

Plot Addendum**Plot Addendum**

The various plots produced to present the Detailed Model's calibration and verification also contain the Fast Model results to allow comparison between the models. Calibration and verification plots are followed by results of sensitivity tests and are listed below in the order in which they are compiled in the addendum.

Detailed Model – Tidal and Minor Flood Calibration and Verification**2013 DM Flood and Tide Calibration**

- Plot 1 DM & FM 2013 Lockyer Creek Water Level Gauges
- Plot 2 DM & FM 2013 Bremer River Water Level Gauges
- Plot 3 DM & FM 2013 Brisbane River Water Level Gauges
- Plot 4 DM & FM 2013 Centenary Bridge Flow Recordings
- Plot 5 DM & FM 2013 Mid-Brisbane and Lower Brisbane River Longitudinal Profiles
- Plot 6 DM & FM 2013 Lockyer and Bremer River Longitudinal Profiles

1996 DM Flood Verification

- Plot 7 DM & FM 1996 Lockyer Creek Water Level Gauges
- Plot 8 DM & FM 1996 Bremer River Water Level Gauges
- Plot 9 DM & FM 1996 Brisbane River Water Level Gauges

1999 DM Flood Verification

- Plot 10 DM & FM 1999 Lockyer Creek Water Level Gauges
- Plot 11 DM & FM 1999 Bremer River Water Level Gauges
- Plot 12 DM & FM 1999 Brisbane River Water Level Gauges

Detailed Model – Major Flood Calibration and Verification**2011 DM Flood Calibration**

- Plot 13 DM & FM 2011 Lockyer Creek Water Level Gauges
- Plot 14 DM & FM 2011 Bremer River Water Level Gauges
- Plot 15 DM & FM 2011 Brisbane River Water Level Gauges
- Plot 16 DM & FM 2011 Centenary Bridge Flow Recordings
- Plot 17 DM & FM 2011 Mid-Brisbane and Lower Brisbane River Longitudinal Profiles
- Plot 18 DM & FM 2011 Lockyer and Bremer River Longitudinal Profiles

1974 DM Flood Verification

- Plot 19 DM & FM 1974 Lockyer Creek Water Level Gauges
- Plot 20 DM & FM 1974 Bremer River Water Level Gauges
- Plot 21 DM & FM 1974 Brisbane River Water Level Gauges
- Plot 22 DM & FM 1974 Brisbane River Water Level Additional Gauges
- Plot 23 DM & FM 1974 Centenary Bridge Flow Recordings
- Plot 24 DM & FM 1974 Mid-Brisbane and Lower Brisbane River Longitudinal Profiles

- Plot 25 DM & FM 1974 Lockyer and Bremer River Longitudinal Profiles

Detailed Model – Longitudinal Profiles for all Events

- Plot 26 DM & FM Calibration and Extreme Events Brisbane and Lower Brisbane River Longitudinal Profiles
- Plot 27 DM & FM Calibration and Extreme Events Lockyer and Bremer River Longitudinal Profiles

Detailed Model – Rating Curve Review

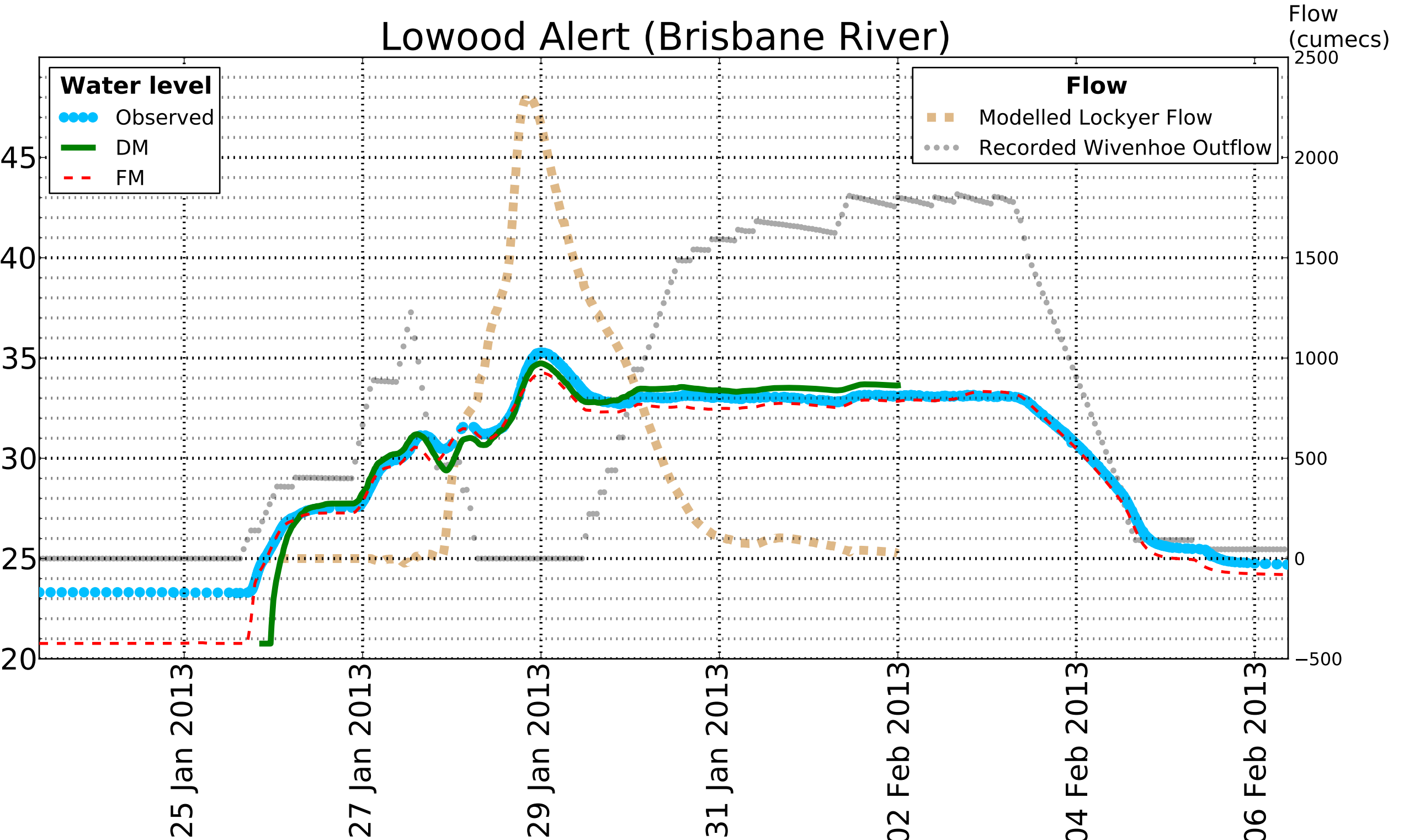
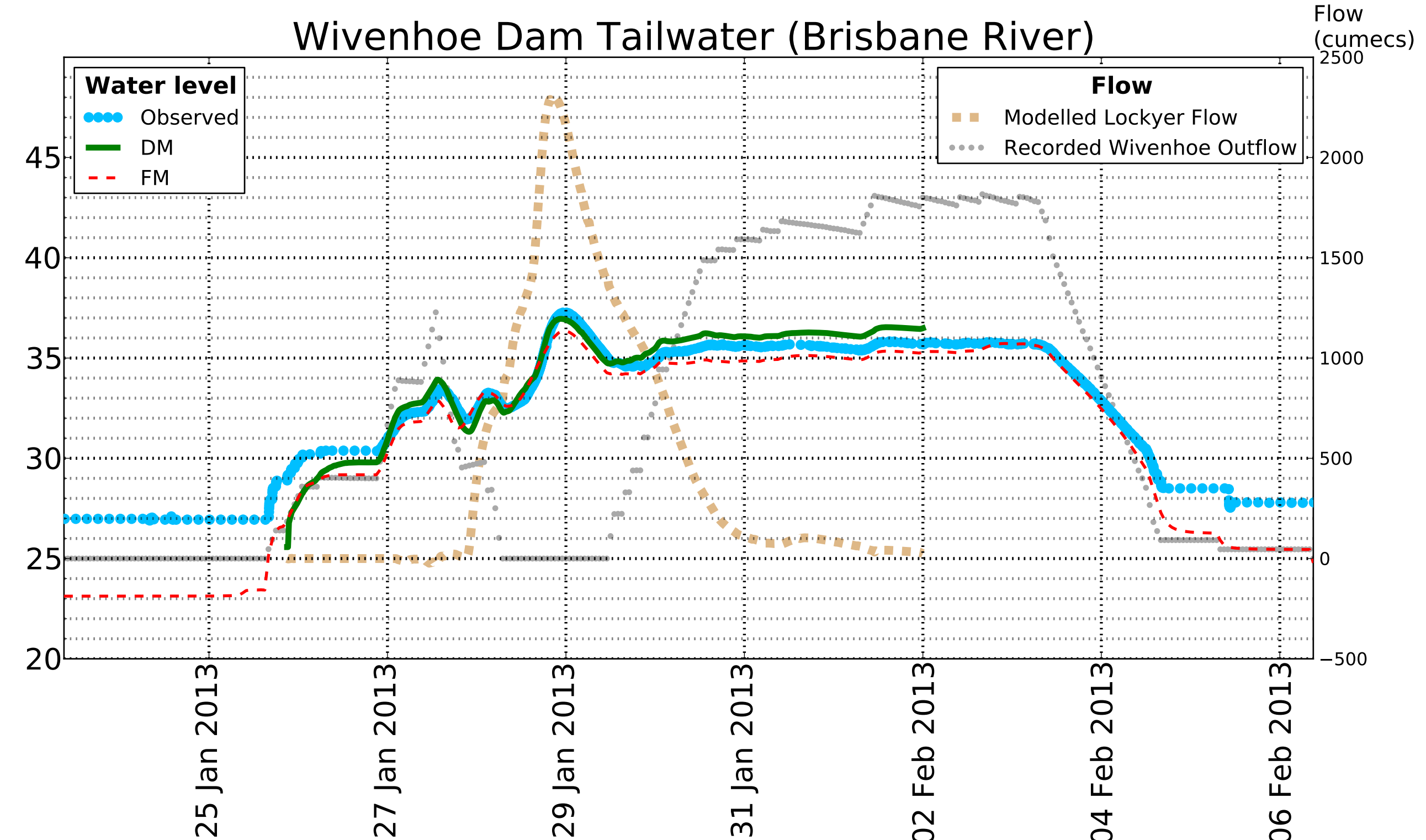
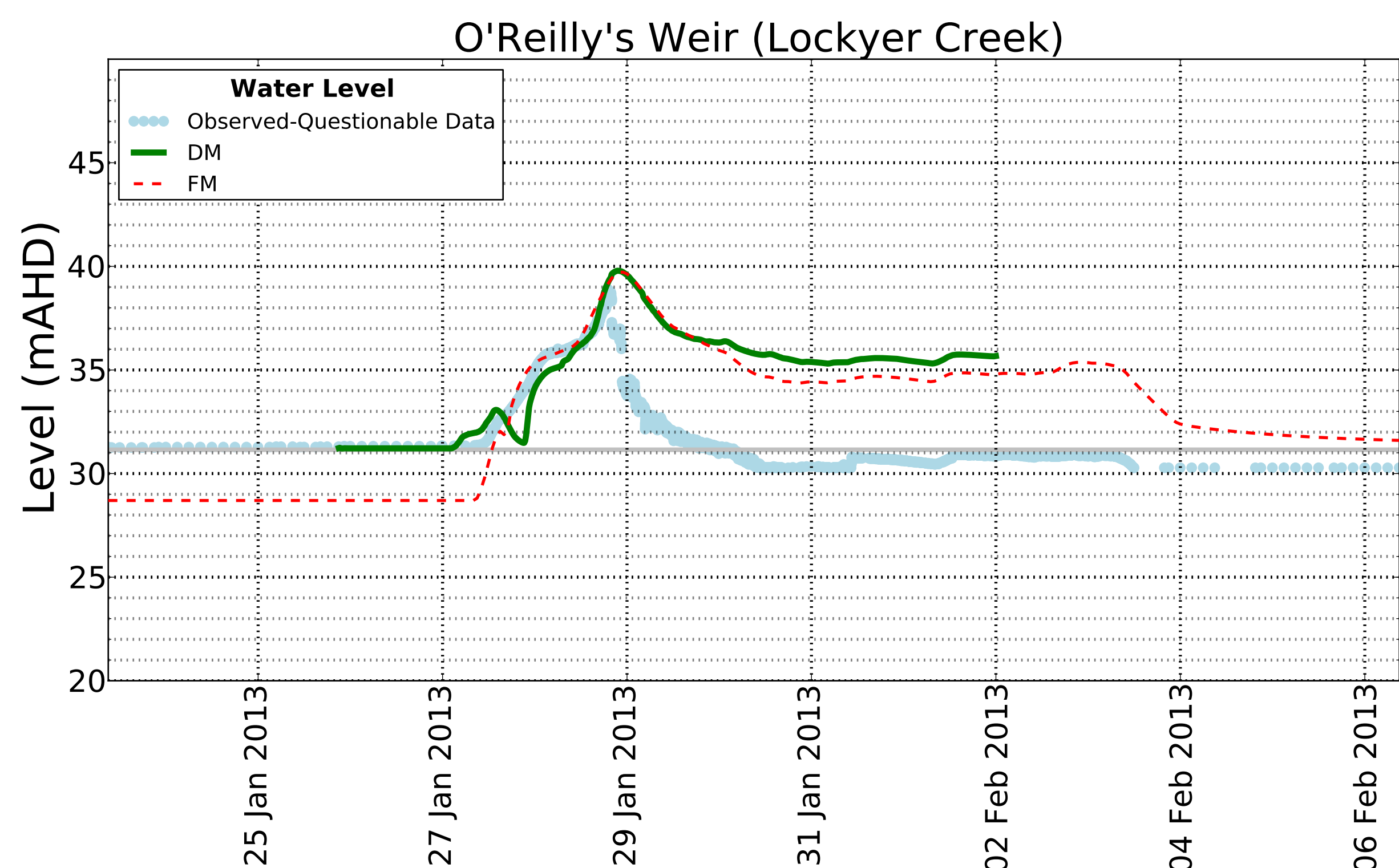
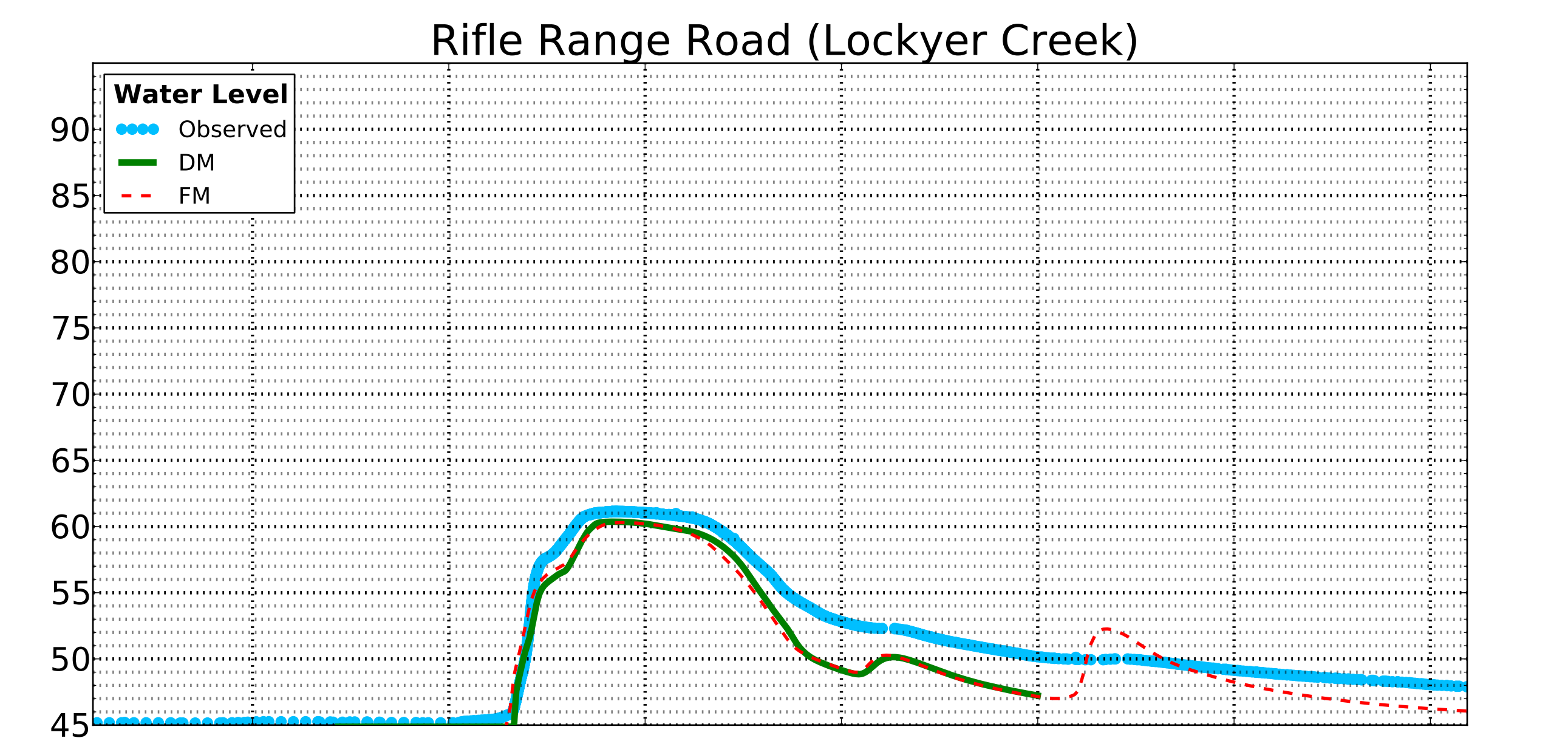
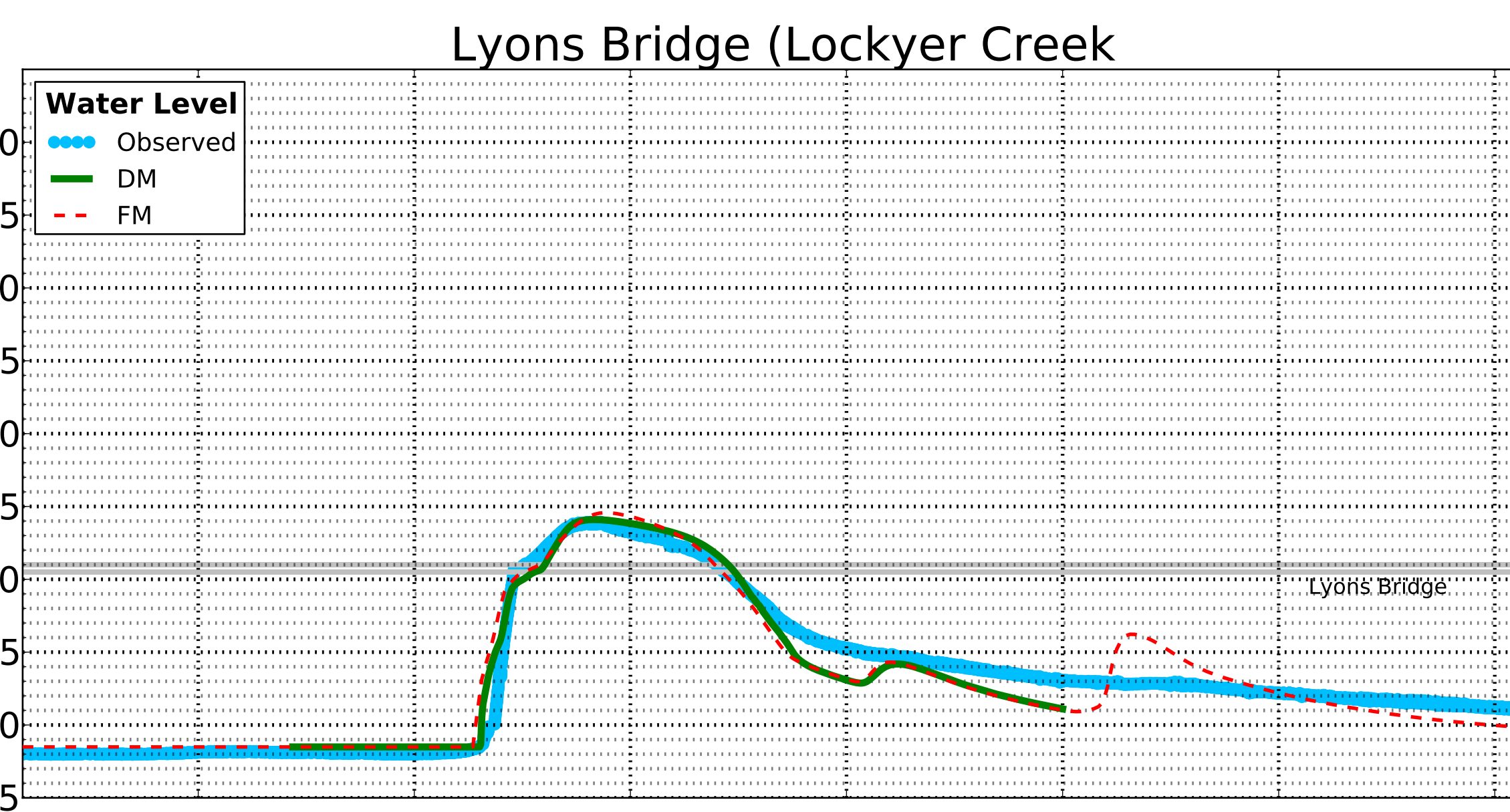
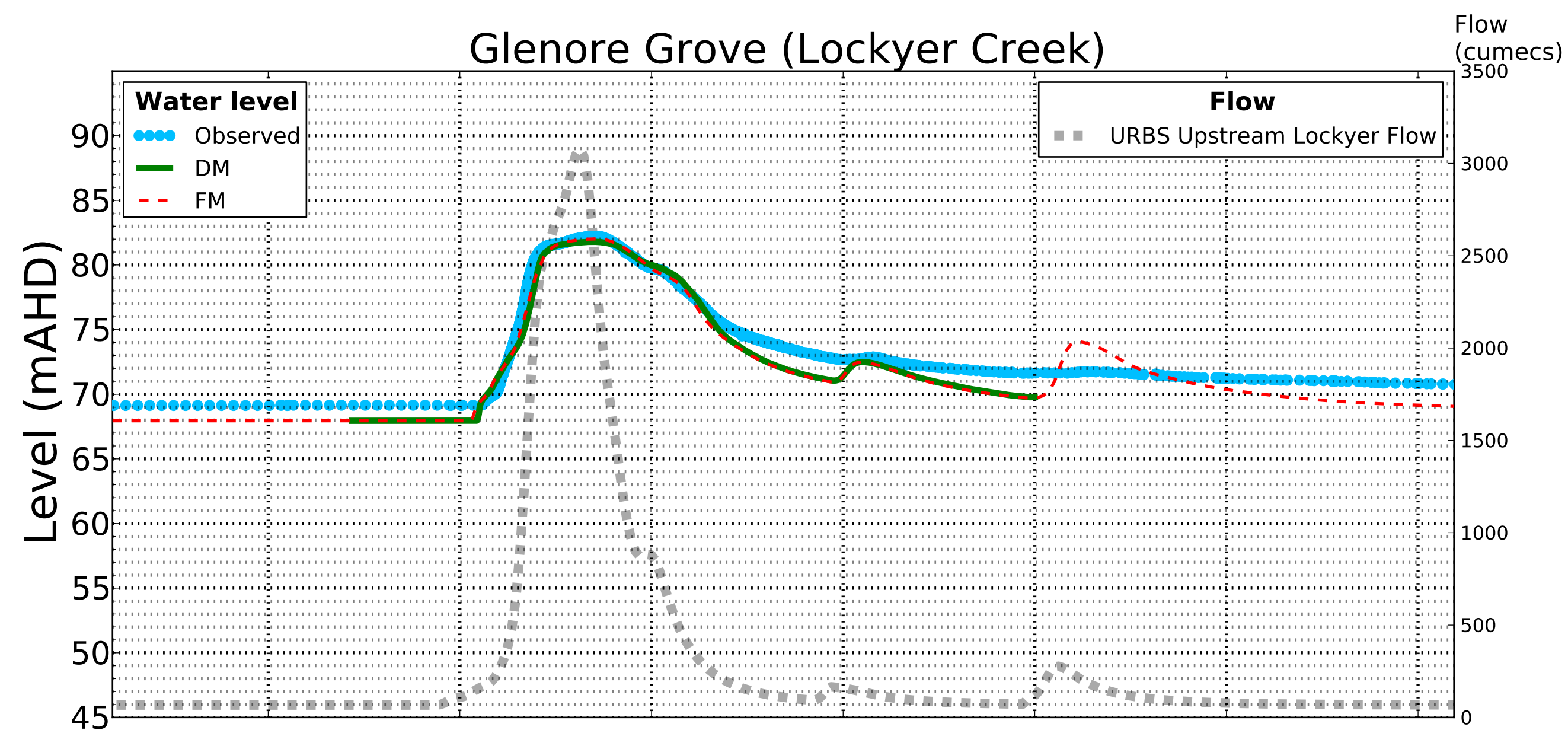
- Plot 28 DM Historical Calibration Events Rating Curve Comparison – Sheet A
- Plot 29 DM Historical Calibration Events Rating Curve Comparison – Sheet B
- Plot 30 DM Historical Calibration Events Rating Curve Comparison – Sheet C
- Plot 31 DM & FM Extreme Event (8 x 1974) Rating Curve Comparison – Sheet A
- Plot 32 DM & FM Extreme Event (8 x 1974) Rating Curve Comparison – Sheet B
- Plot 33 DM & FM Extreme Event (8 x 1974) Rating Curve Comparison – Sheet C

Detailed Model Sensitivity Tests**ST02 Detailed Model Manning's n and Bend Loss Values ±10%**

- Plot 34 ST02 DM Manning's n and Bend Loss ±10% – 2011 Lockyer Creek Water Level Gauges
- Plot 35 ST02 DM Manning's n and Bend Loss ±10% – 2011 Bremer River Water Level Gauges
- Plot 36 ST02 DM Manning's n and Bend Loss ±10% – 2011 Brisbane River Water Level Gauges
- Plot 37 ST02 DM Manning's n and Bend Loss ±10% – 2011 Brisbane River Longitudinal Profiles
- Plot 38 ST02 DM Manning's n and Bend Loss ±10% – 2011 Lockyer / Bremer Longitudinal Profiles
- Plot 39 ST02 DM Manning's n and Bend Loss ±10% – 2011 Centenary Bridge Flow Recordings
- Plot 40 ST02 DM 2011 Event Rating Curve Comparison – Sheet A
- Plot 41 ST02 DM 2011 Event Rating Curve Comparison – Sheet B
- Plot 42 ST02 DM 2011 Event Rating Curve Comparison – Sheet C

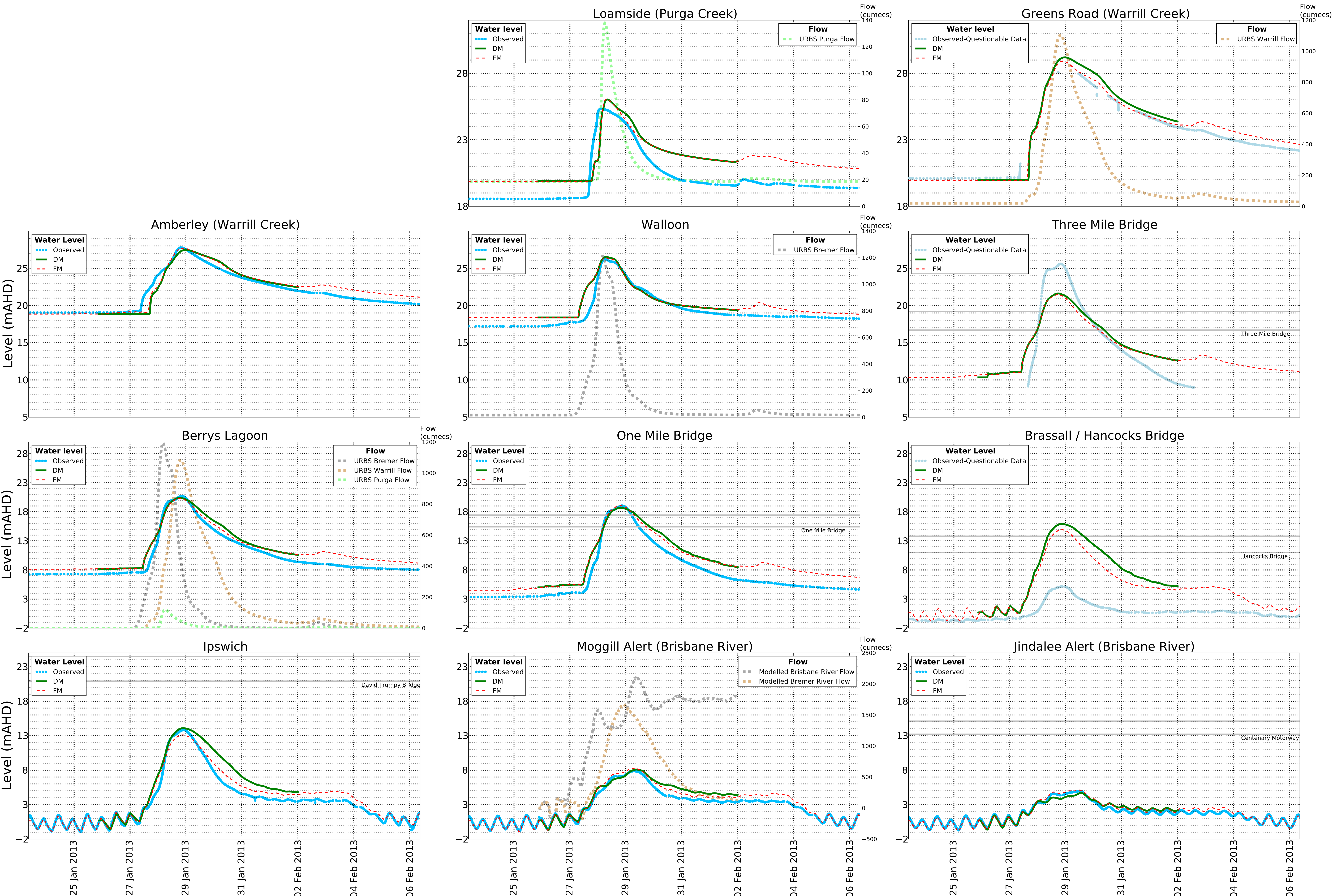
ST10 Detailed Model 20m Grid

- Plot 43 ST10 DM 20m Grid – 2011 Lockyer Creek Water Level Gauges
- Plot 44 ST10 DM 20m Grid – 2011 Bremer River Water Level Gauges
- Plot 45 ST10 DM 20m Grid – 2011 Brisbane River Water Level Gauges
- Plot 46 ST10 DM 20m Grid – 2011 Brisbane River Longitudinal Profiles
- Plot 47 ST10 DM 20m Grid – 2011 Lockyer / Bremer Longitudinal Profiles
- Plot 48 ST10 DM 20m Grid – 2011 Centenary Bridge Flow Recordings



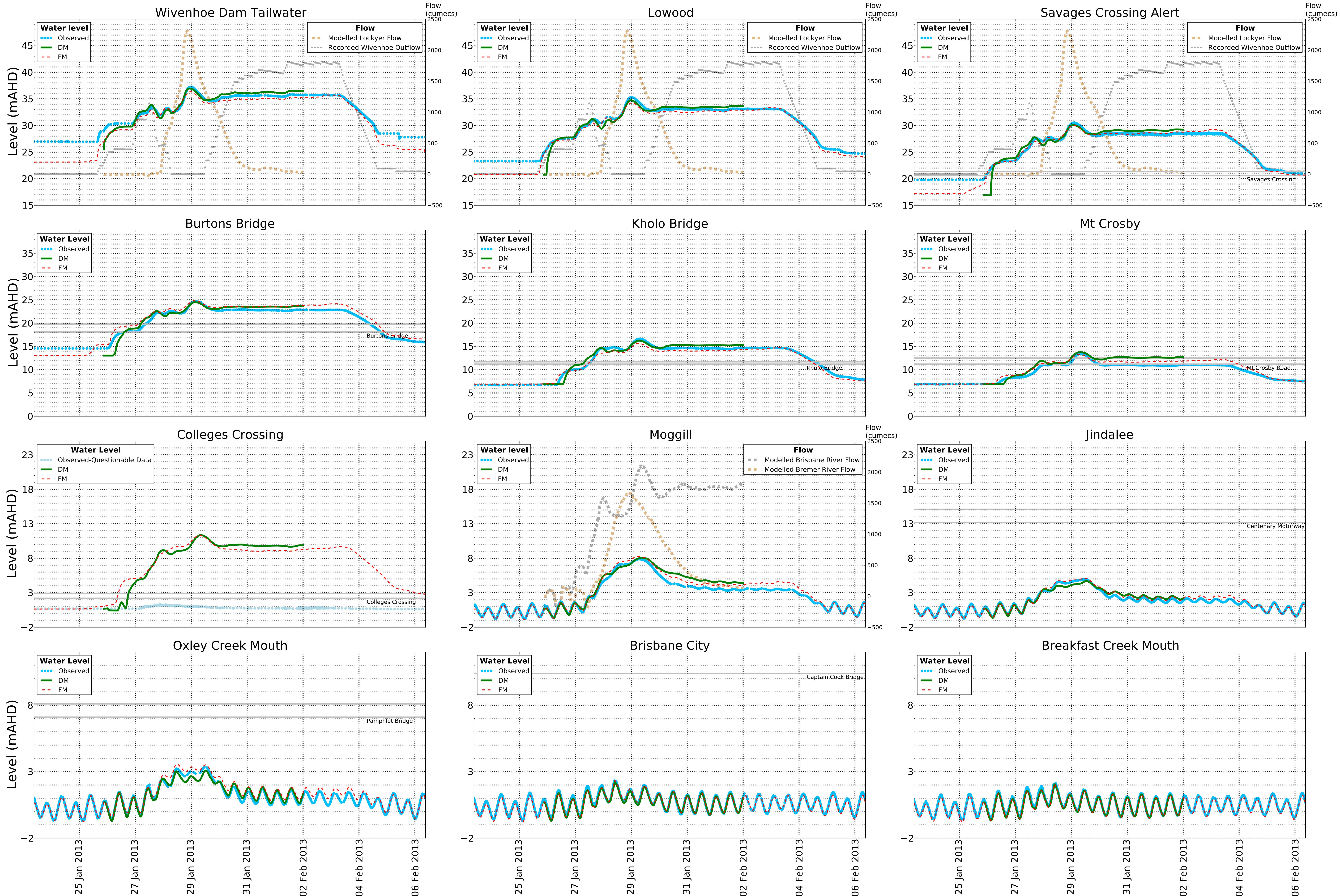
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 01 DM & FM 2013 Lockyer Creek Water Level Gauges



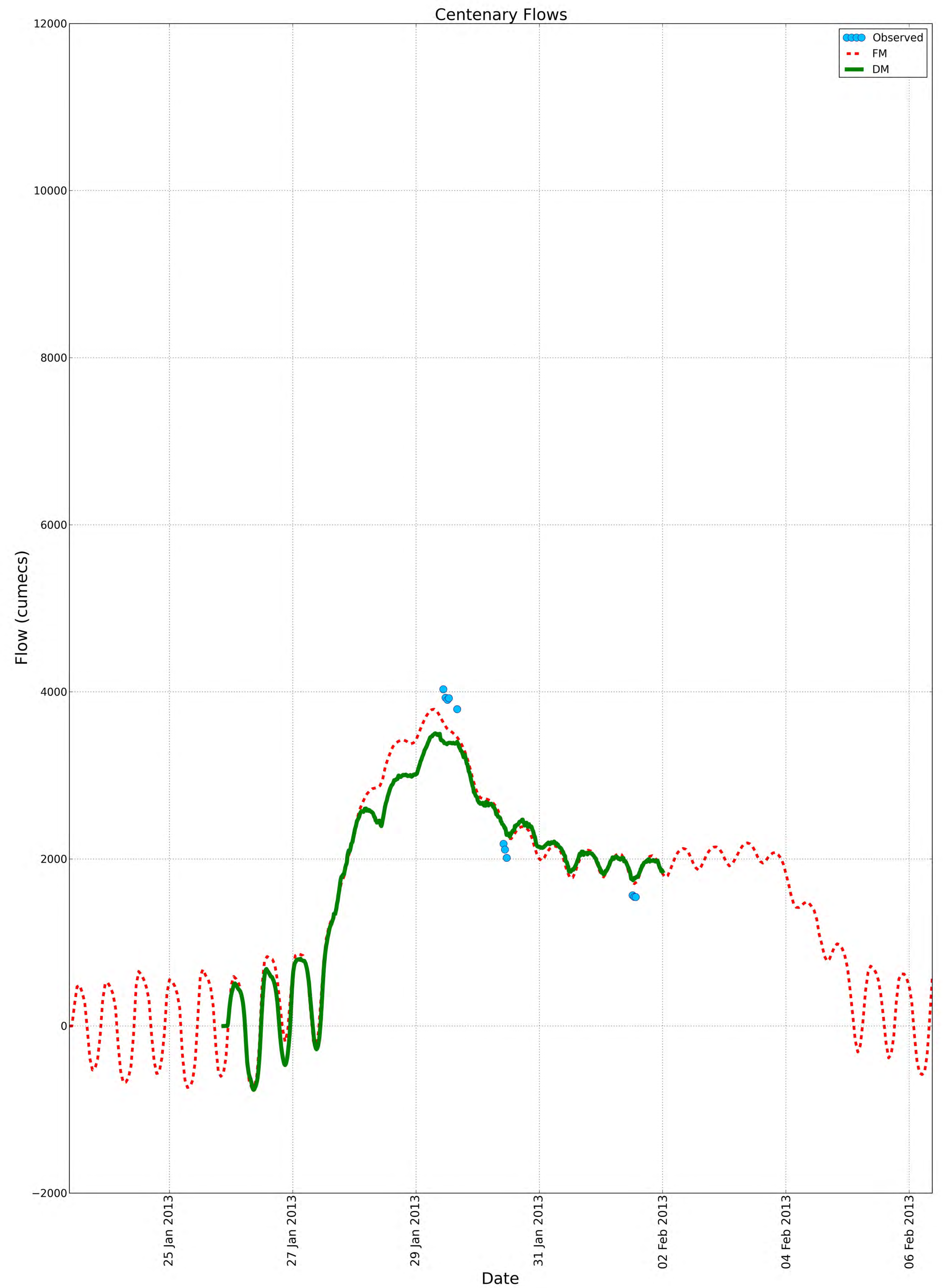
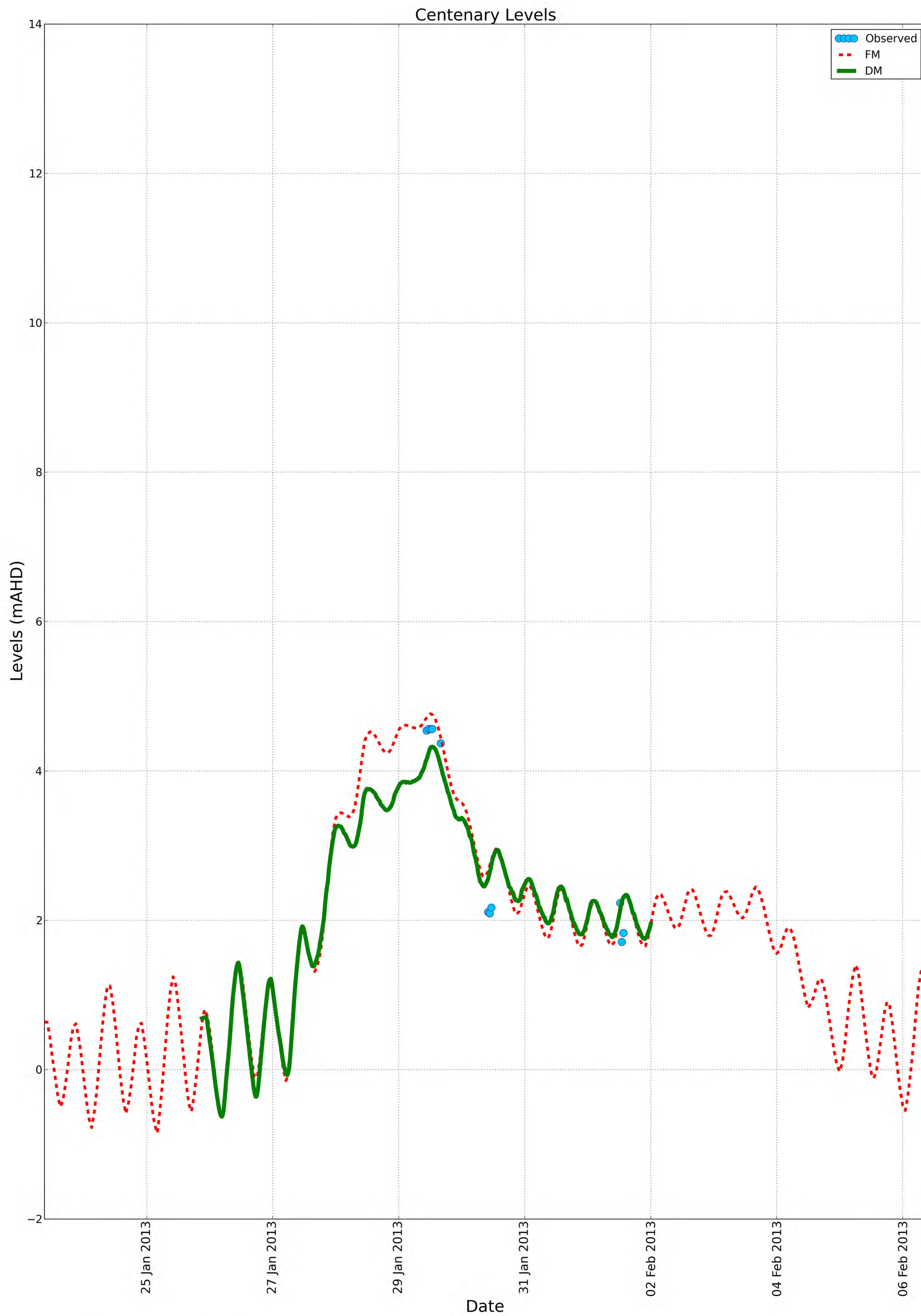
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 02 DM & FM 2013 Bremer River Water Level Gauges



Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 03 DM & FM 2013 Brisbane River Water Level Gauges



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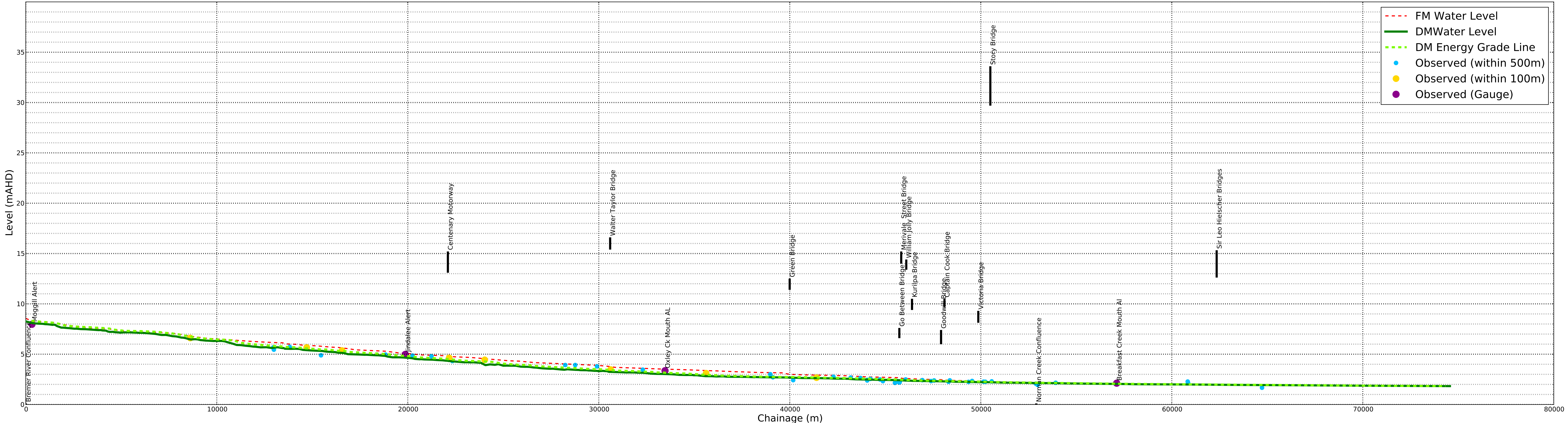
Fast Model Version: 0285 Detailed Model Version: 043

Plot 04 DM & FM 2013 Centenary Bridge Flow Recordings

Mid Brisbane



Lower Brisbane



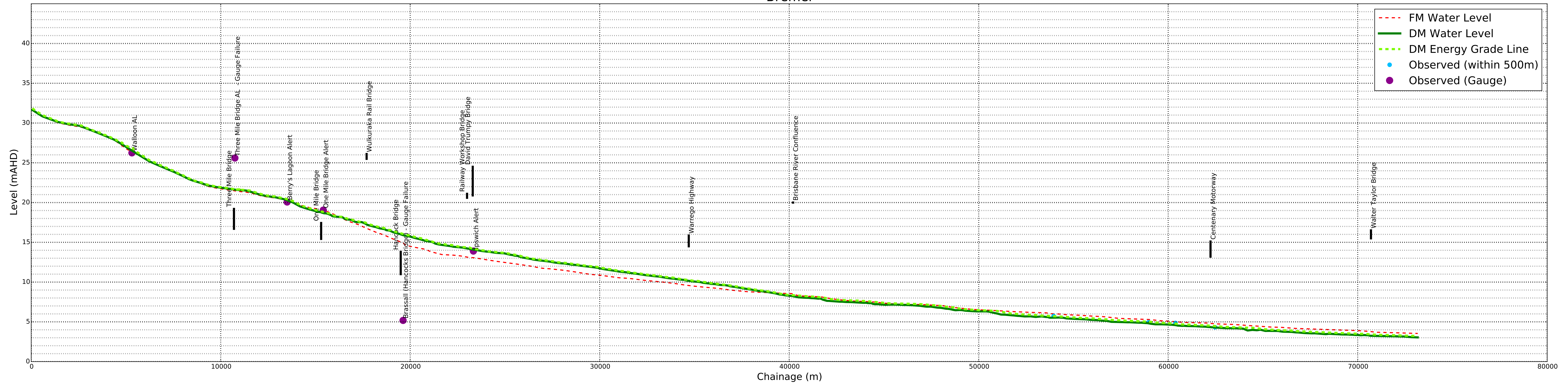
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 Fast Model Version: 0285 Detailed Model Version: 043

