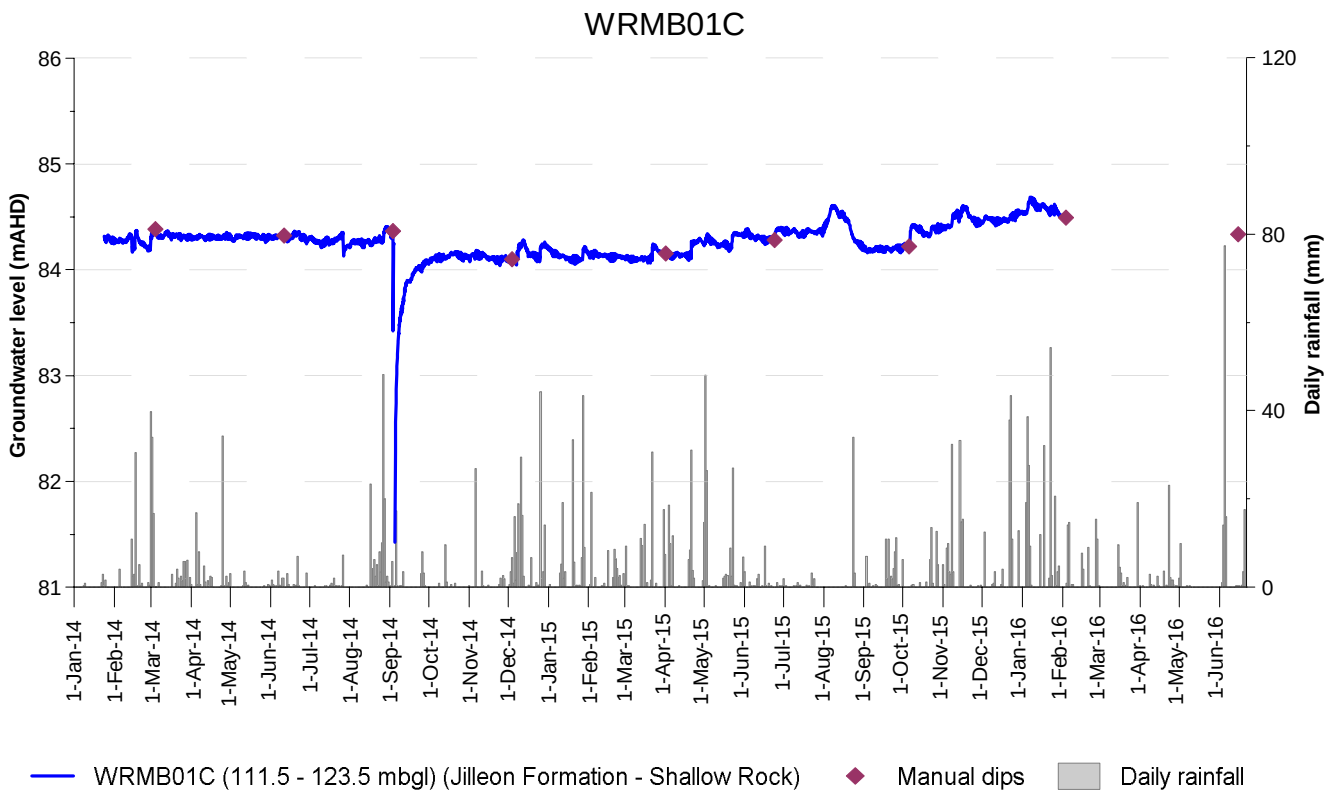


Figure A.20: WRMB01A and WRMB01B monitoring bores



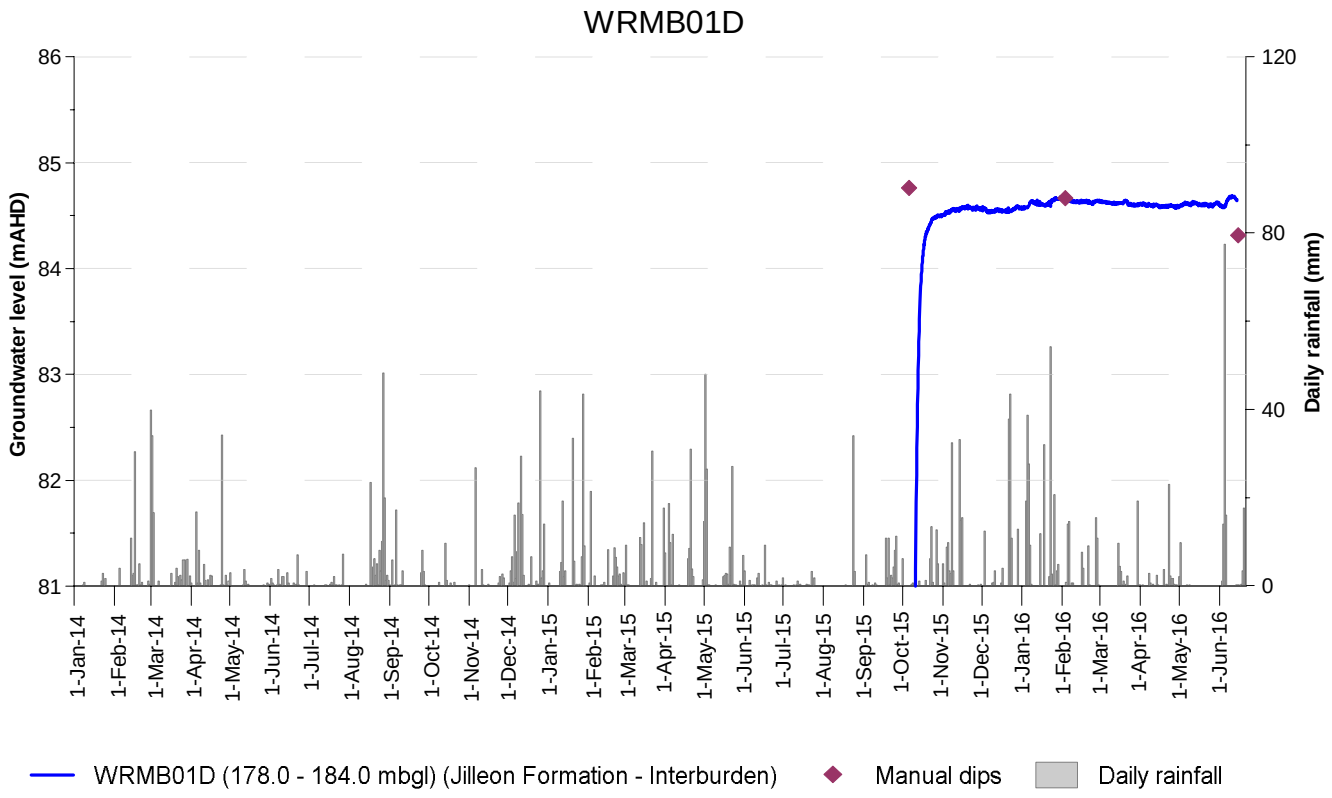
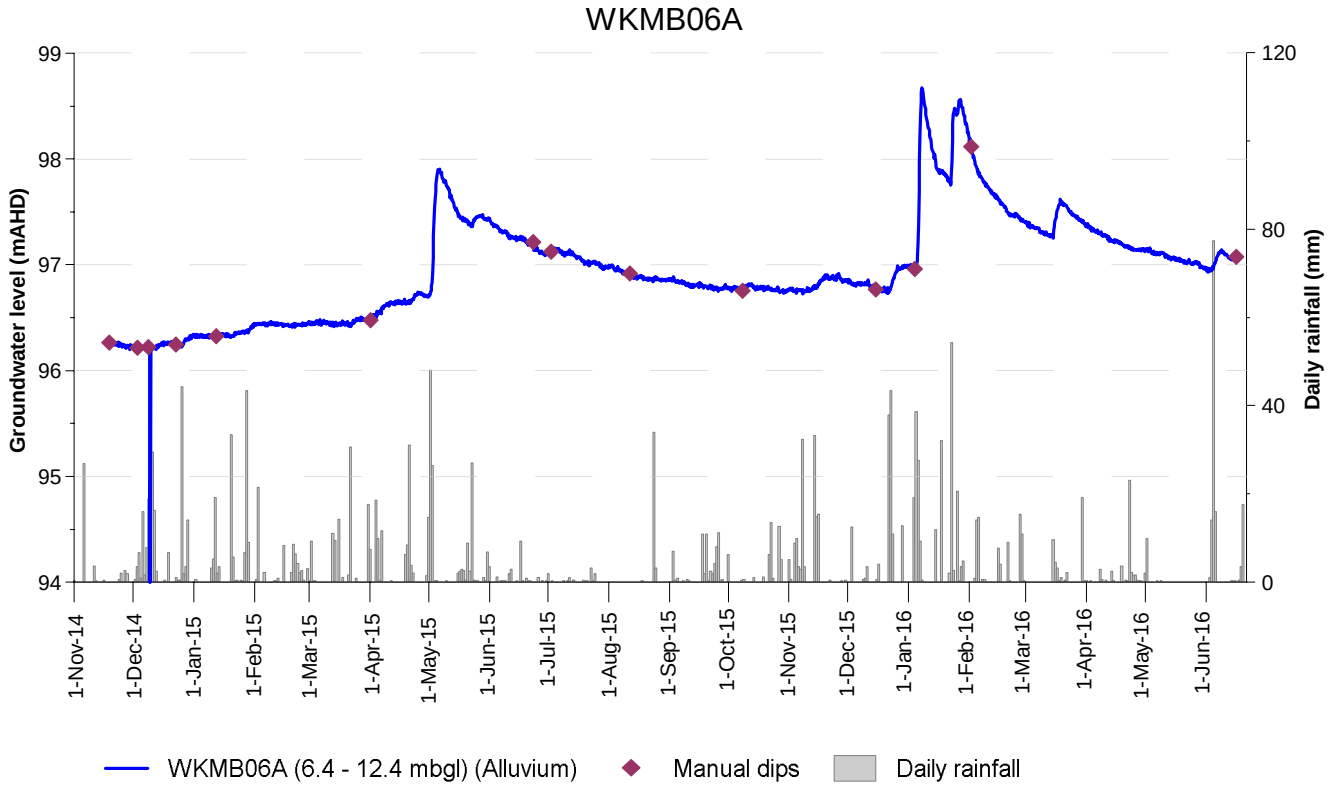