Plot 05 DM & FM 2013 Brisbane River Longitudinal Profiles

Lockyer

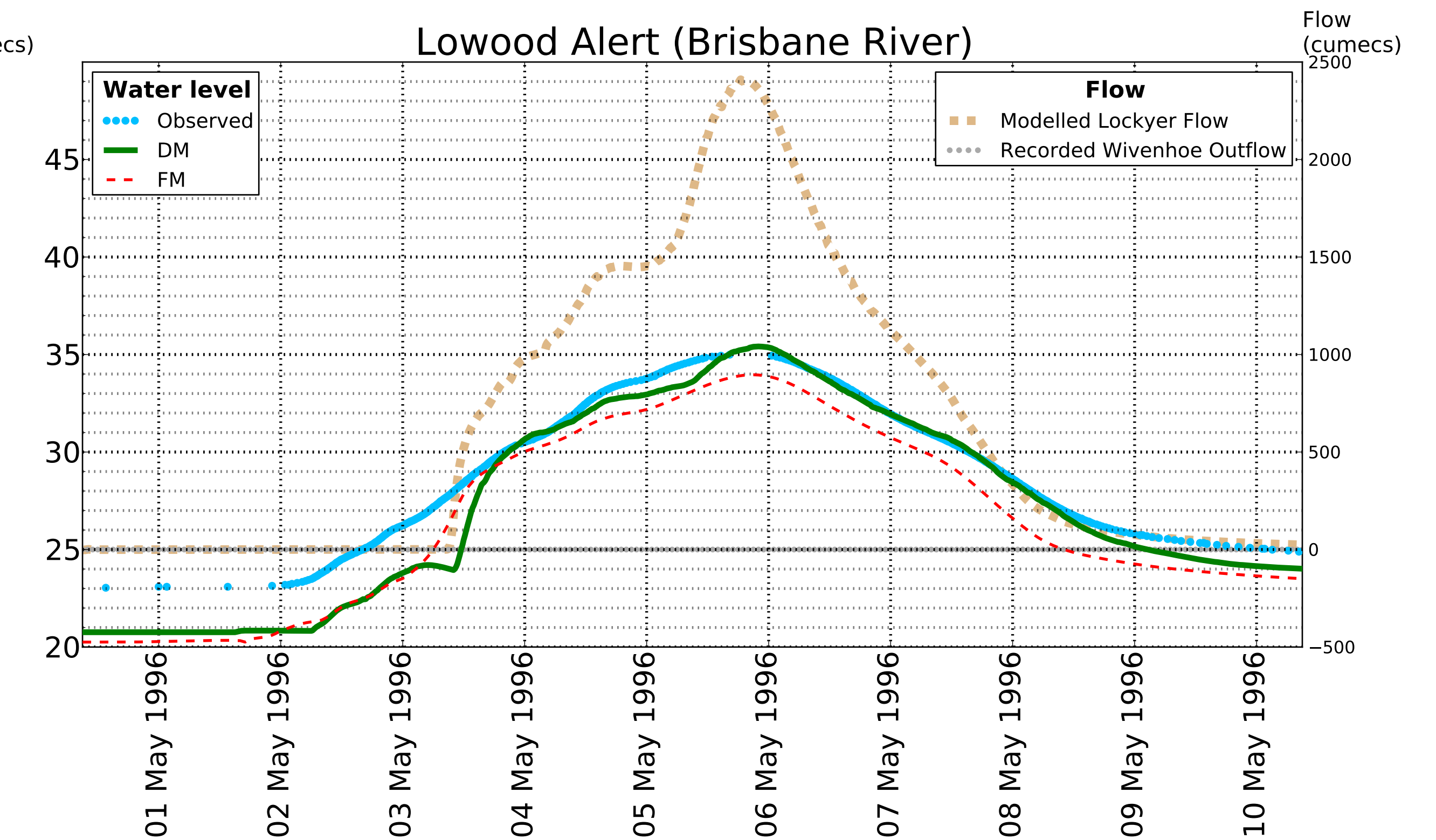
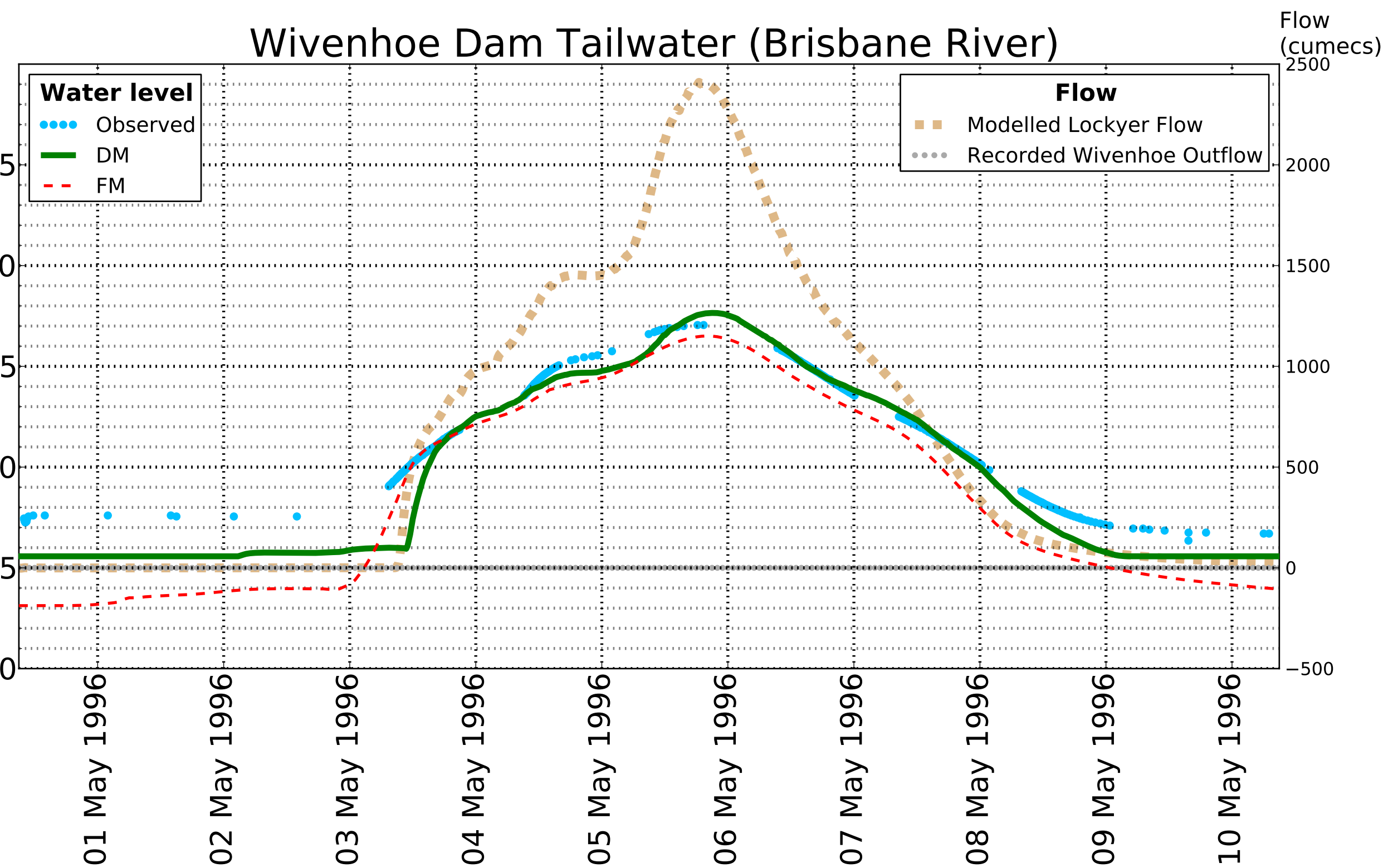
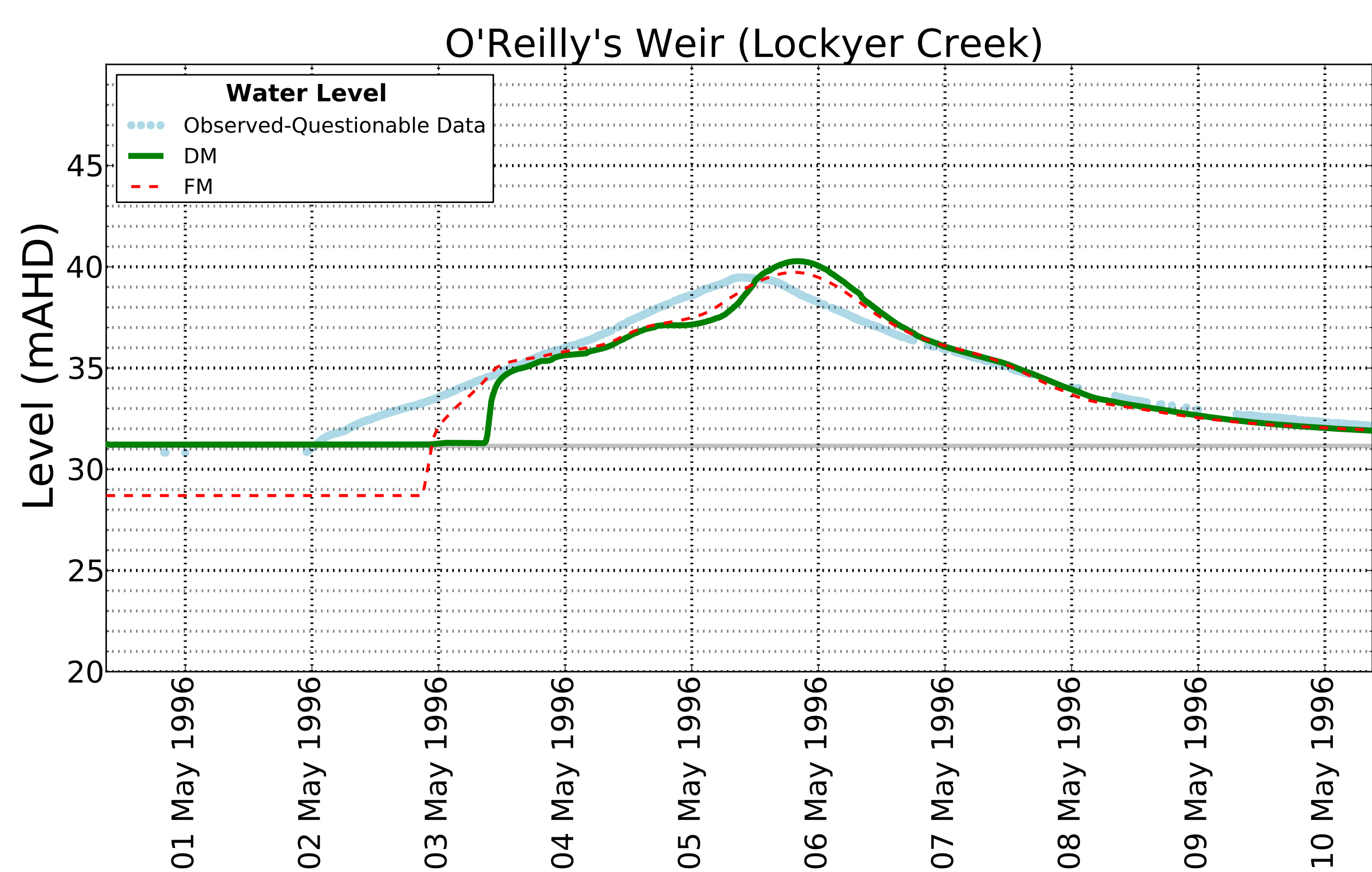
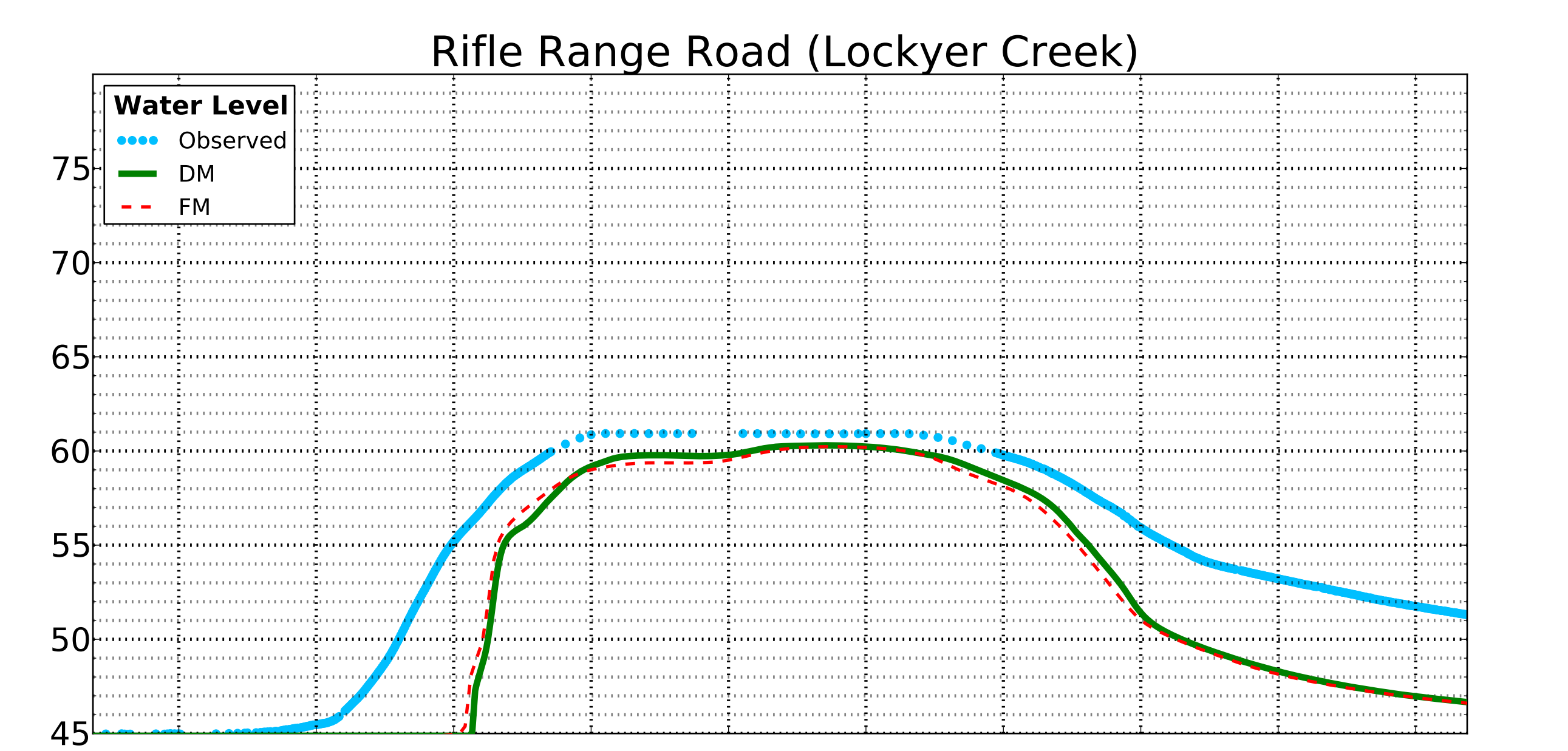
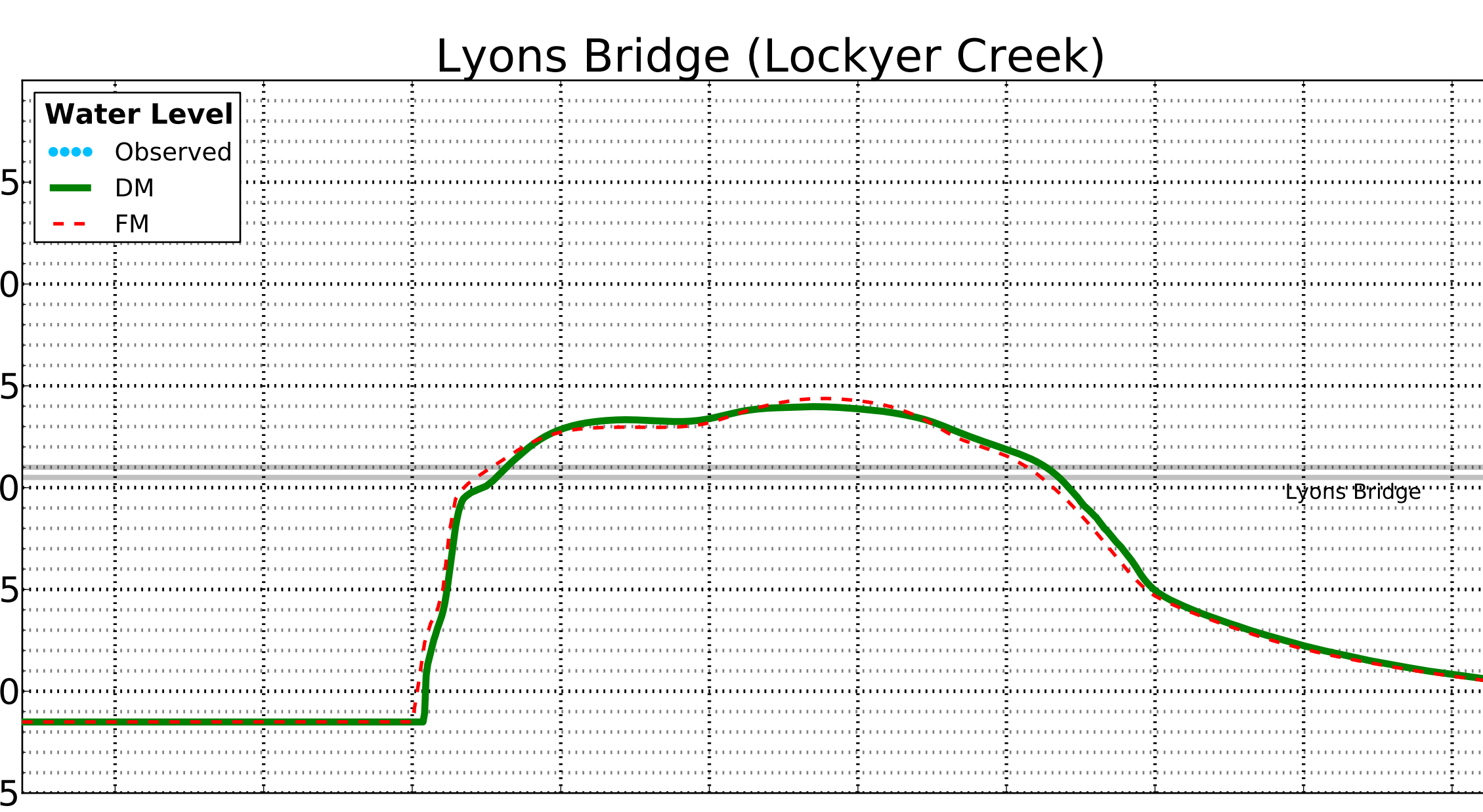
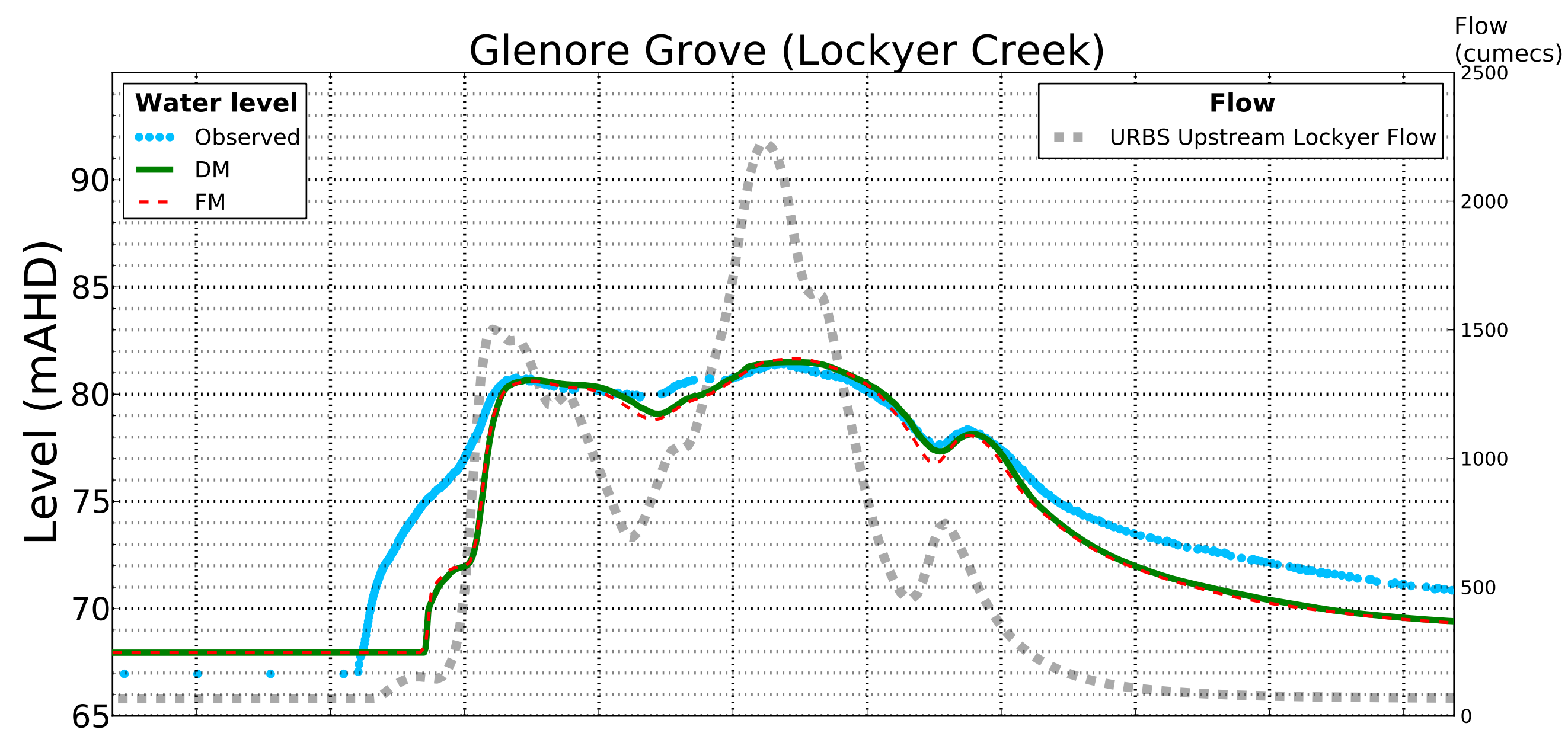


Bremer



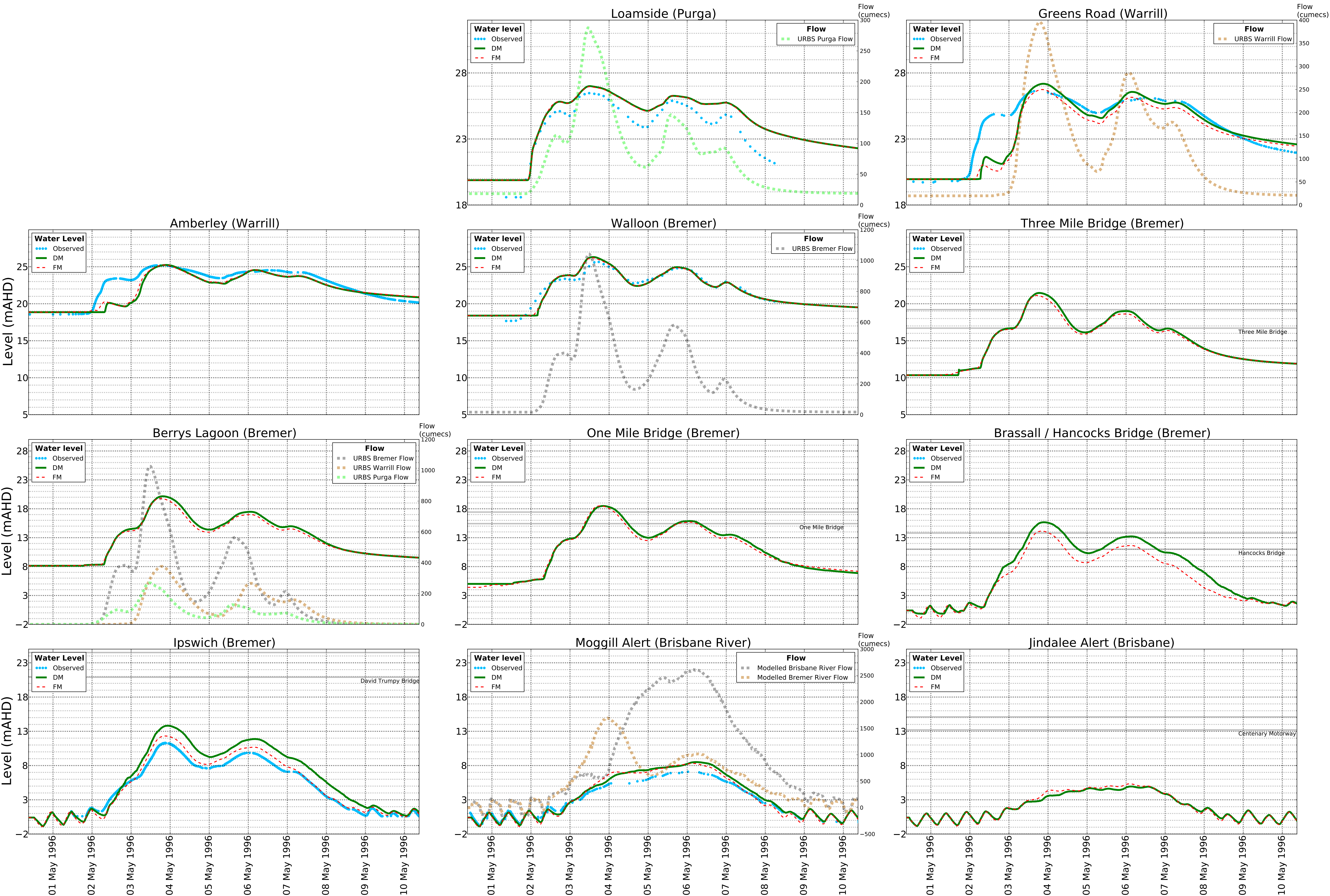
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Fast Model Version: 0285 Detailed Model Version: 043

Plot 06 DM & FM 2013 Lockyer / Bremer Longitudinal Profiles



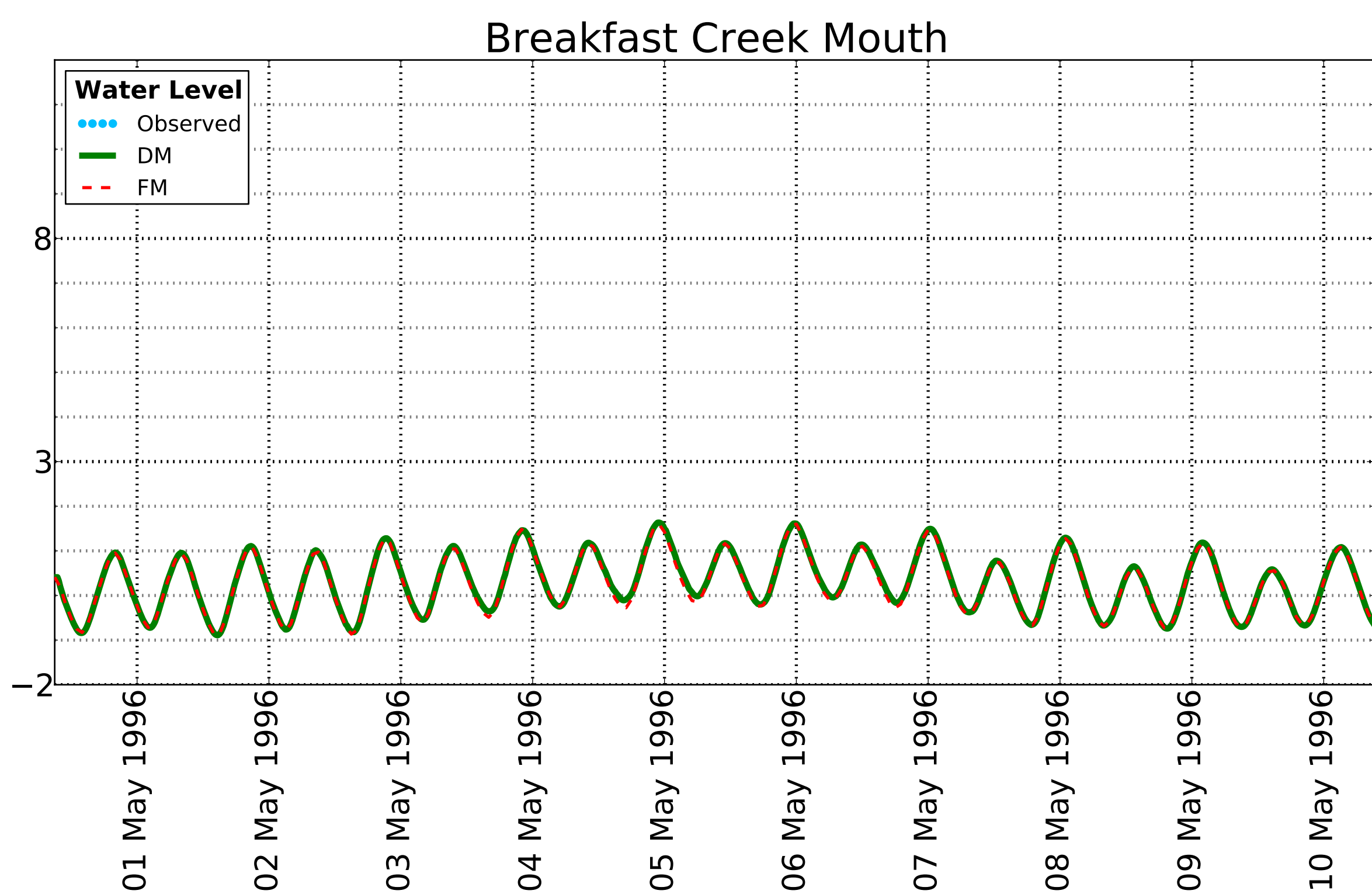
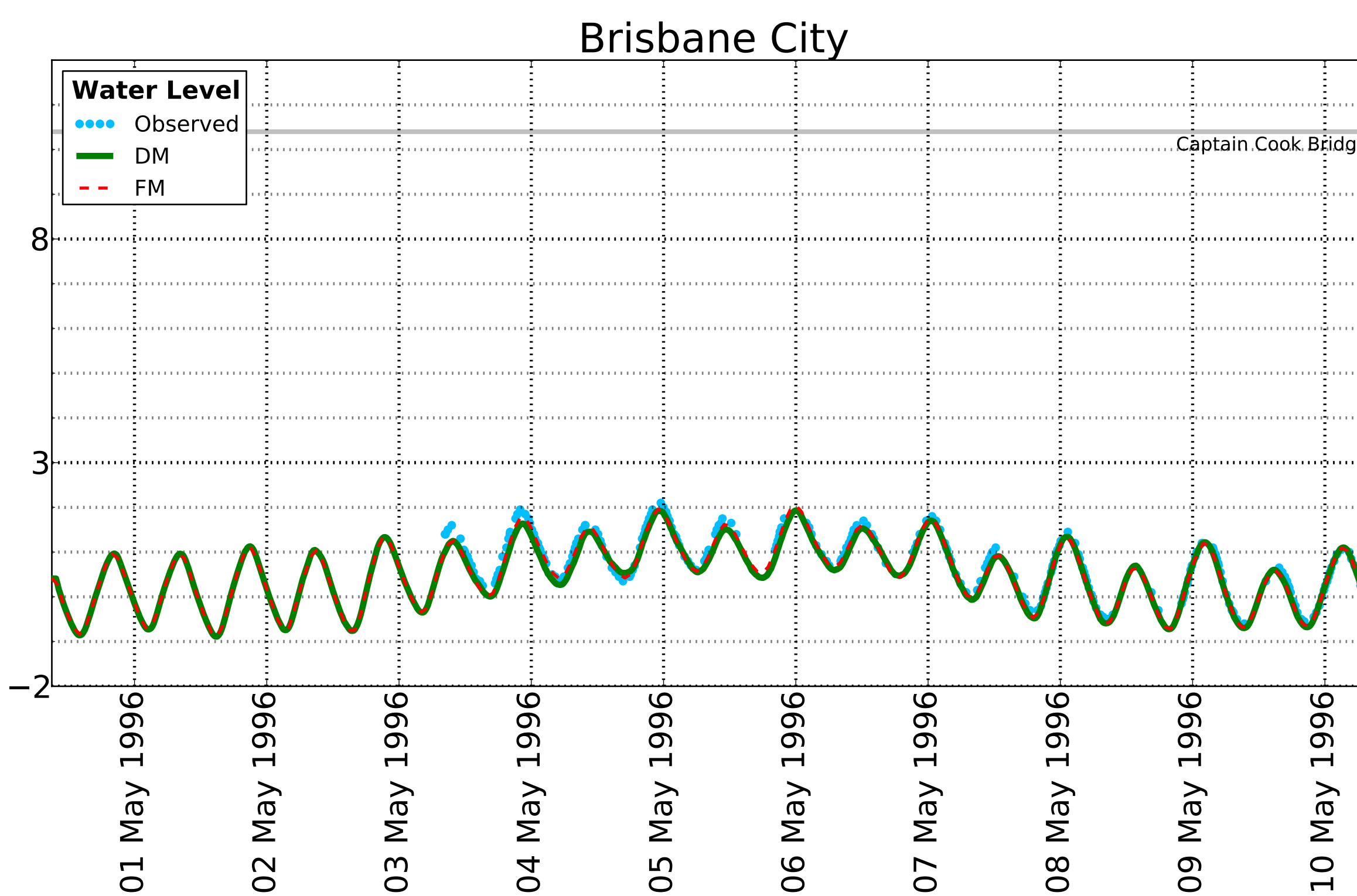
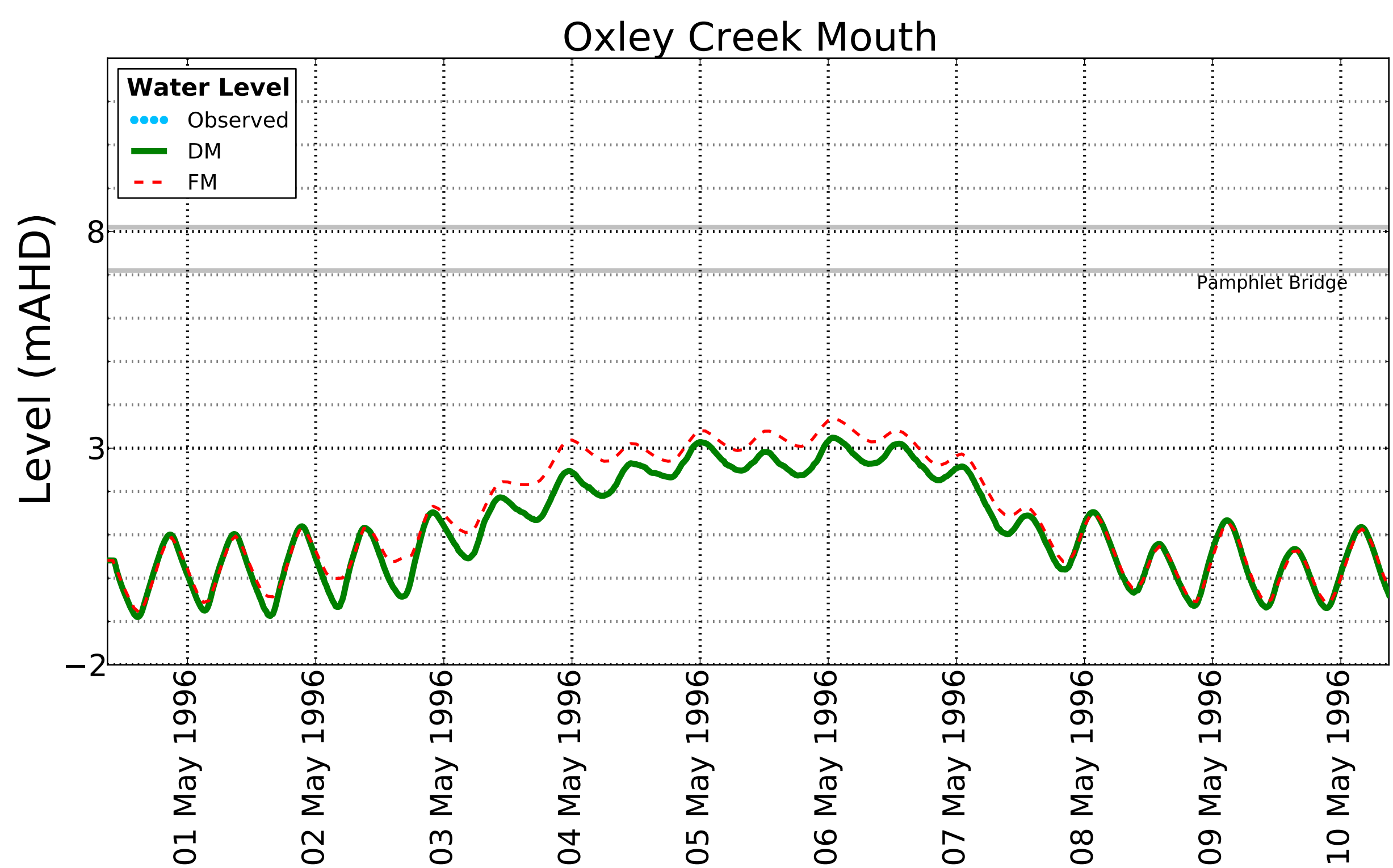
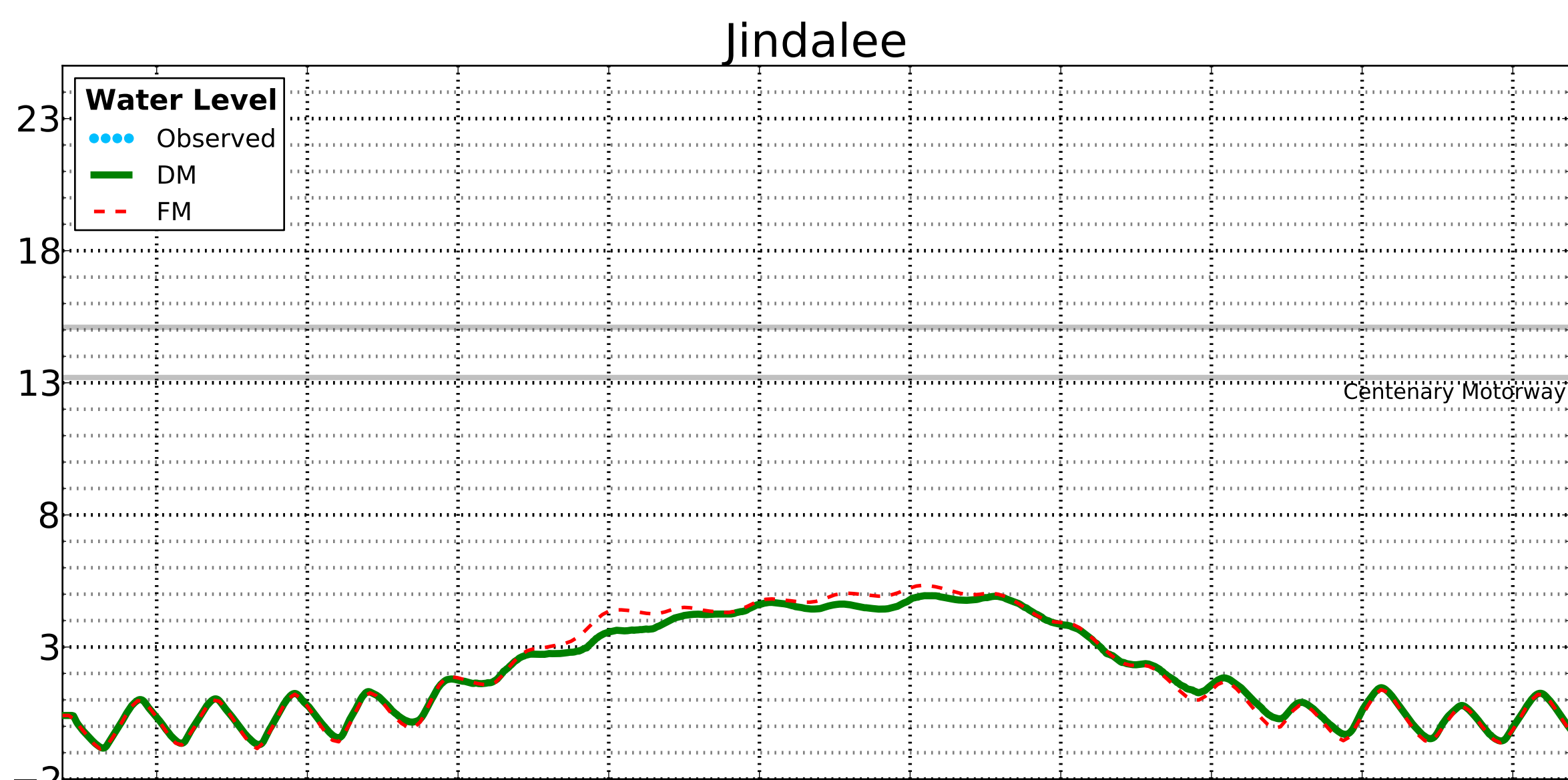
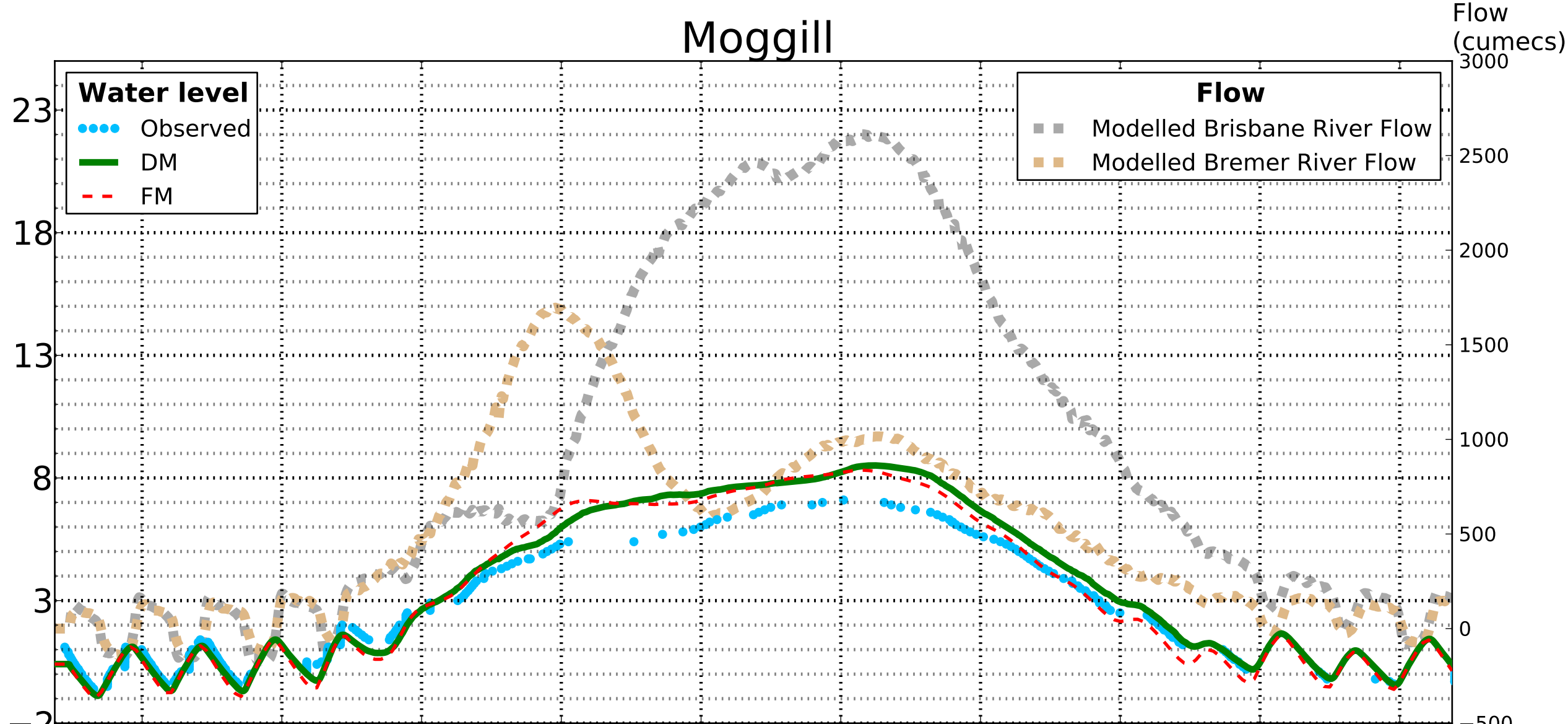
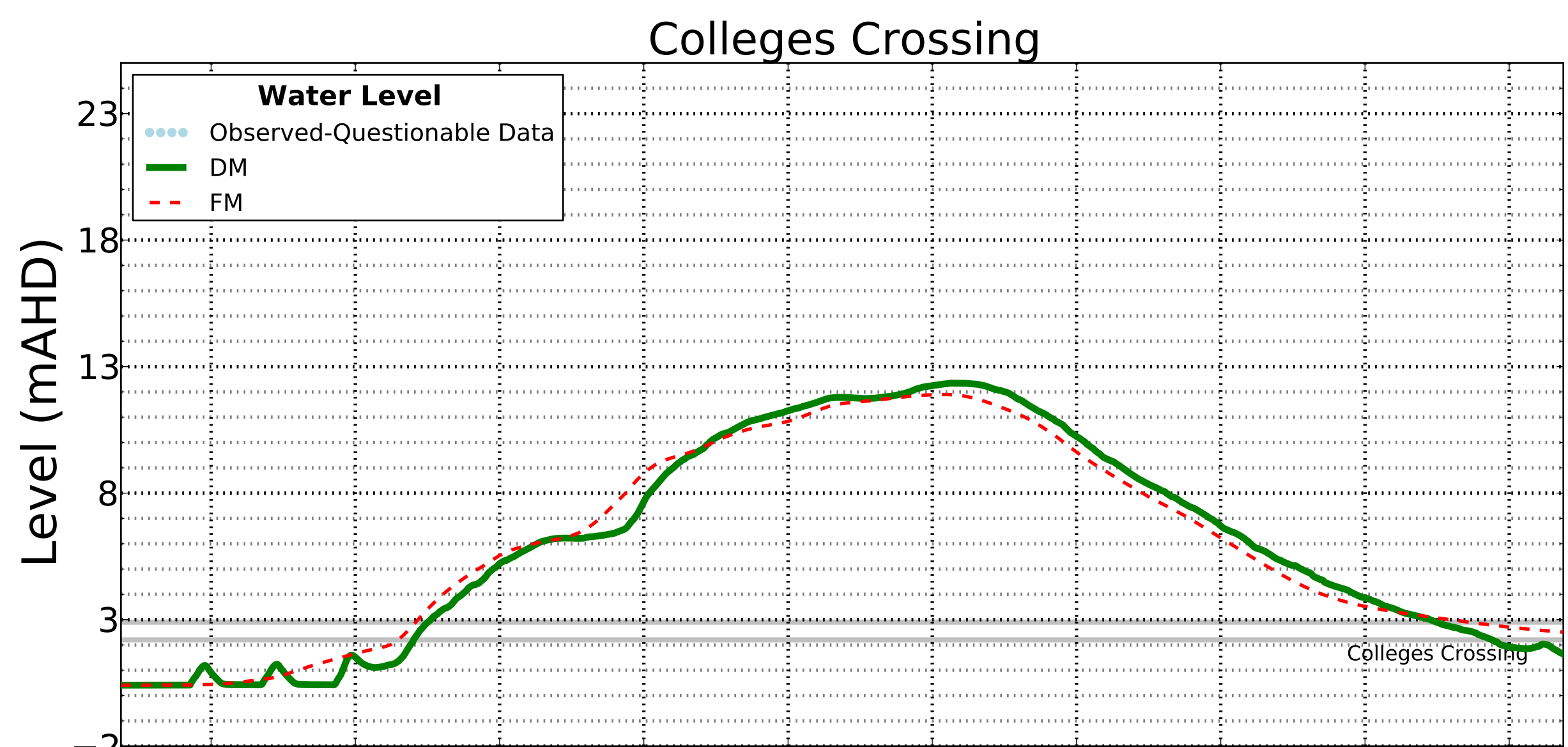
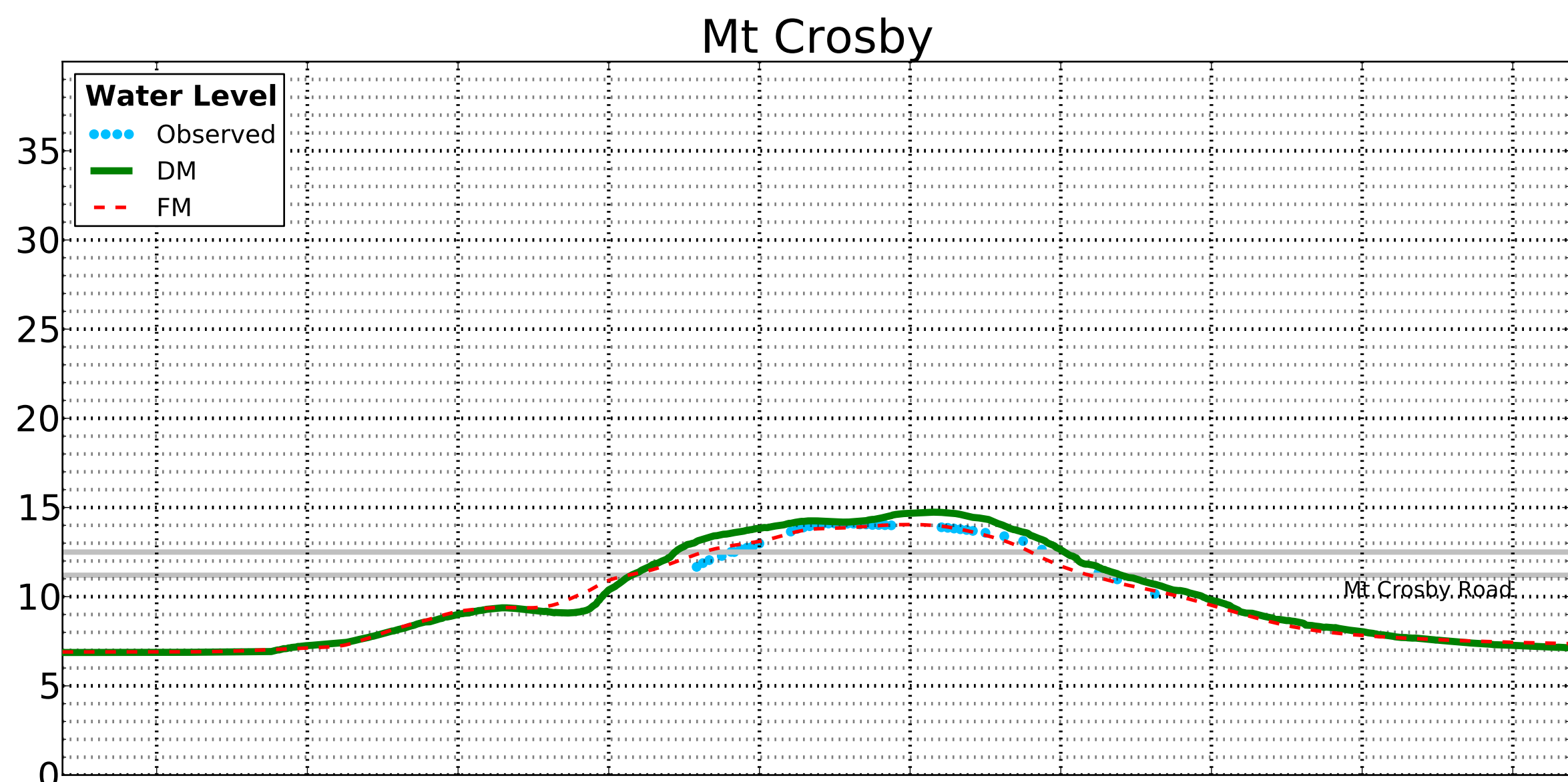
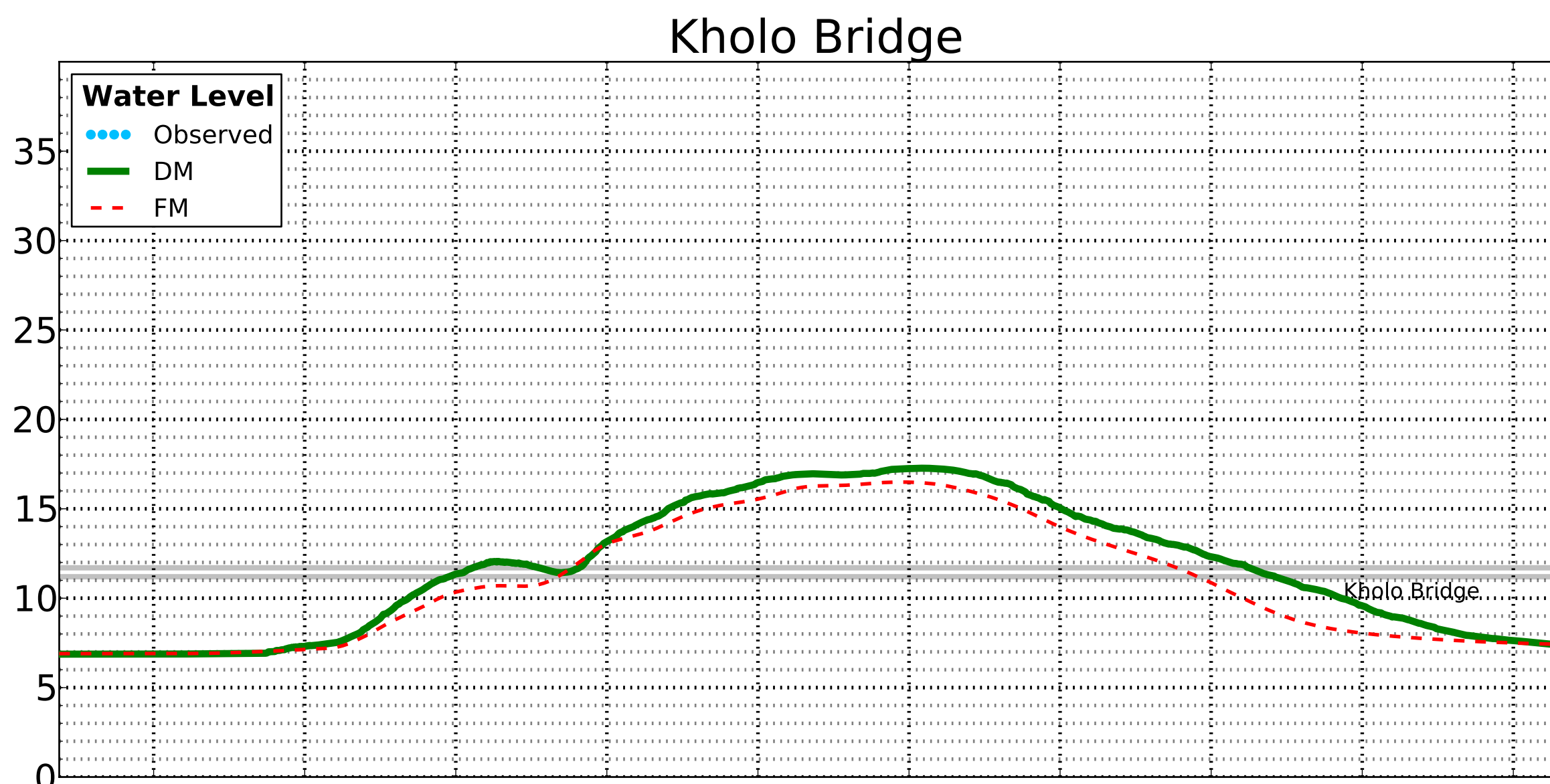
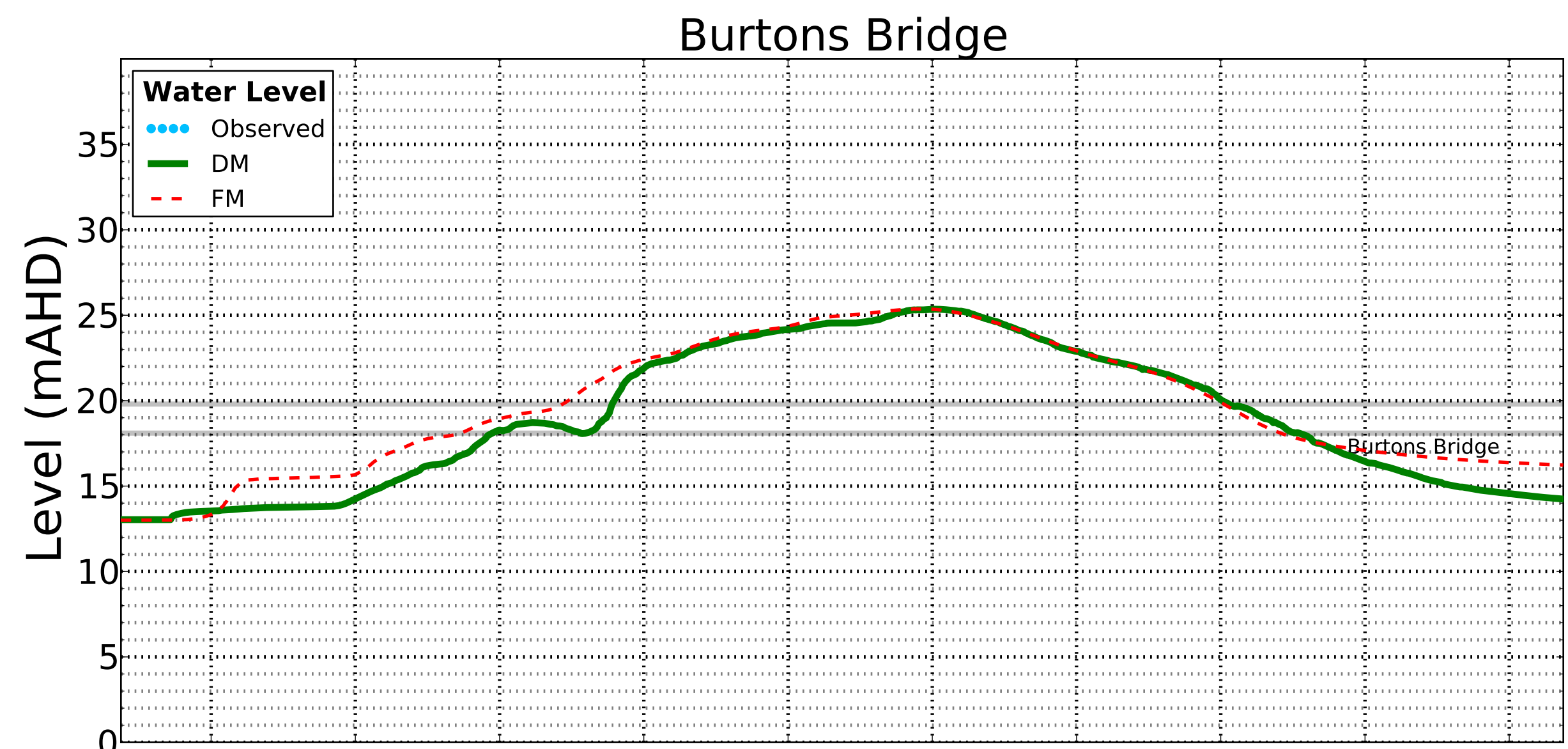
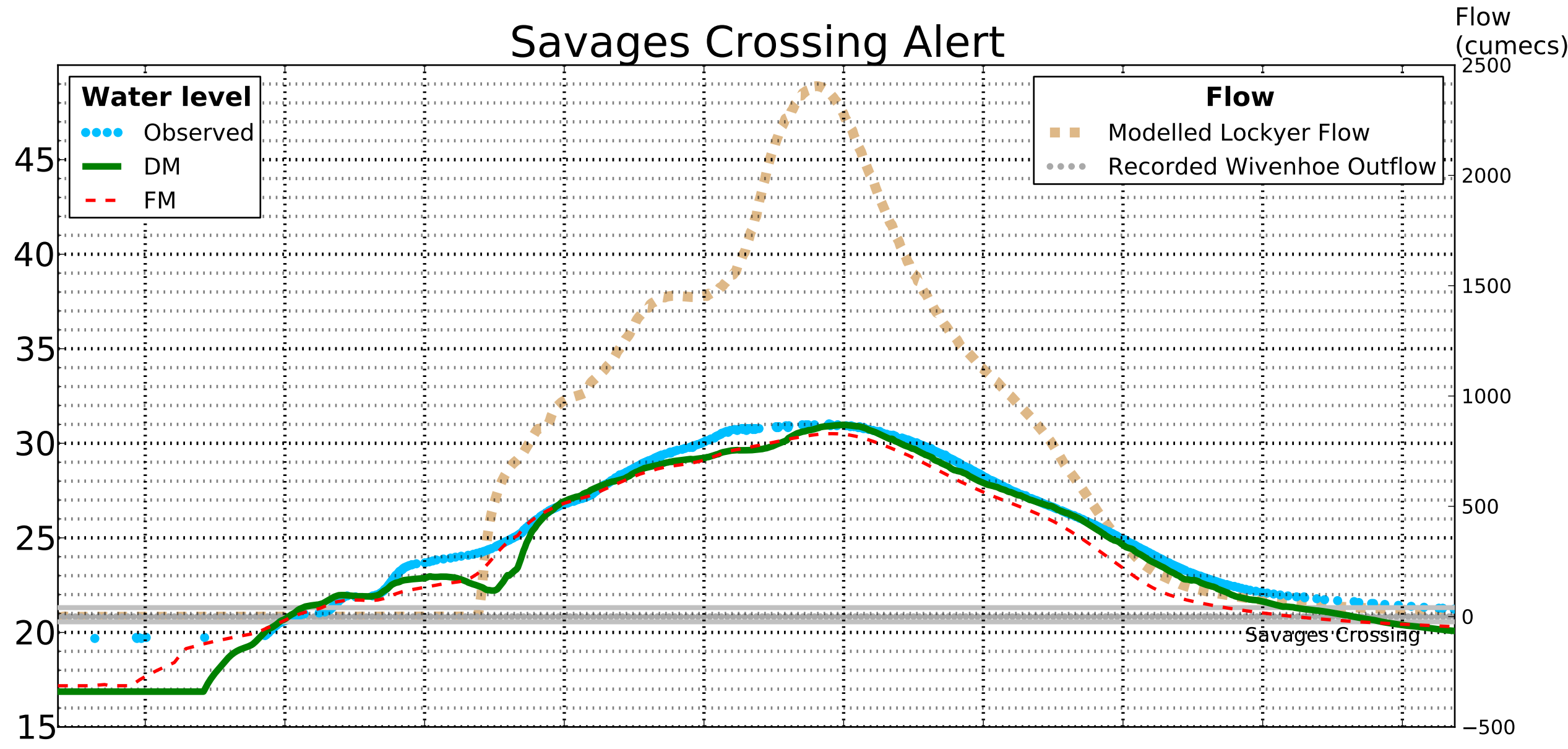
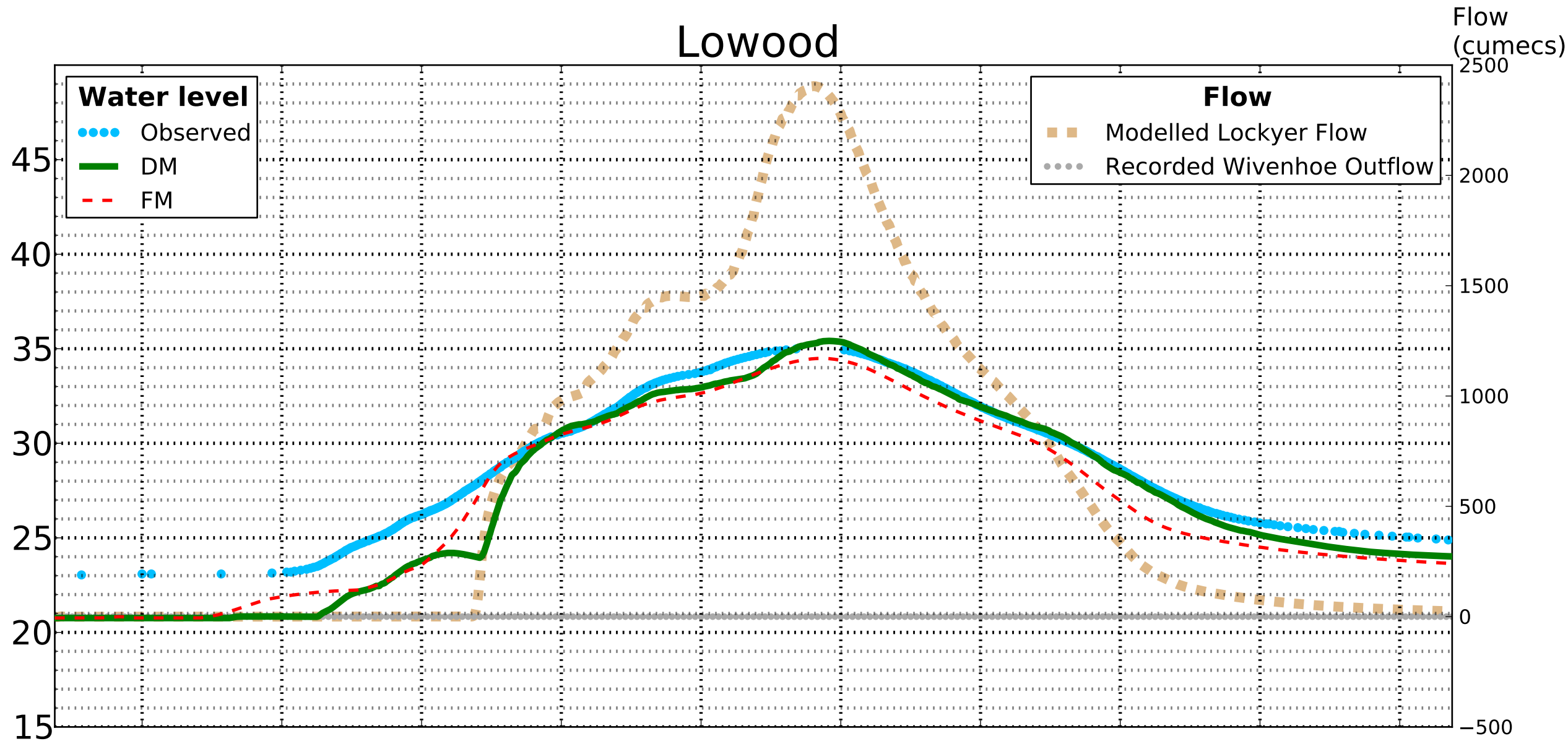
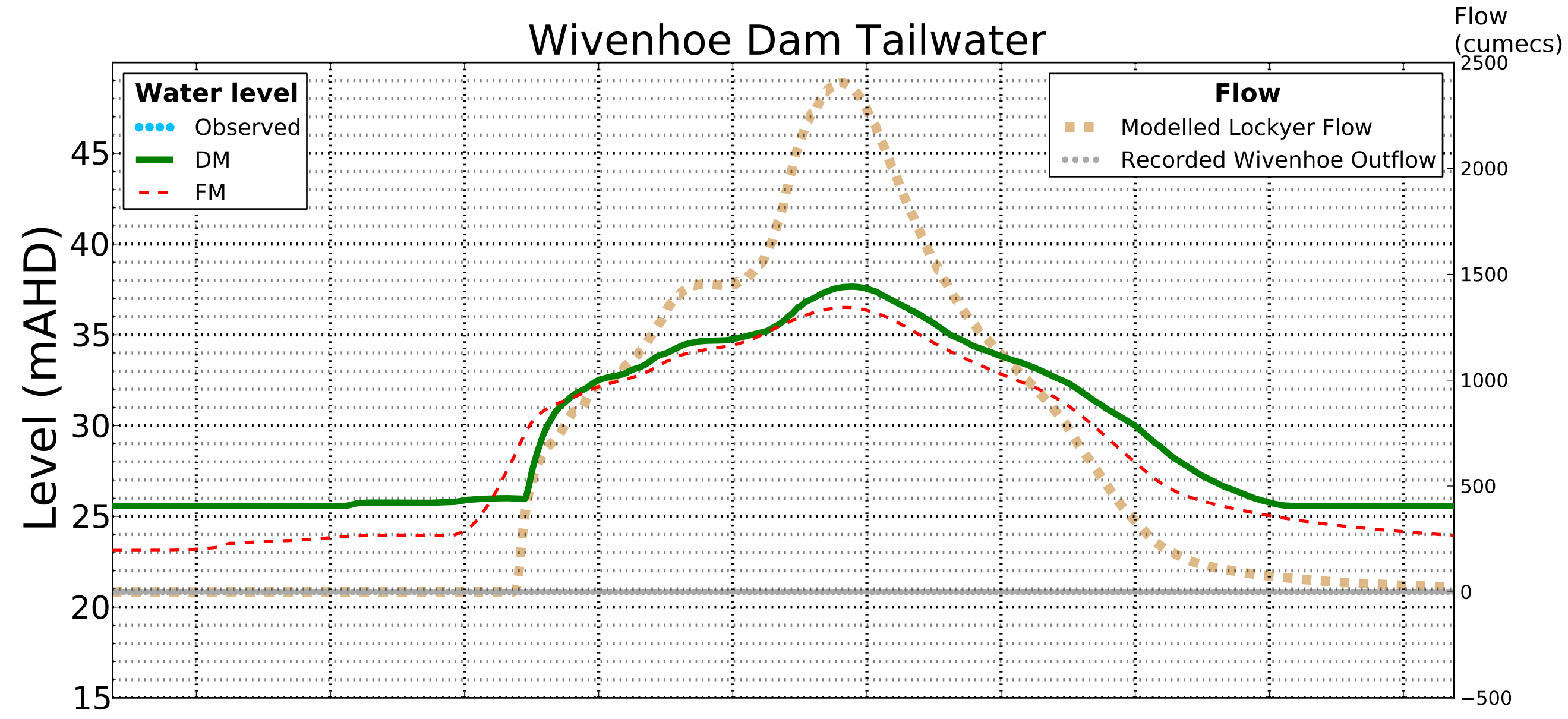
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 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 07 DM & FM 1996 Lockyer Creek Water Level Gauges



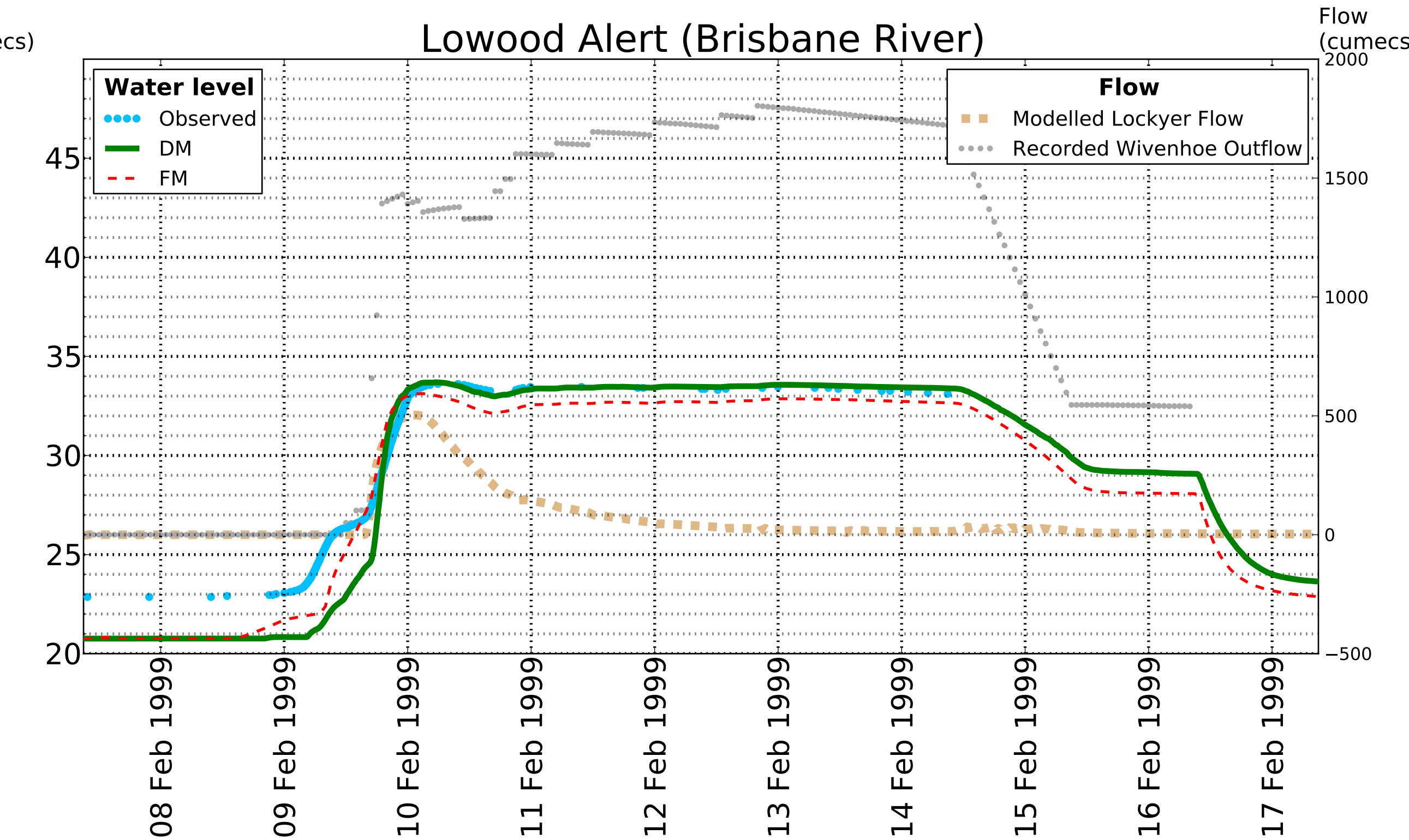
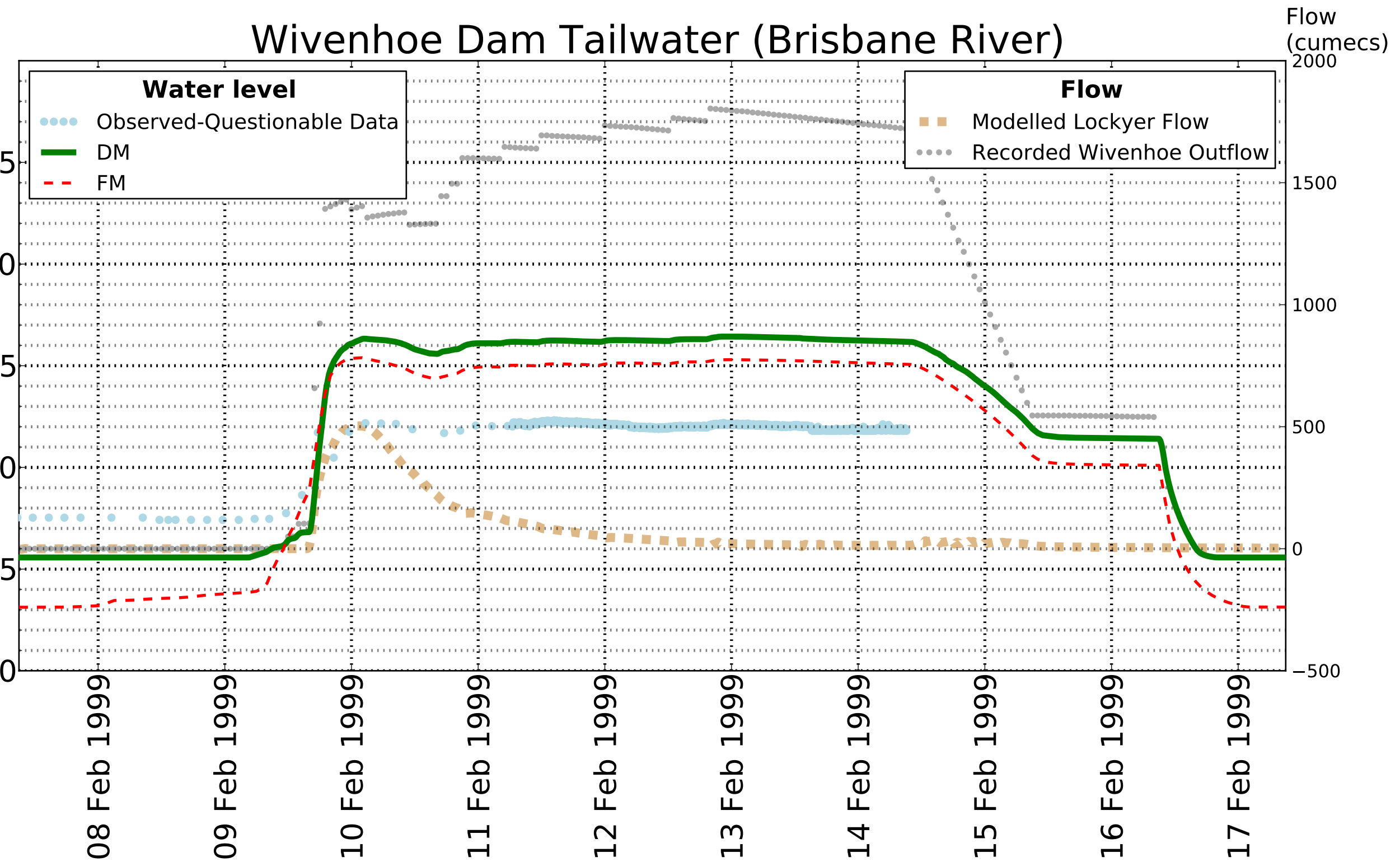
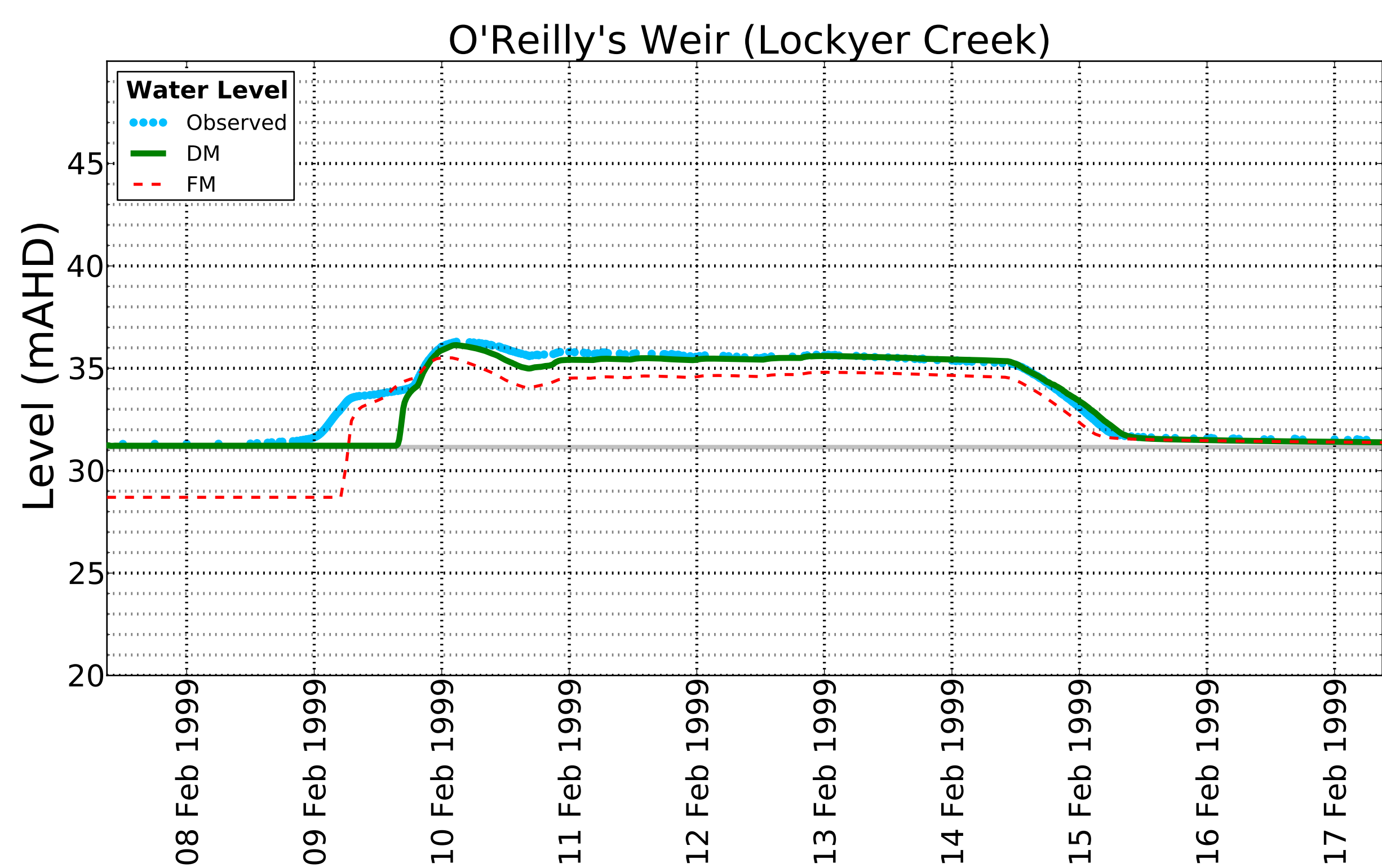
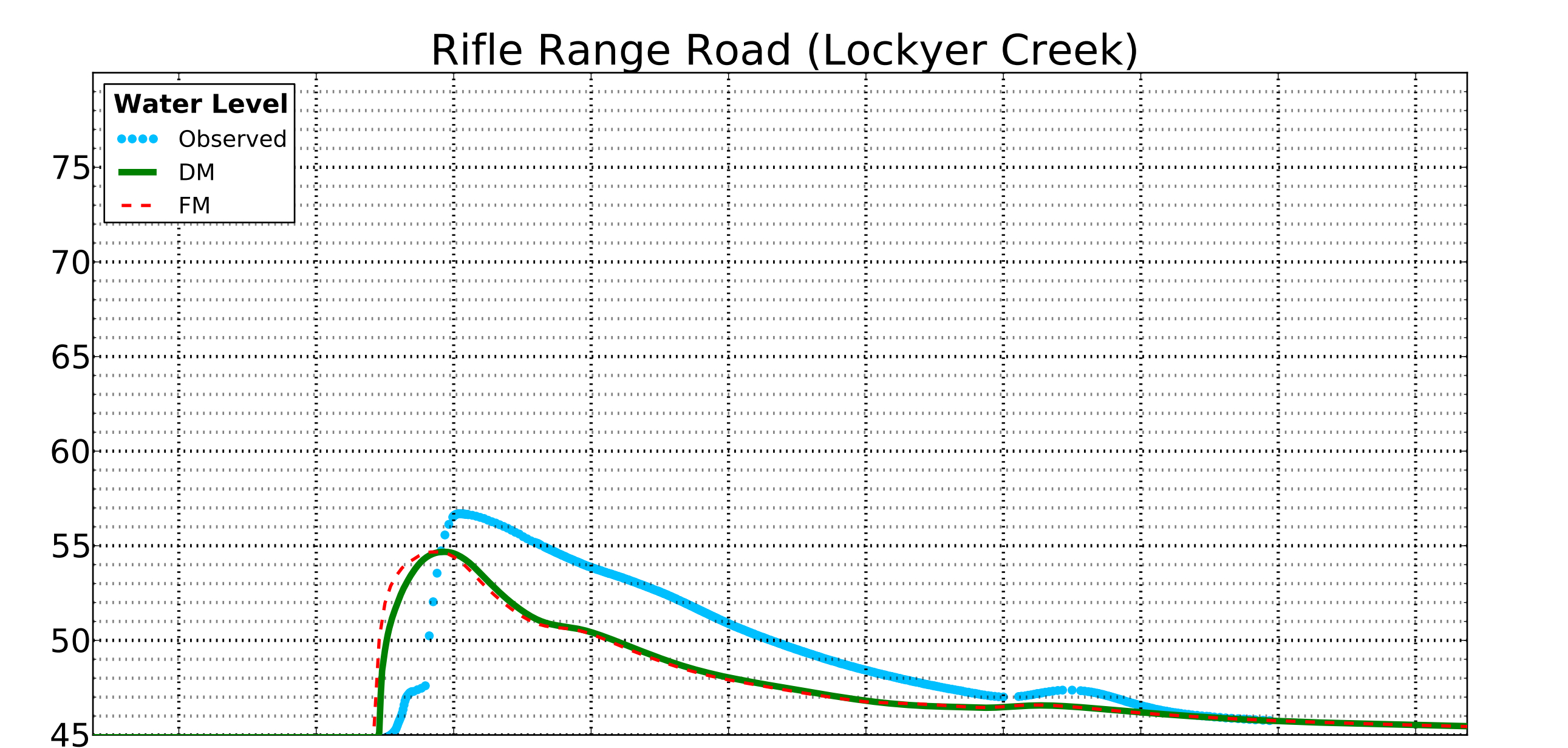
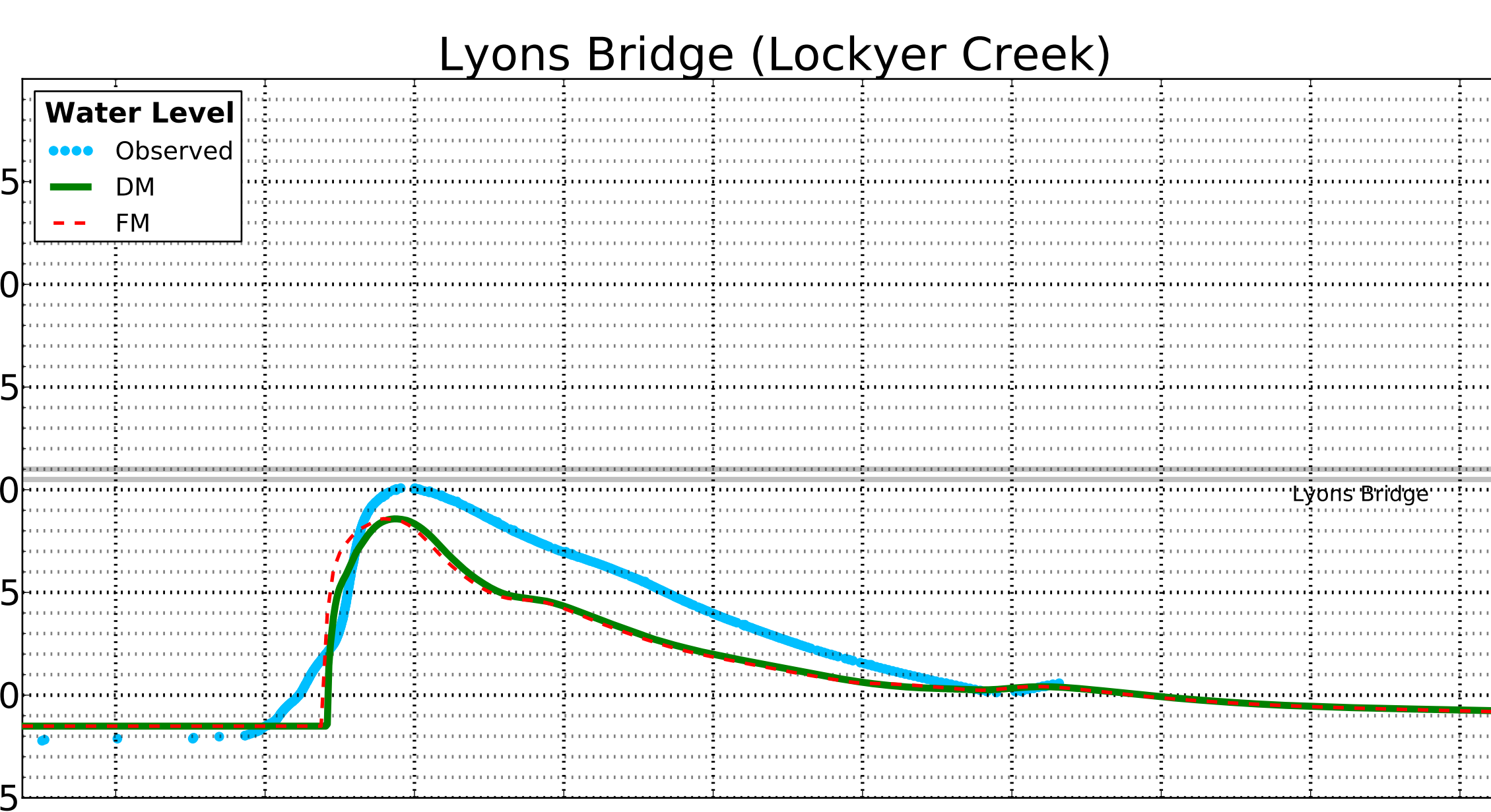
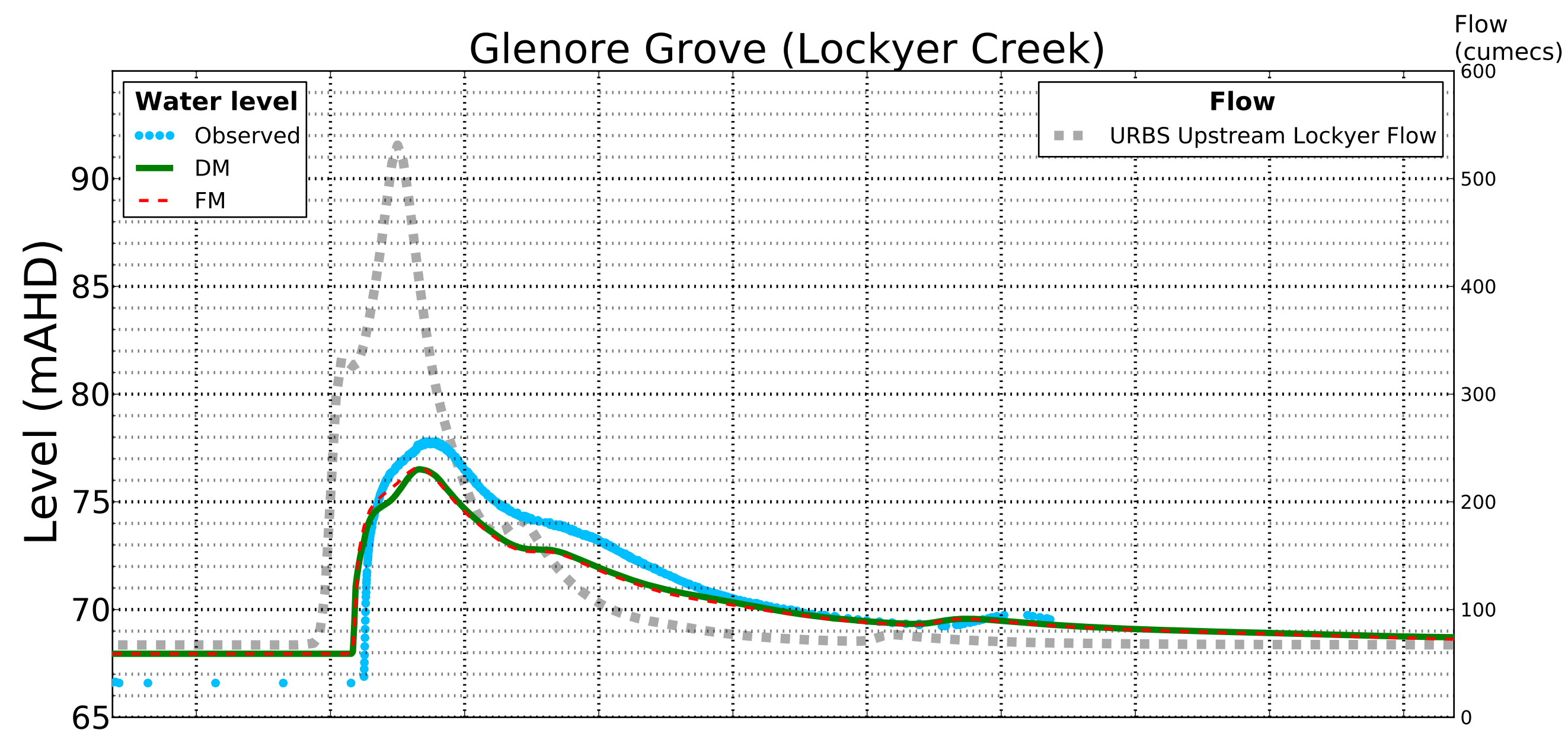
Date Labels are at 00:00 hours on that date
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 08 DM & FM 1996 Bremer River Water Level Gauges



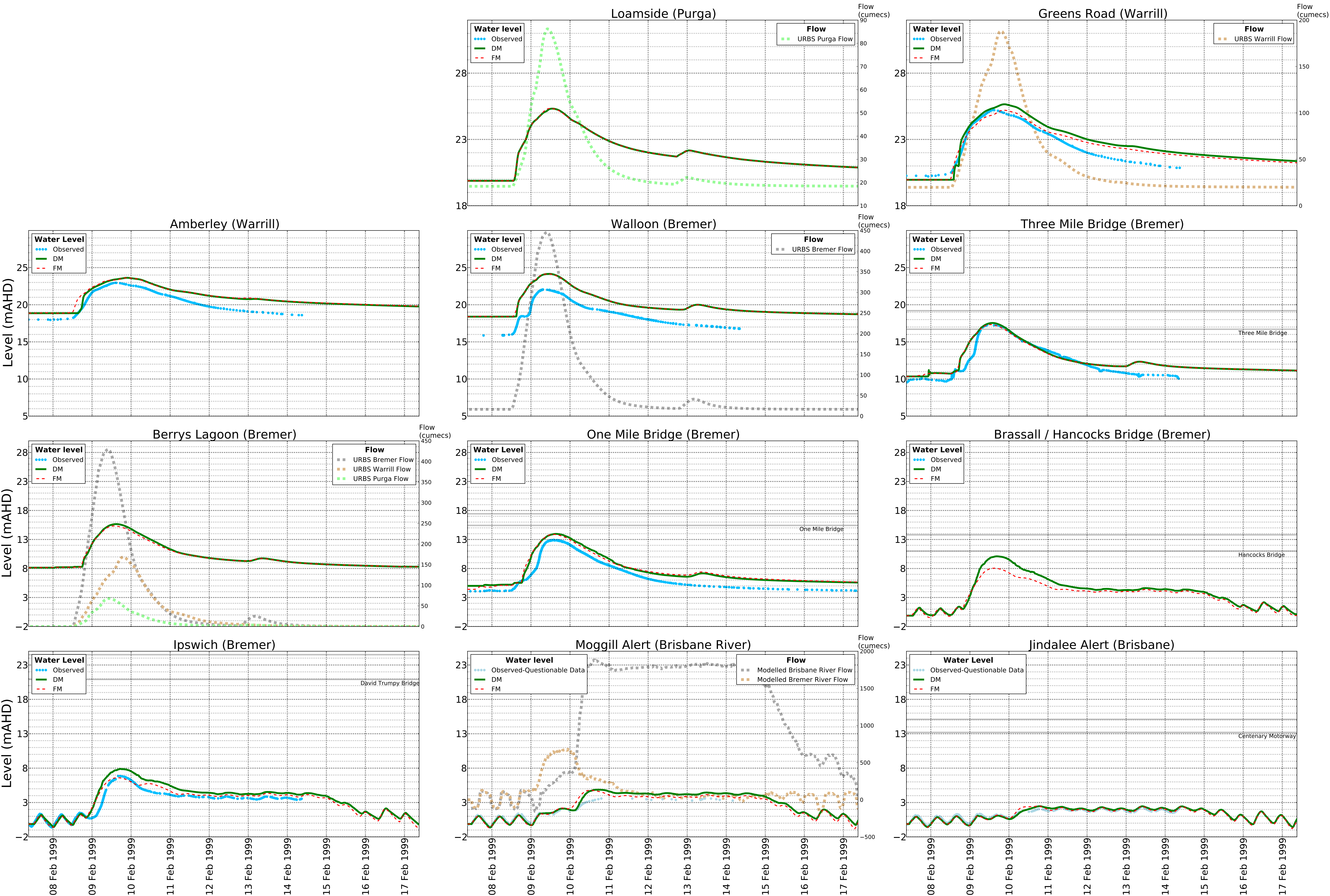
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 09 DM & FM 1996 Brisbane River Water Level Gauges