Figure A.21: WRMB01C and WRMB01D monitoring bores



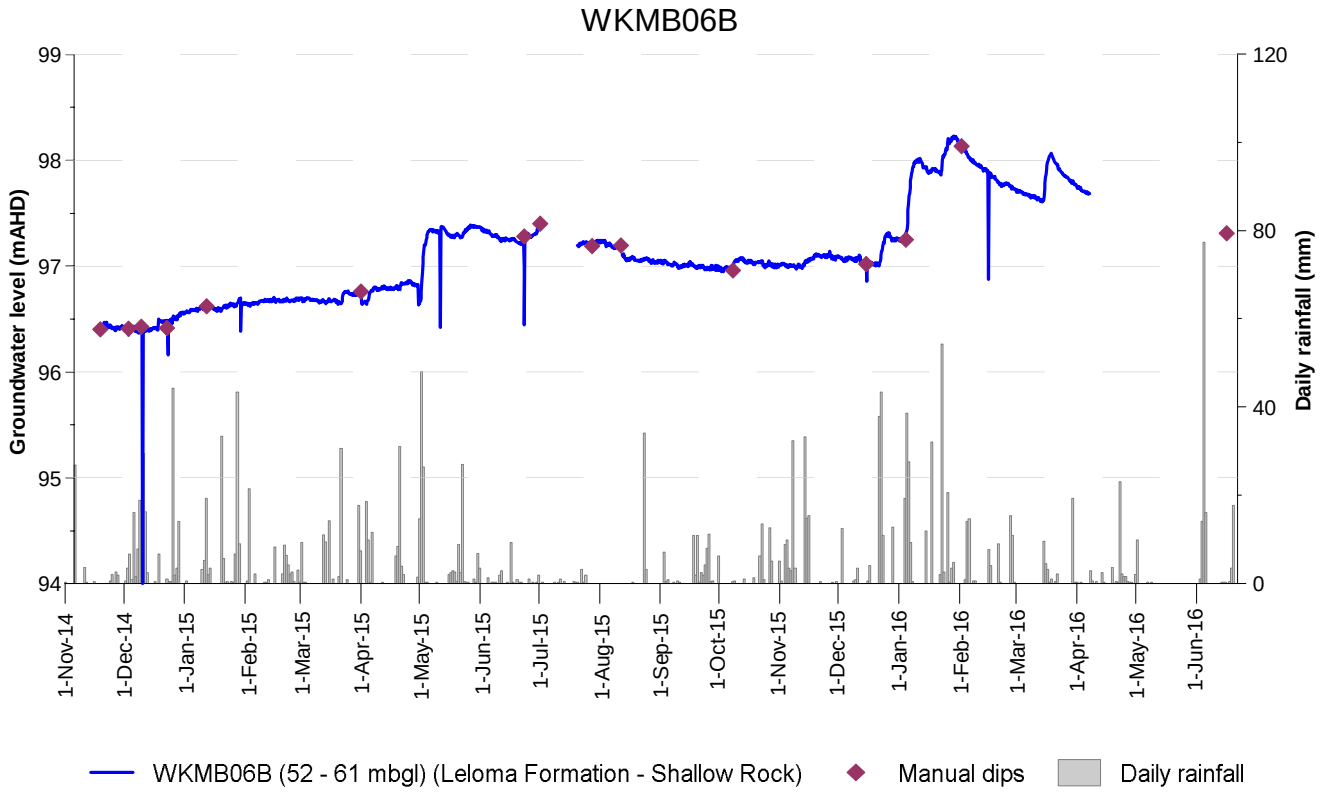
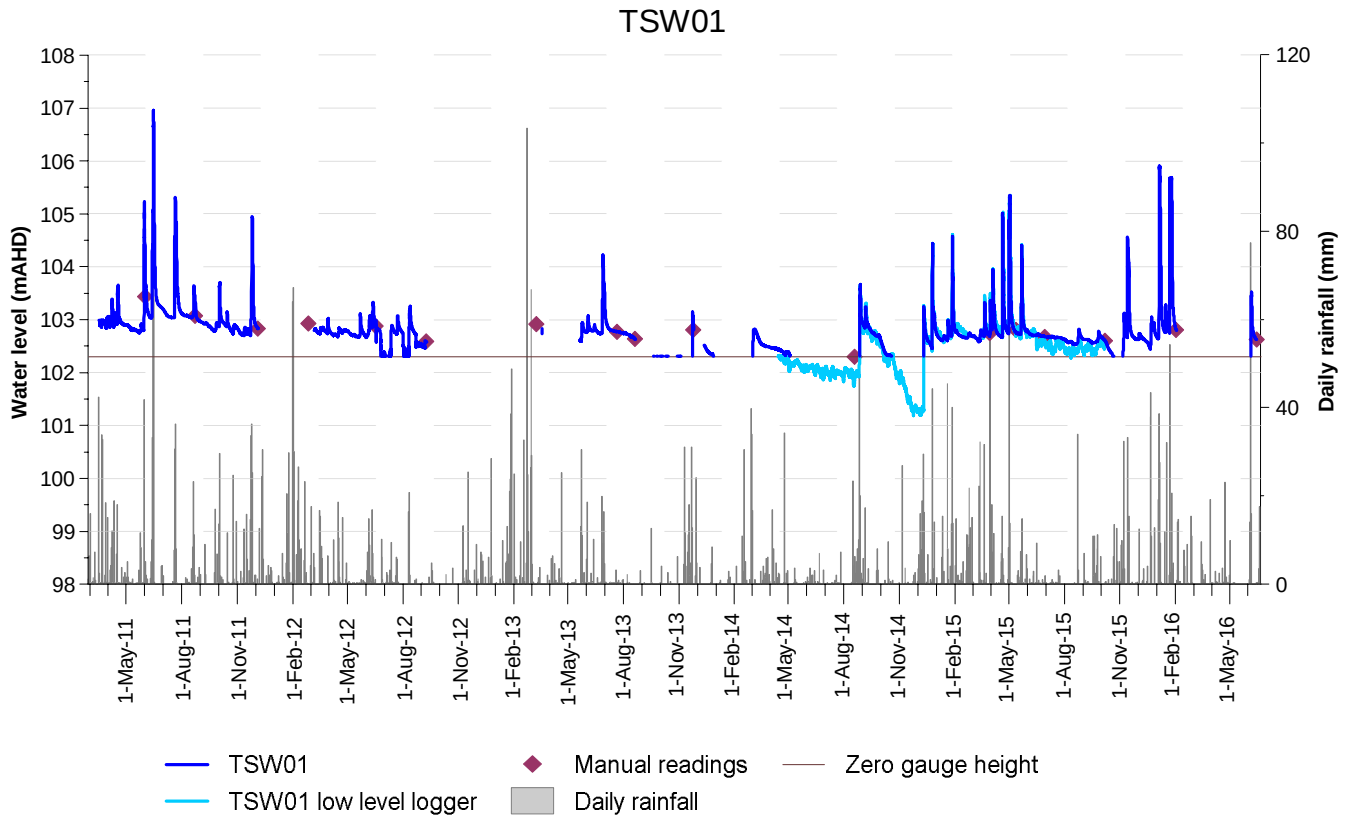


Figure A.22: WKMB06A and WKMB06B monitoring bores



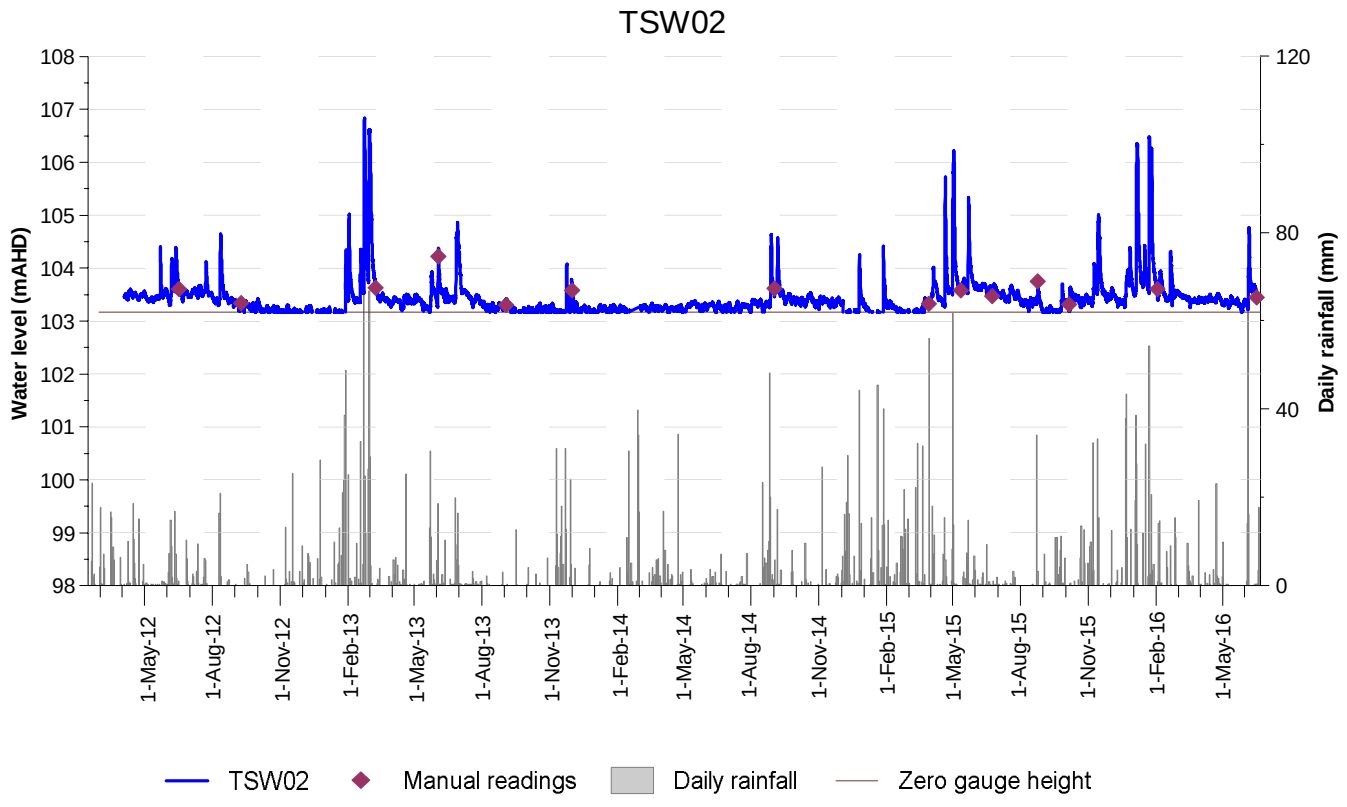


Figure A.23: TSW01 and TSW02 stream levels

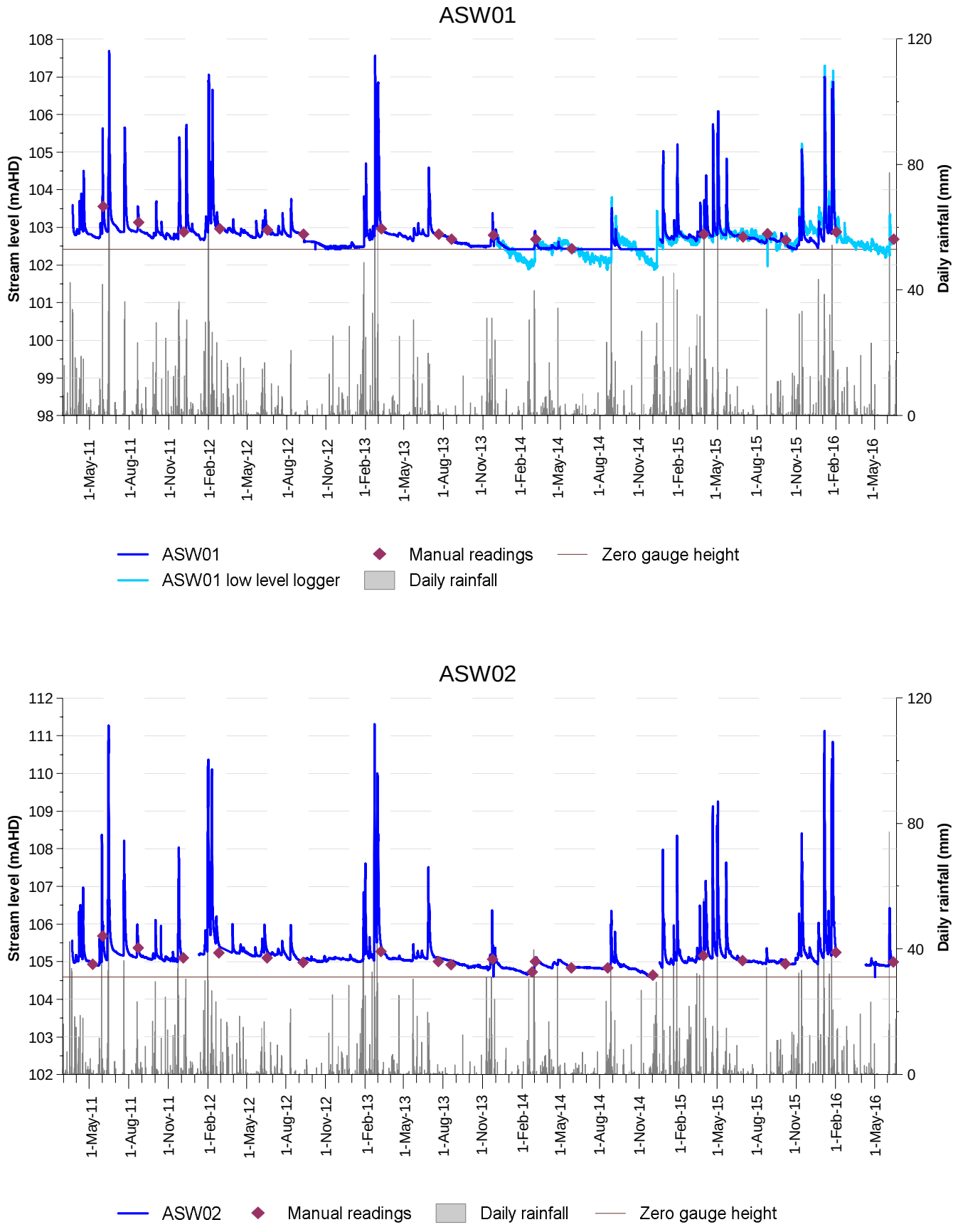


Figure A.24: ASW01 and ASW02 stream levels

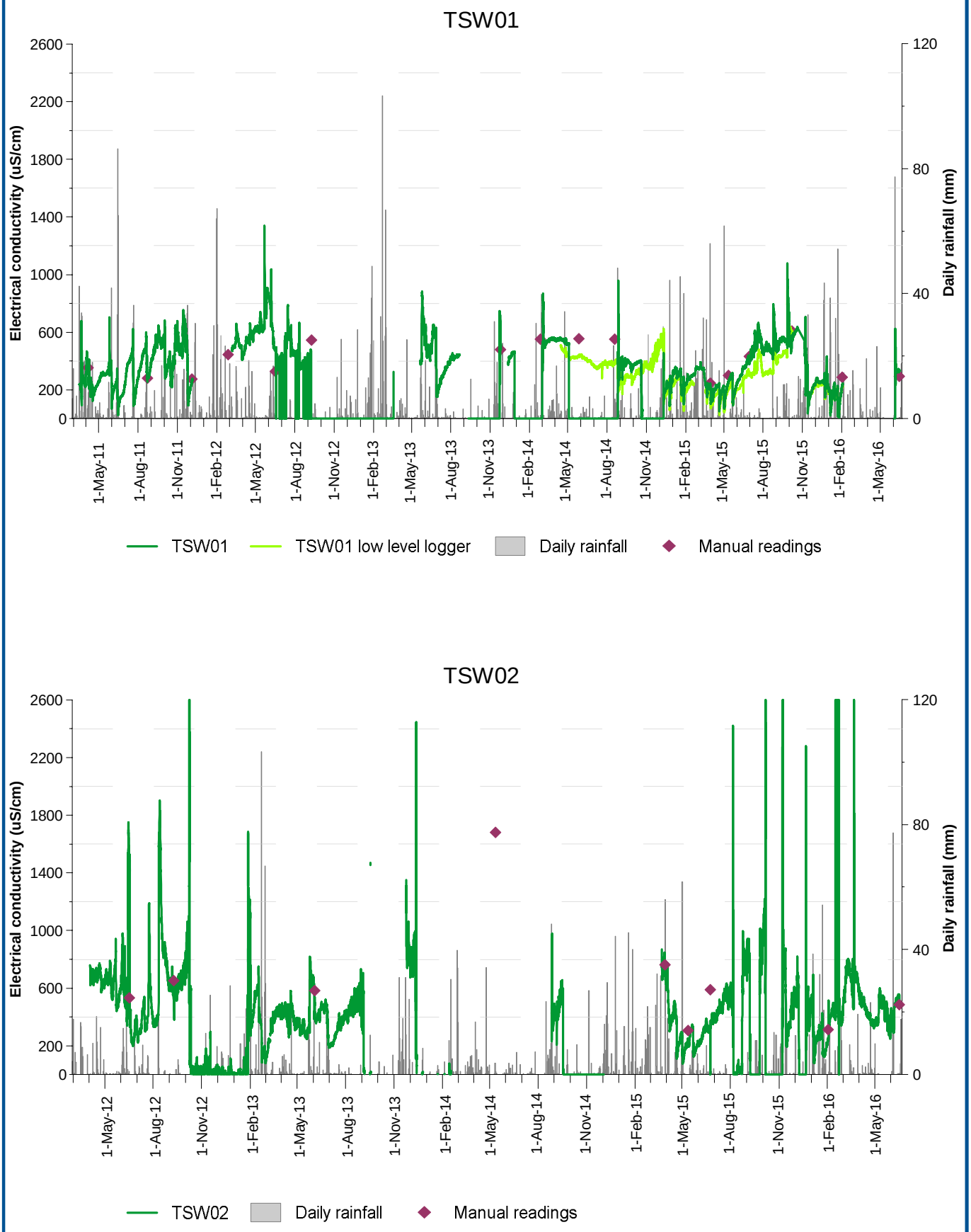
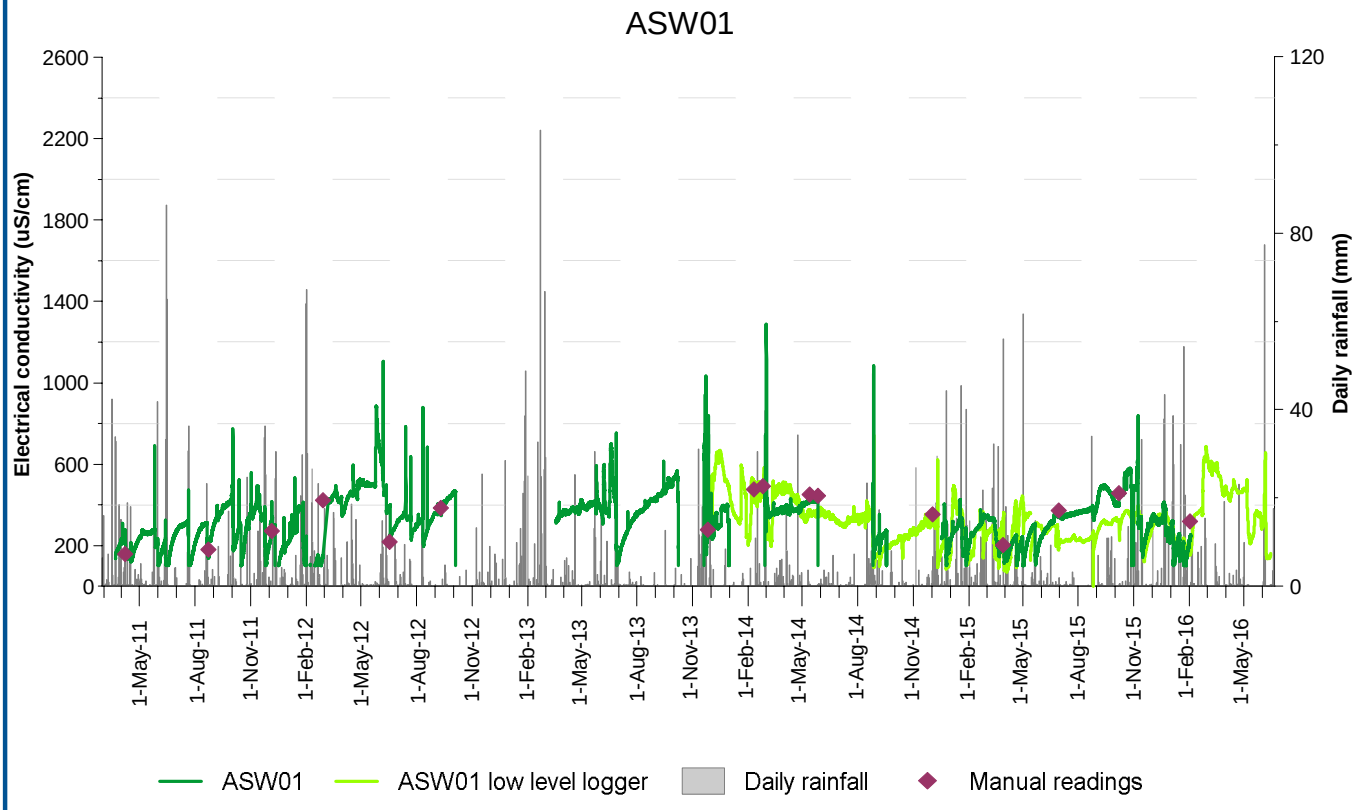