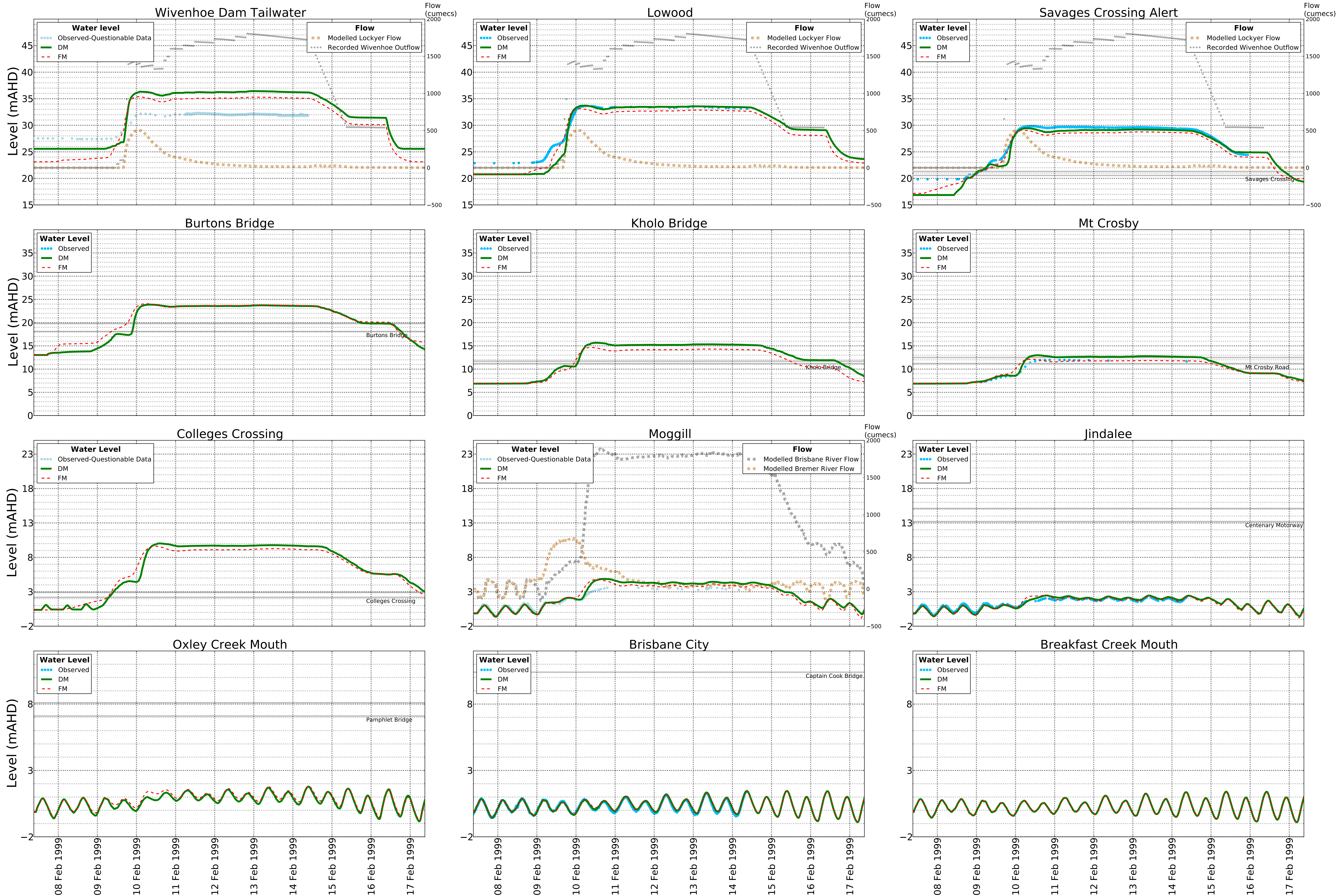
Date Labels are at 00:00 hours on that date
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 10 DM & FM 1999 Lockyer Creek Water Level Gauges



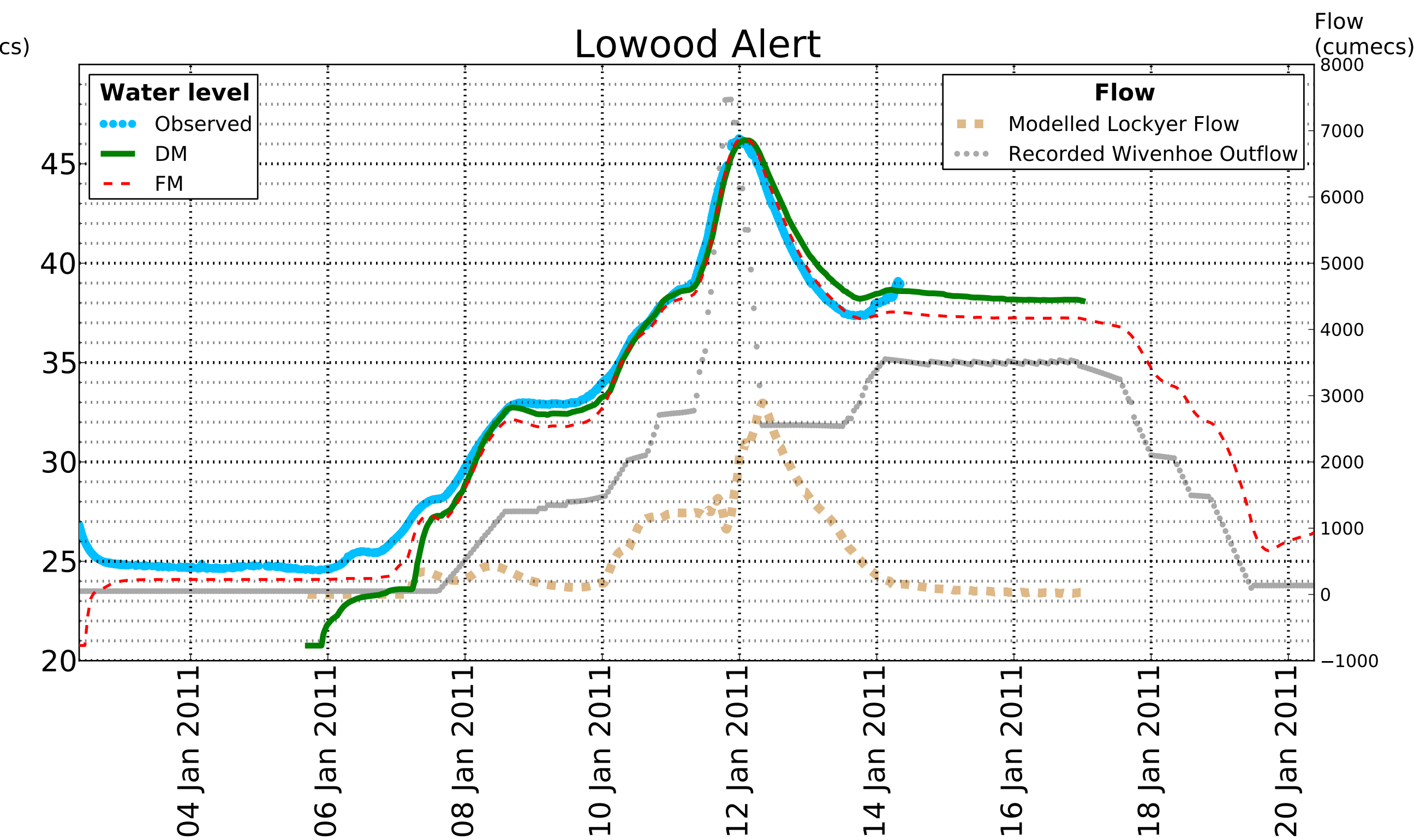
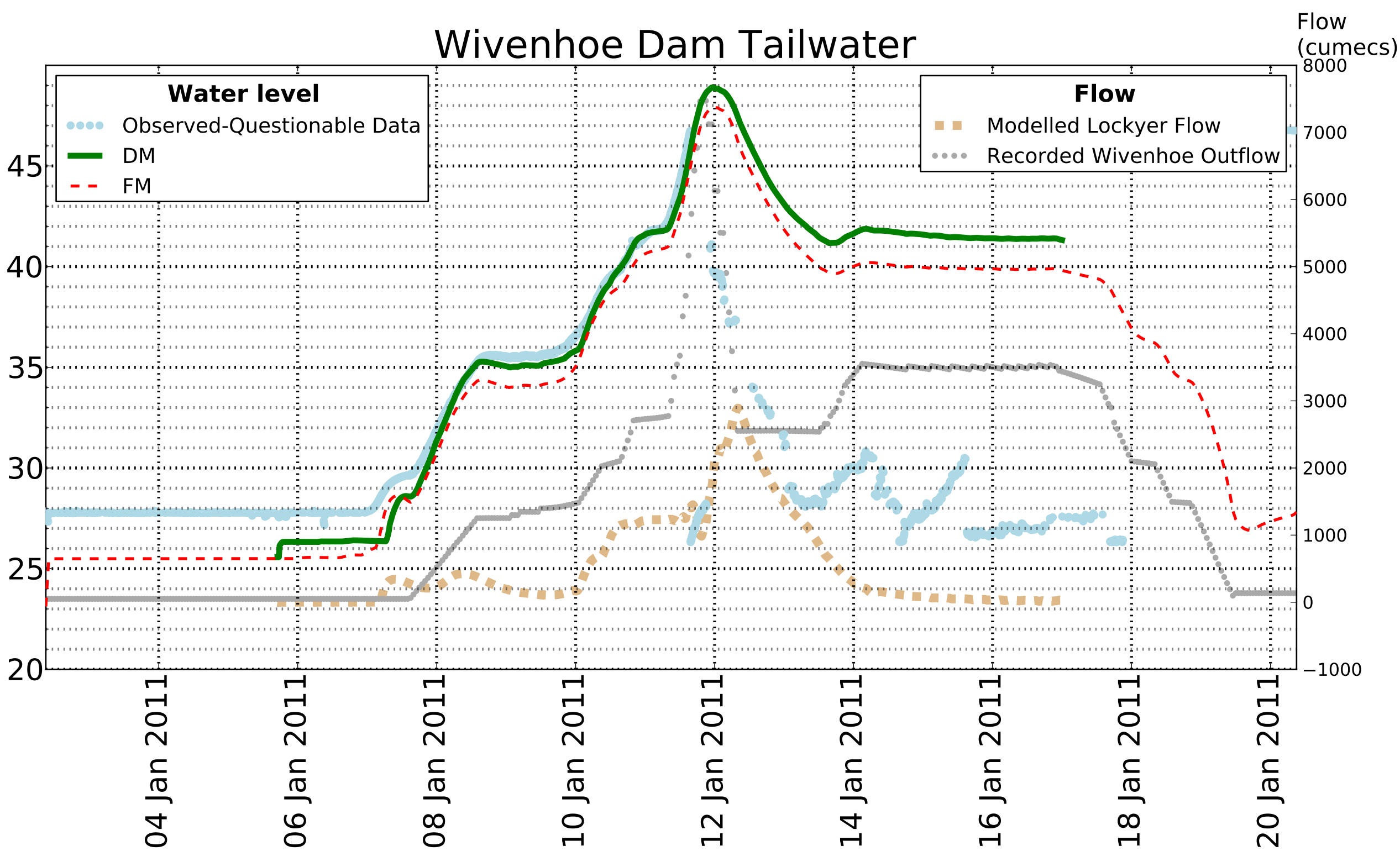
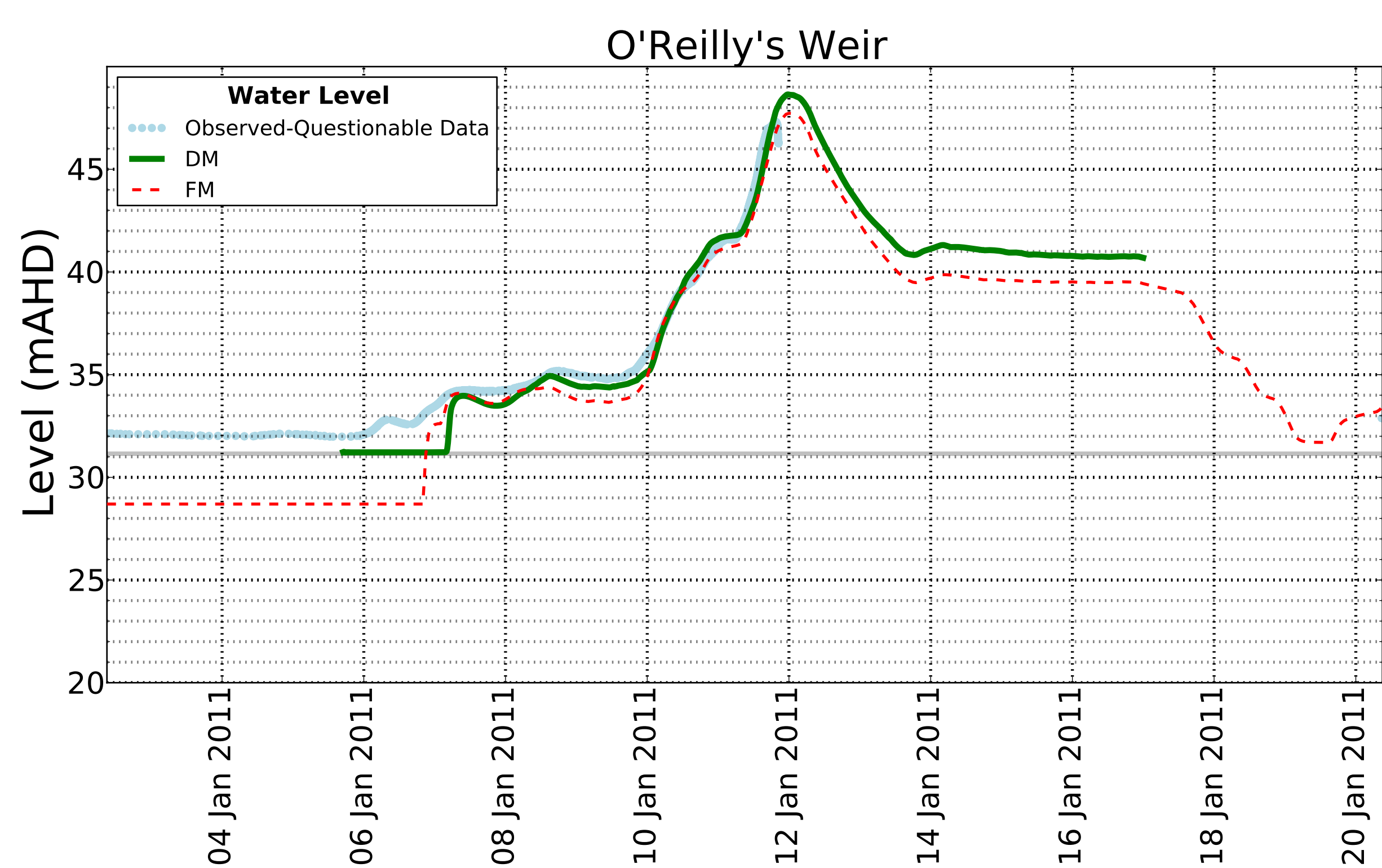
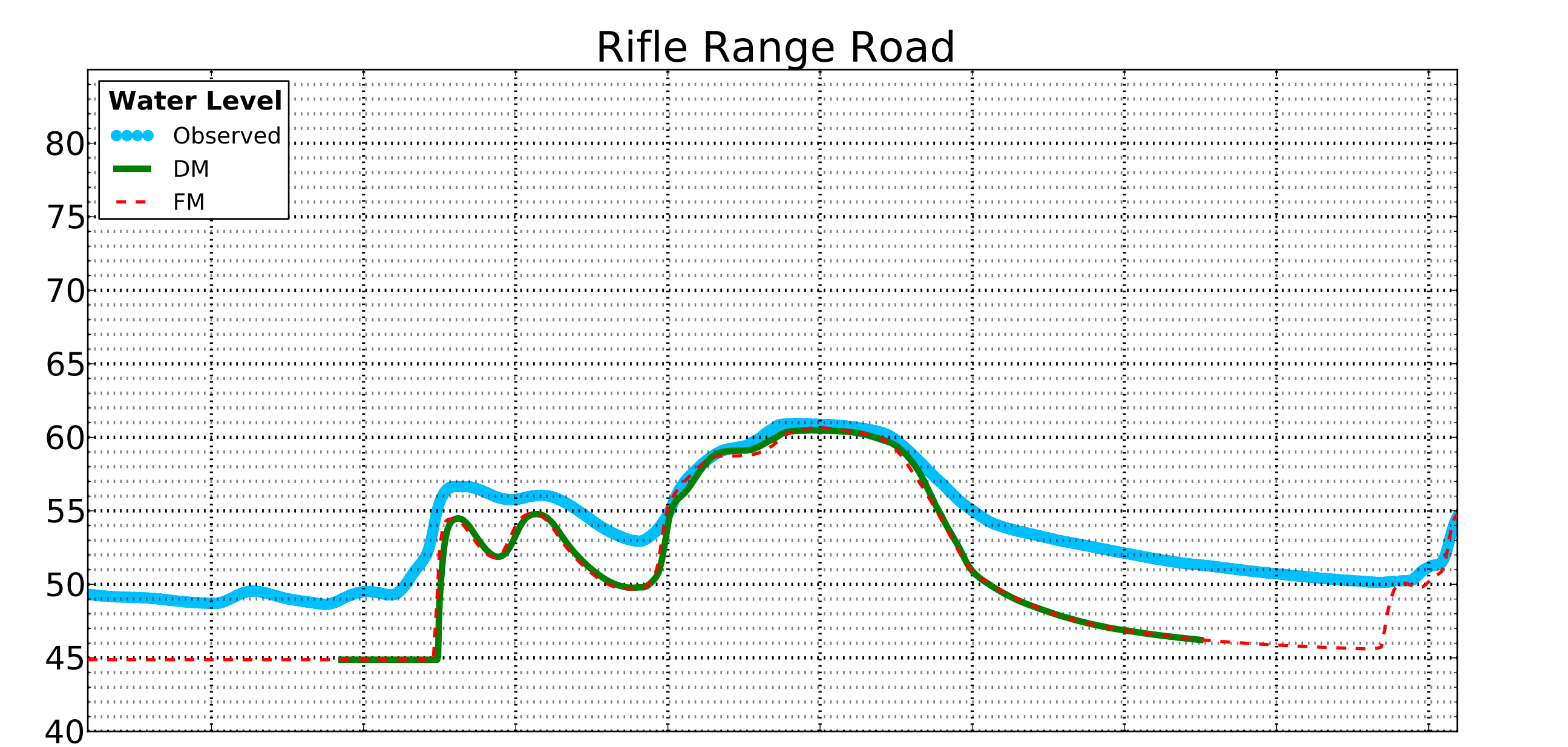
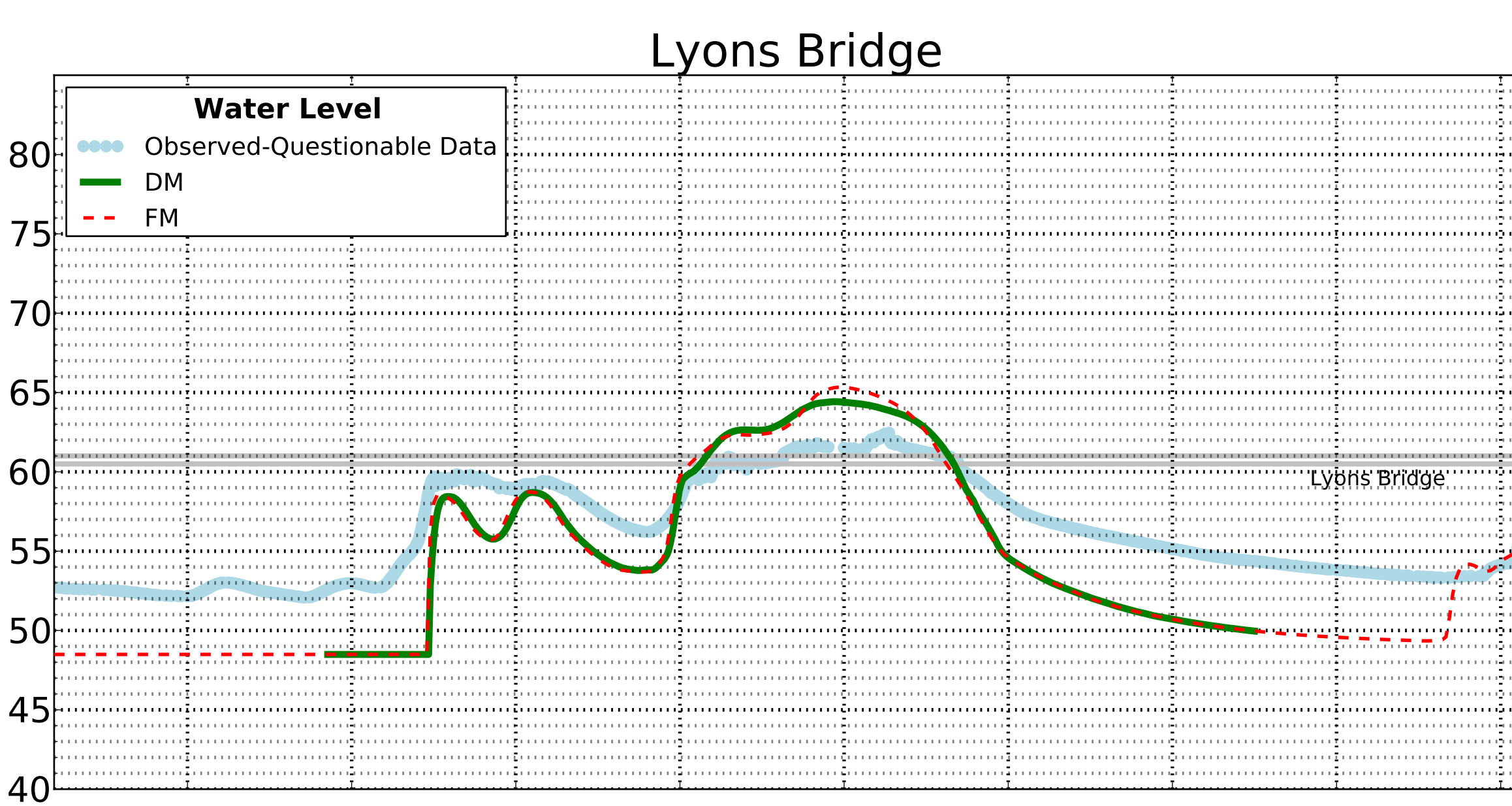
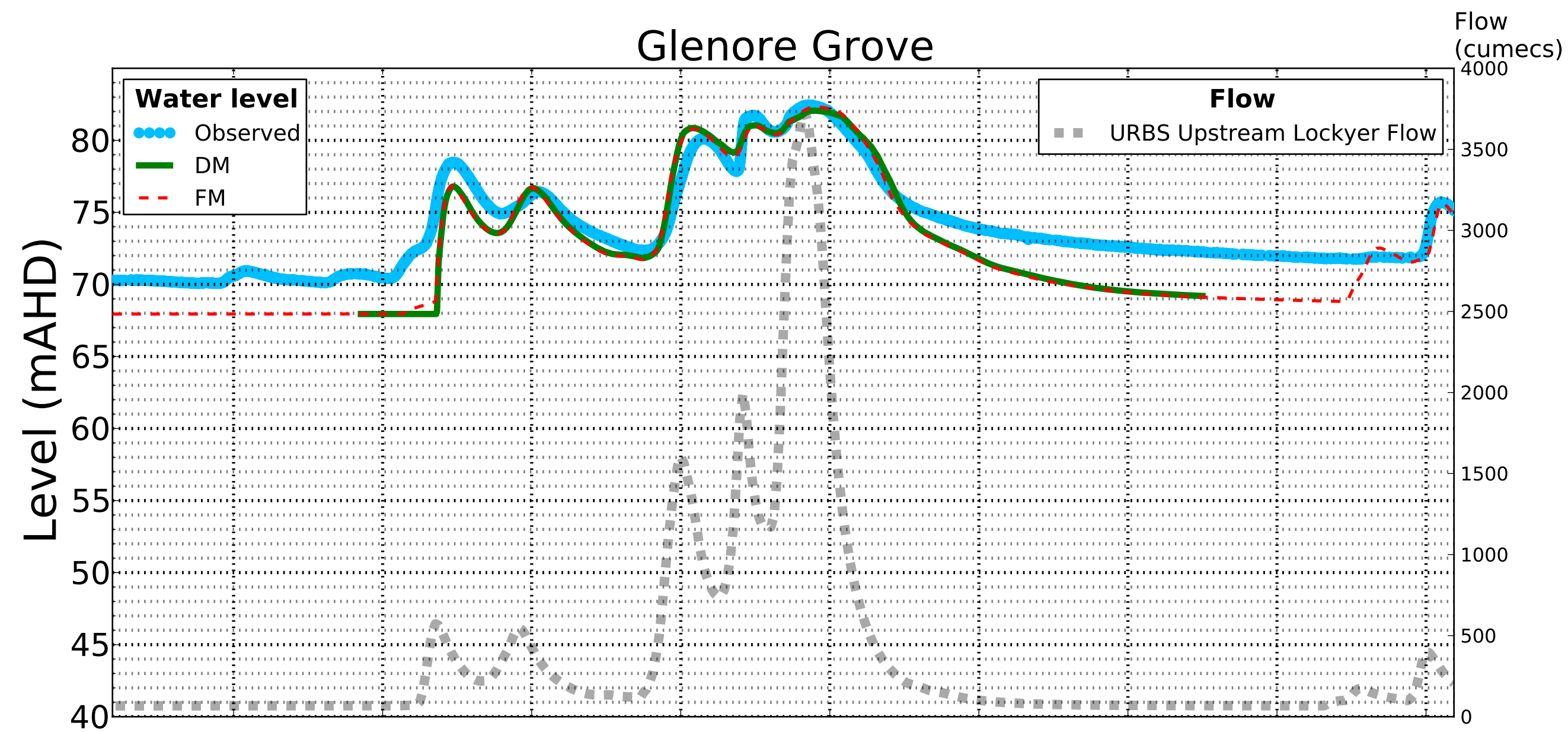
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 11 DM & FM 1999 Bremer River Water Level Gauges



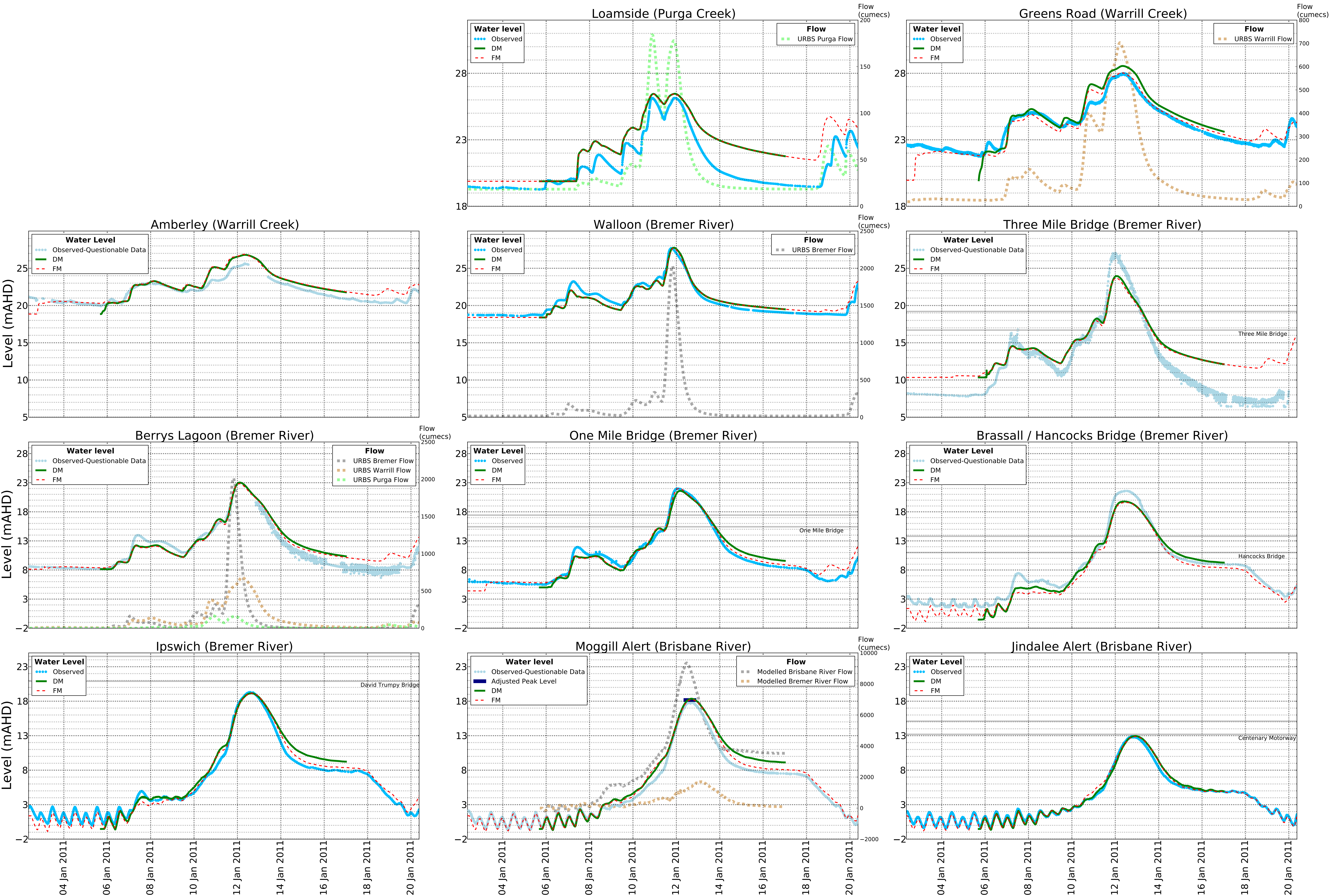
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 12 DM & FM 1999 Brisbane River Water Level Gauges



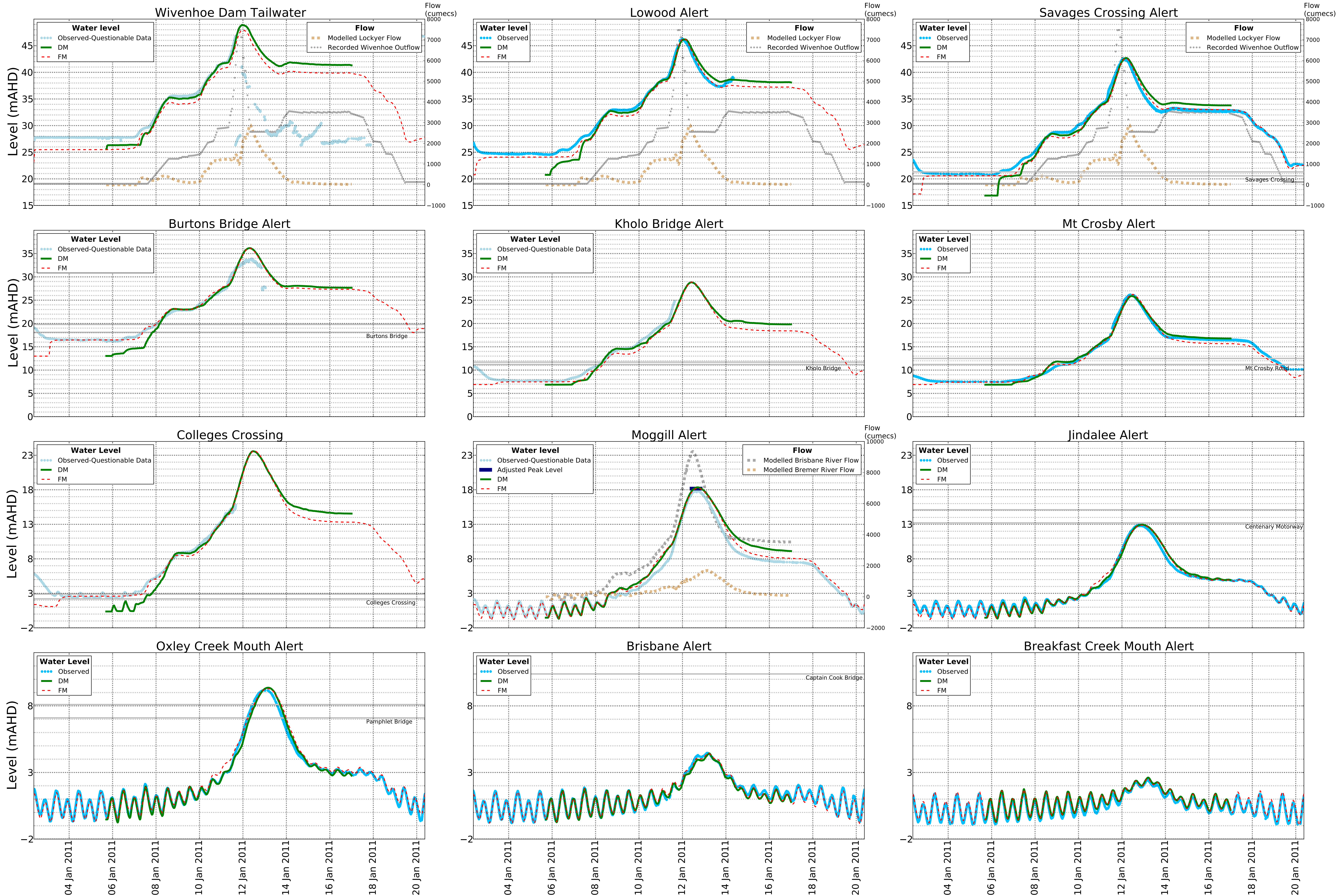
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 13 DM & FM 2011 Lockyer Creek Water Level Gauges



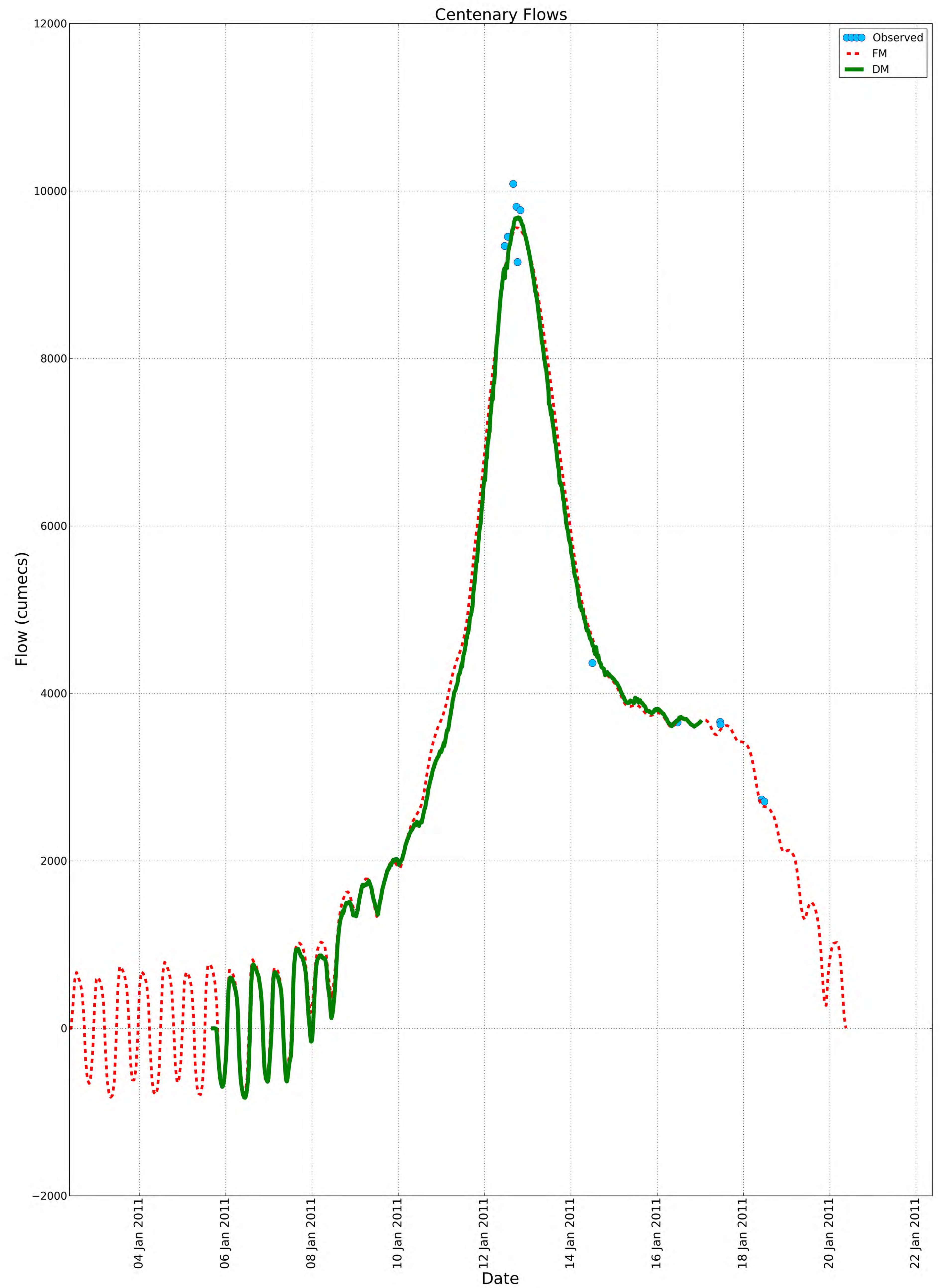
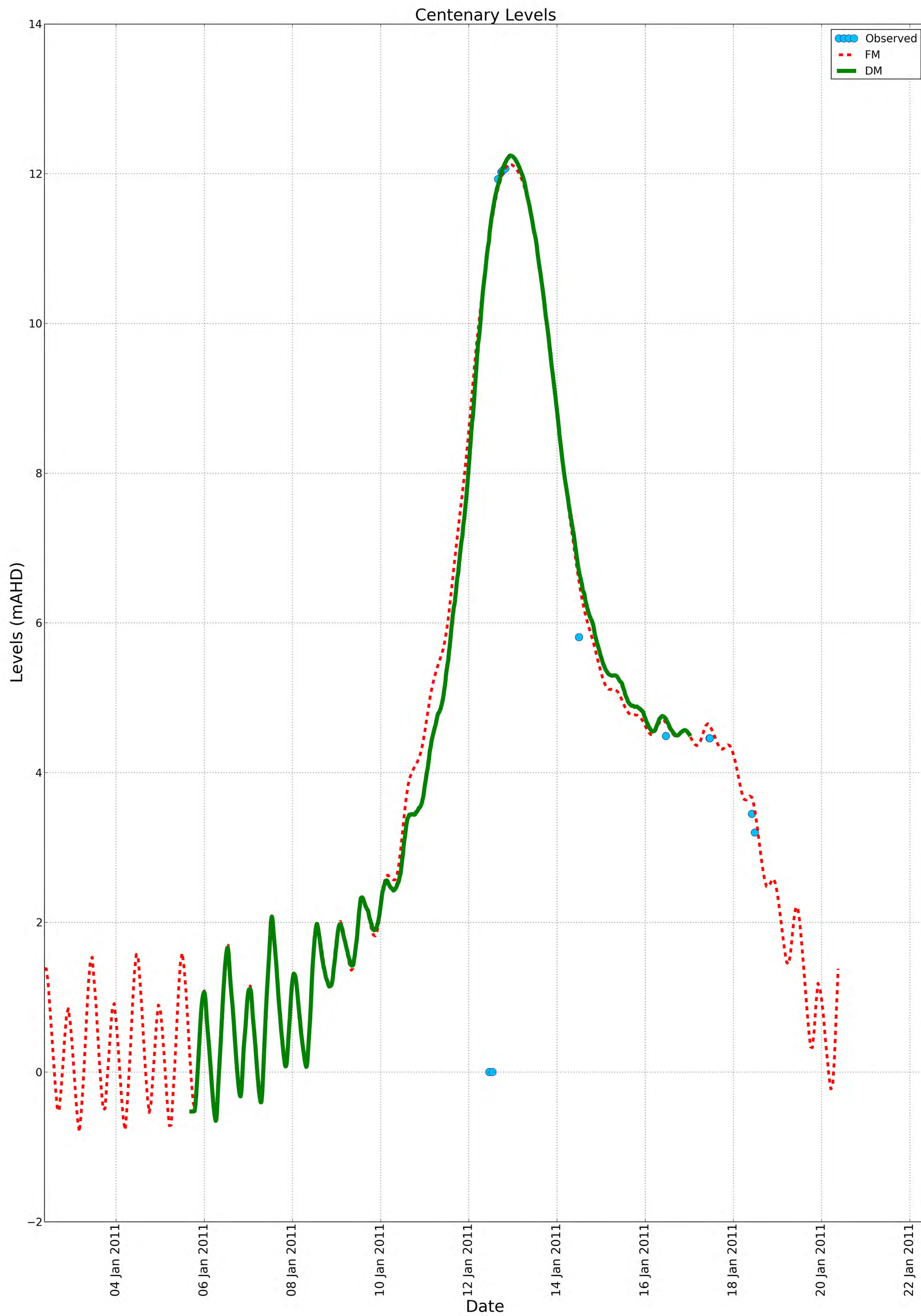
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 14 DM & FM 2011 Bremer River Water Level Gauges



Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

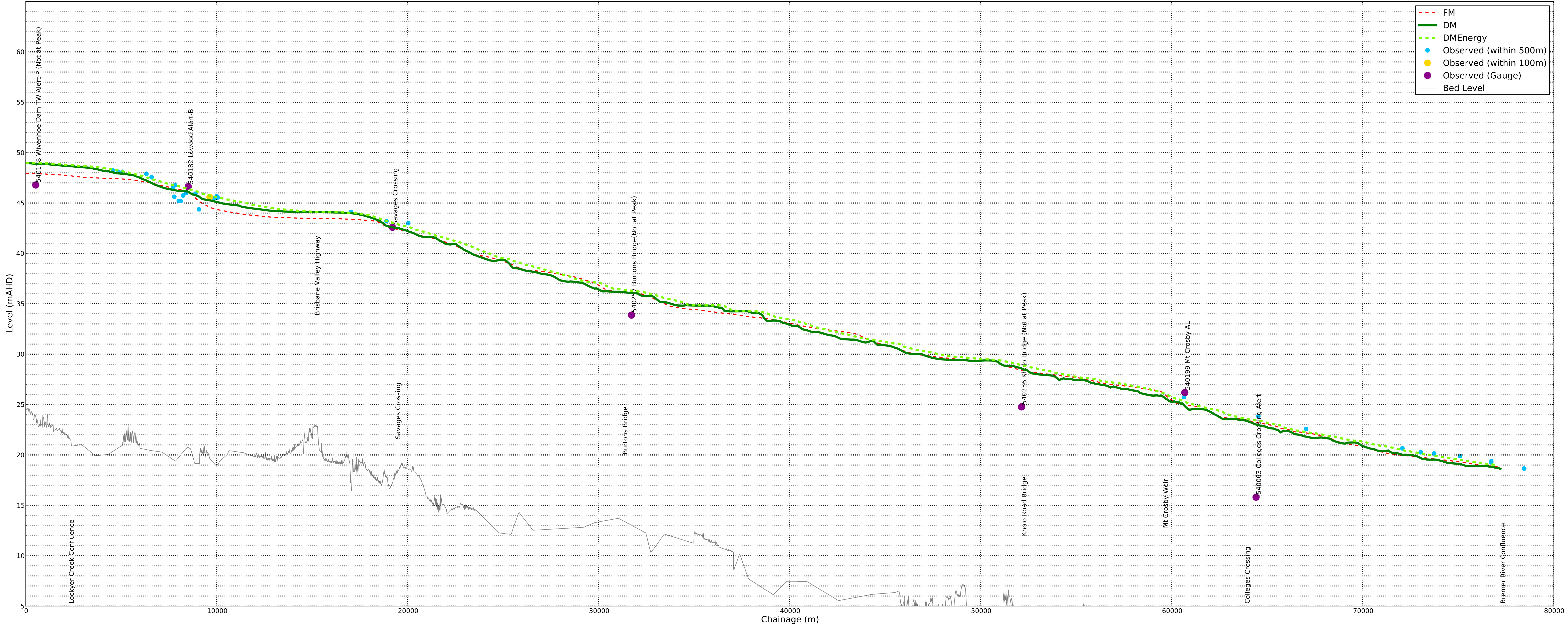
Plot 15 DM & FM 2011 Brisbane River Water Level Gauges



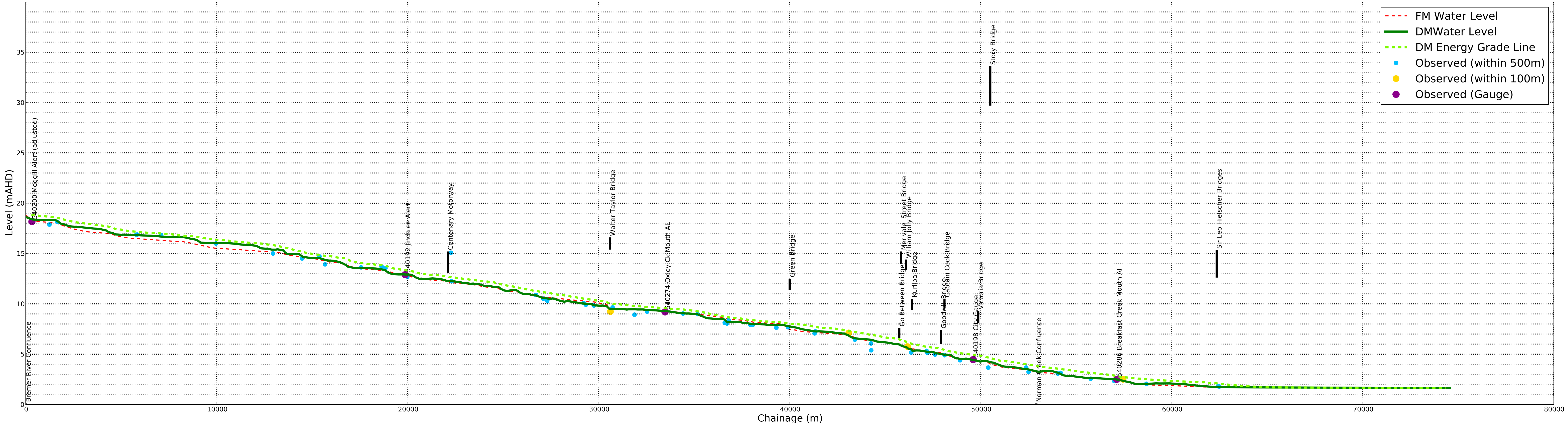
Date Labels are at 00:00 hours on that date

Plot 16 DM & FM 2011 Centenary Bridge Flow Recordings

Mid Brisbane



Lower Brisbane



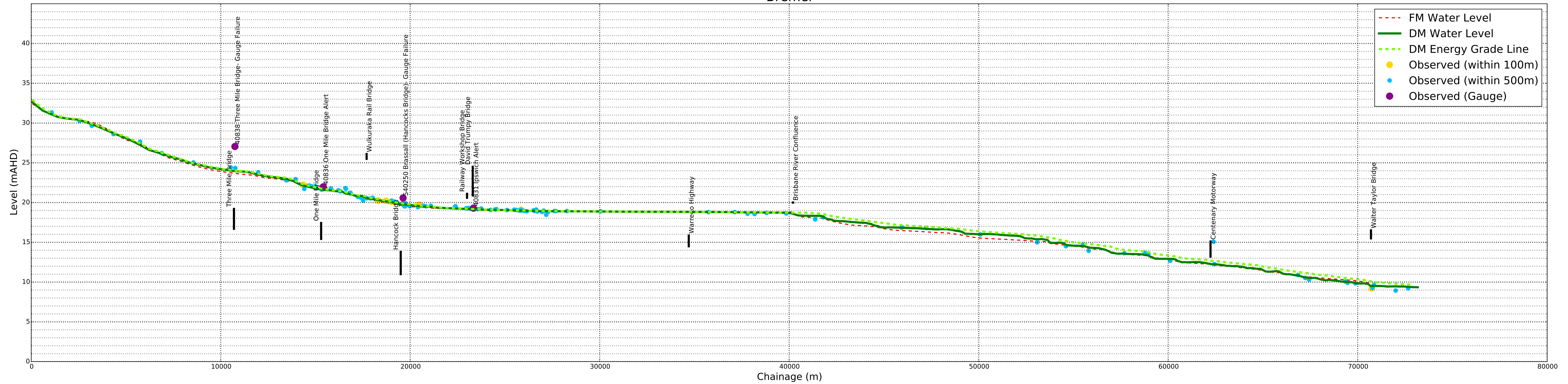
Bridge Levels shown are lowest soffit and lowest deck level
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 17 DM & FM 2011 Brisbane River Longitudinal Profiles

Lockyer

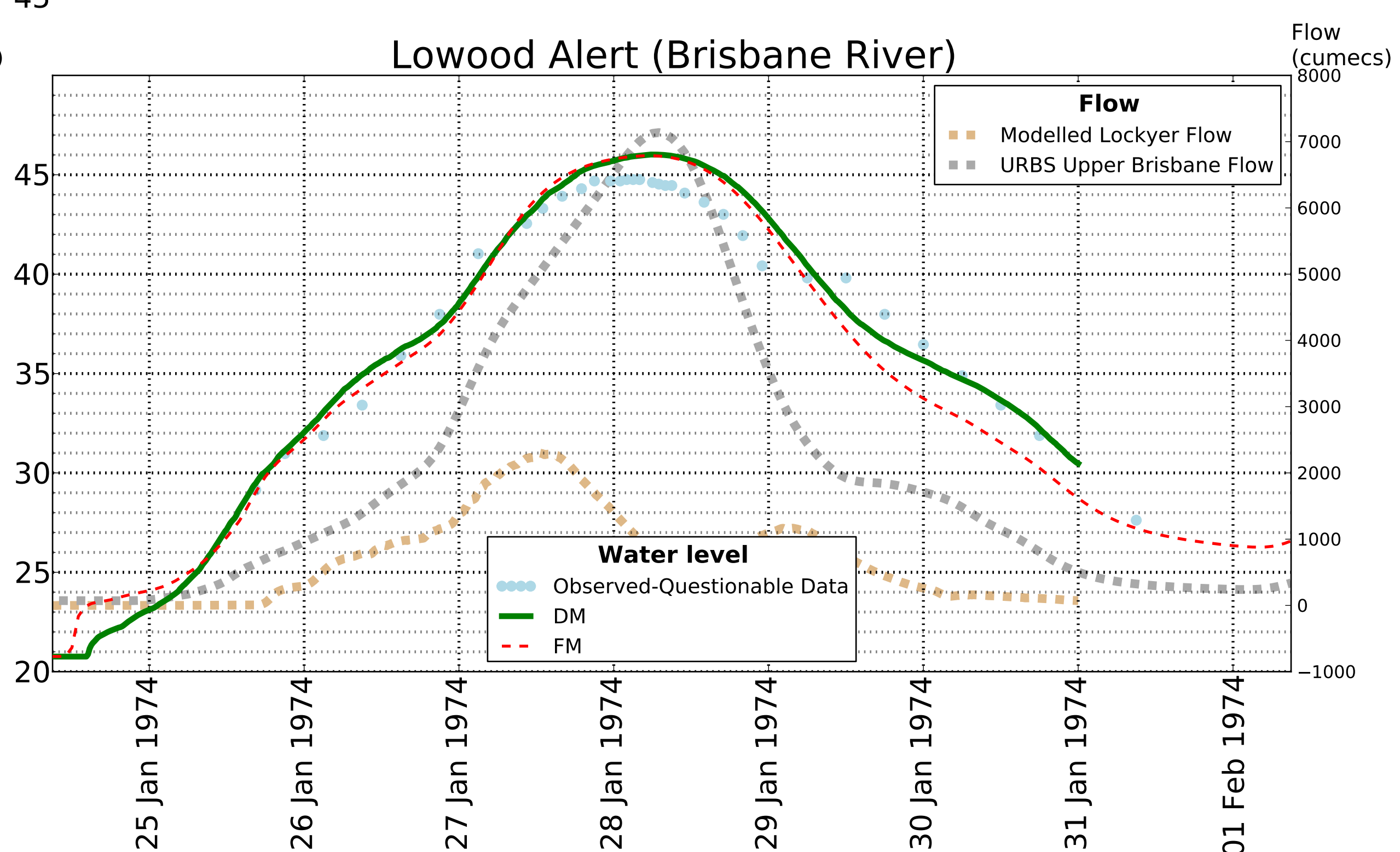
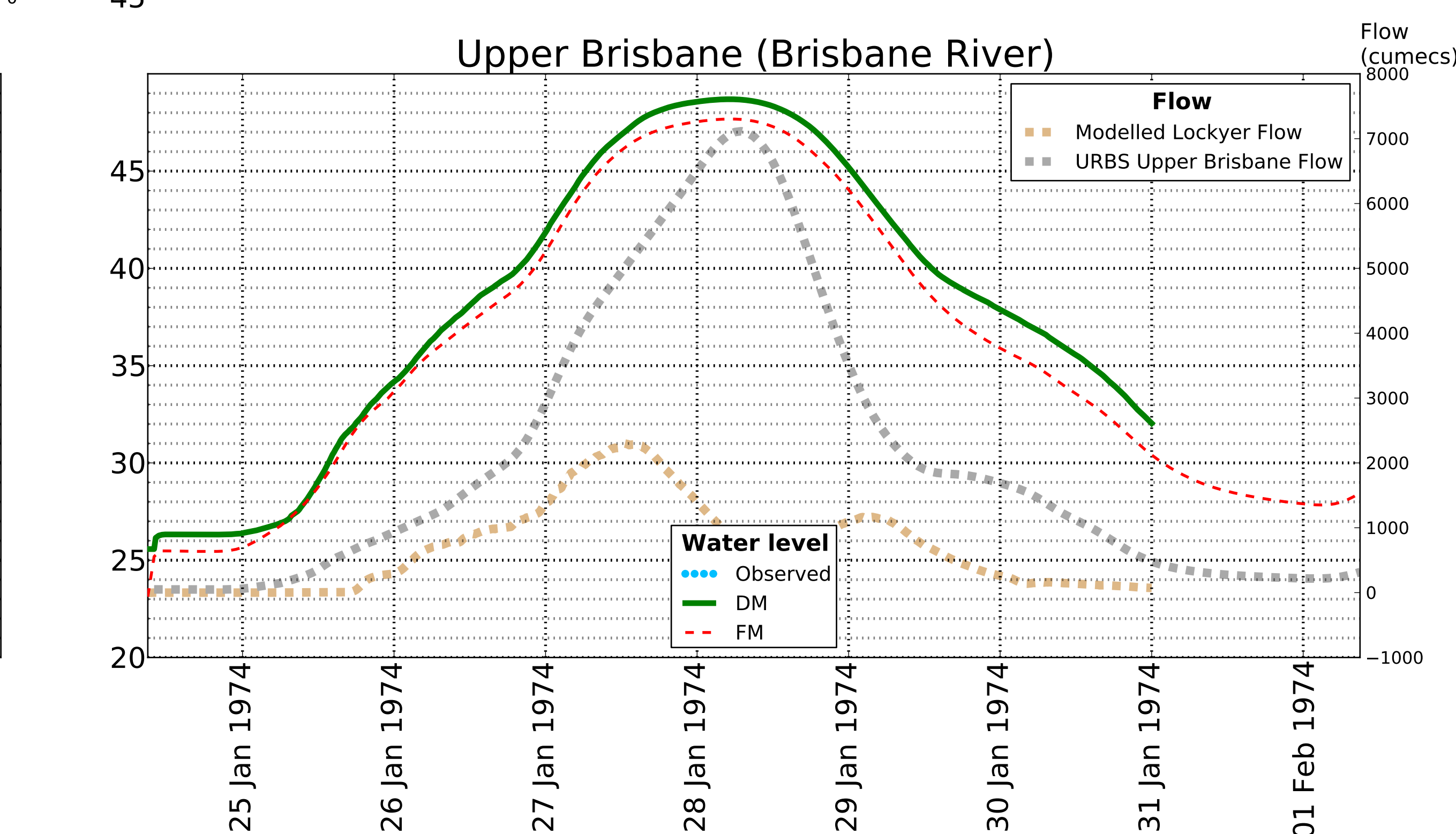
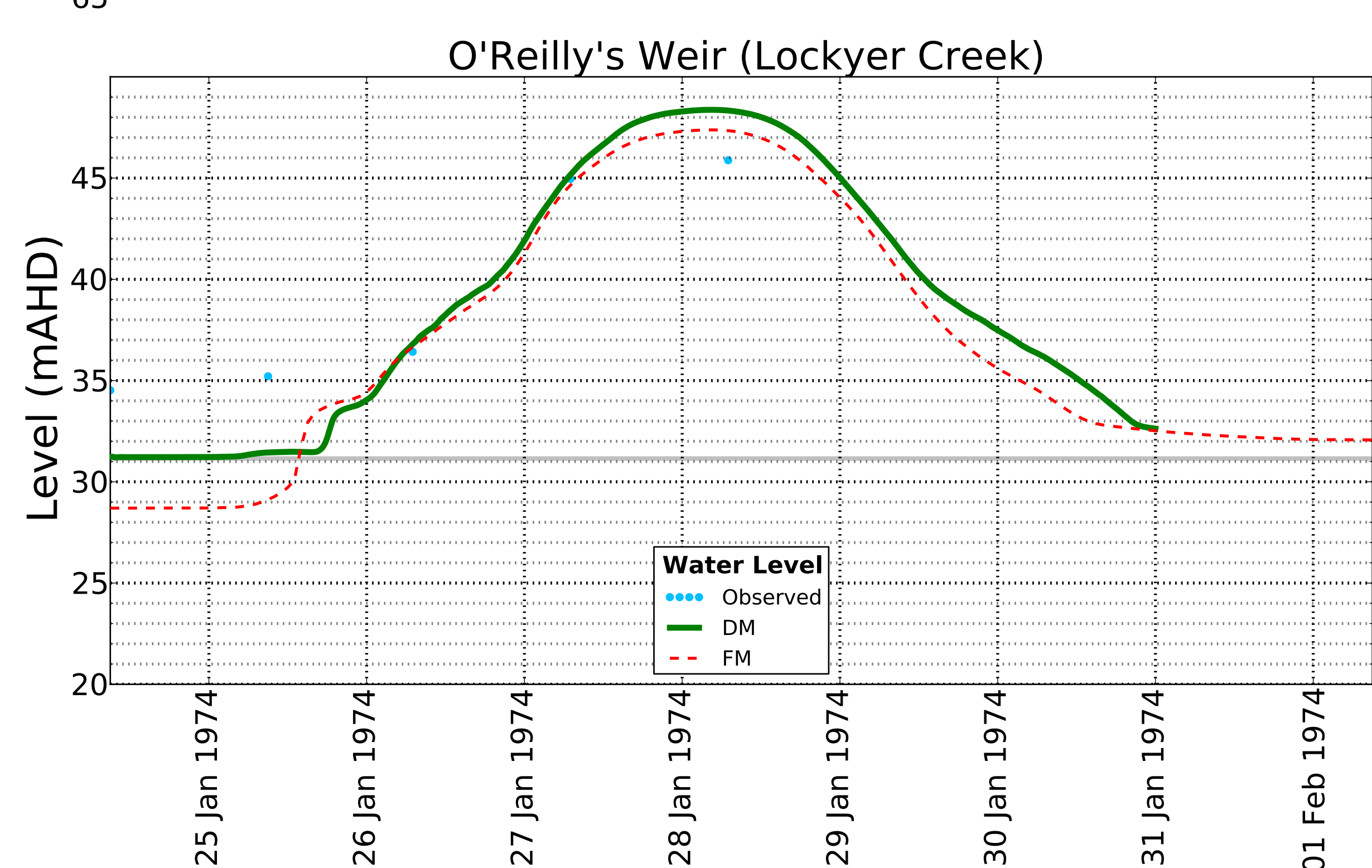
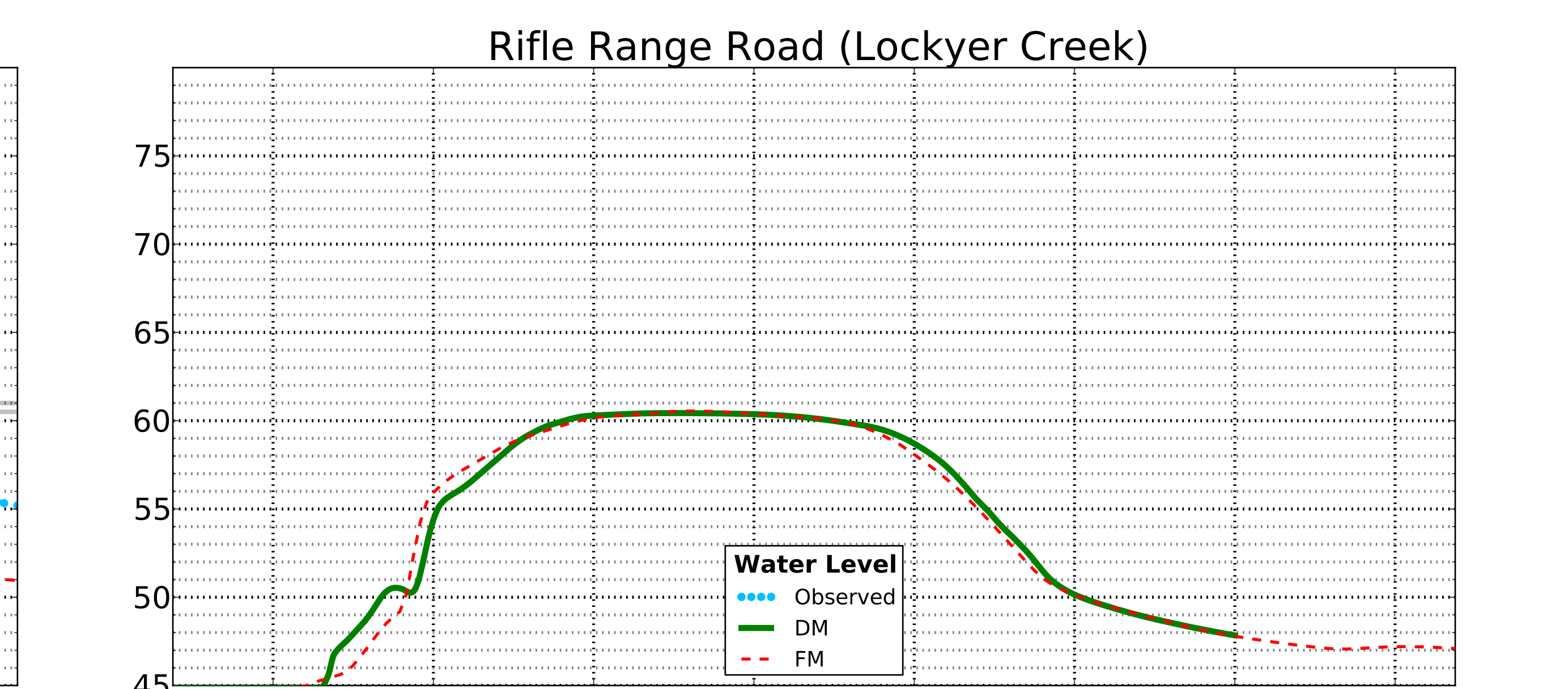
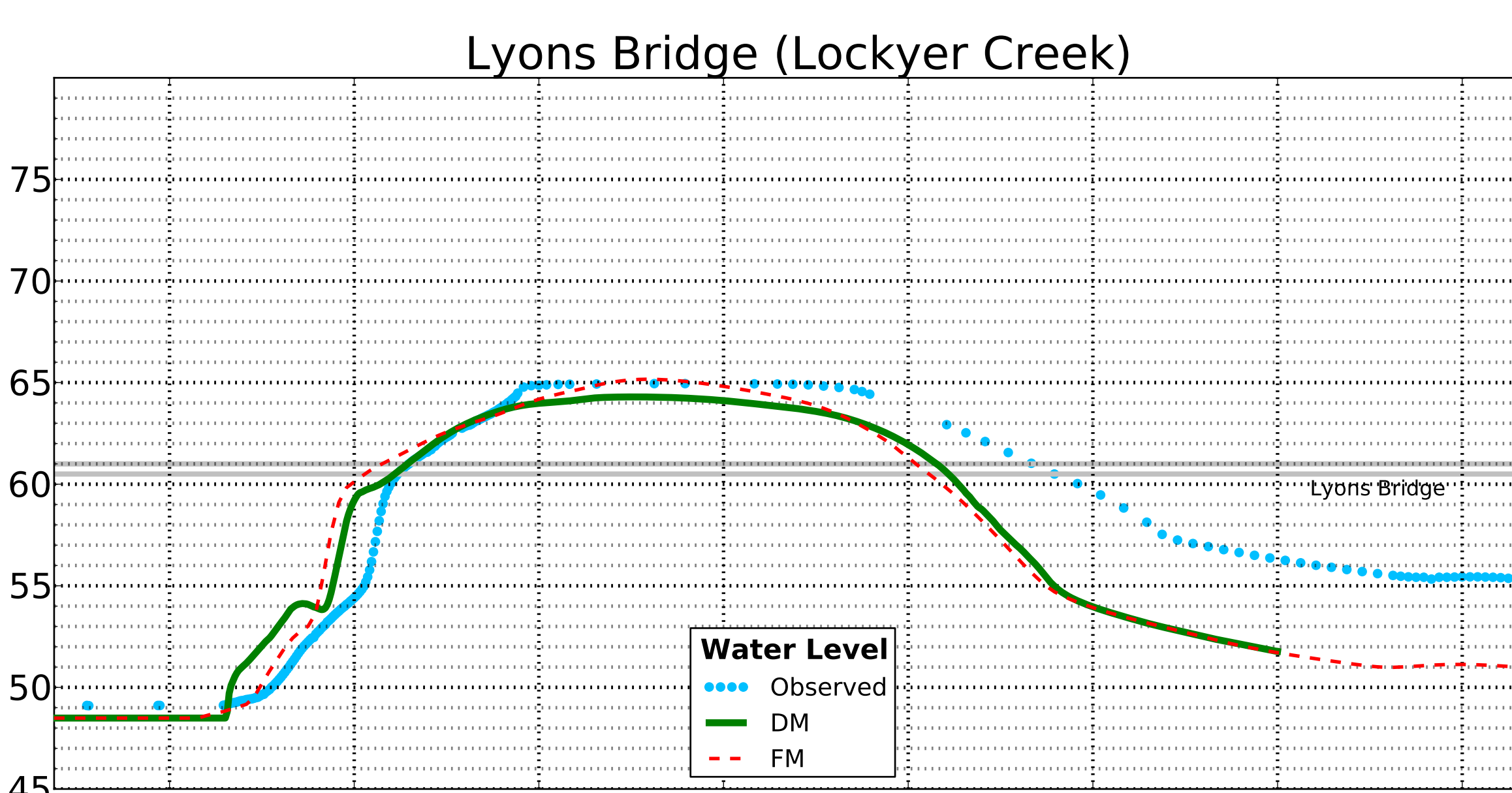
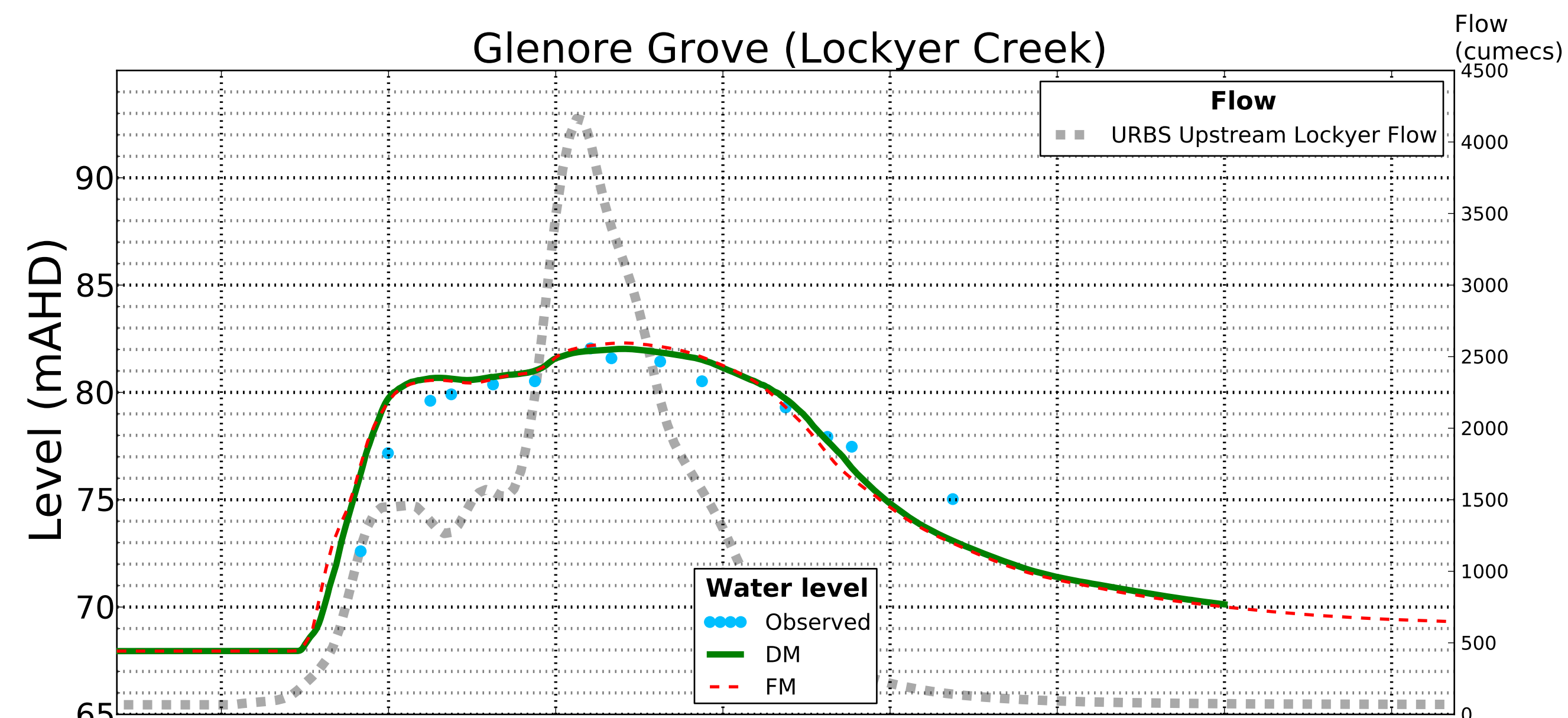


Bremer



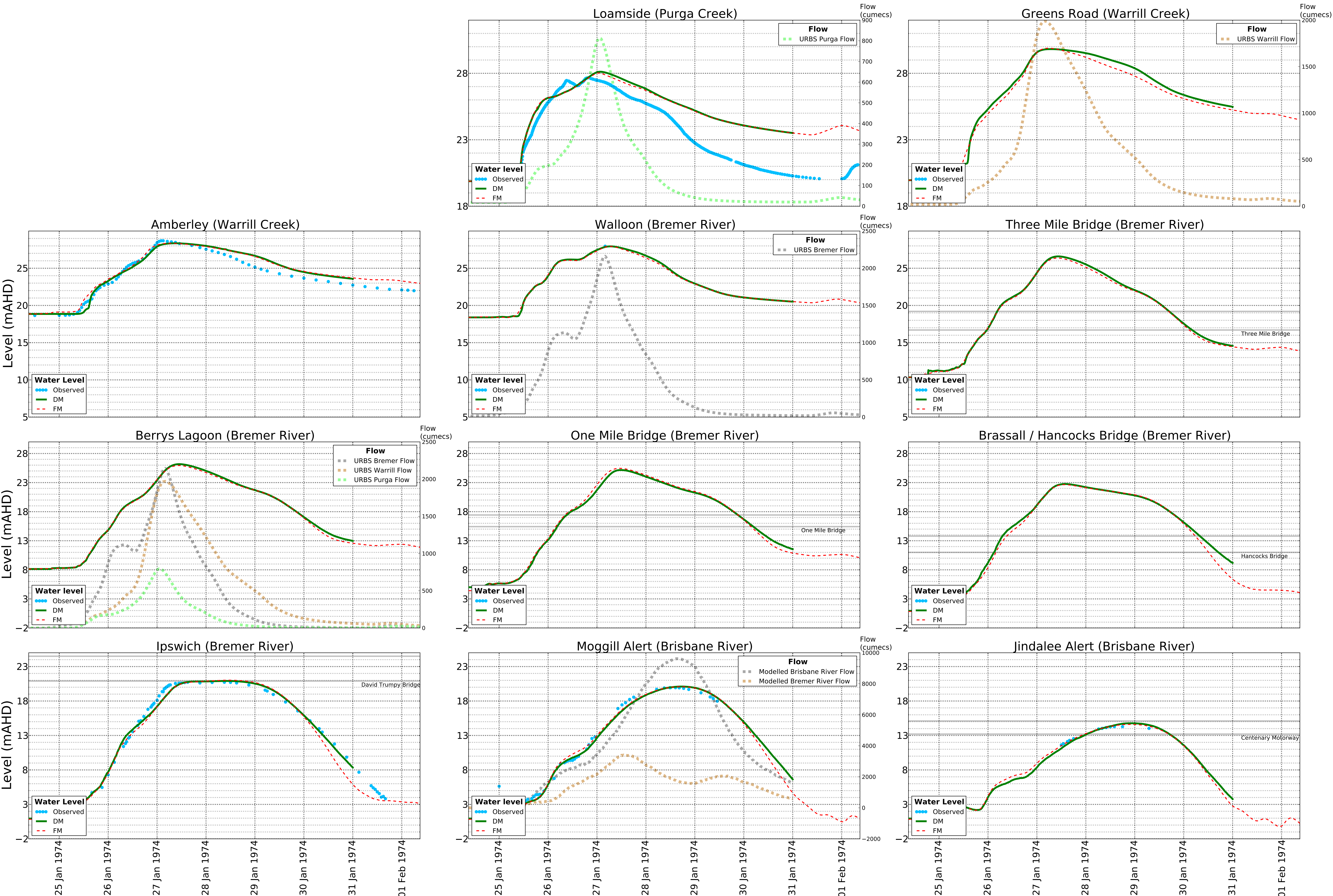
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 18 DM & FM 2011 Lockyer / Bremer Longitudinal Profiles



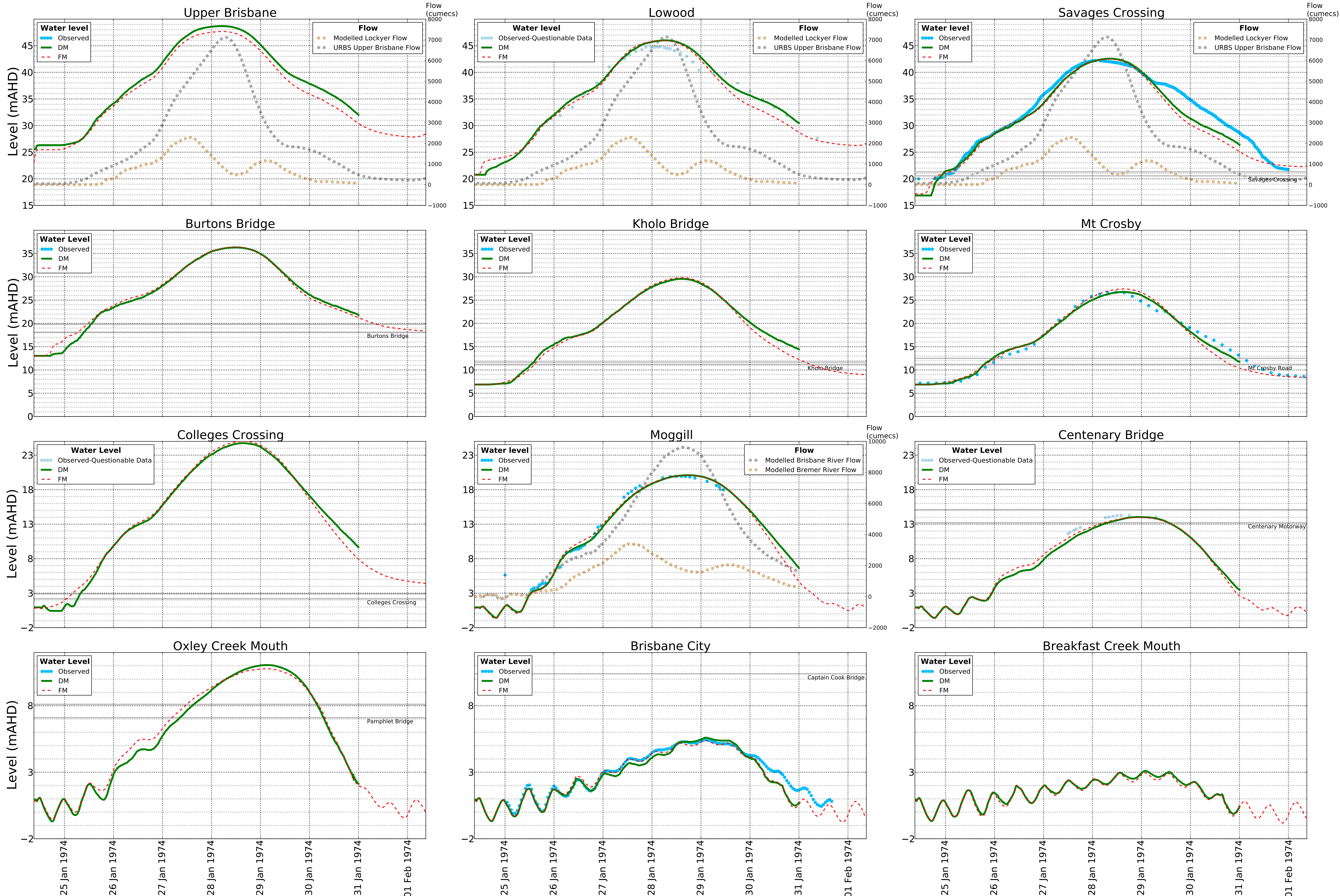
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 19 DM & FM 1974 Lockyer Creek Water Level Gauges
 Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses



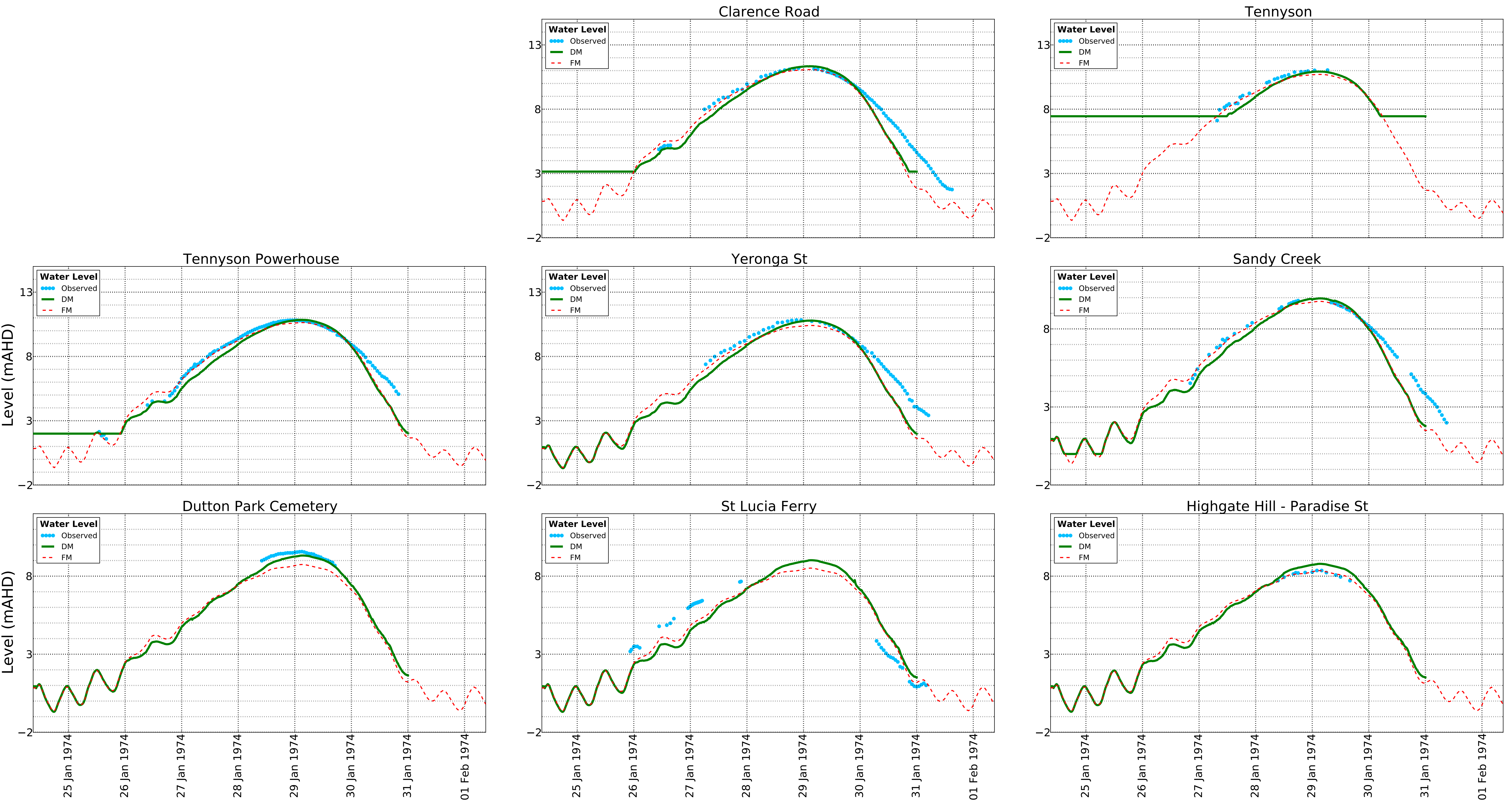
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 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 20 DM & FM 1974 Bremer River Water Level Gauges
 Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses



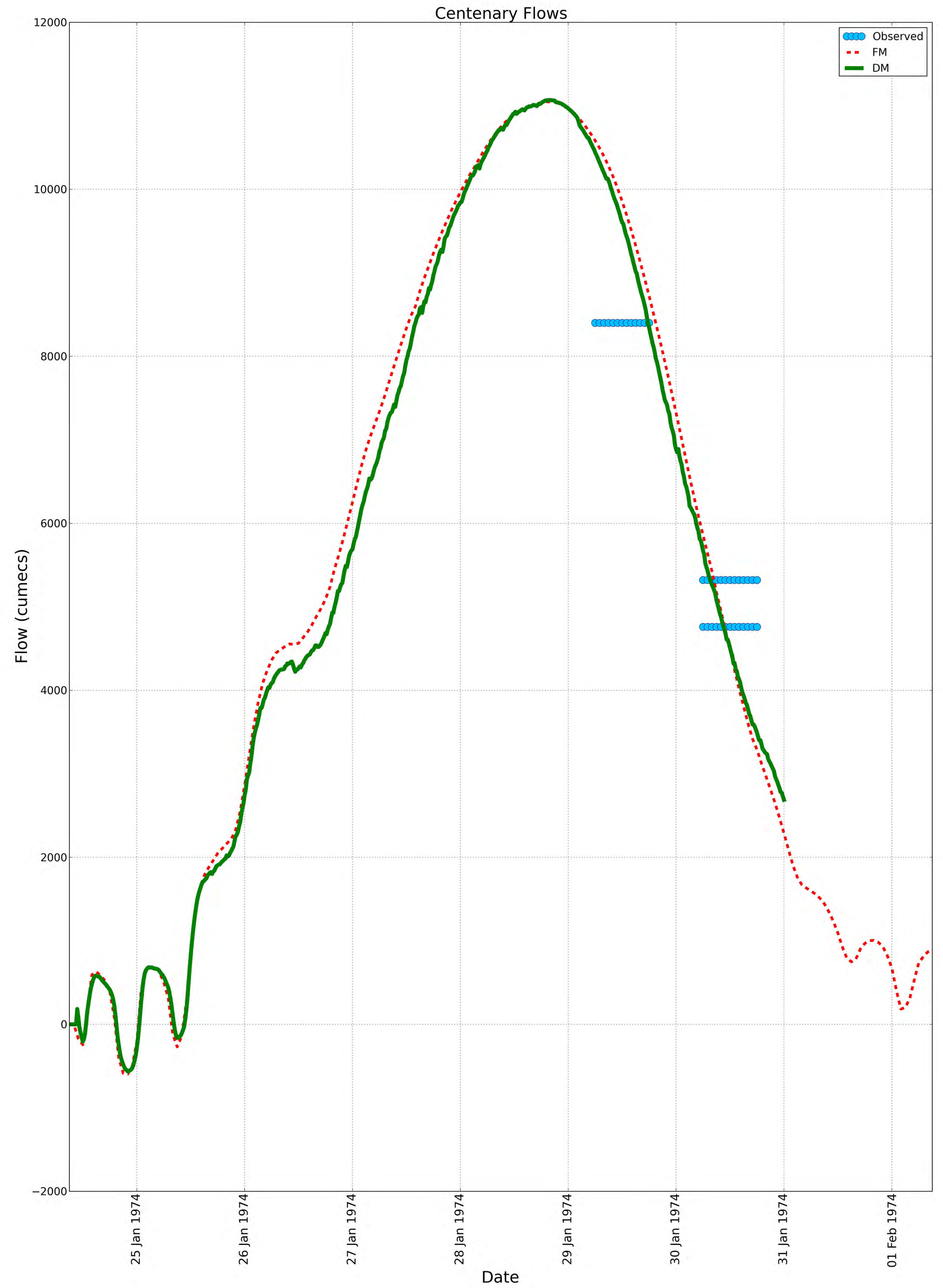
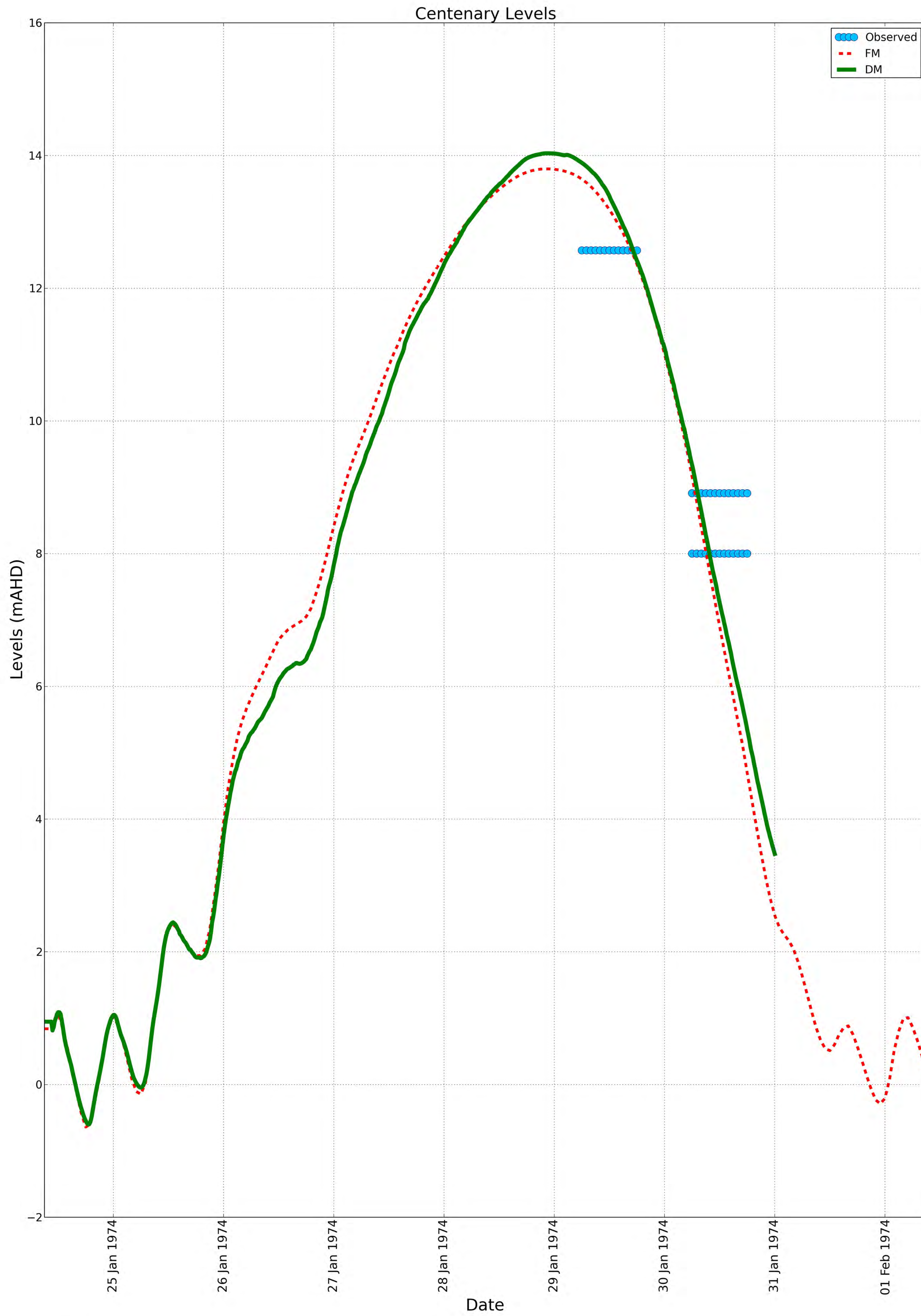
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 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 21 DM & FM 1974 Brisbane River Water Level Gauges
 Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses



Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 22 DM & FM 1974 Brisbane River Water Level Additional Gauges
 Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses



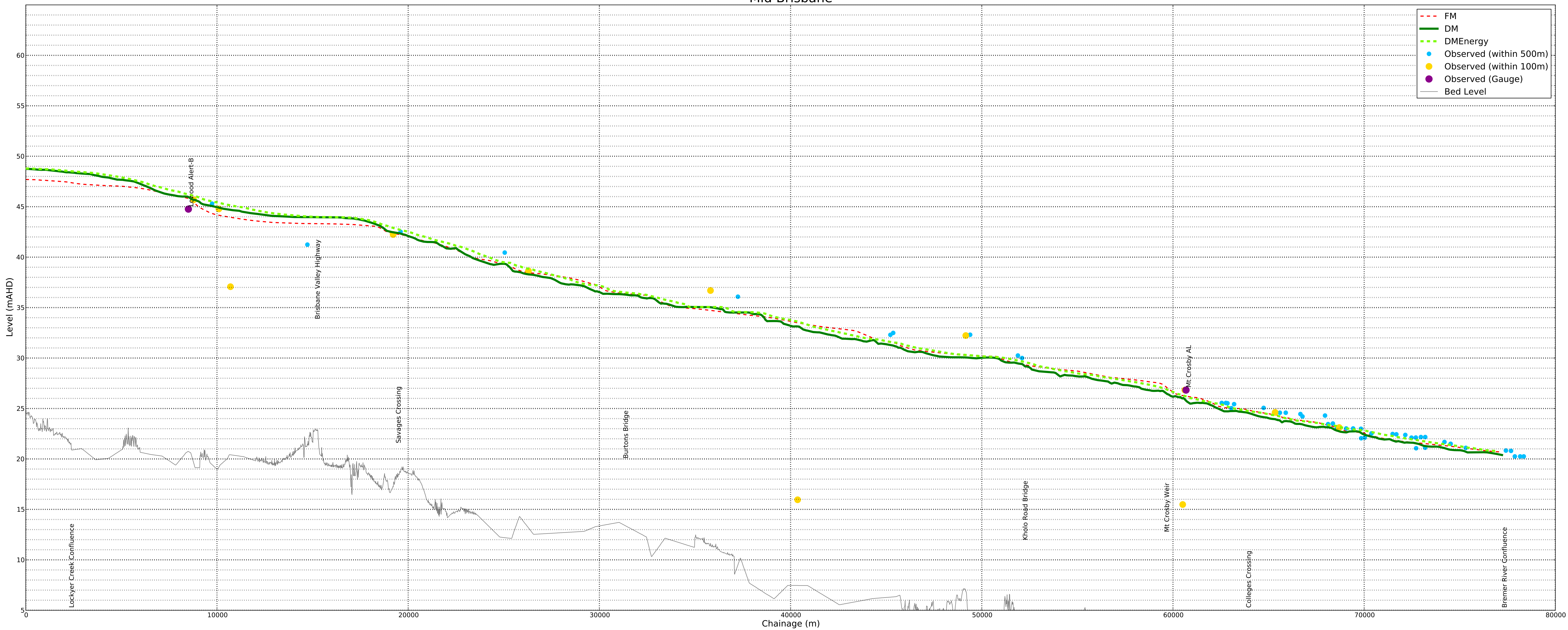
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Fast Model Version: 0285_ST09 Detailed Model Version: 043

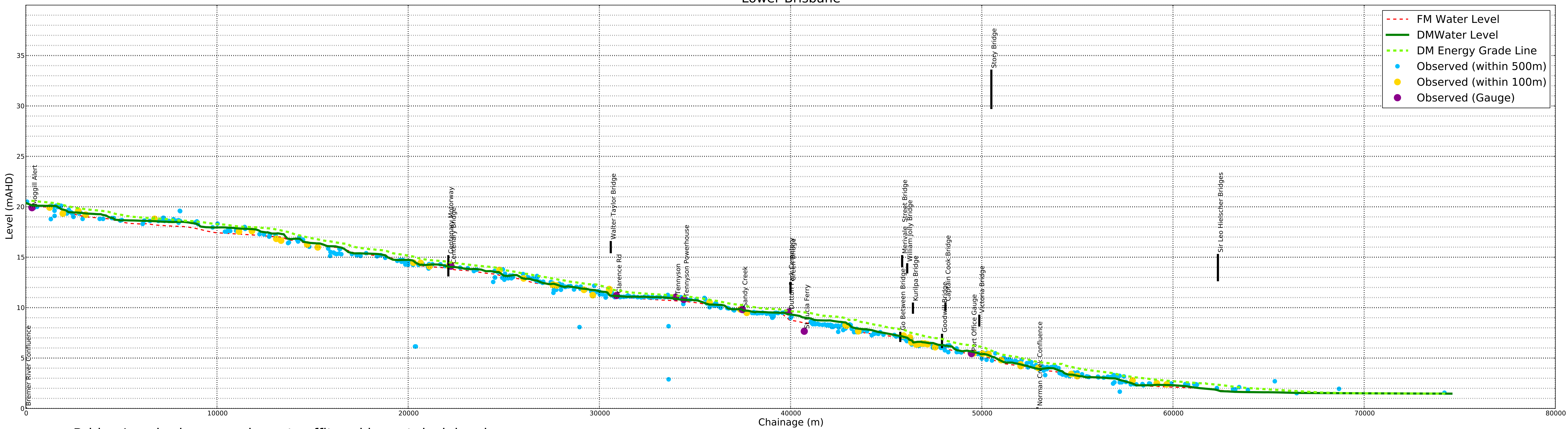
Plot 23 DM & FM 1974 Centenary Bridge Flow Recordings

Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses

Mid Brisbane



Lower Brisbane



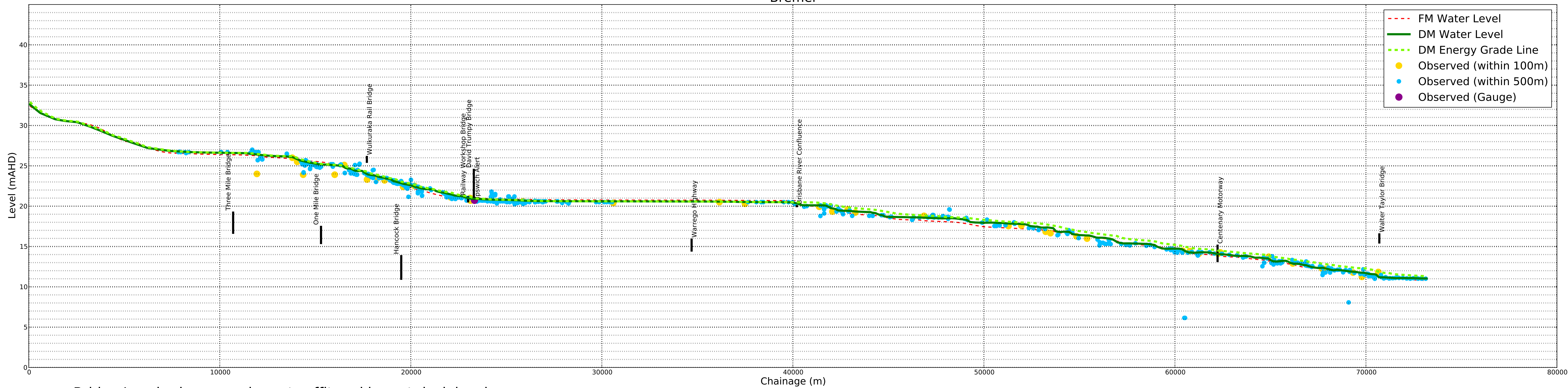
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 24 DM & FM 1974 Brisbane River Longitudinal Profiles
Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQ Water losses