Figure A.25: TSW01 and TSW02 electrical conductivity



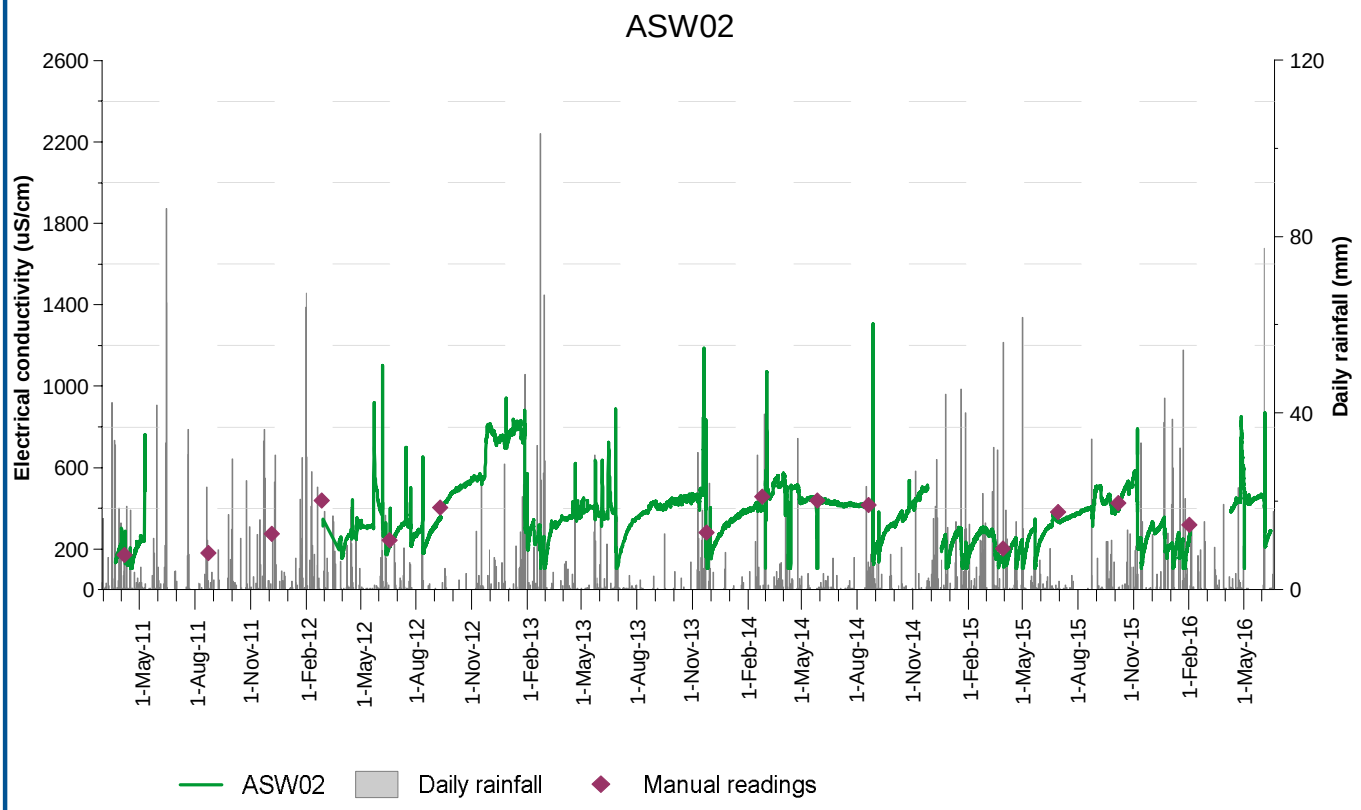


Figure A.26: ASW01 and ASW02 electrical conductivity

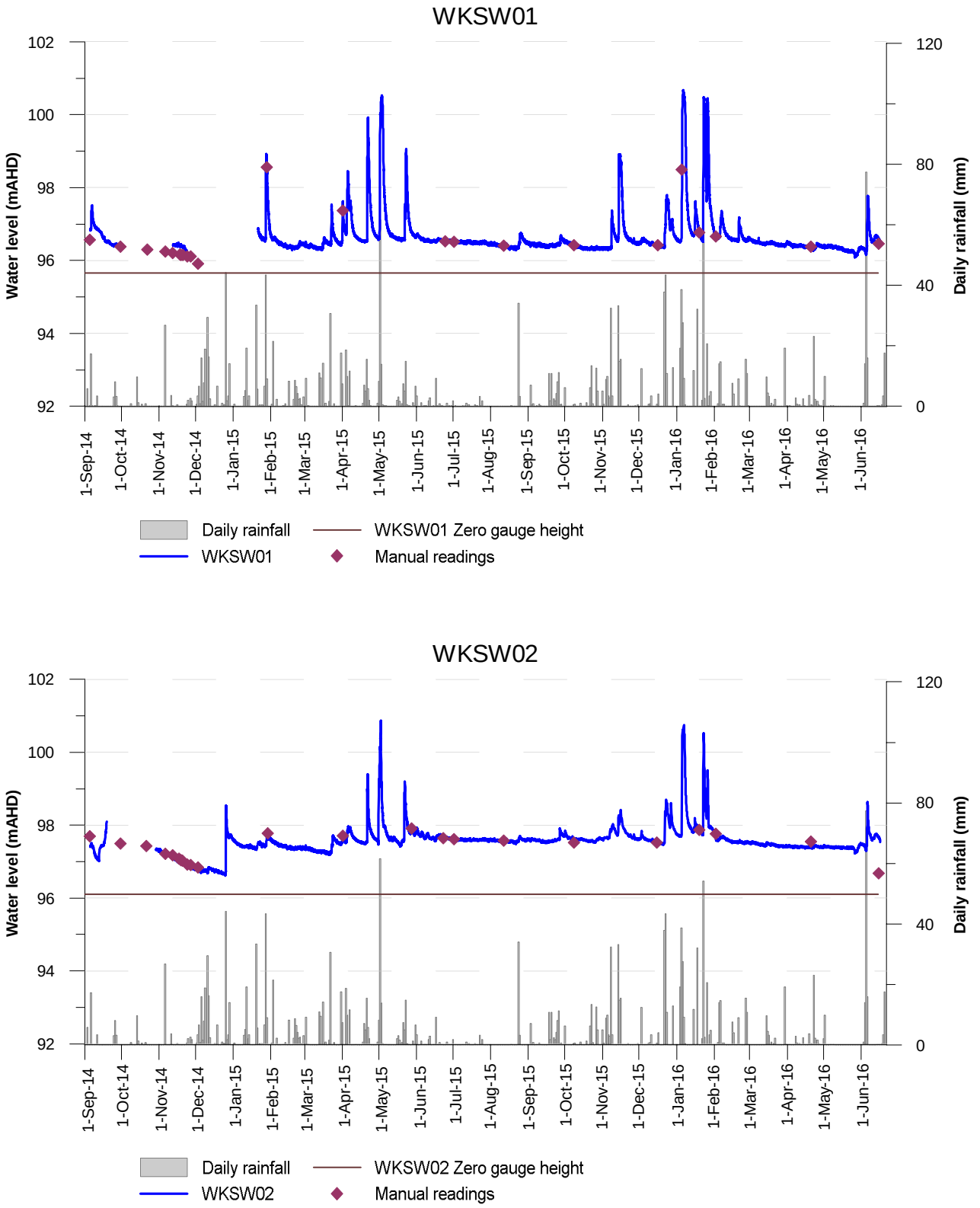


Figure A.27: WKSW01 and WKSW02 stream levels

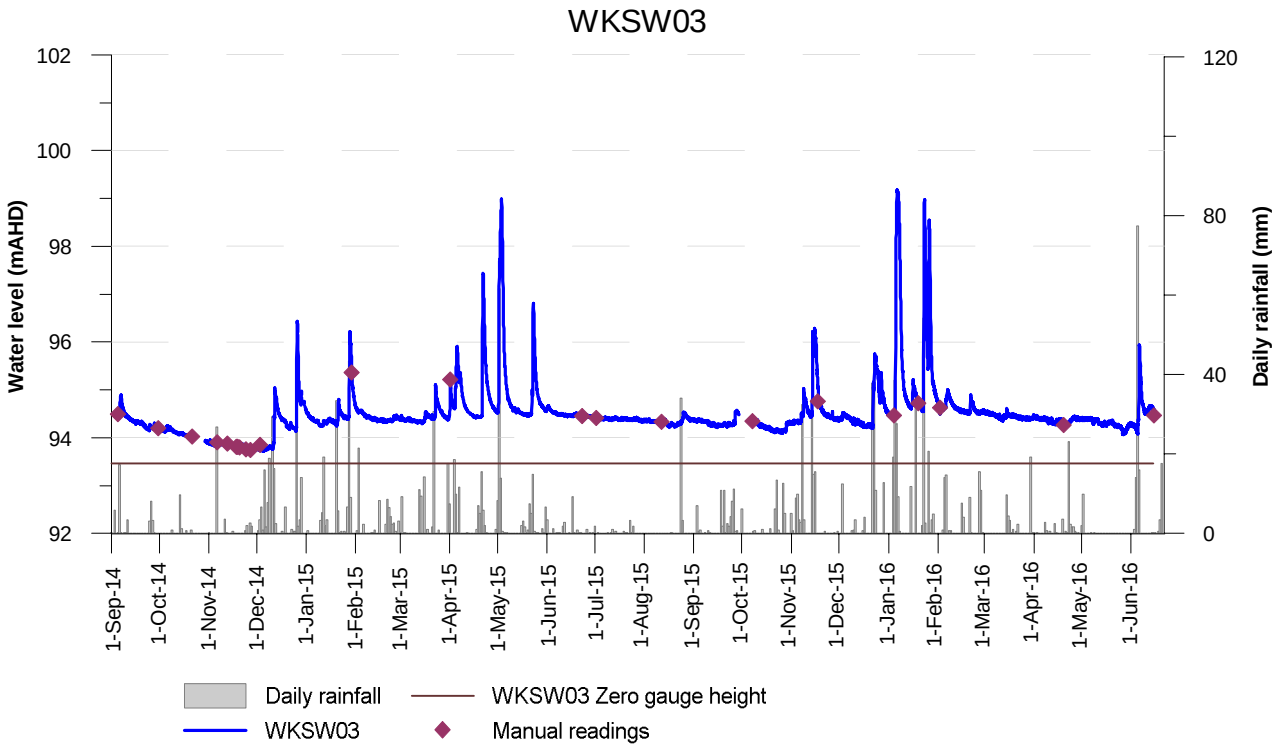


Figure A.28: WKSW03 stream levels

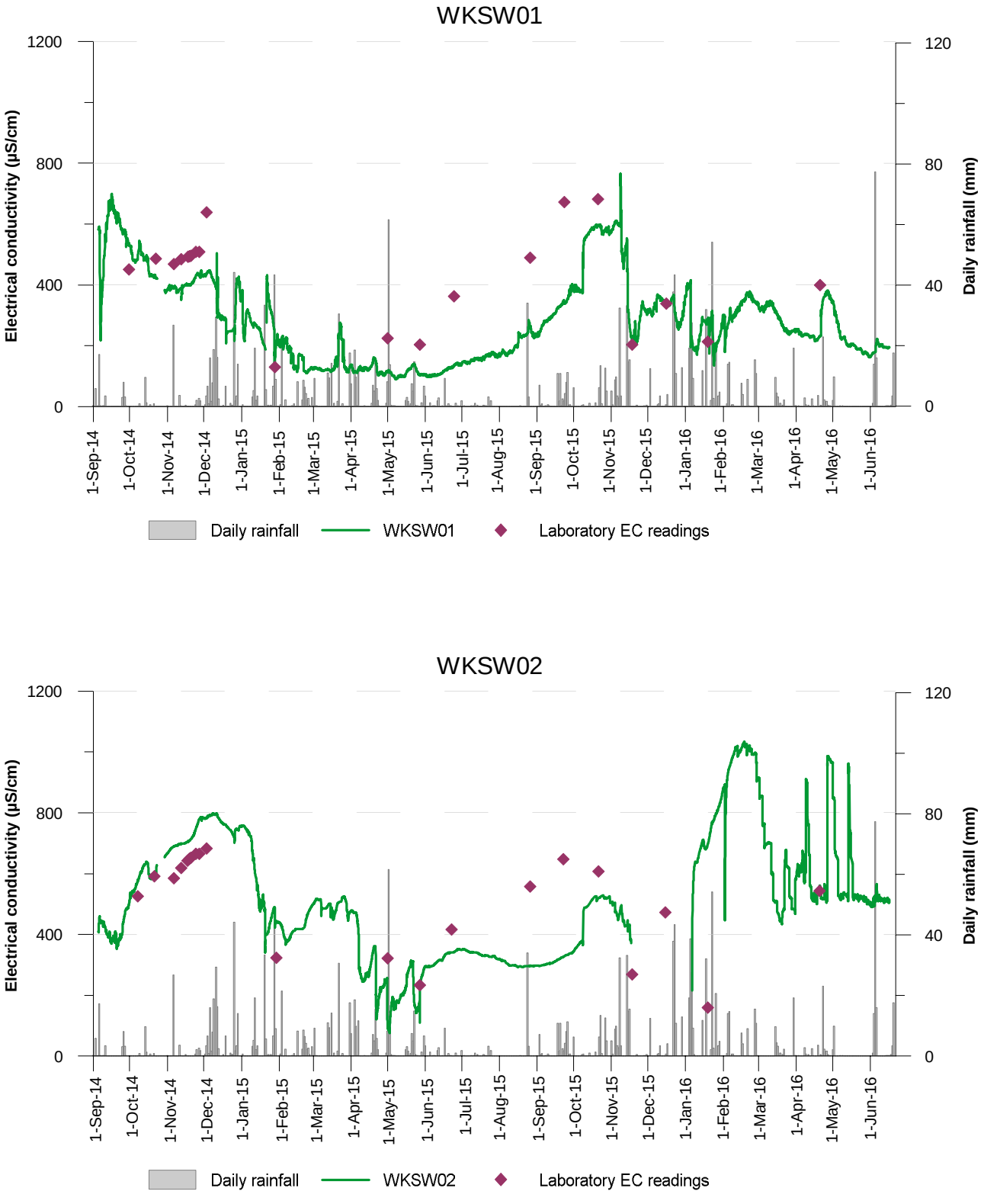


Figure A.29: WKSW01 and WKSW02 electrical conductivity

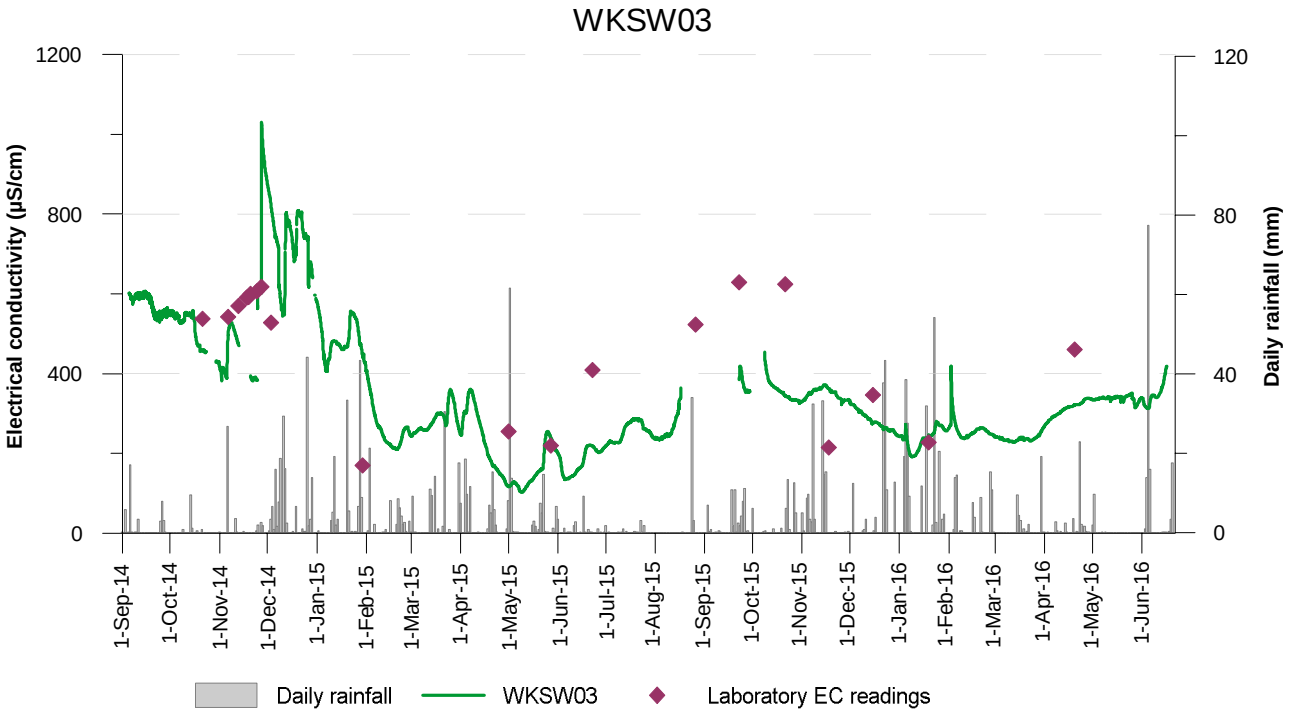
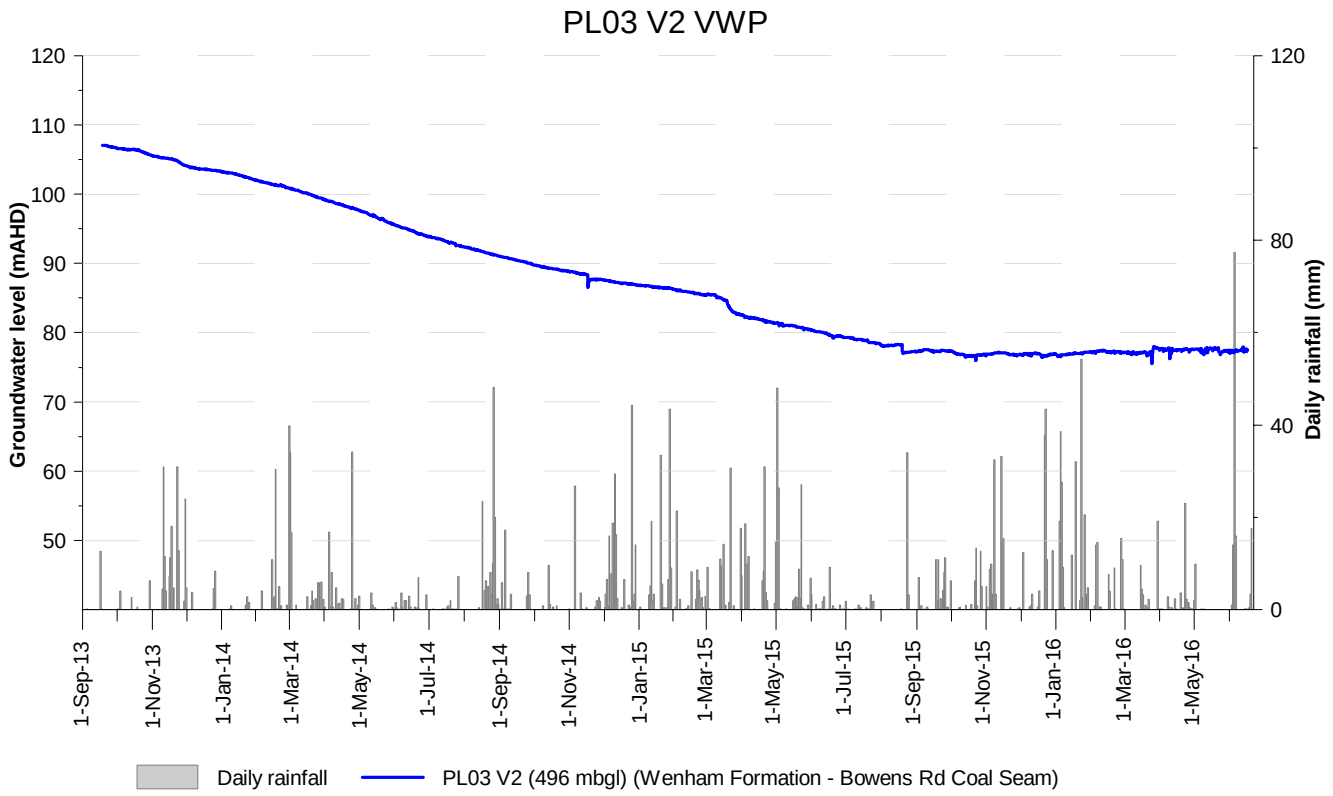