Lockyer



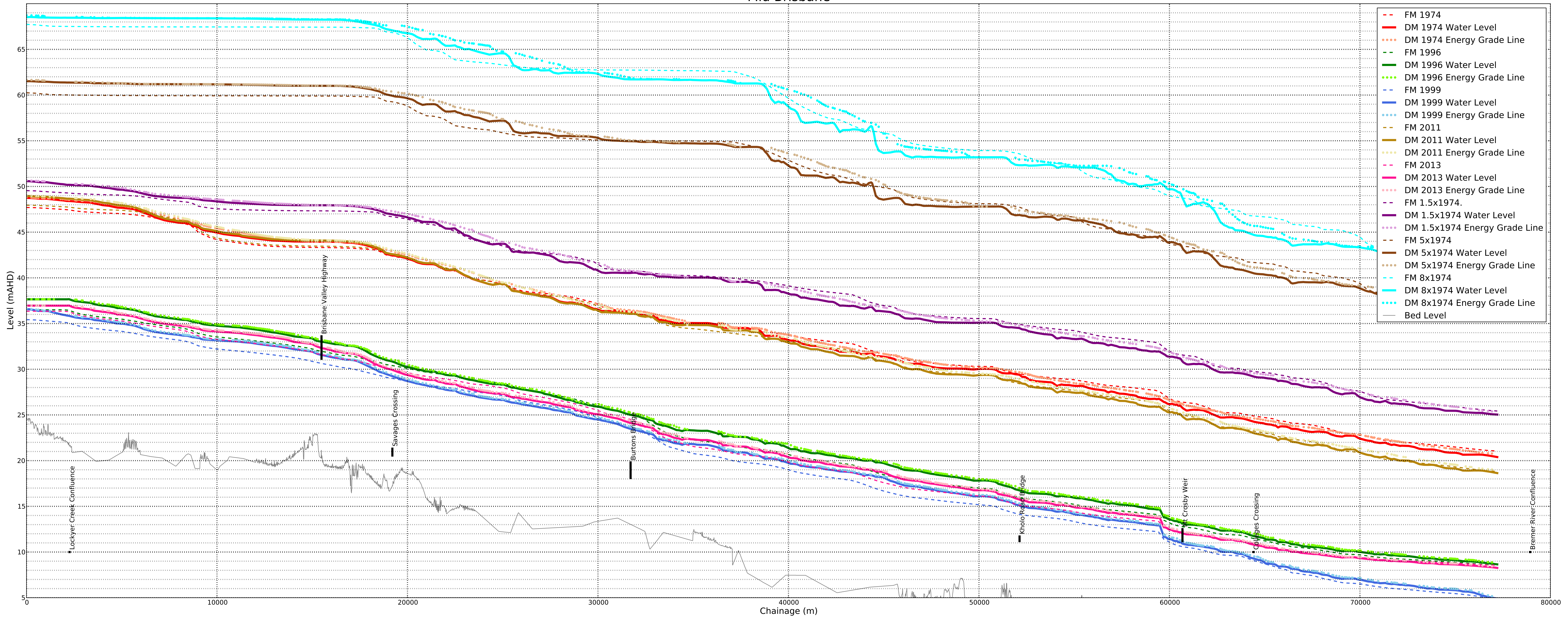
Bremer



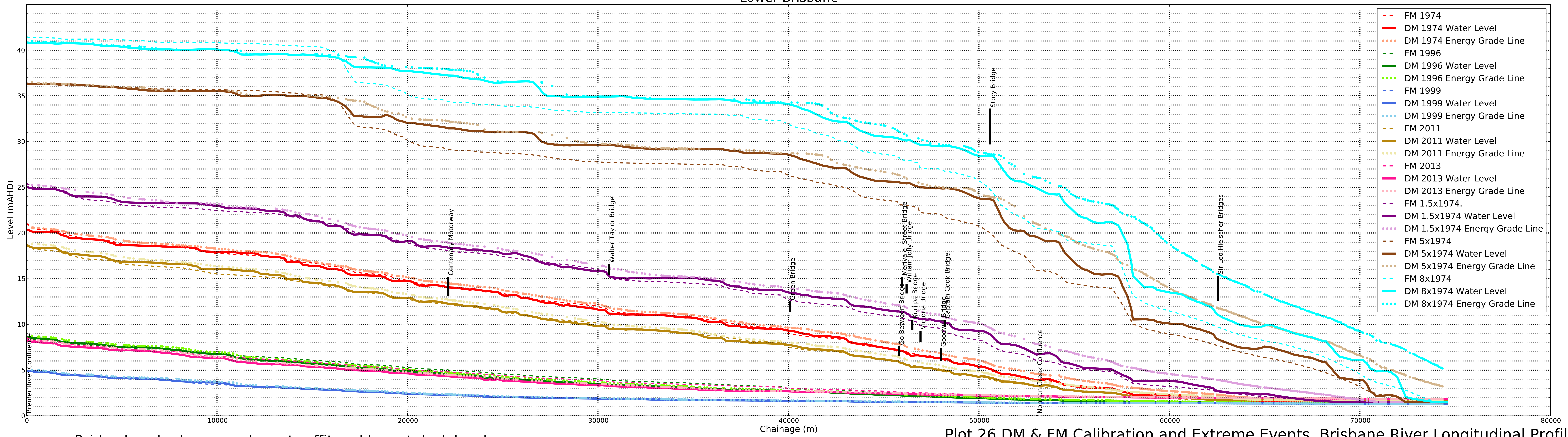
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285_ST09 Detailed Model Version: 043 ST09

Plot 25 DM & FM 1974 Lockyer / Bremer Longitudinal Profiles
Note: 1974 hydrology on the Bremer River adopts 50/50 Aurecon/ SEQwater losses

Mid Brisbane

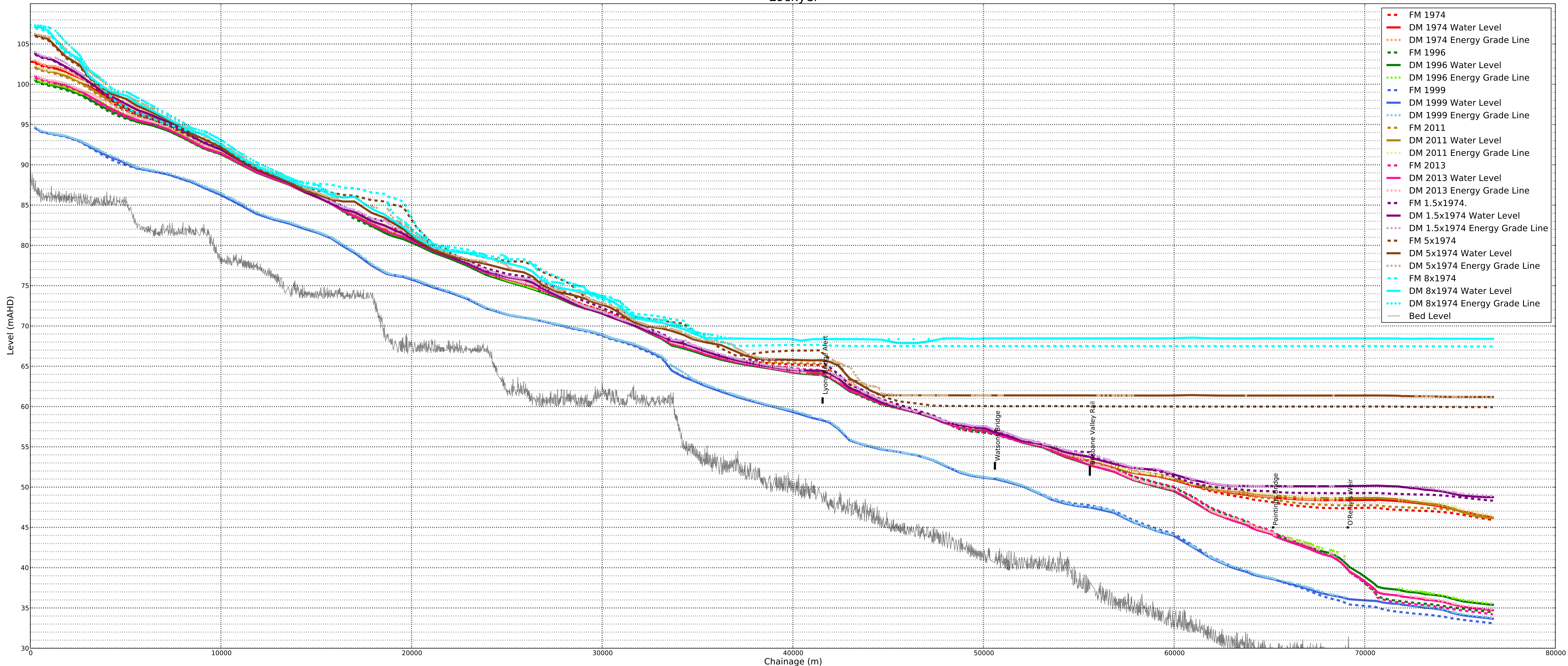


Lower Brisbane

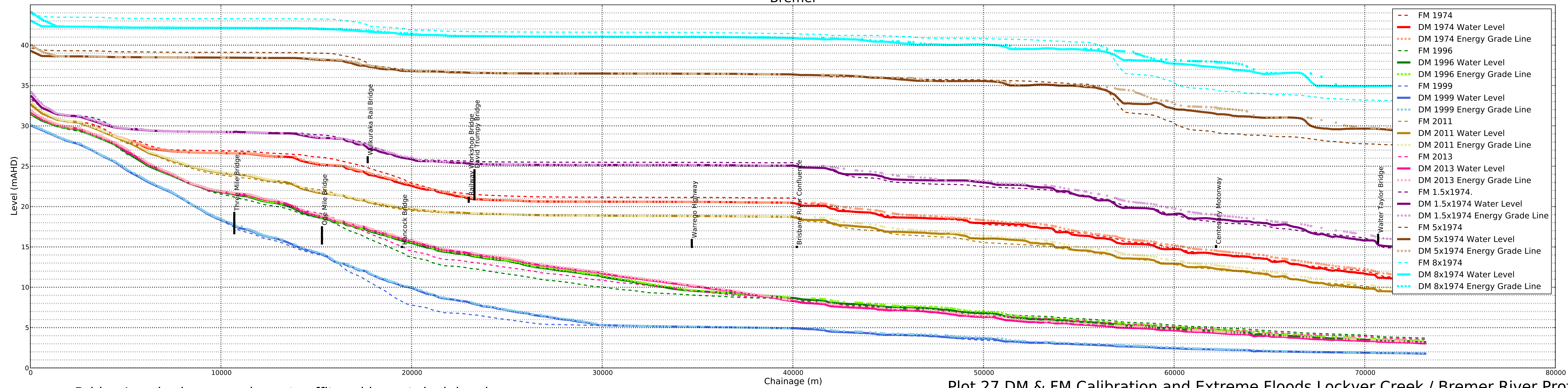


Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285

Lockyer

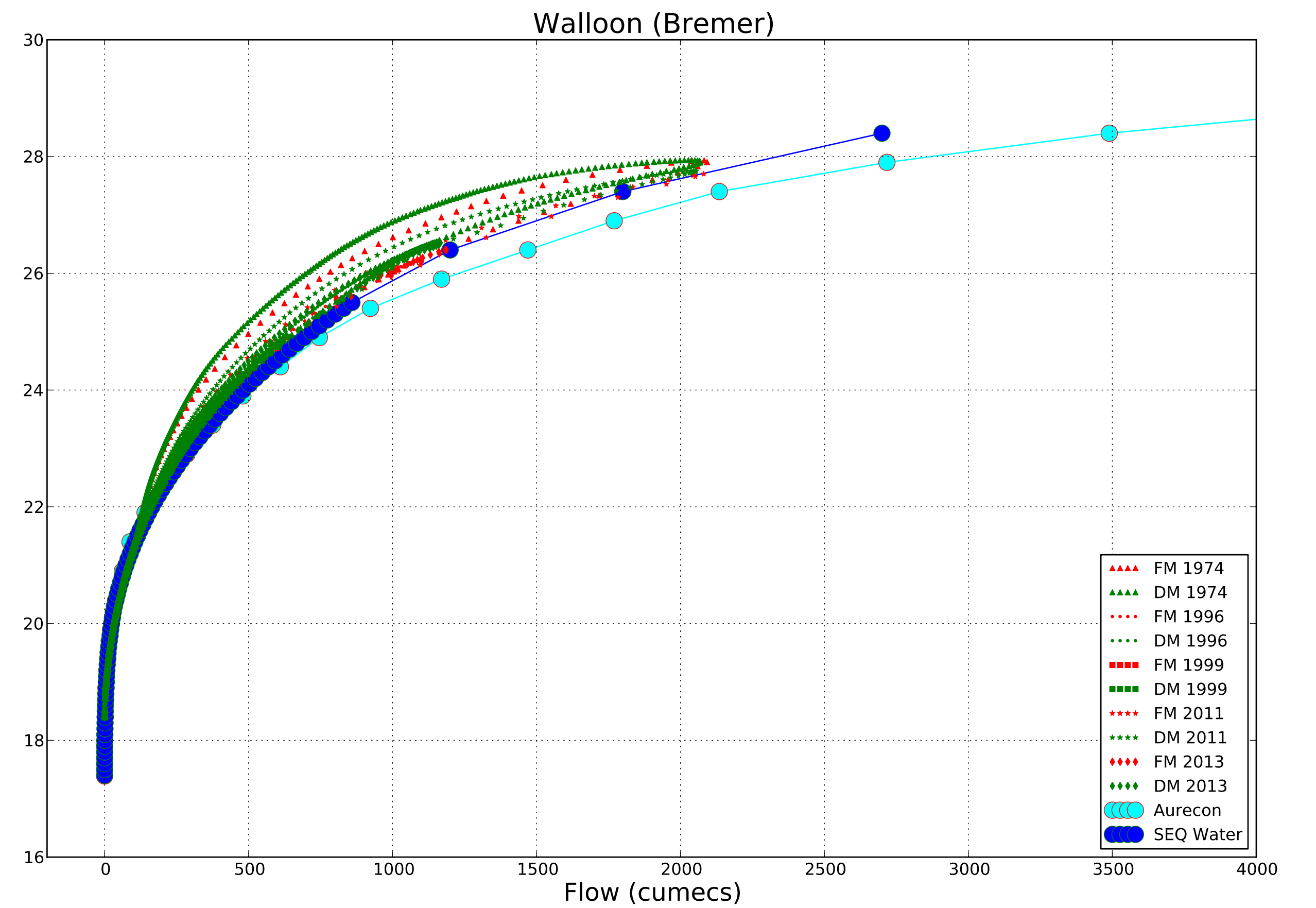
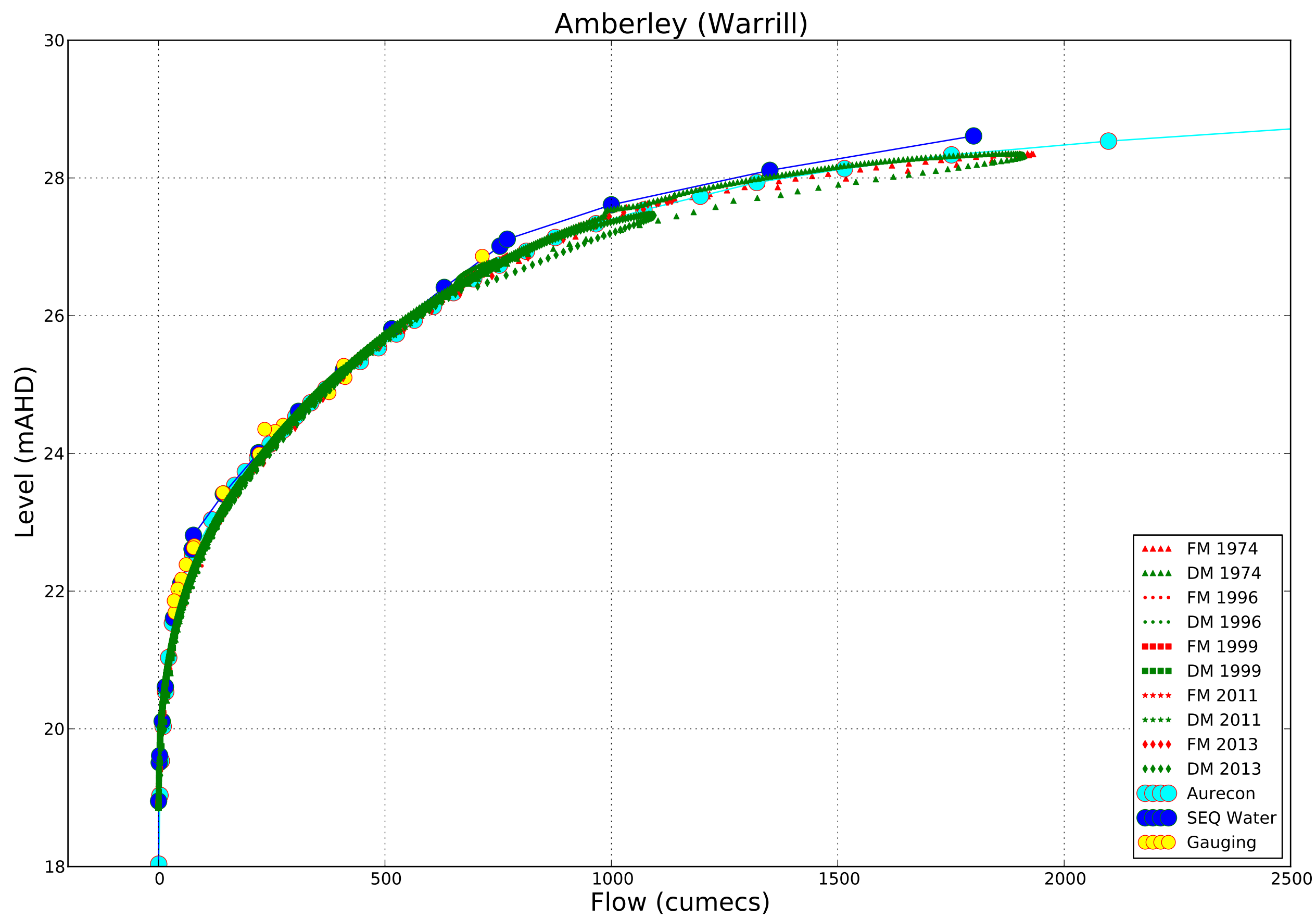
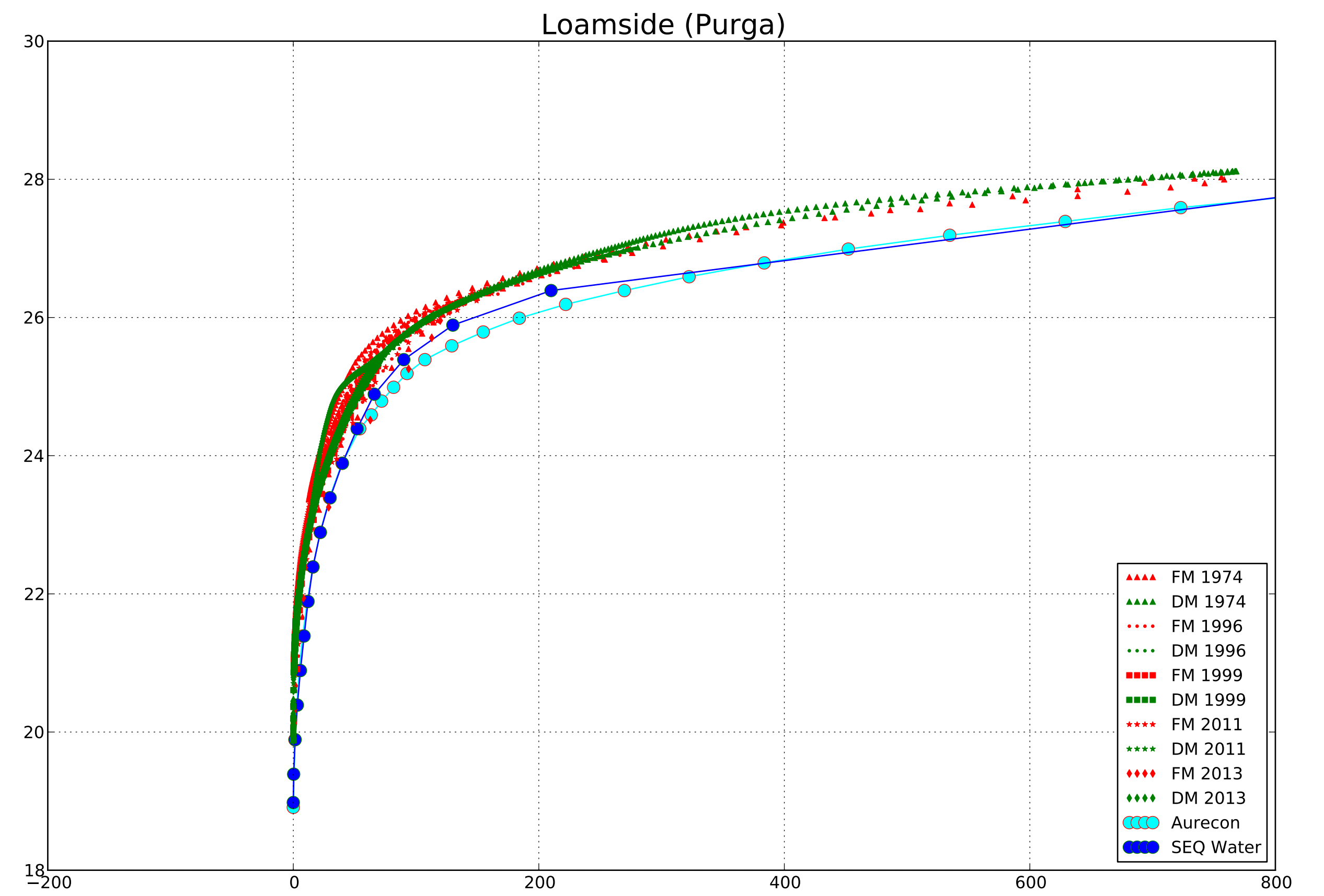
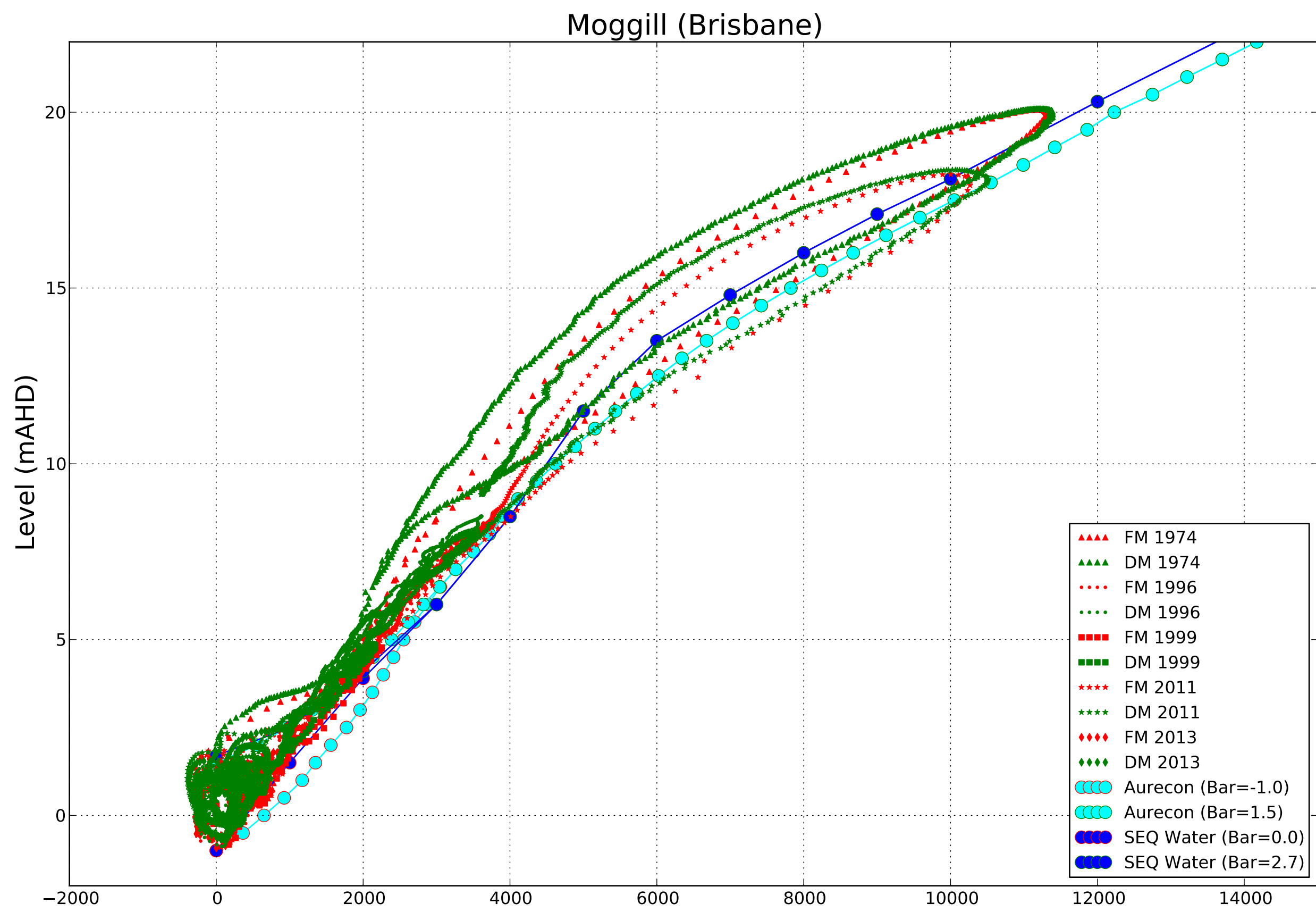


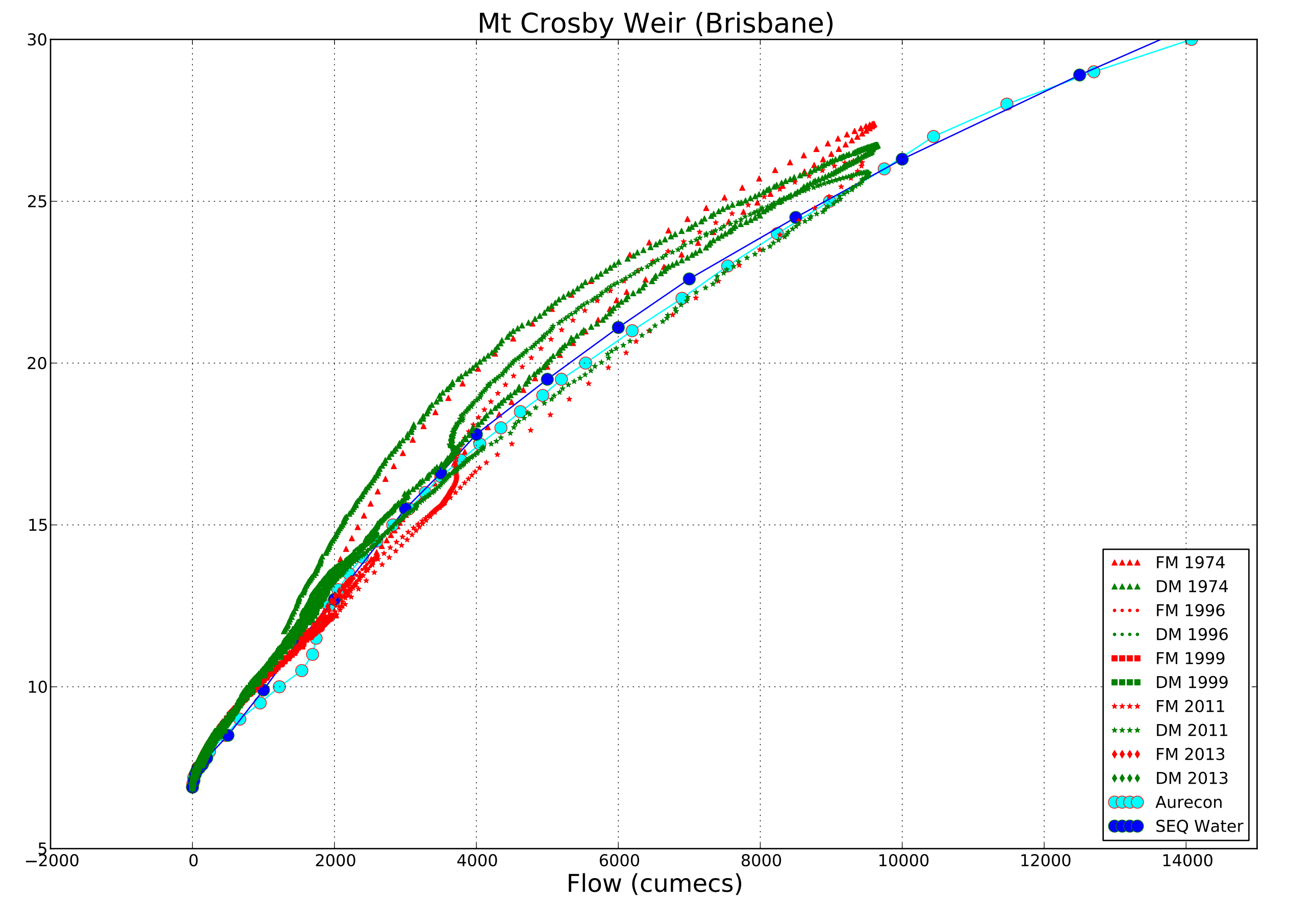
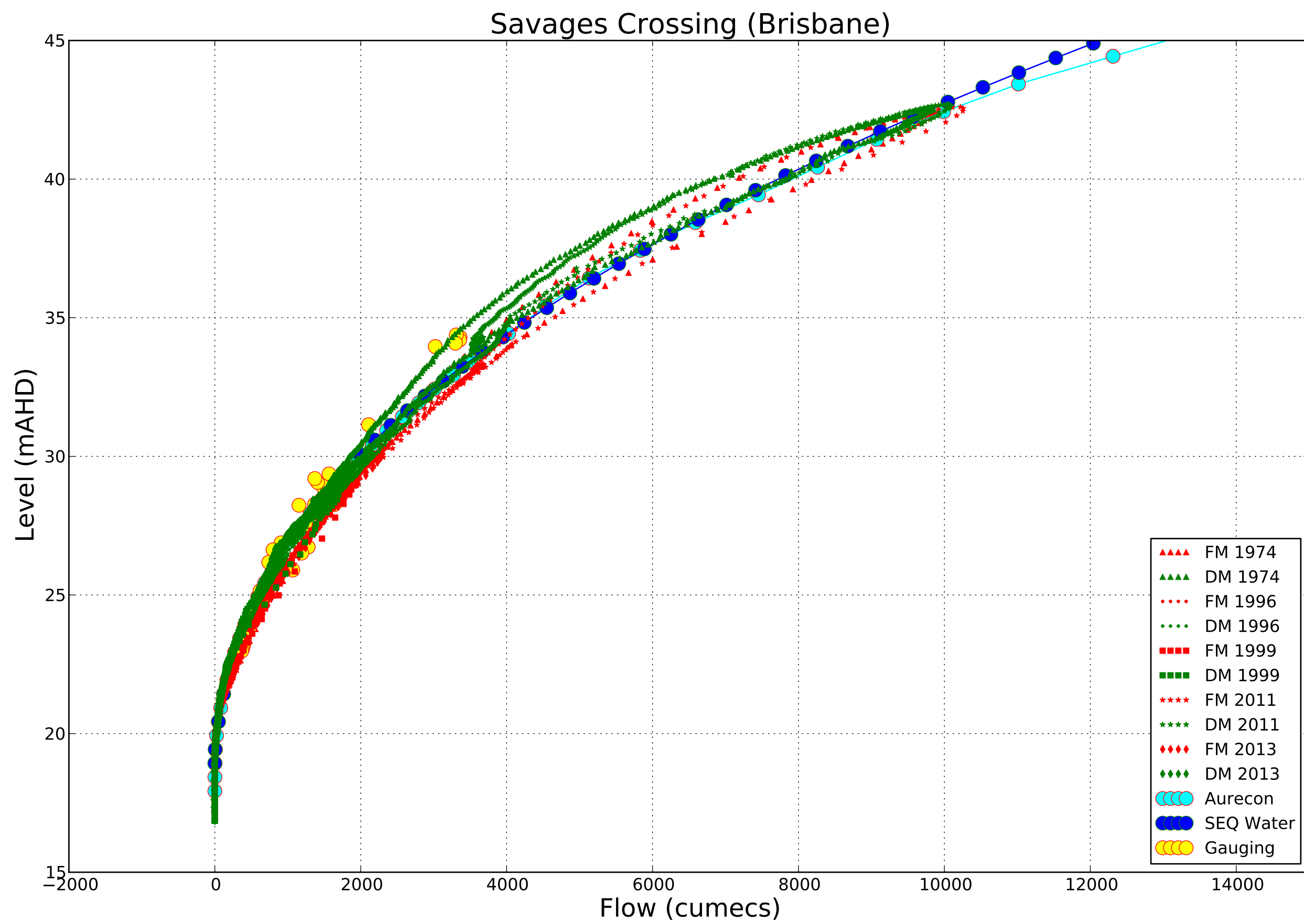
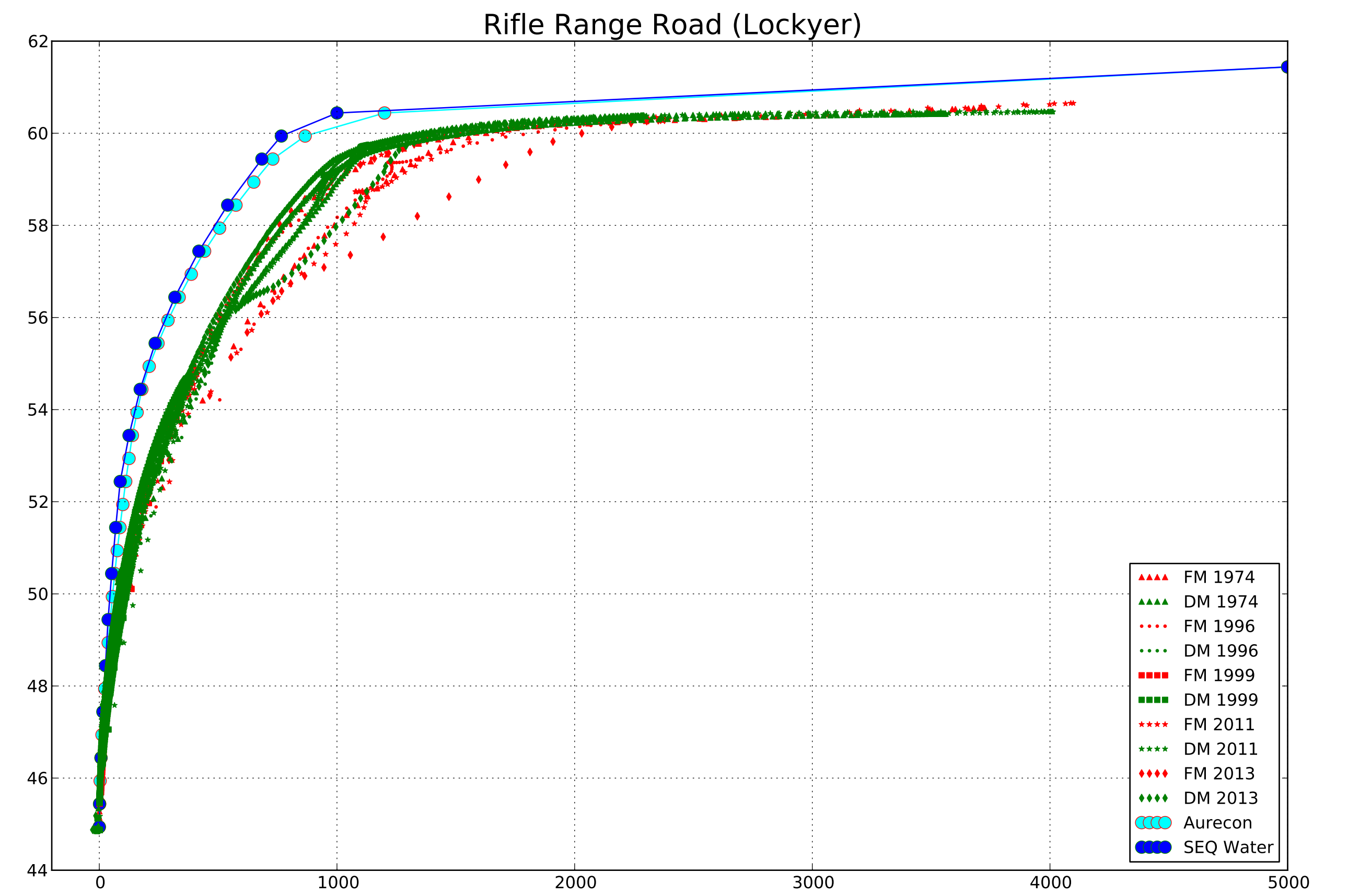
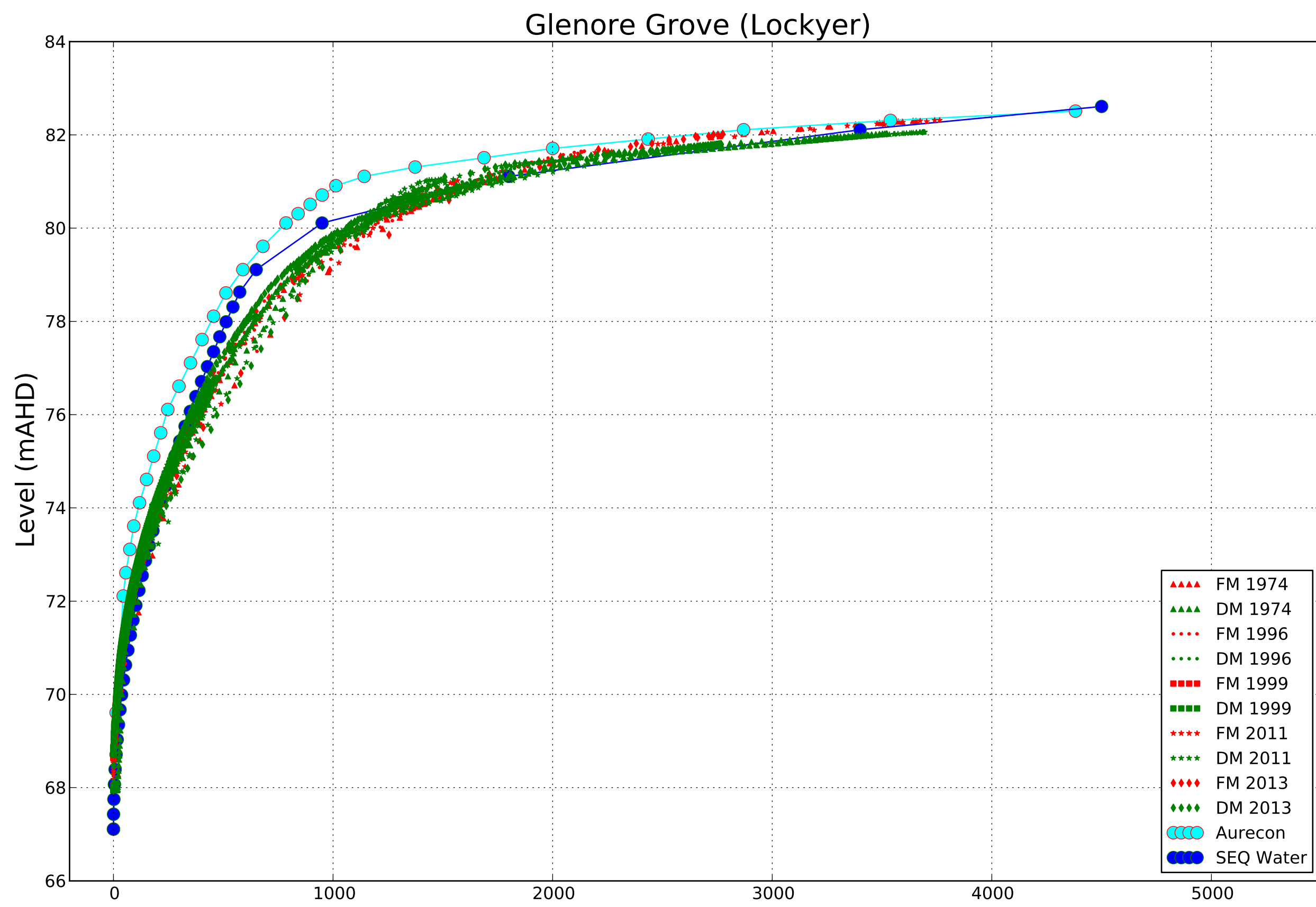
Bremer

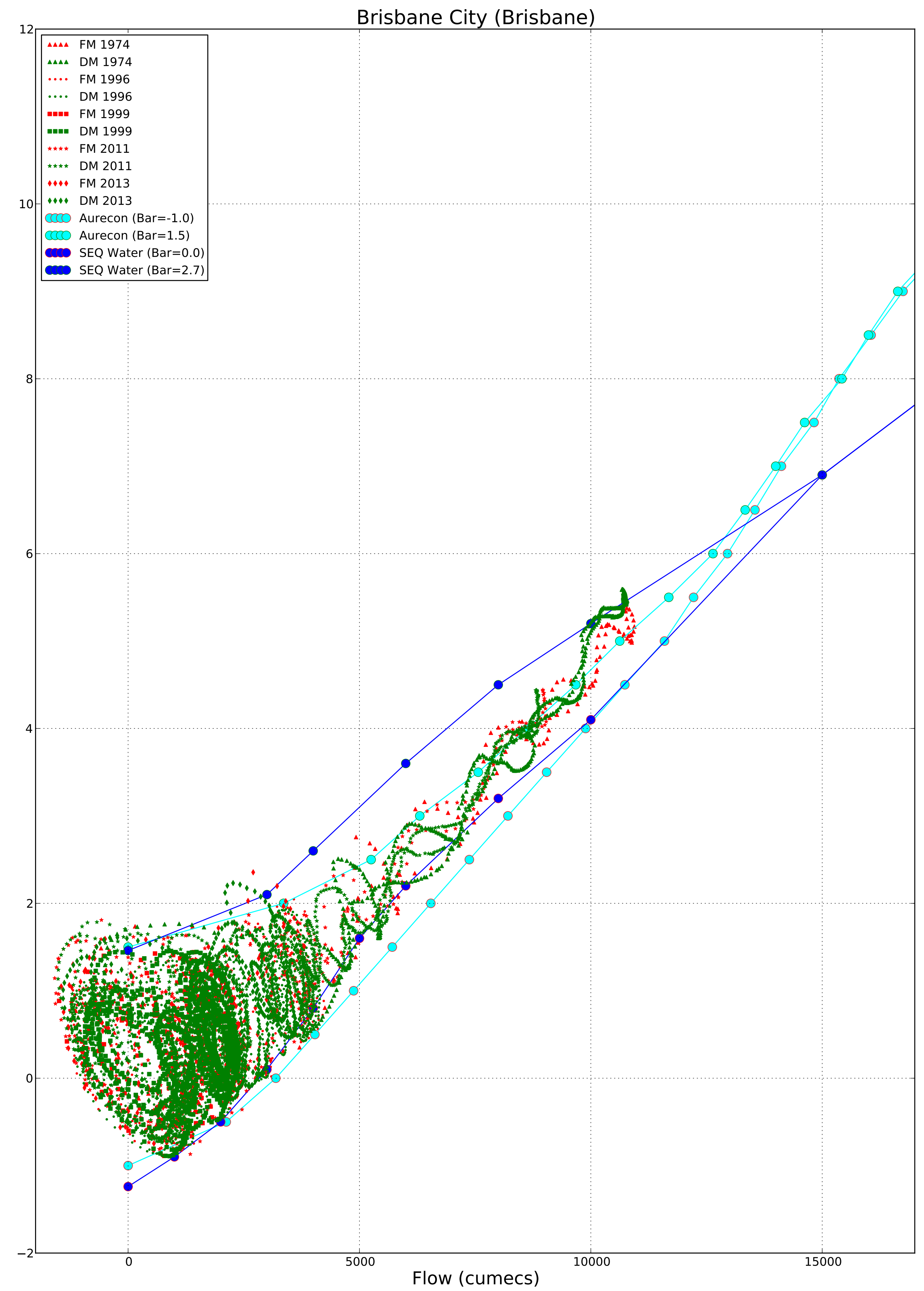
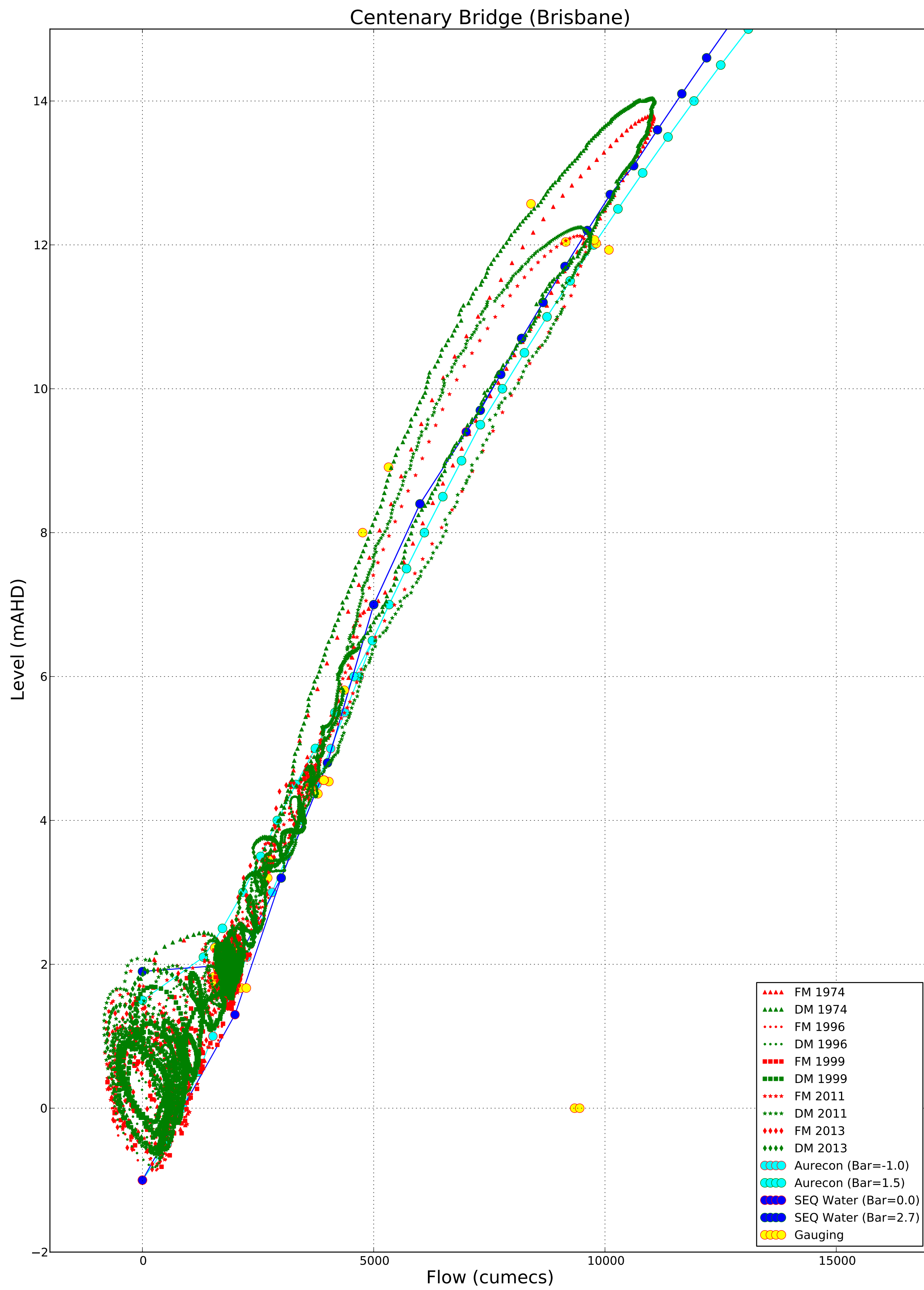