Figure A.30: WKSW03 electrical conductivity



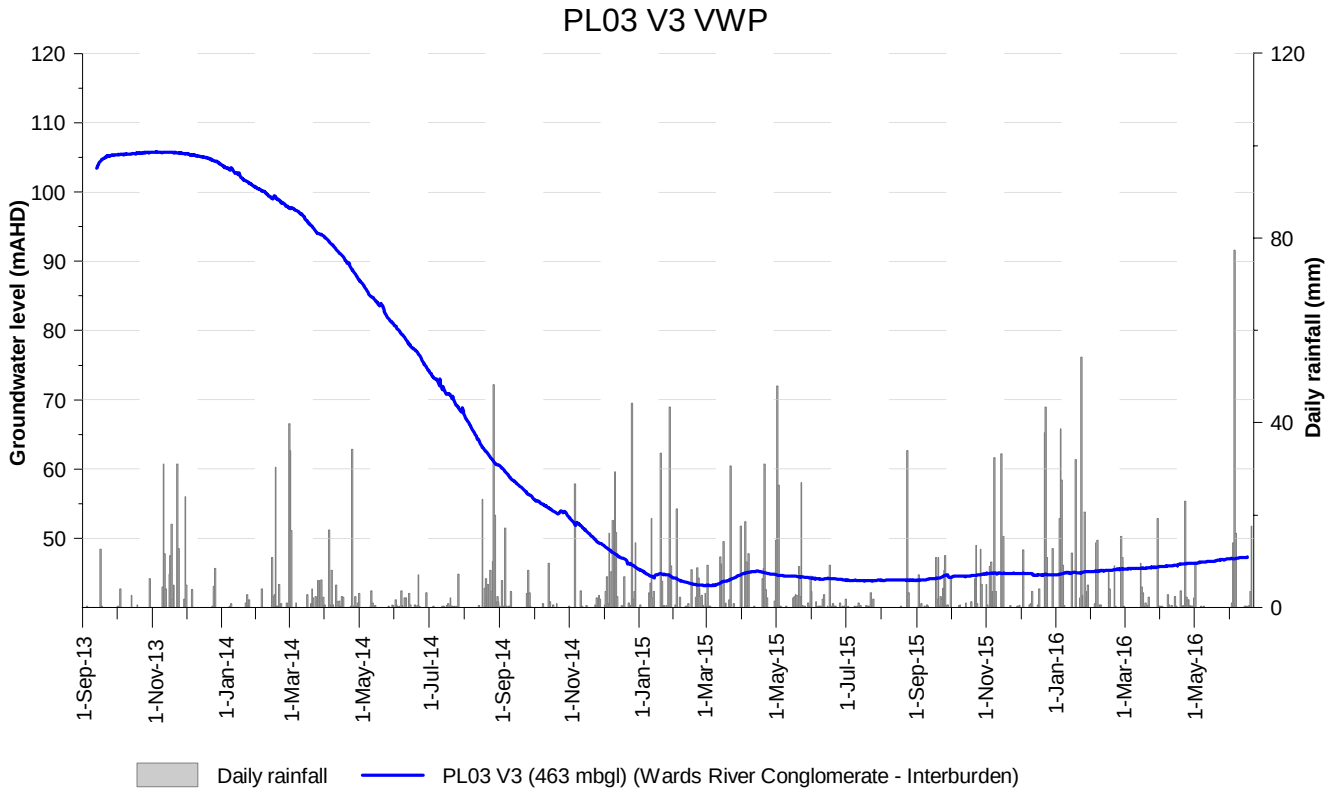
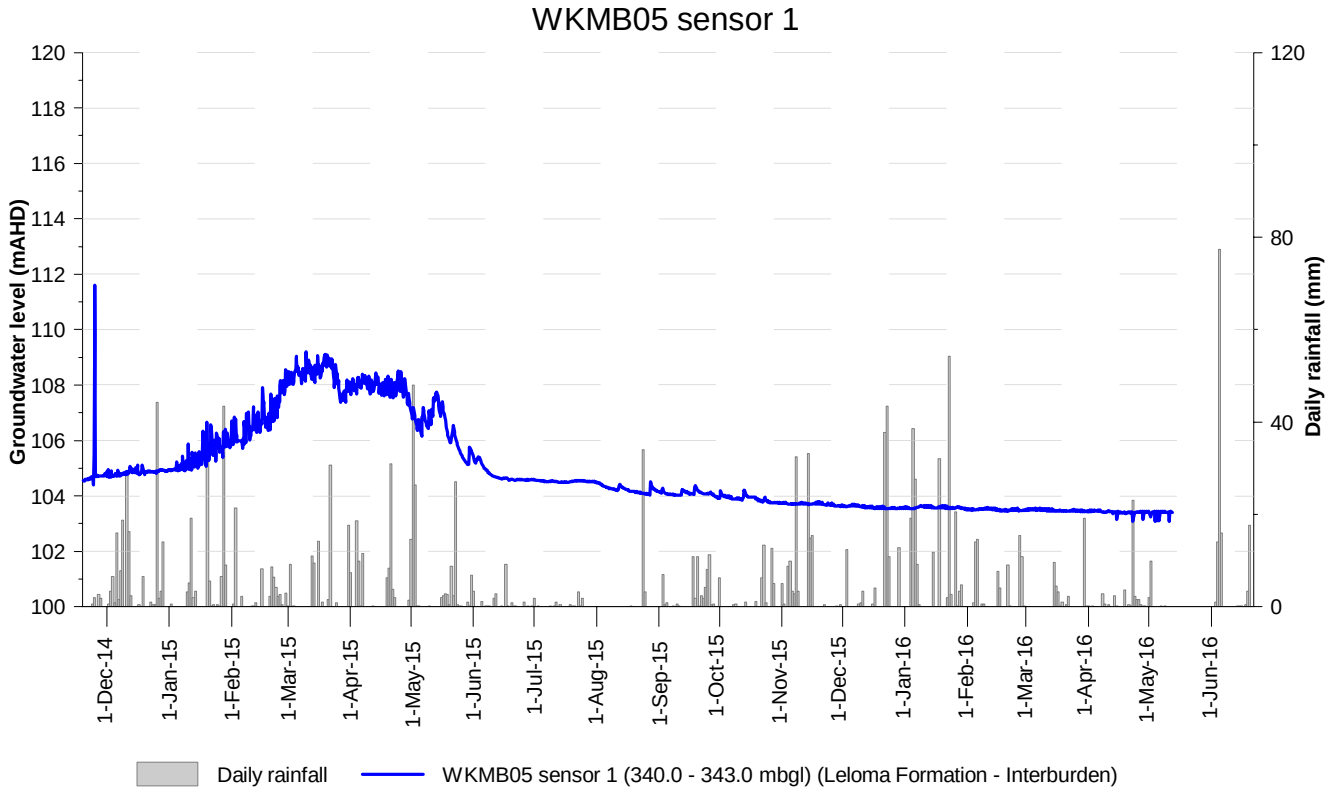


Figure A.31: PL03 VWP



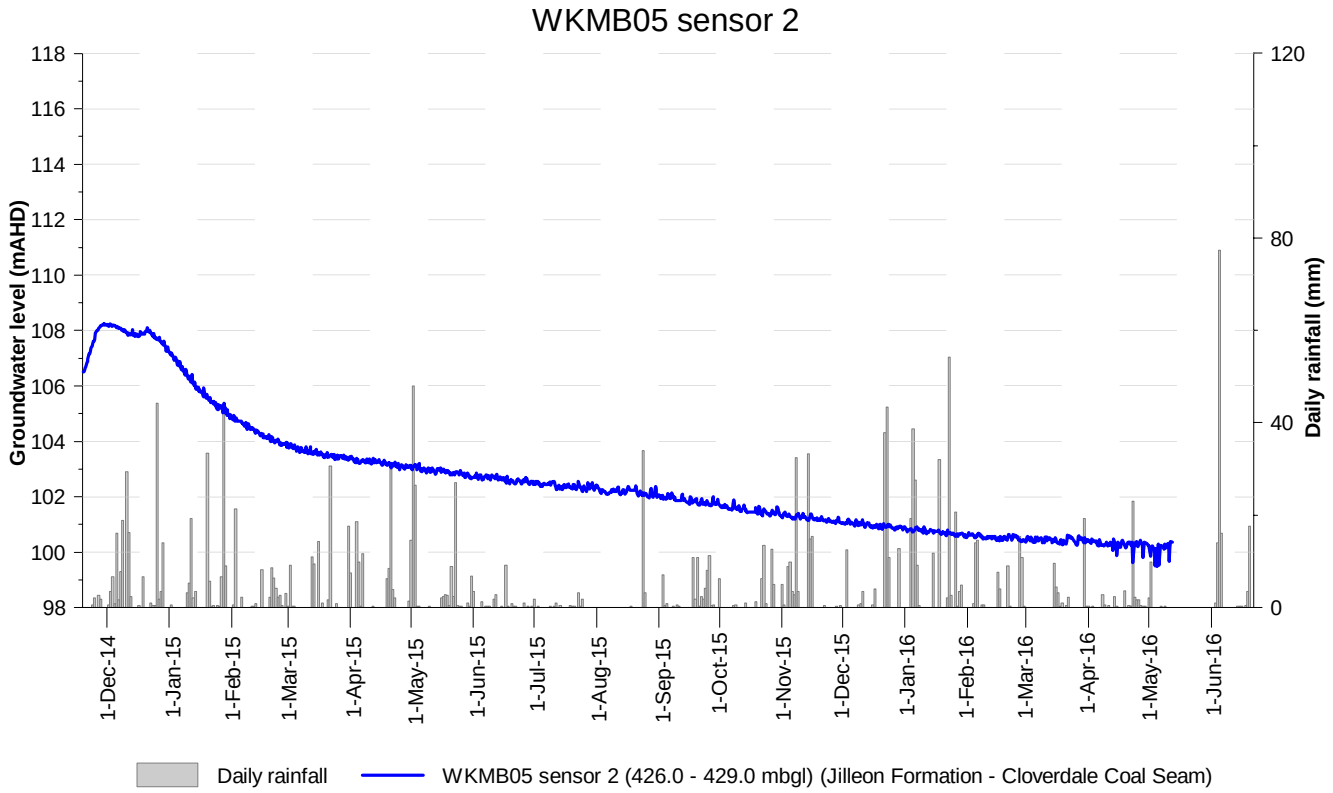
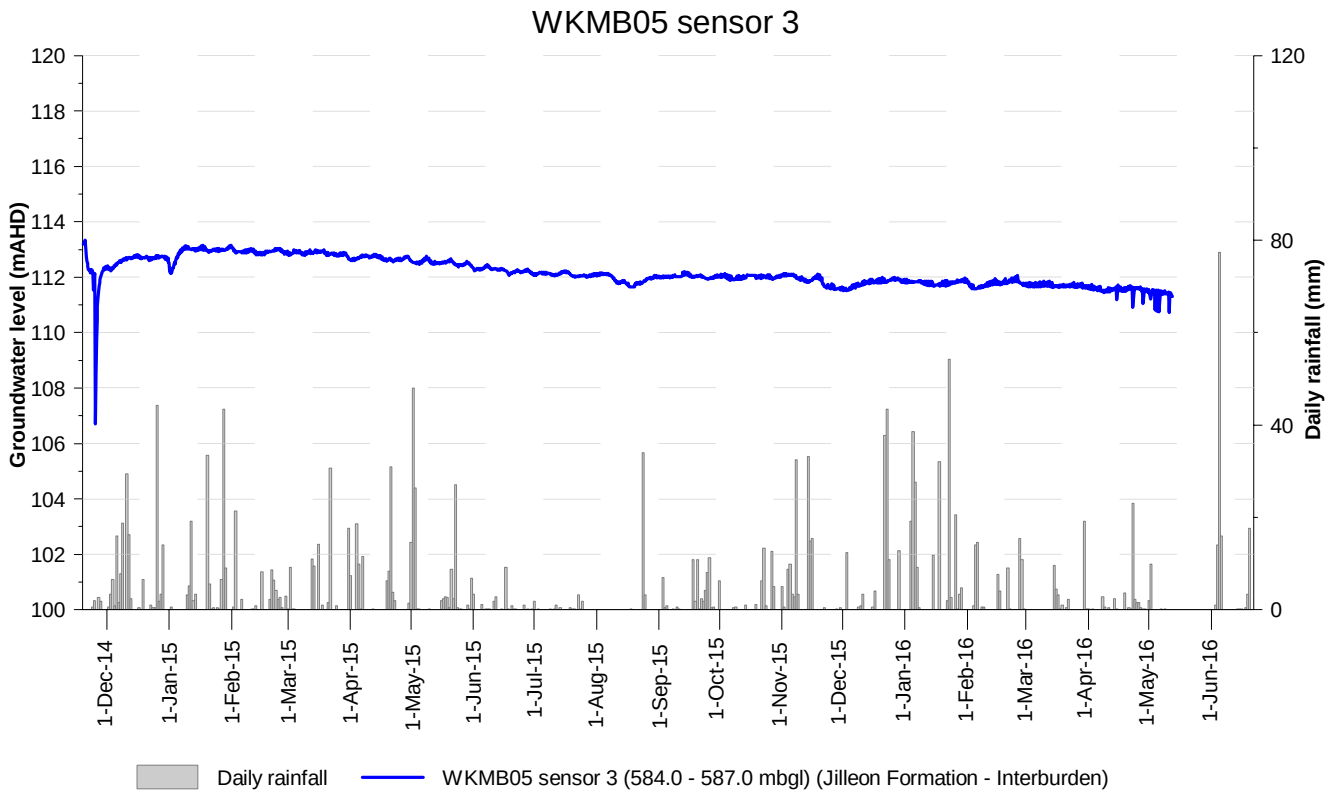


Figure A.32: WKMB05 sensors 1 and 2



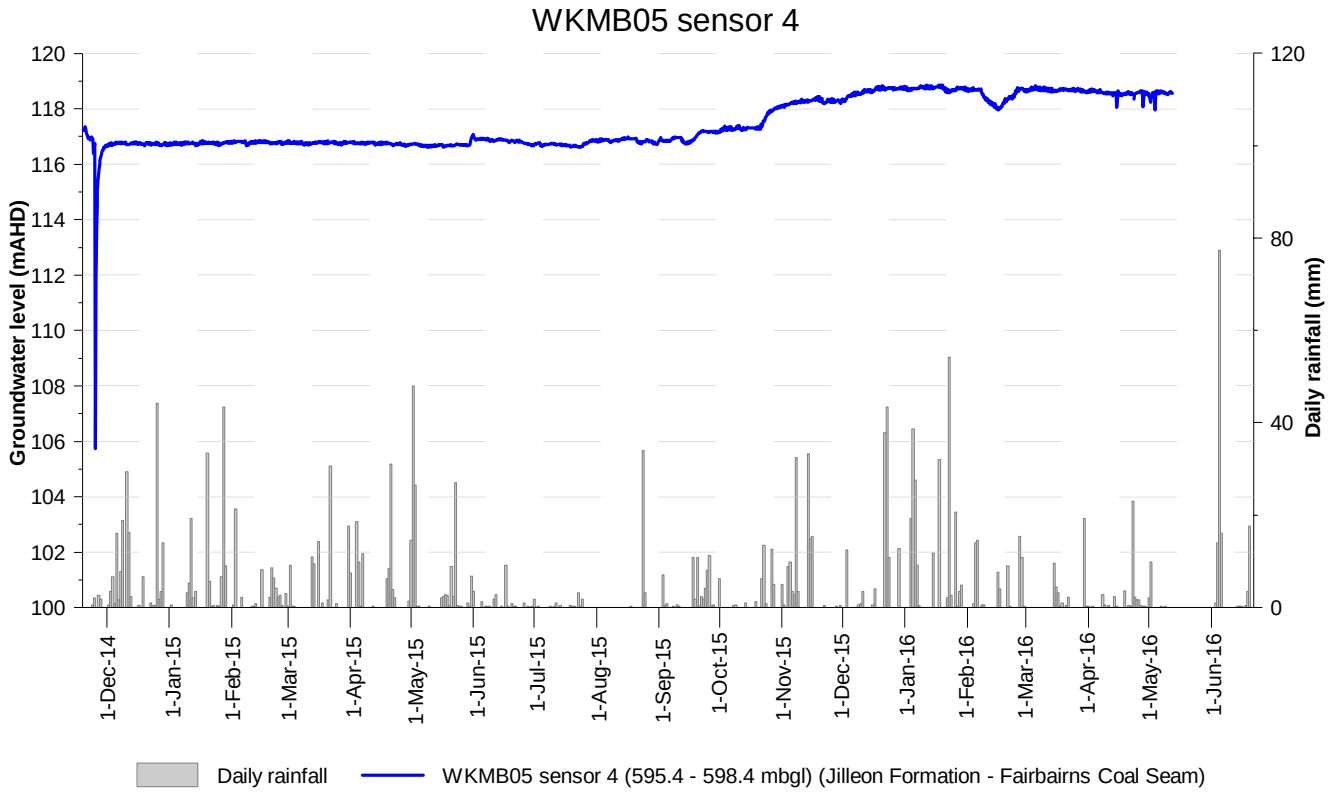
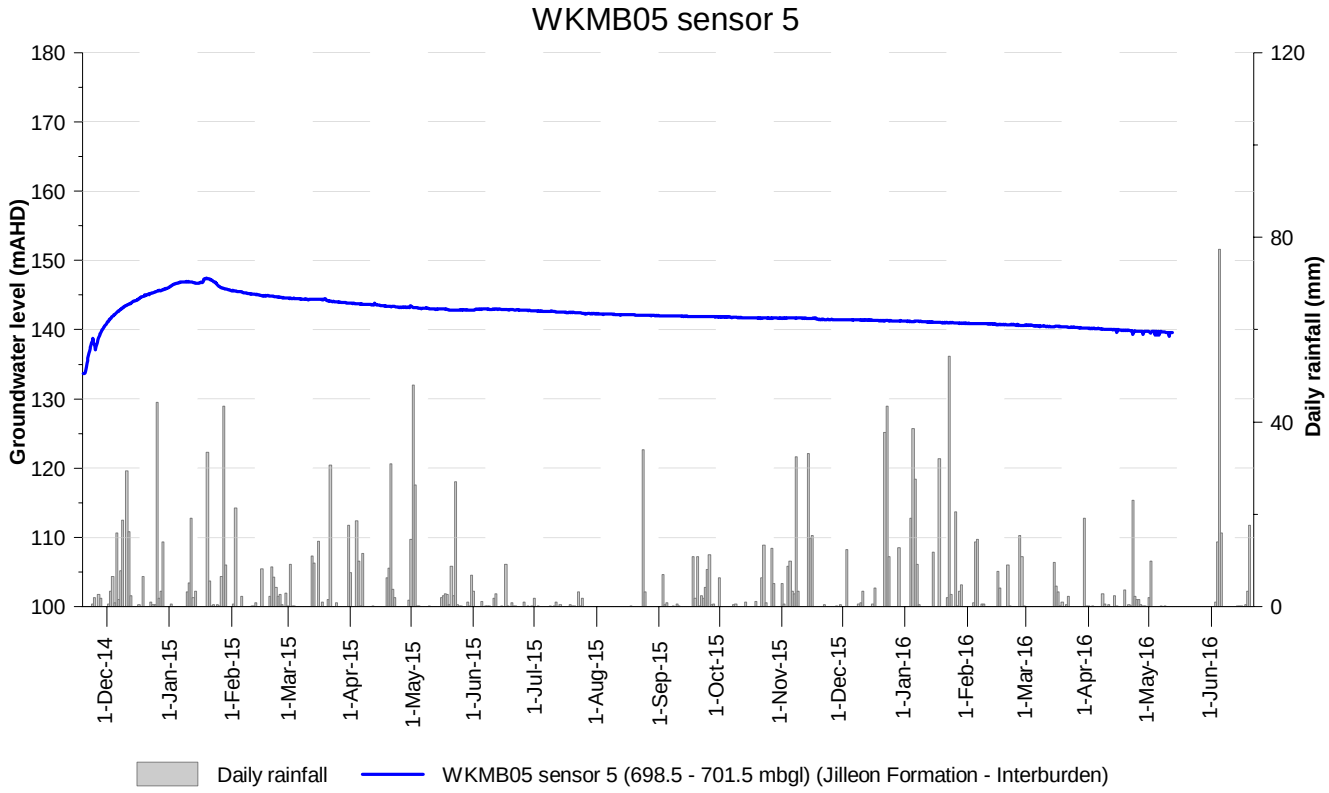