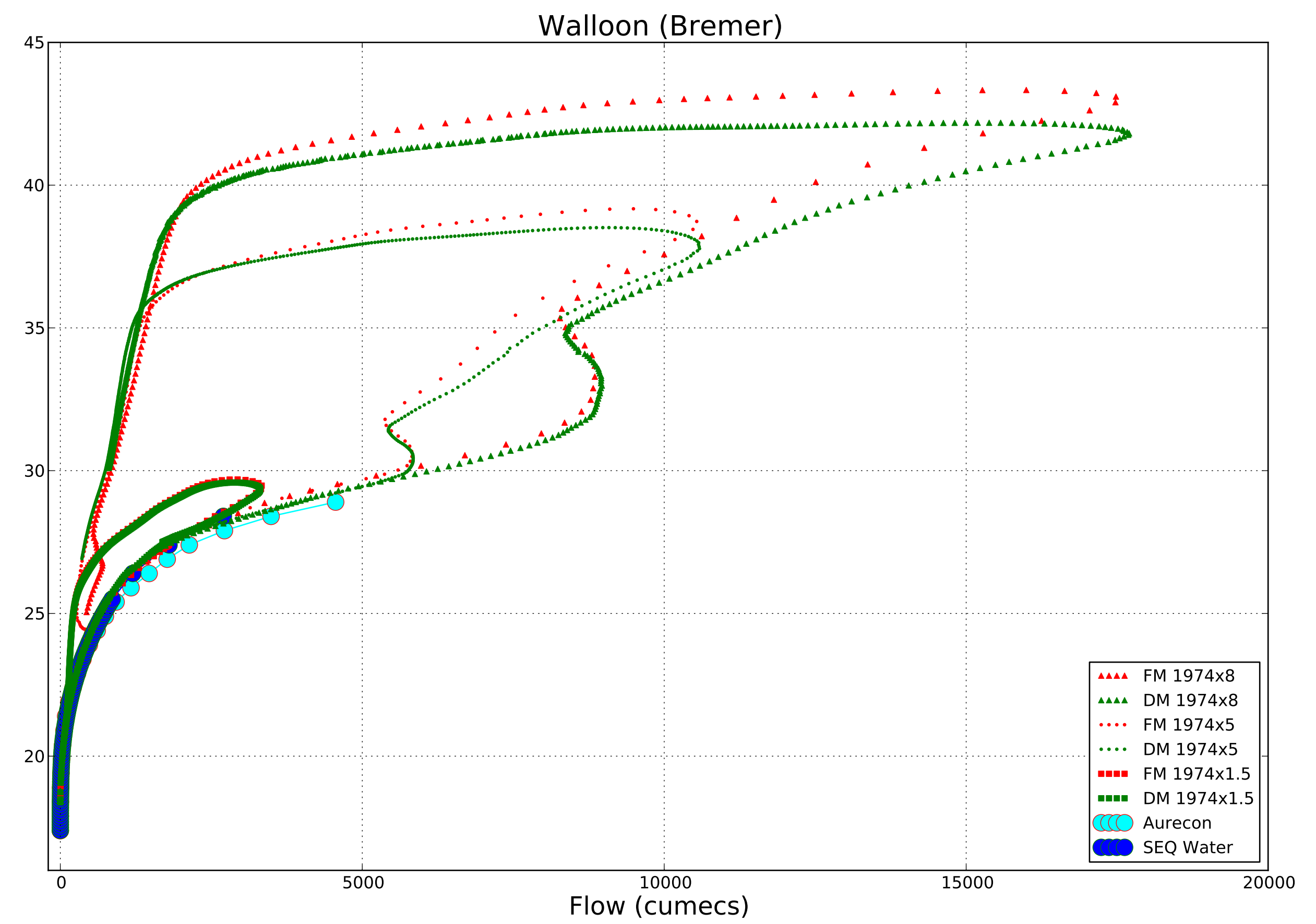
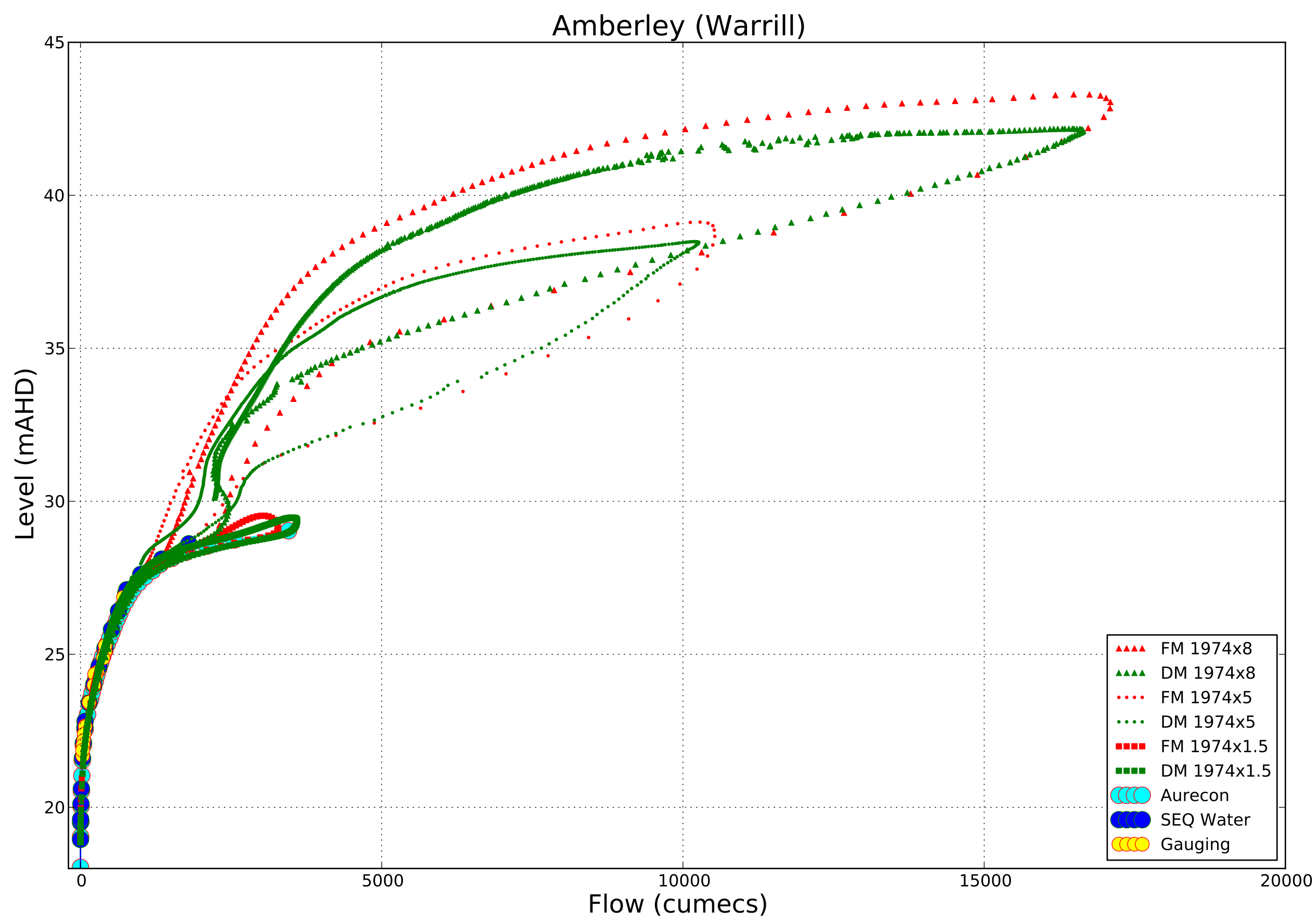
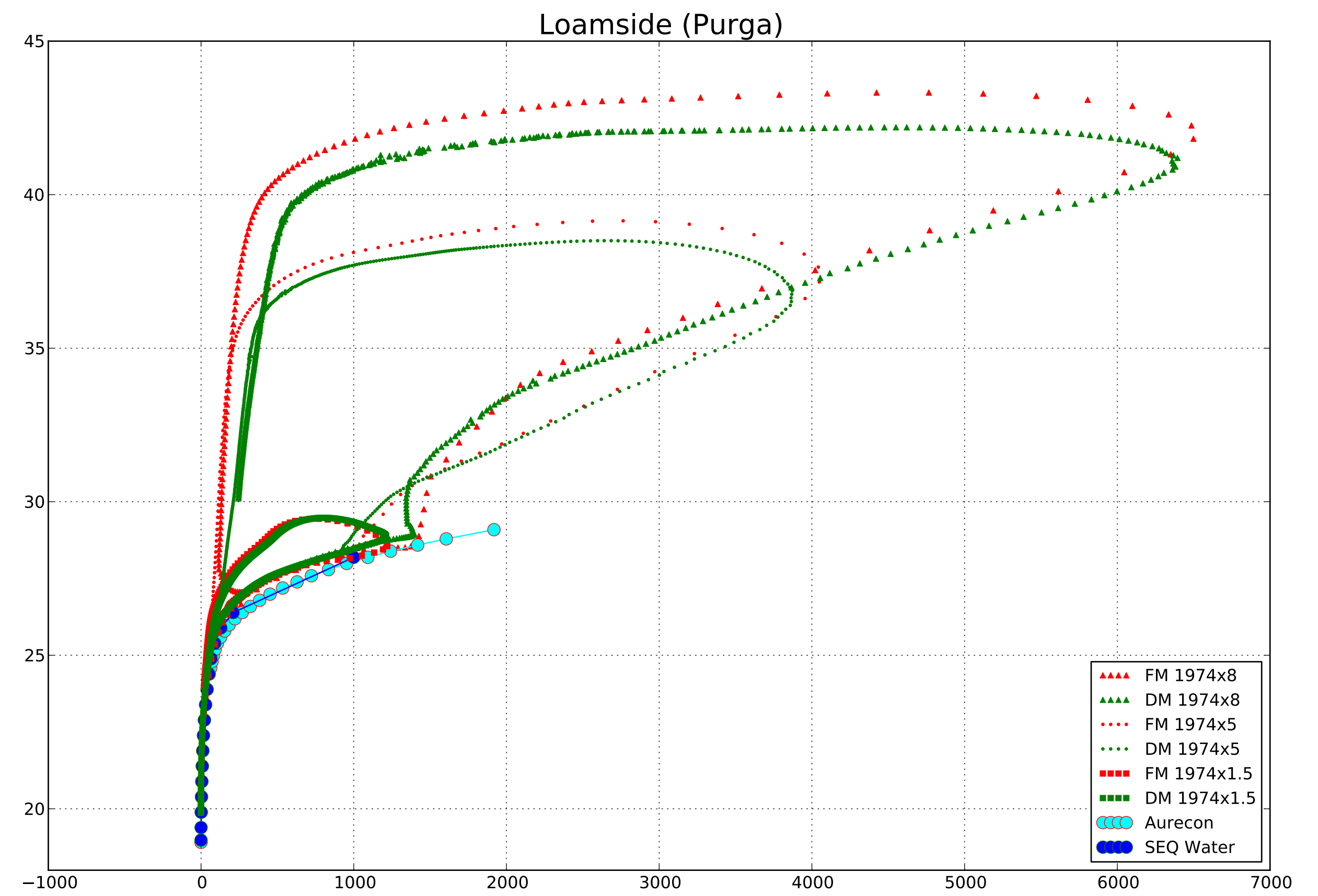
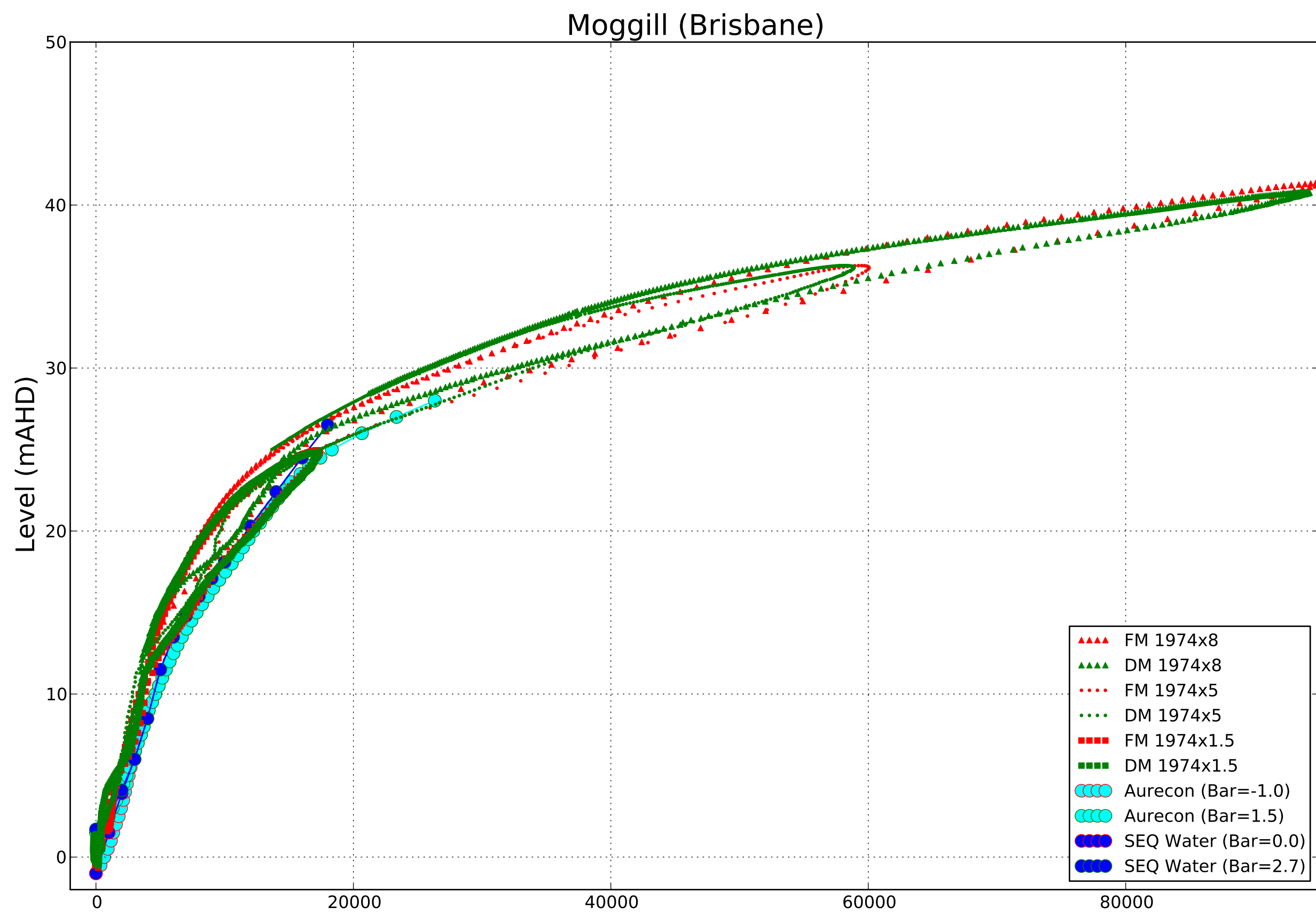
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 27 DM & FM Calibration and Extreme Floods Lockyer Creek / Bremer River Profiles

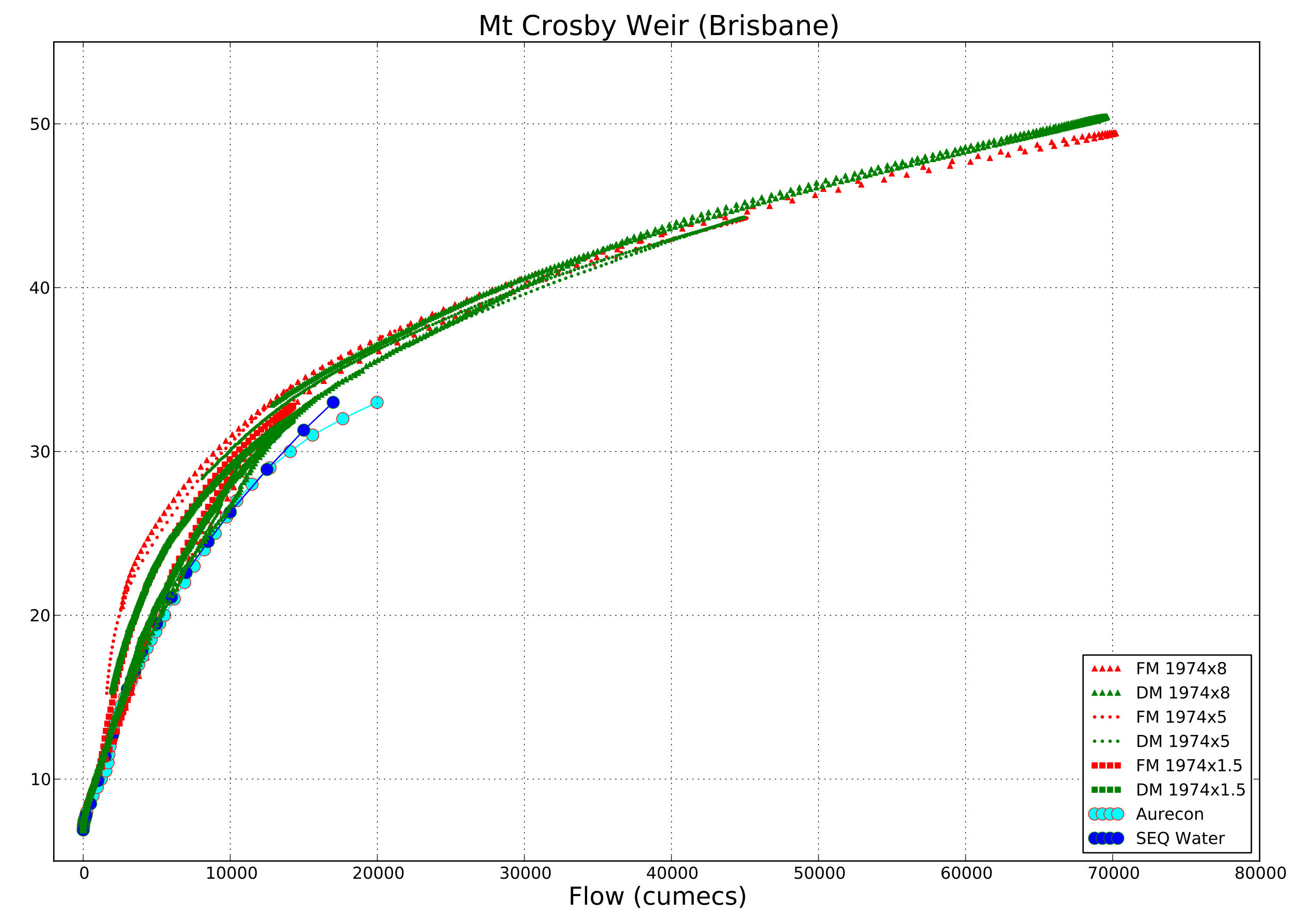
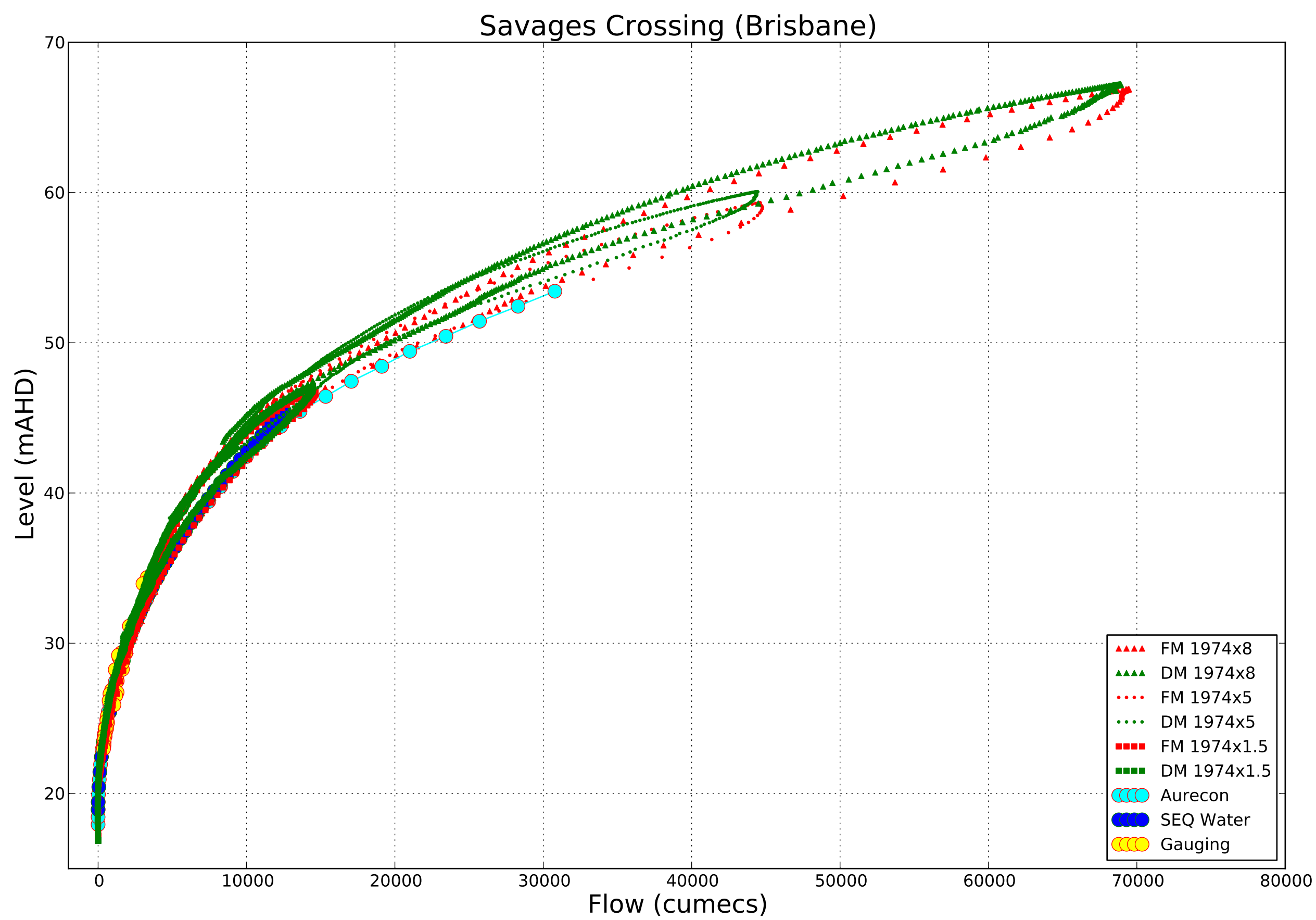
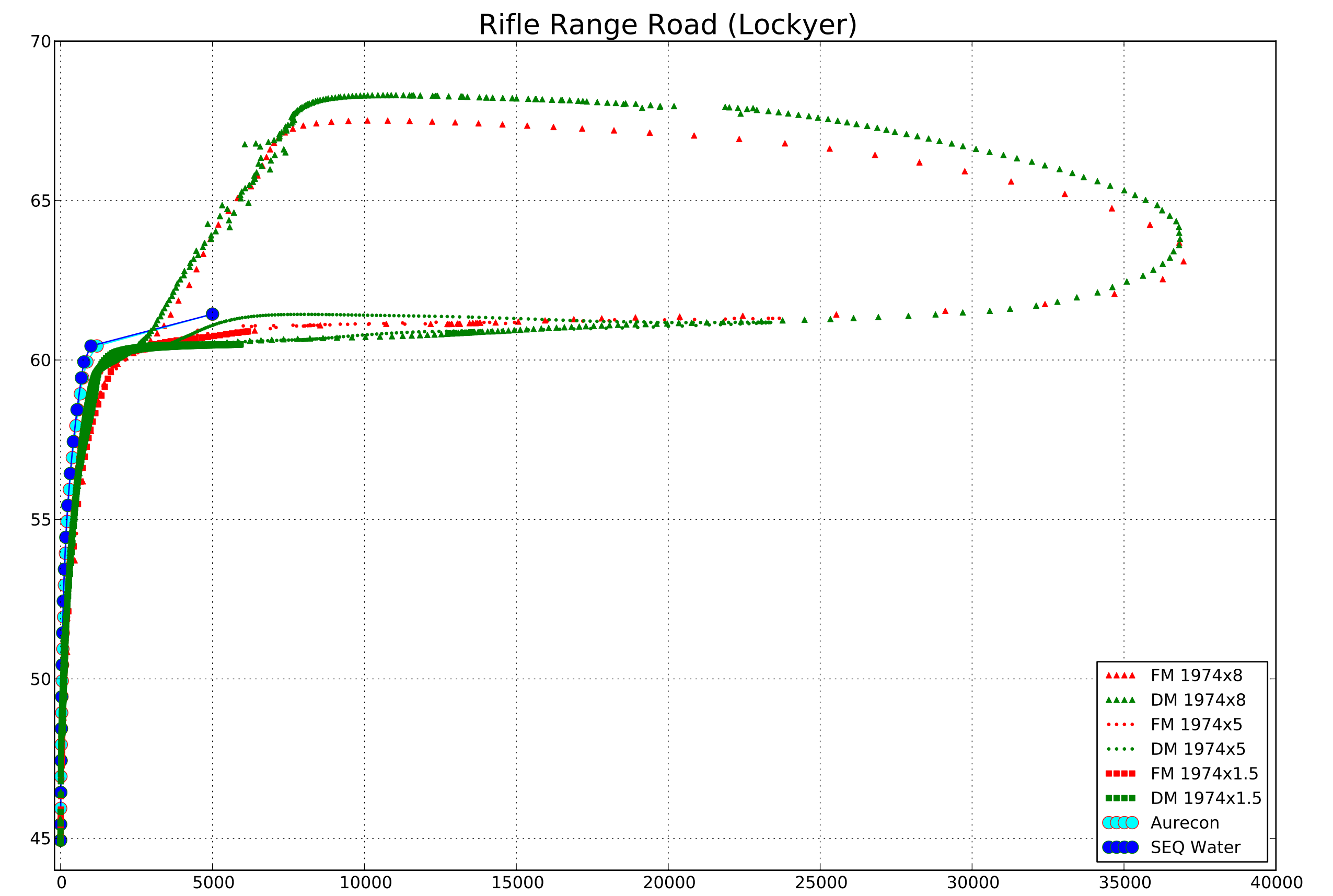
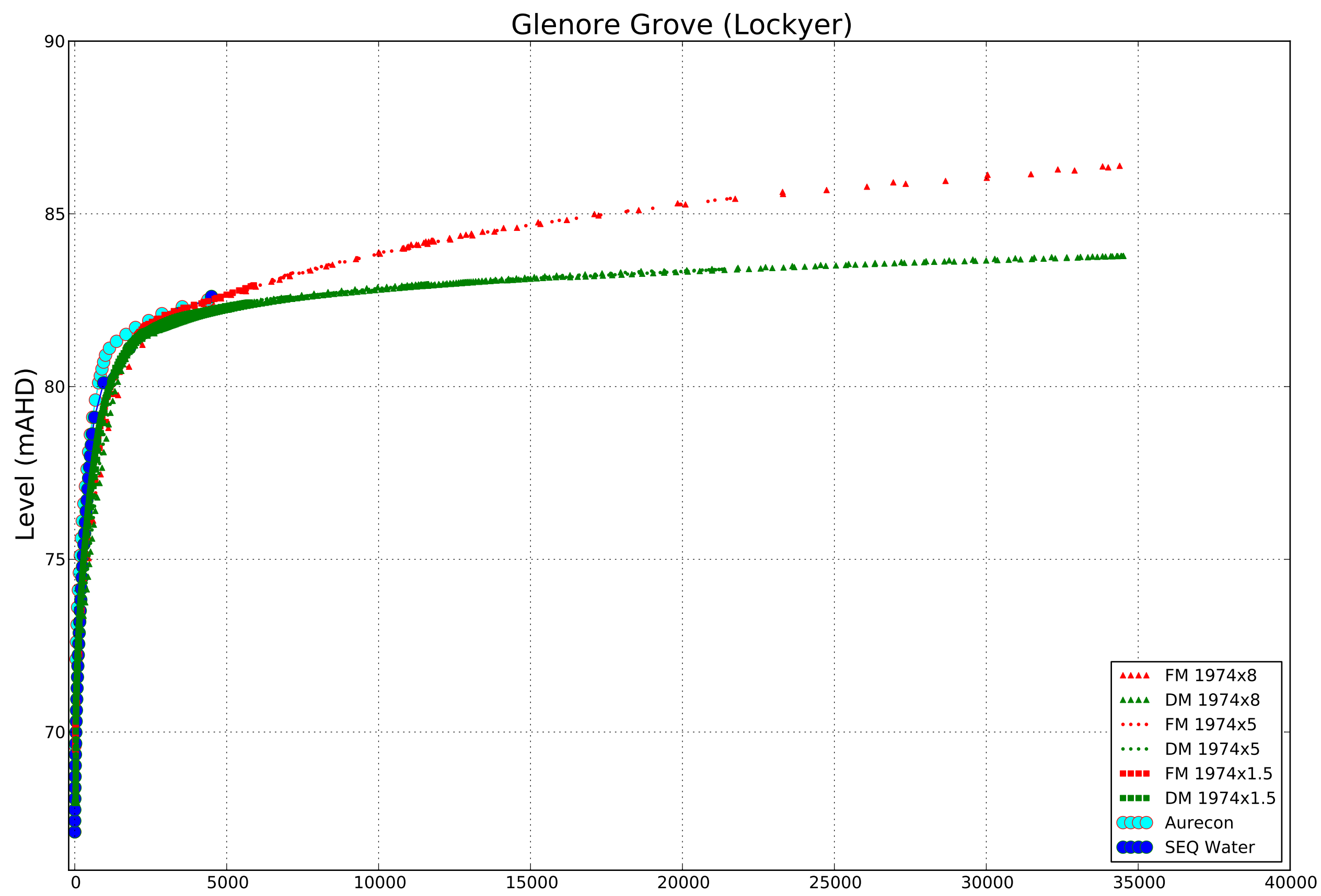




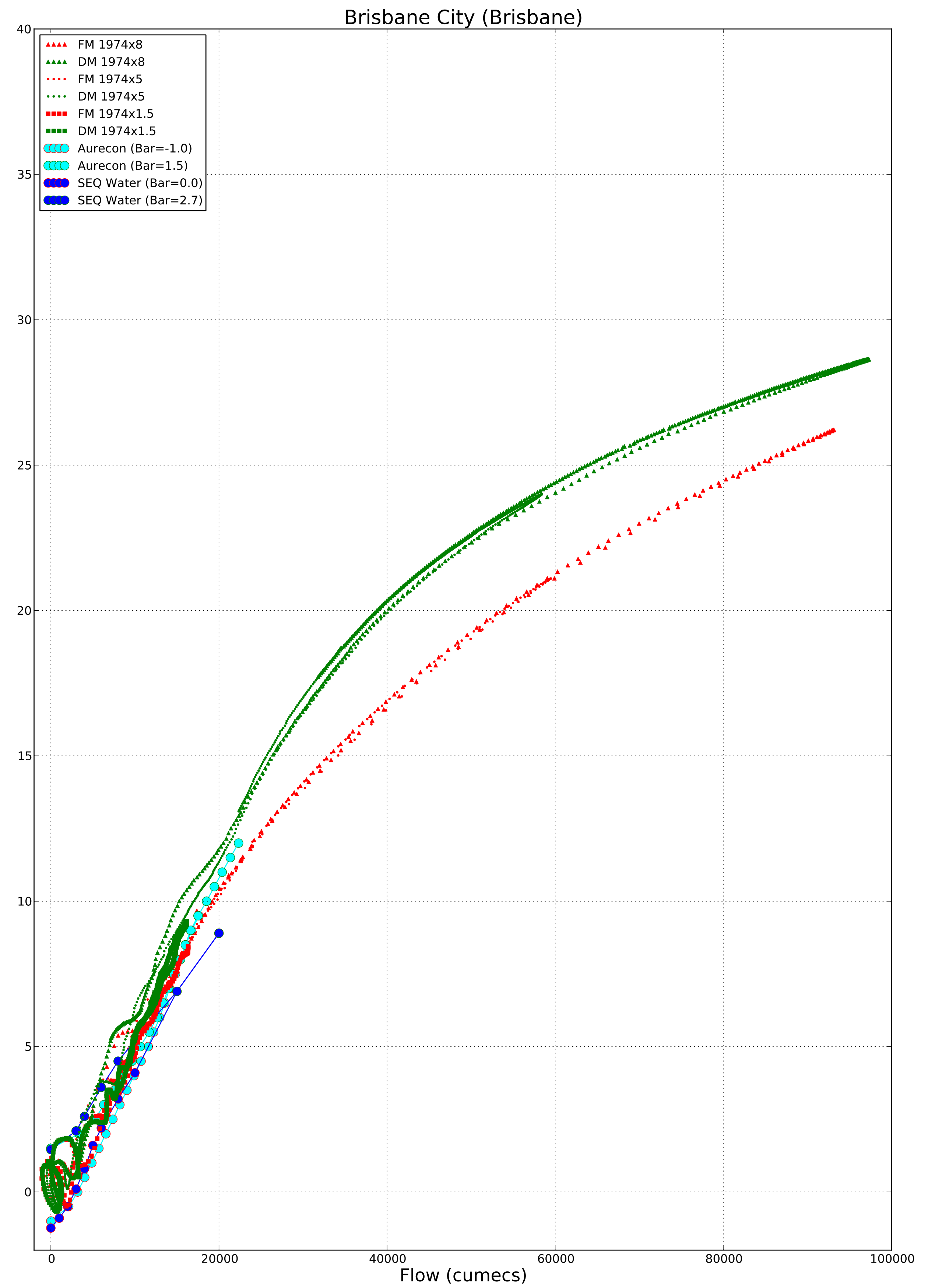
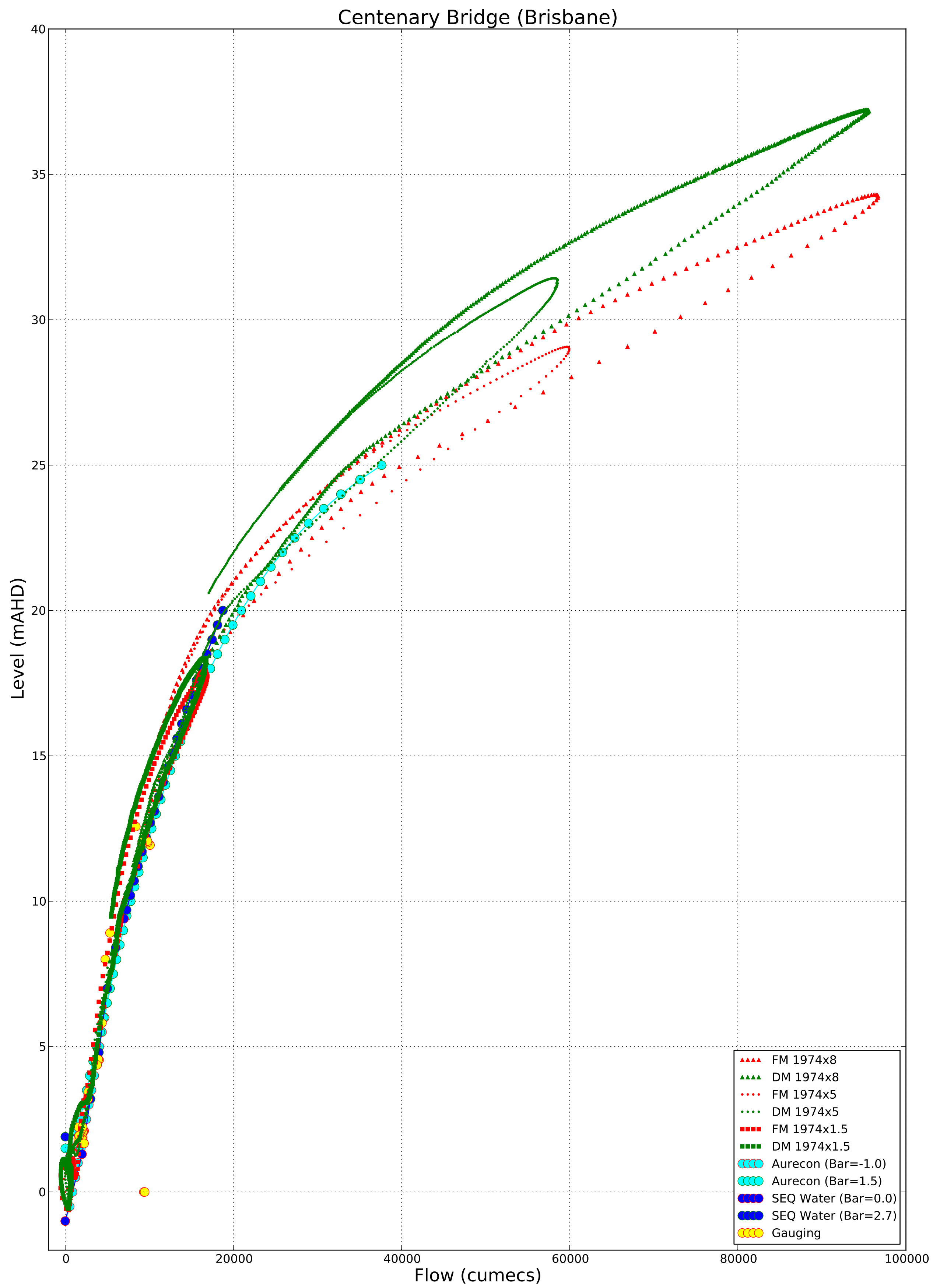




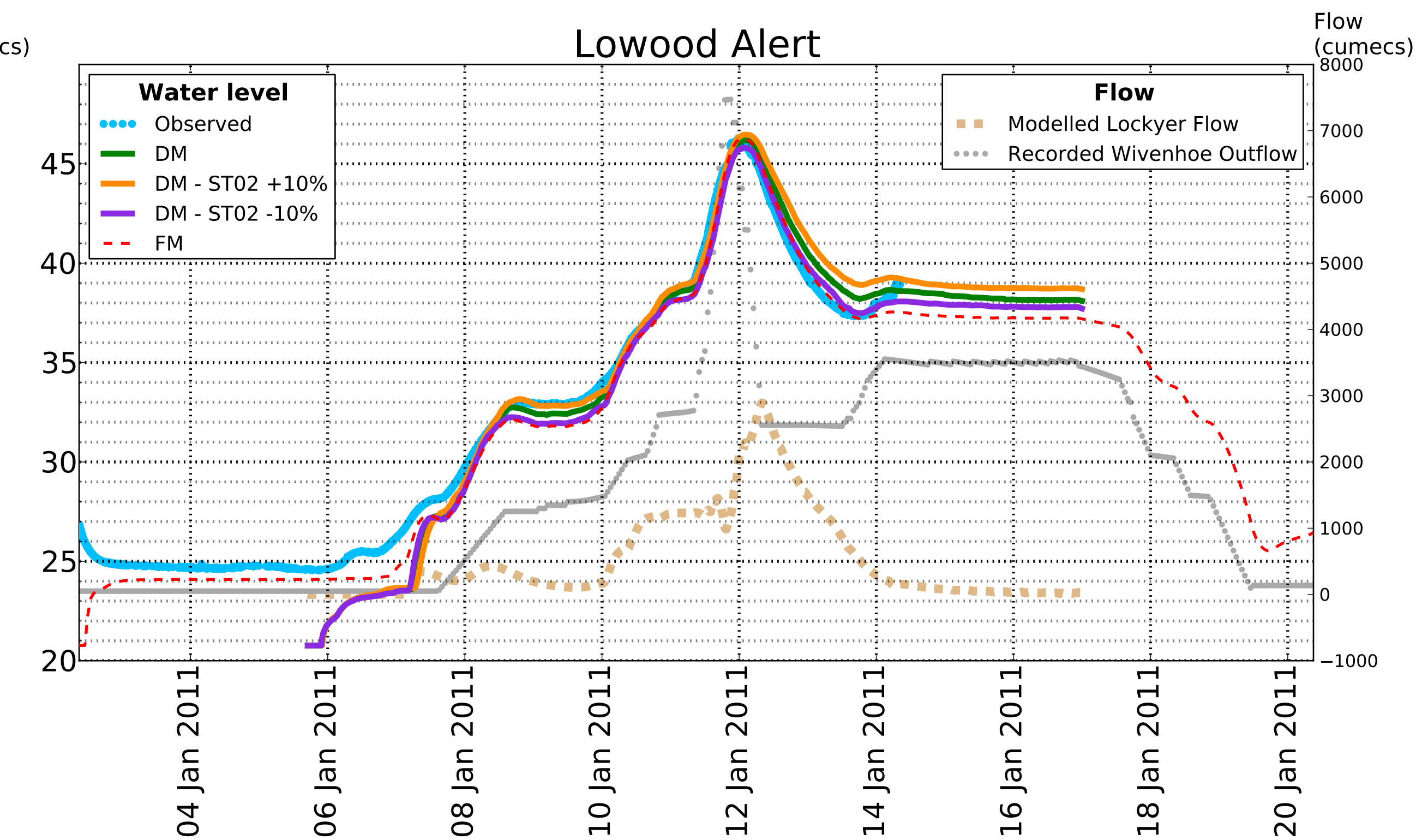
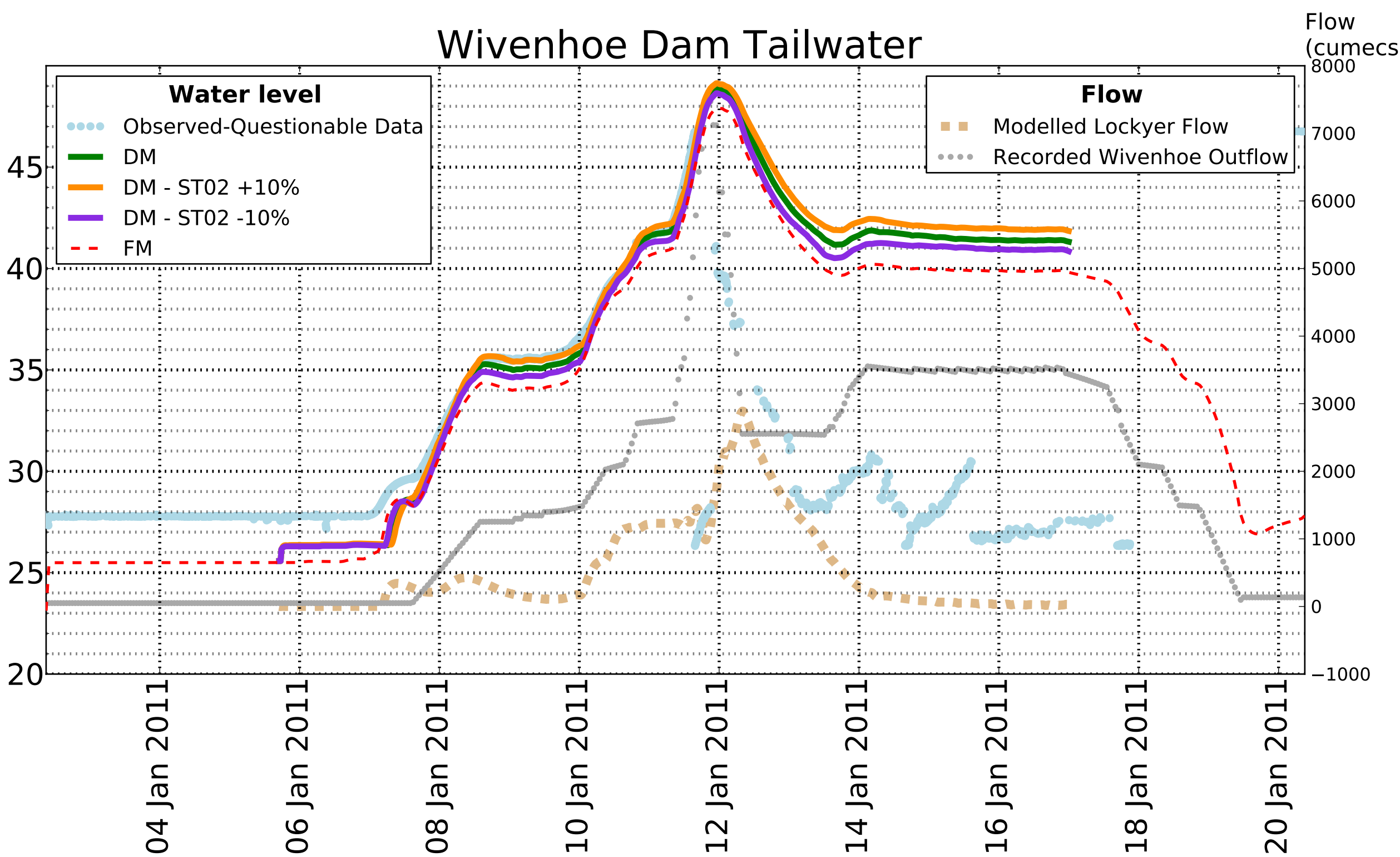
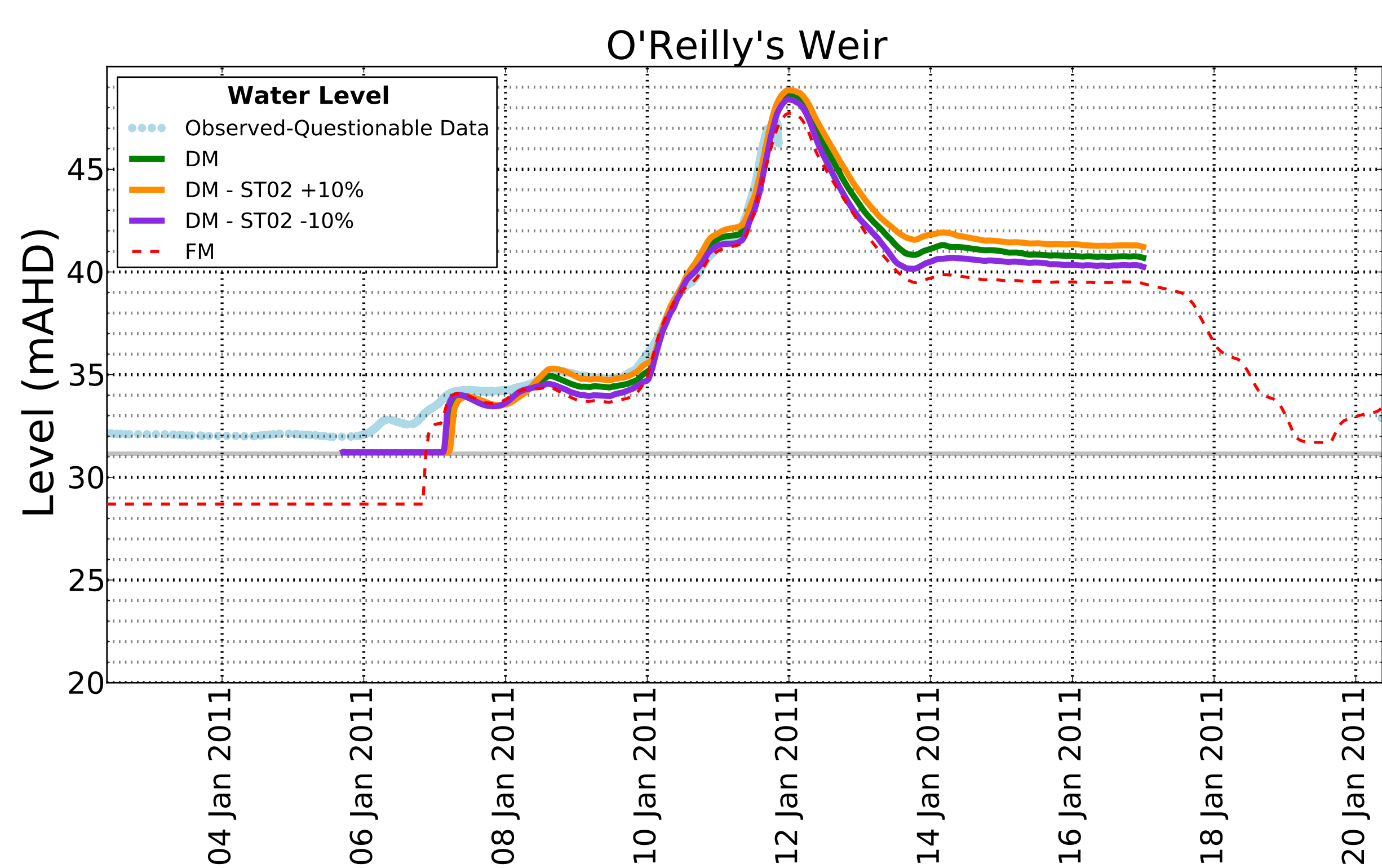
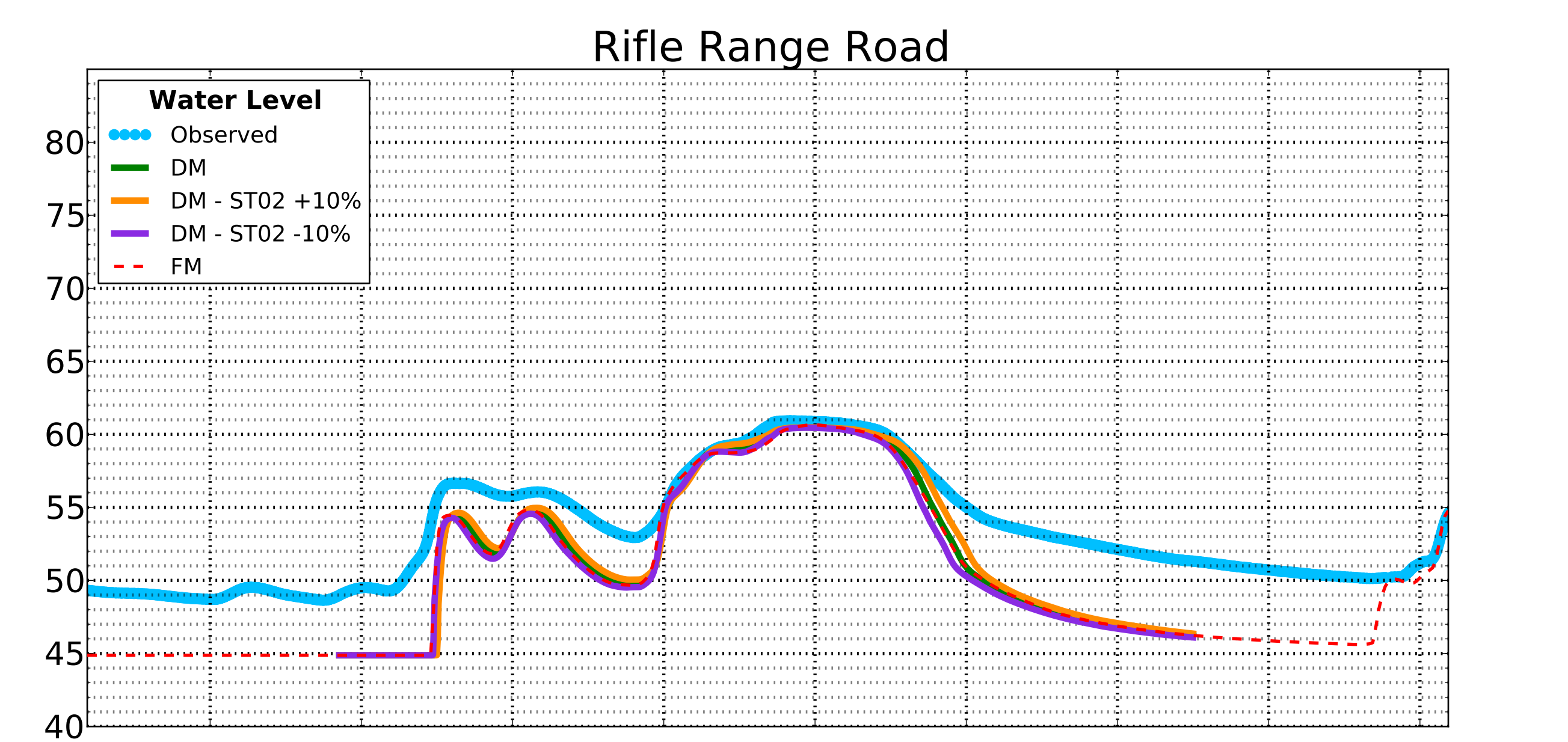
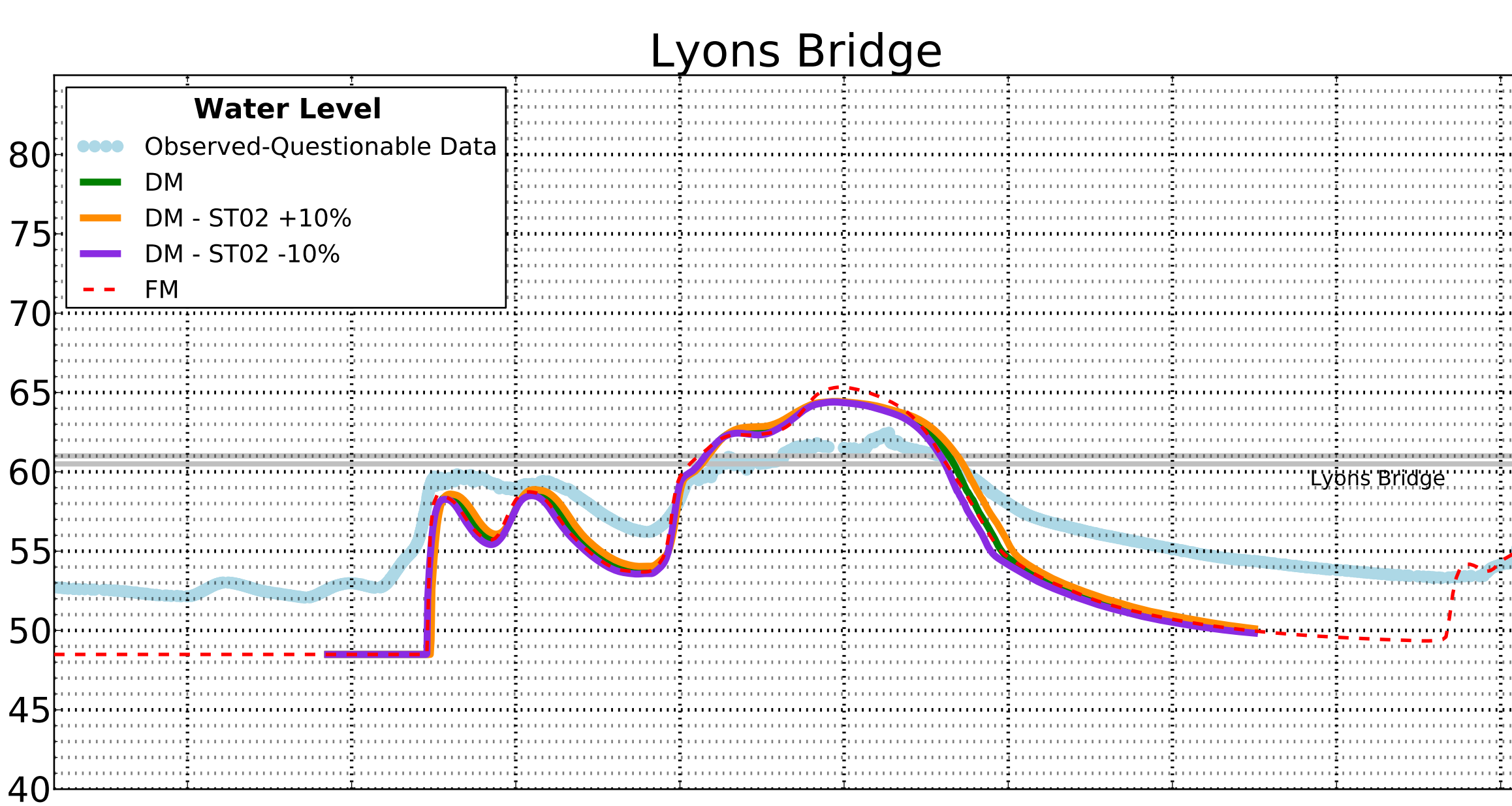
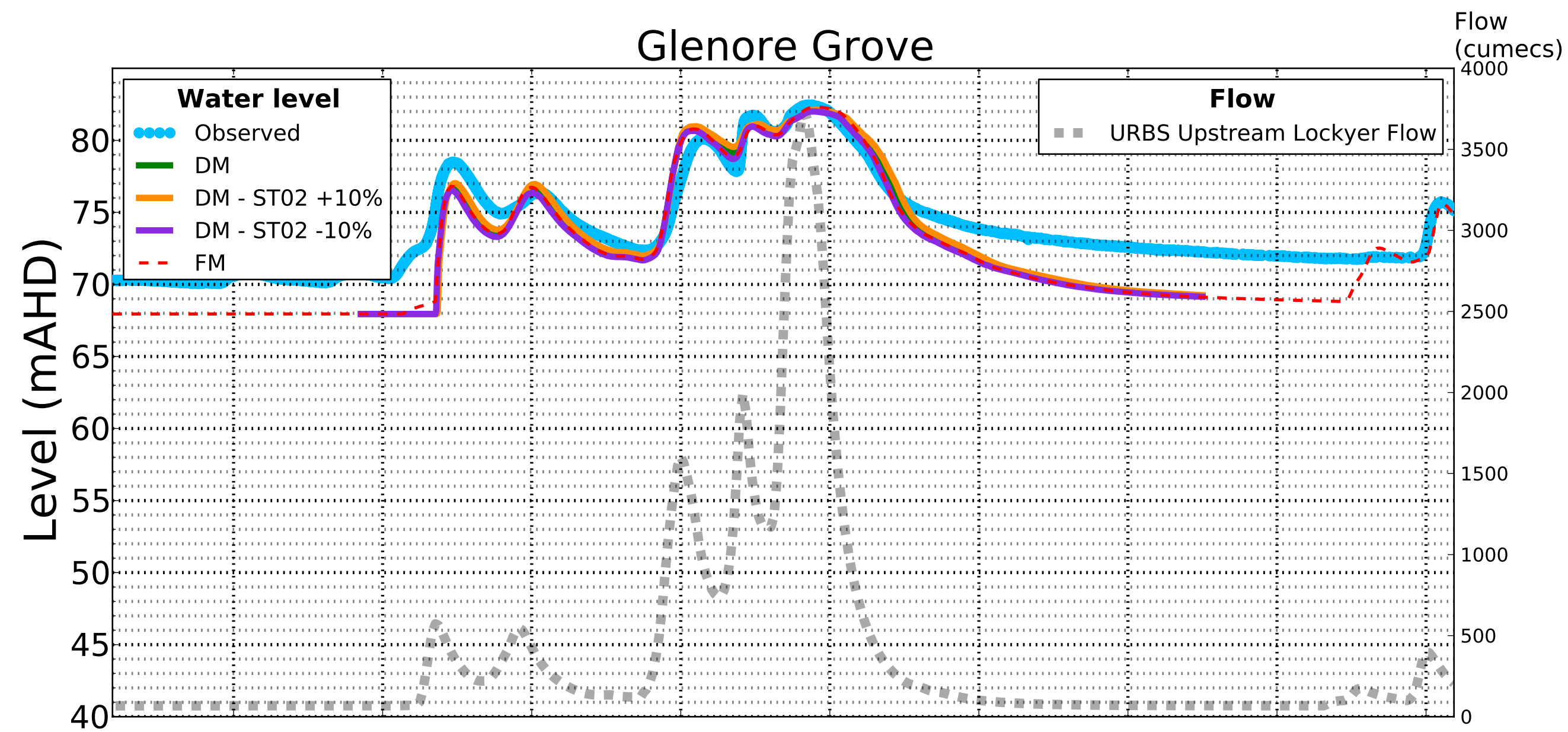
Plot 31 FM & DM Extreme Events Rating Curve Comparison - Sheet A