Figure A.33: WKMB05 sensors 3 and 4



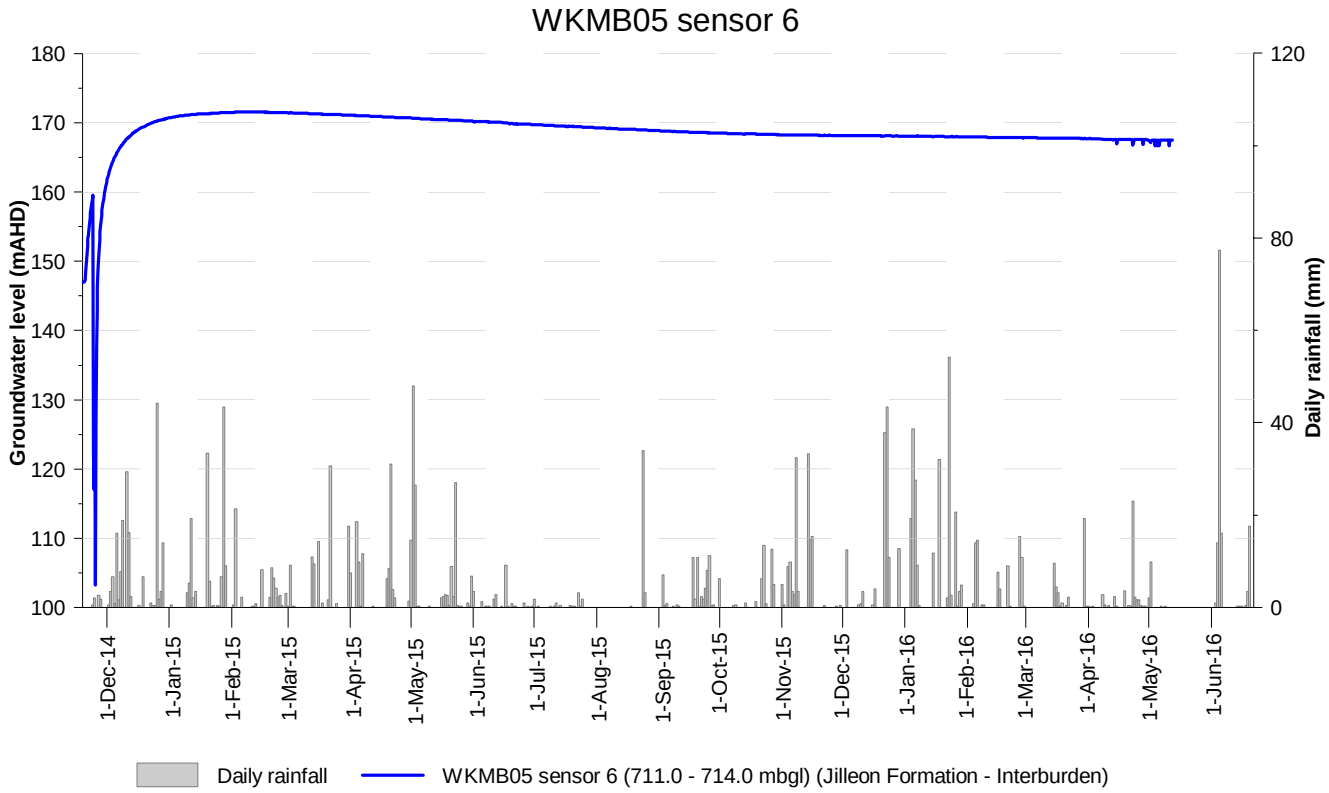


Figure A.34: WKMB05 sensors 5 and 6

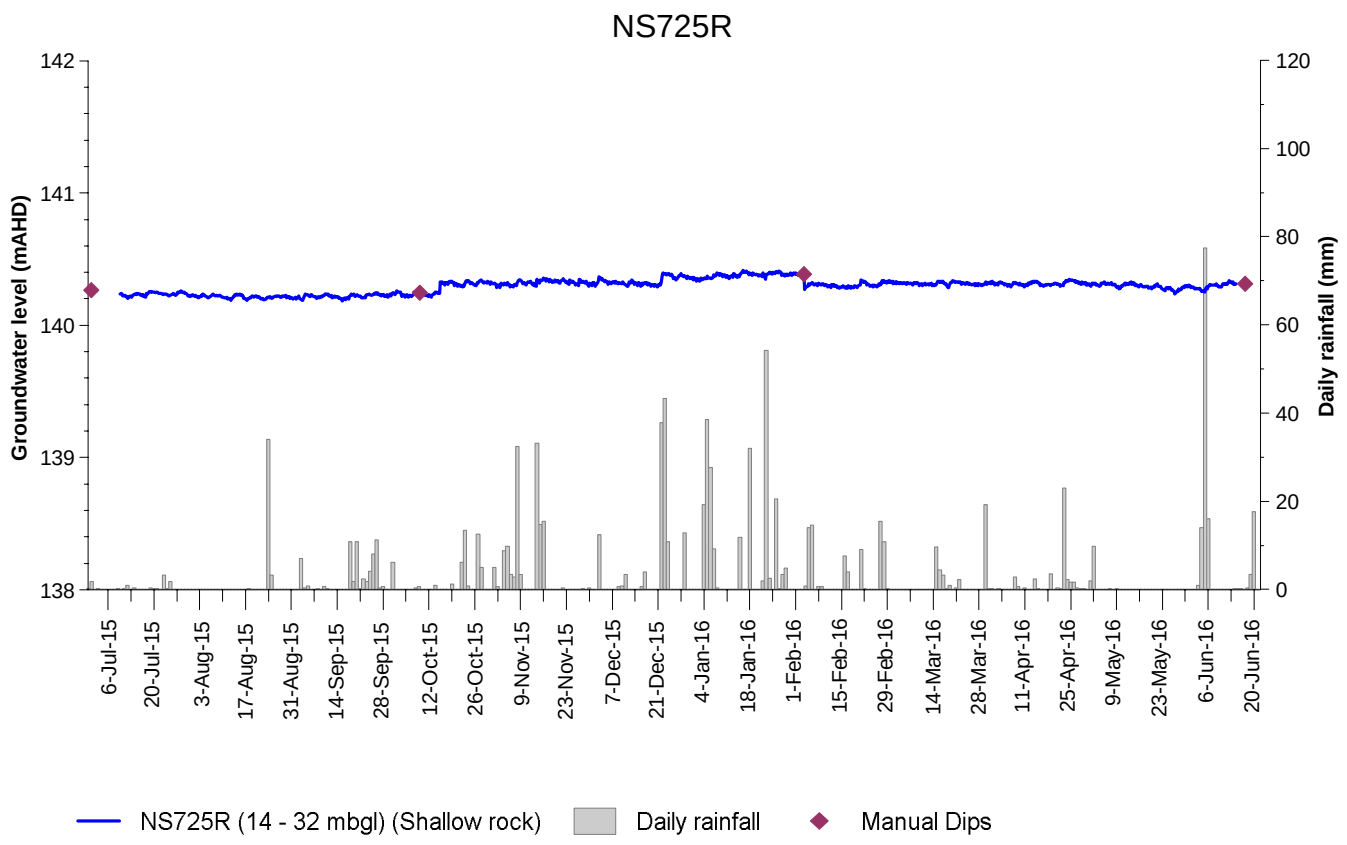


Figure A.35: NS725R monitoring bore