Plot 32 FM & DM Extreme Events Rating Curve Comparison - Sheet B

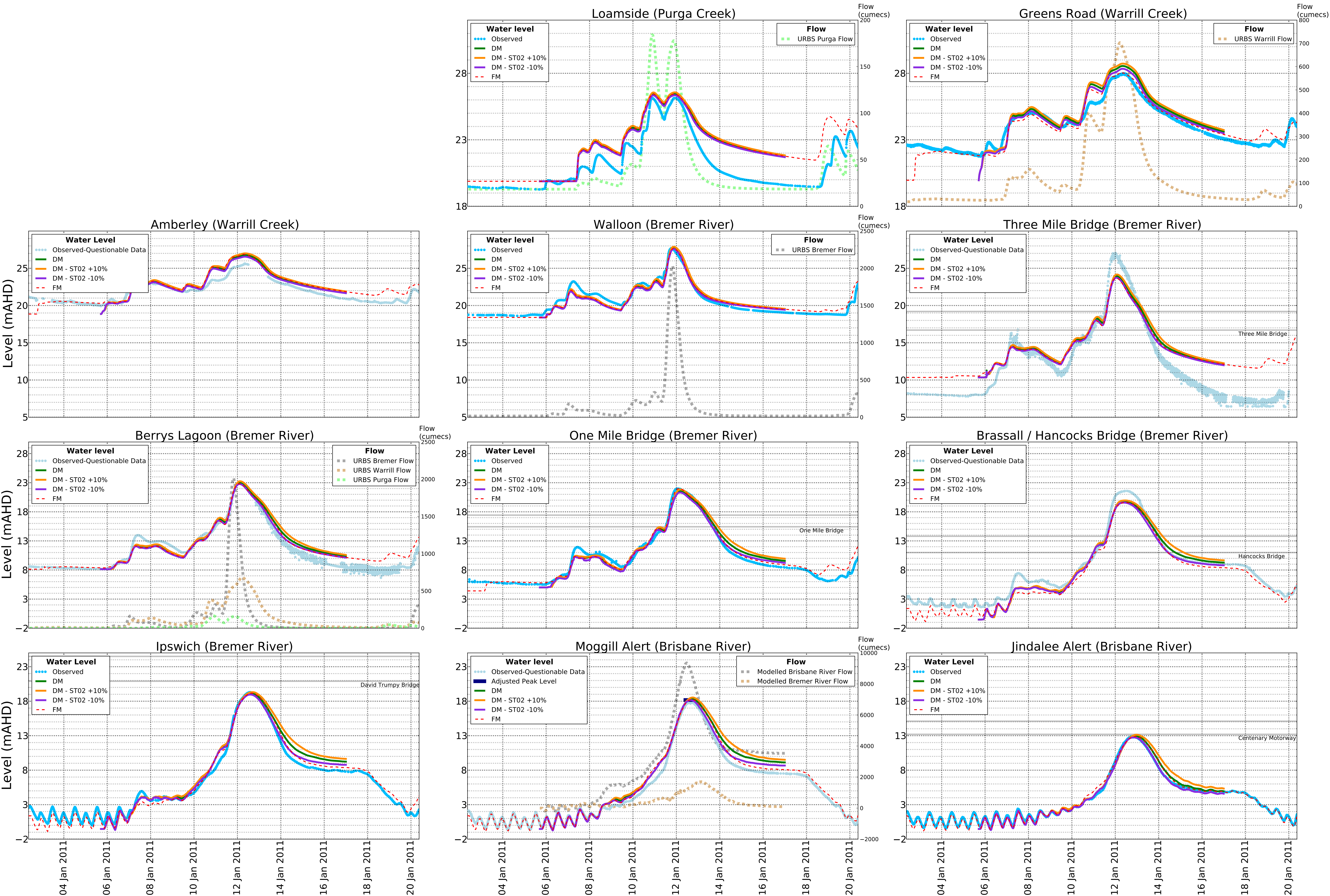


Plot 33 FM & DM Extreme Events Rating Curve Comparison - Sheet C



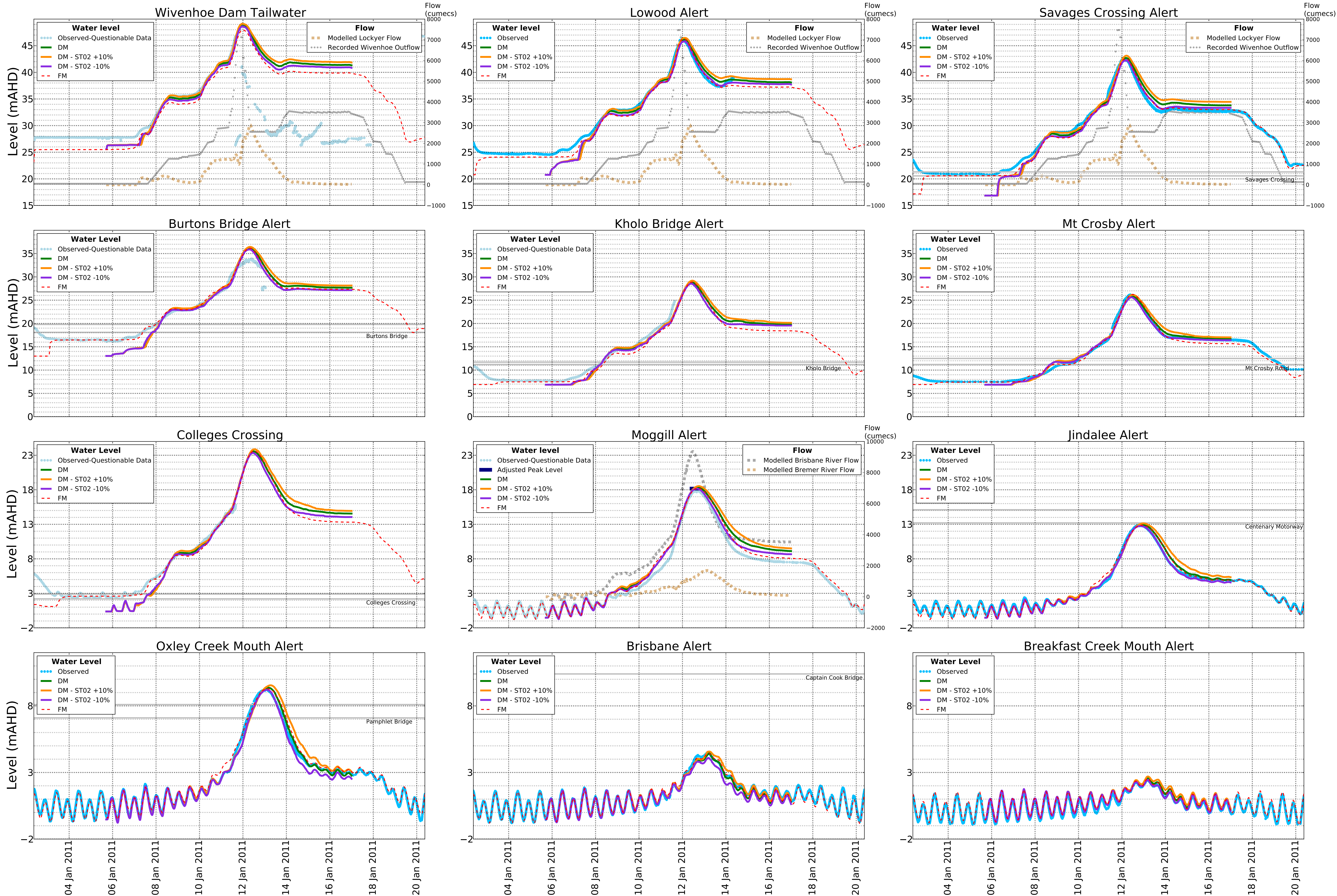
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 34 ST02 DM Mannings n and Bend Loss $\pm 10\%$
 2011 Lockyer Creek Water Level Gauges



Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

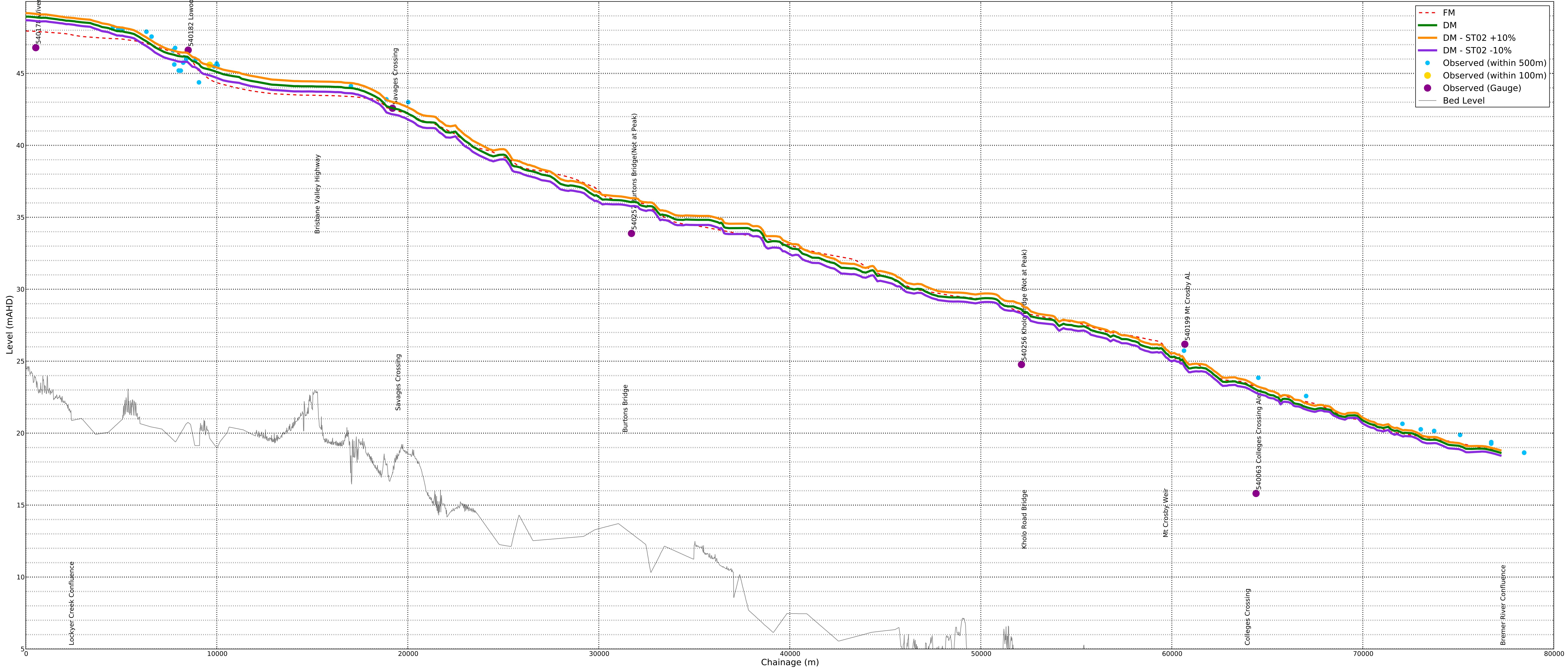
Plot 35 ST02 DM Mannings n and Bend Loss ±10%
 2011 Bremer River Water Level Gauges



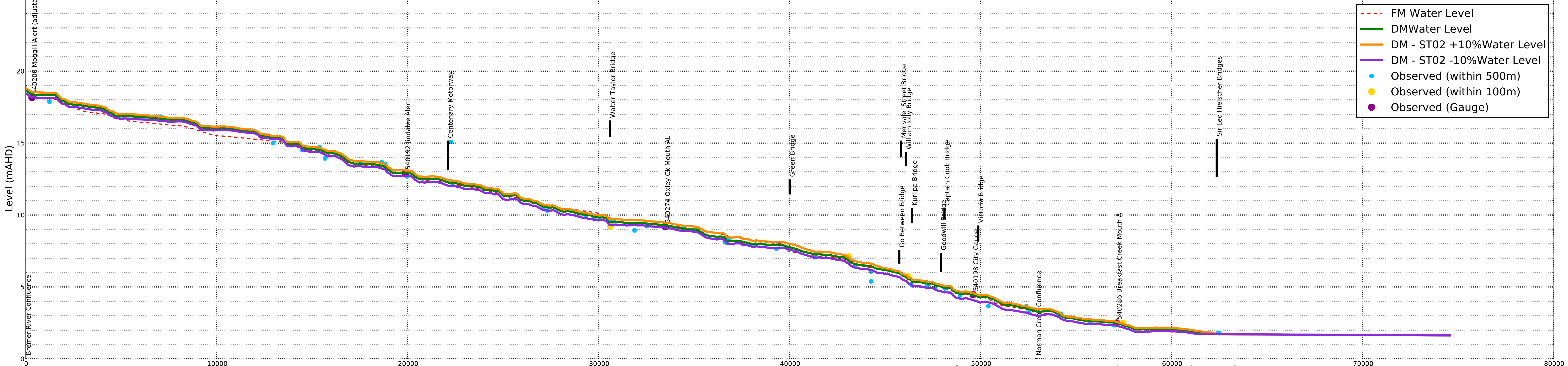
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 36 ST02 DM Mannings n and Bend Loss ±10%
 2011 Brisbane River Water Level Gauges

Mid Brisbane



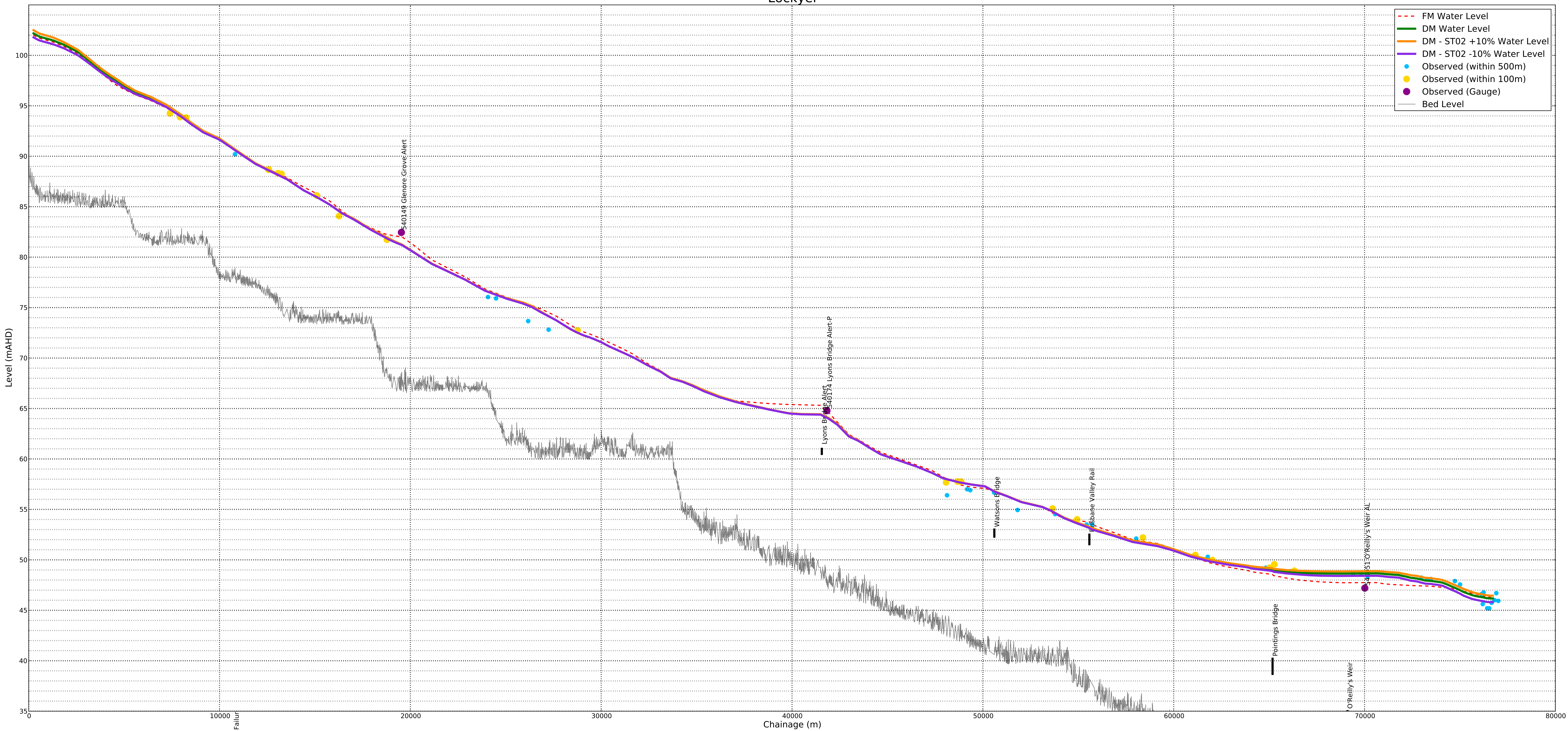
Lower Brisbane



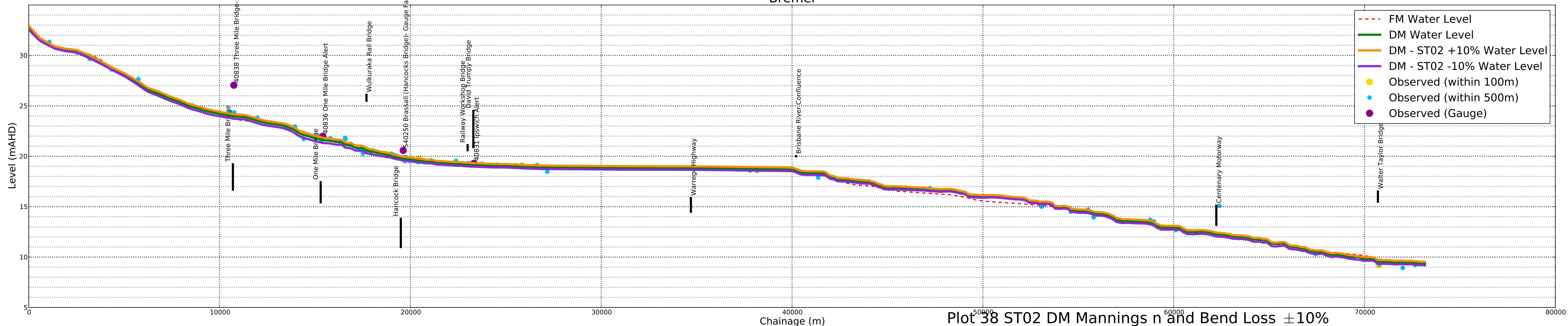
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 37 ST02 DM Mannings n and Bend Loss $\pm 10\%$
2011 Brisbane River Longitudinal Profiles

Lockyer

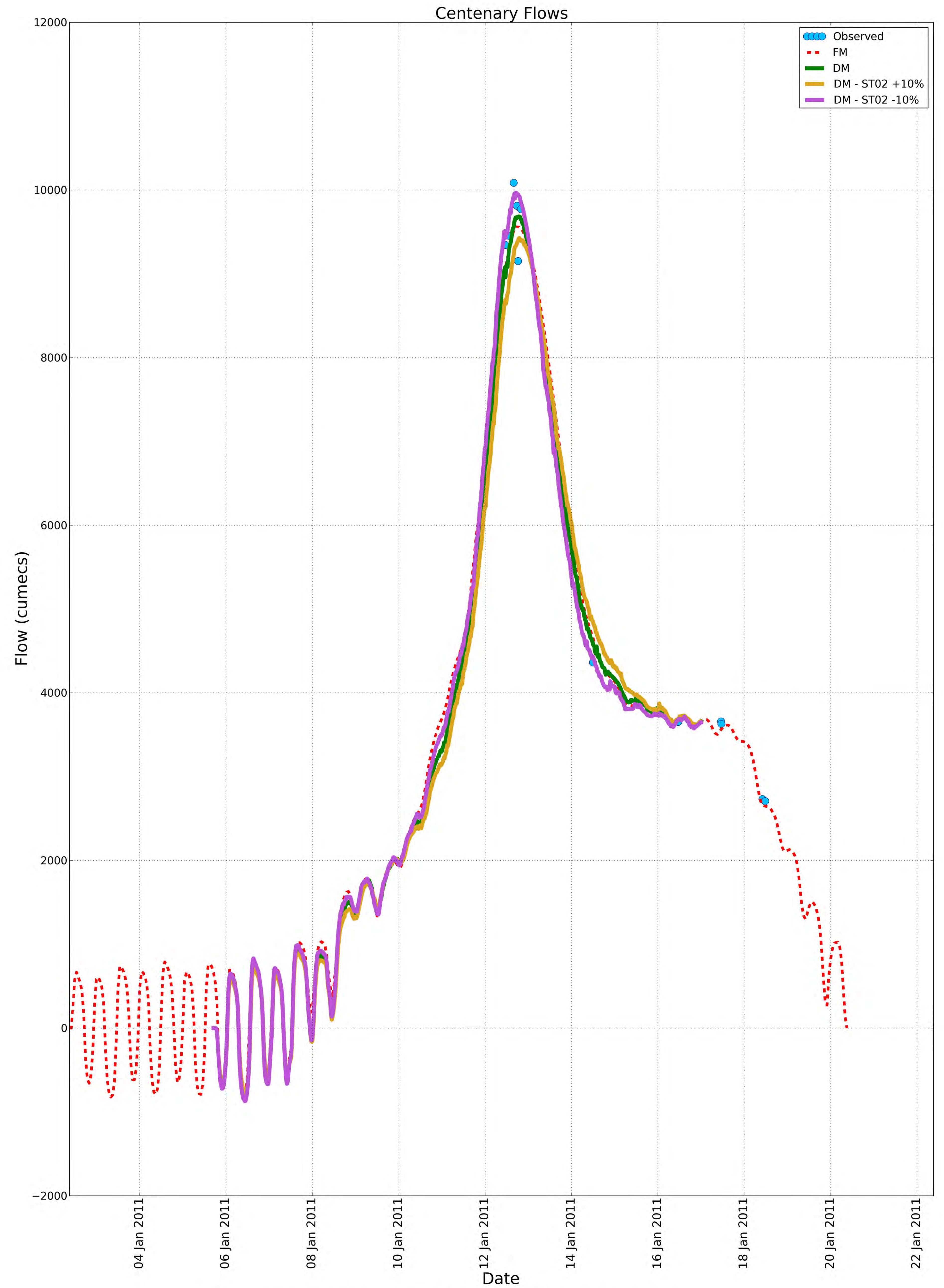
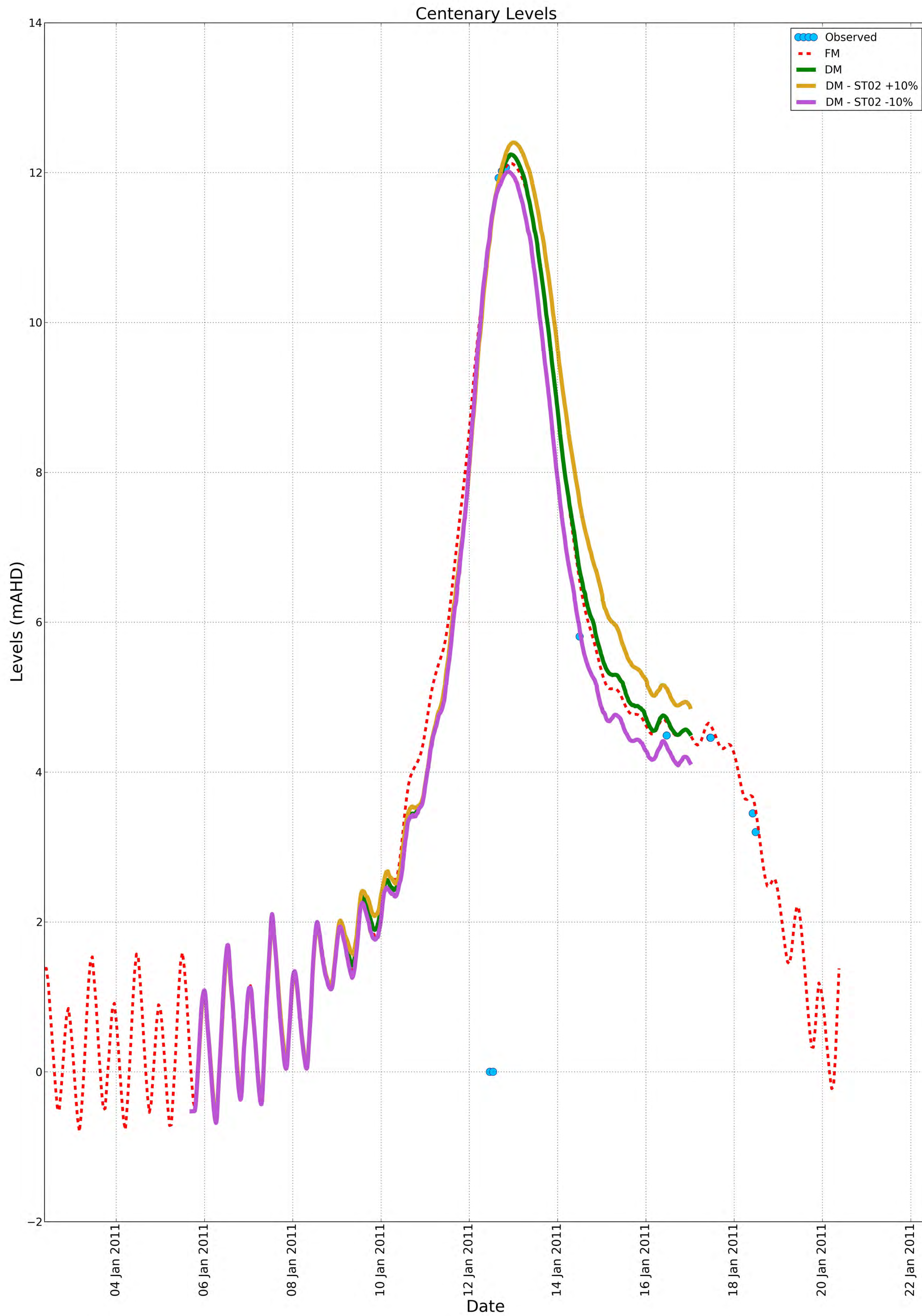


Bremer



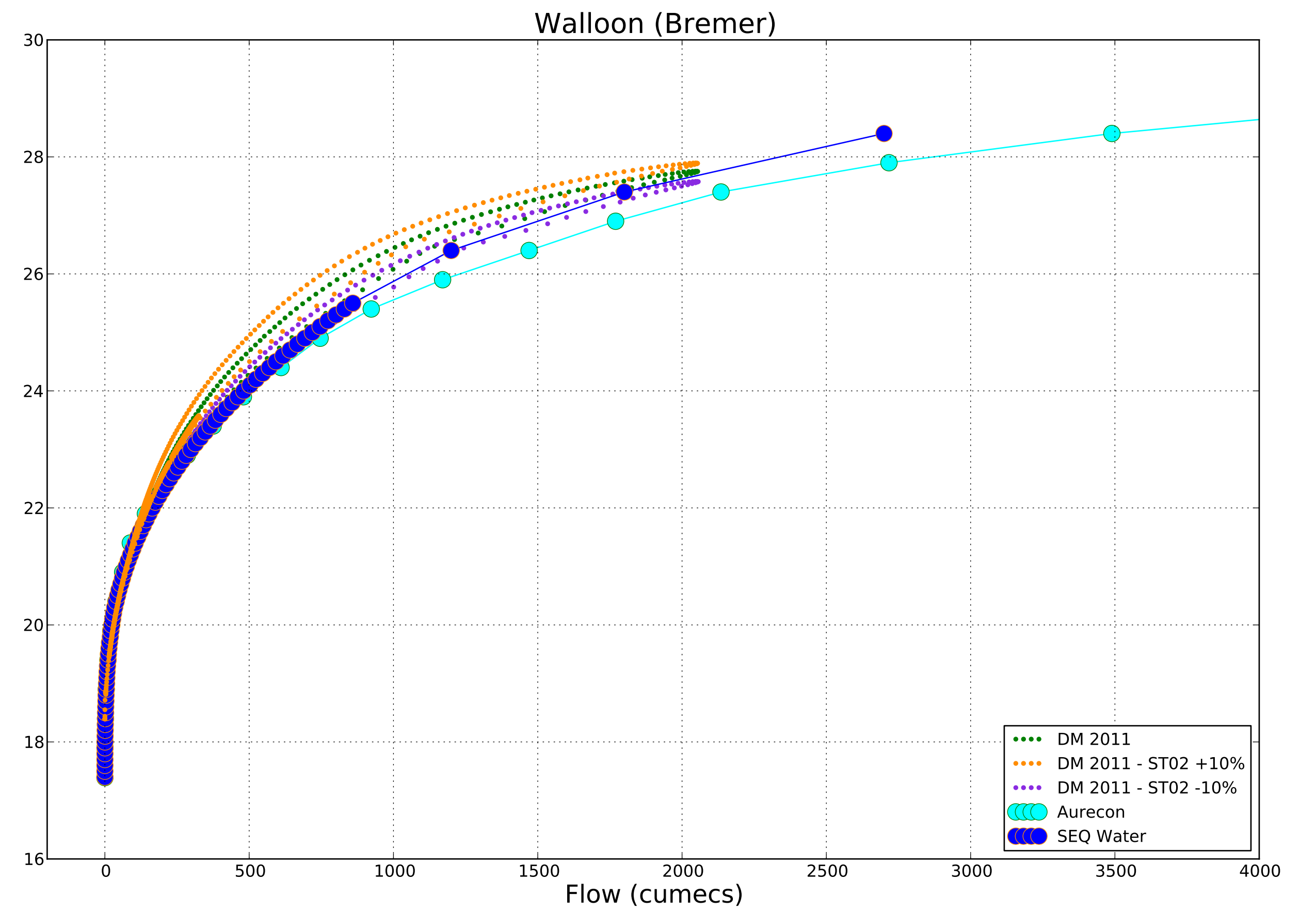
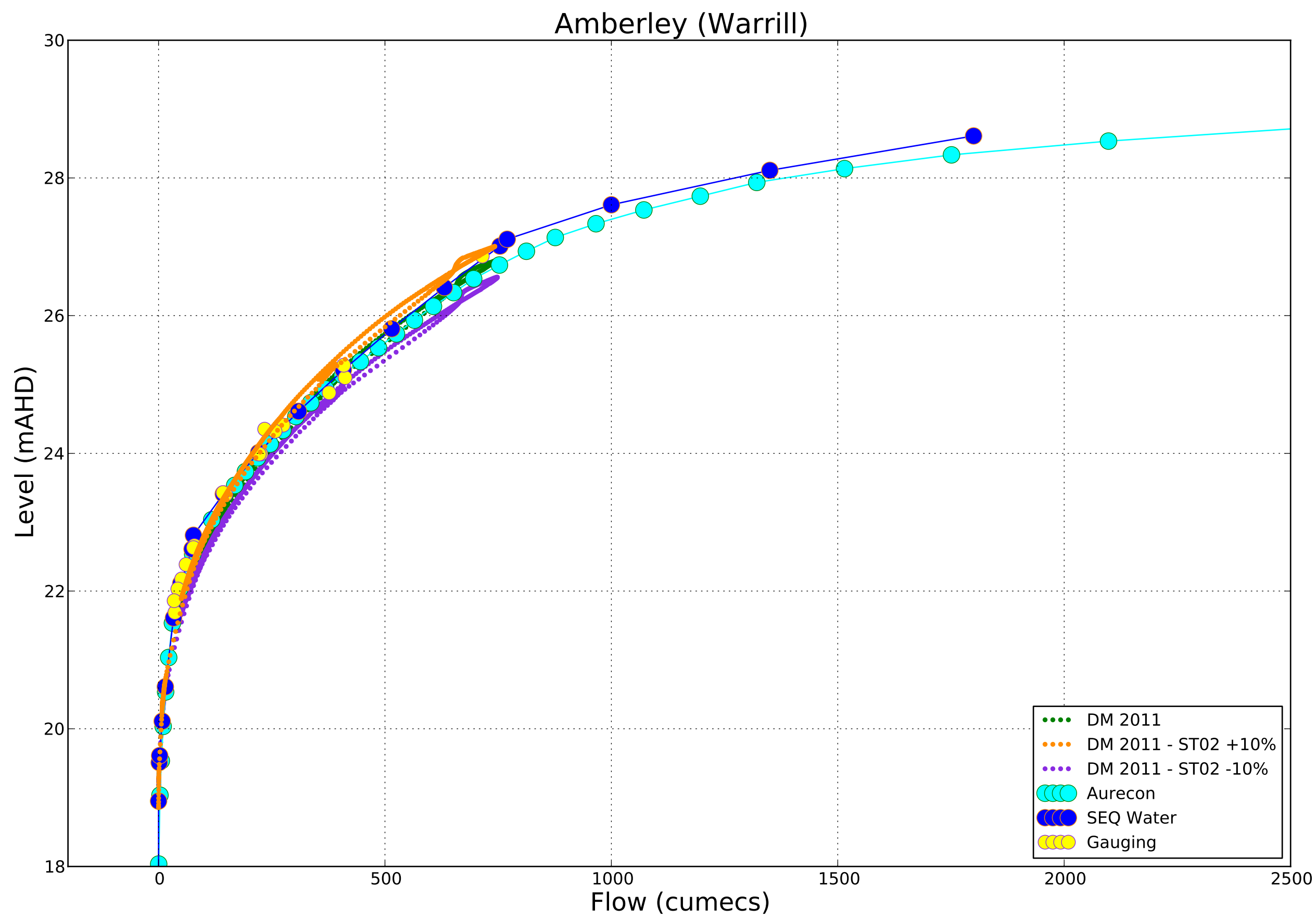
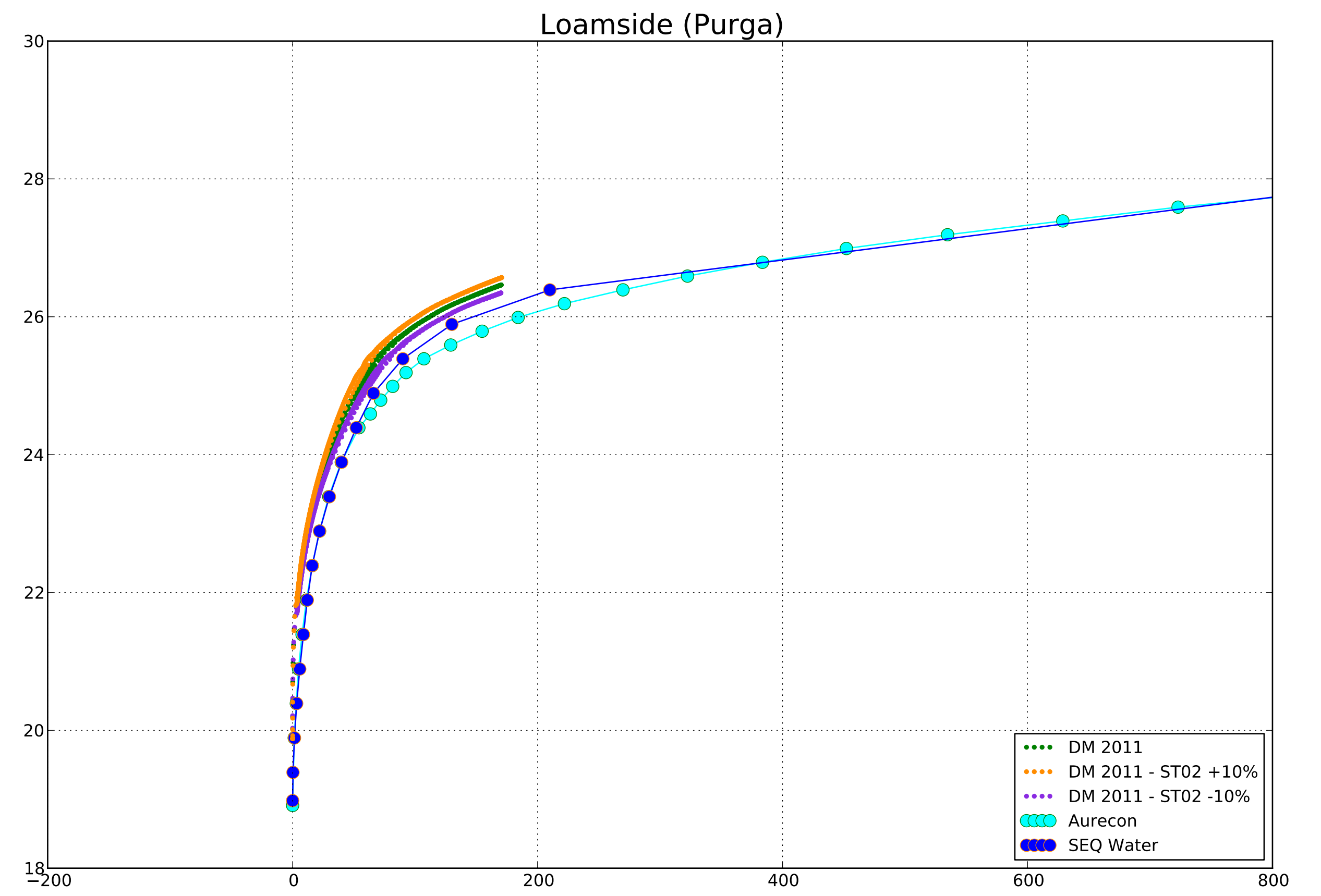
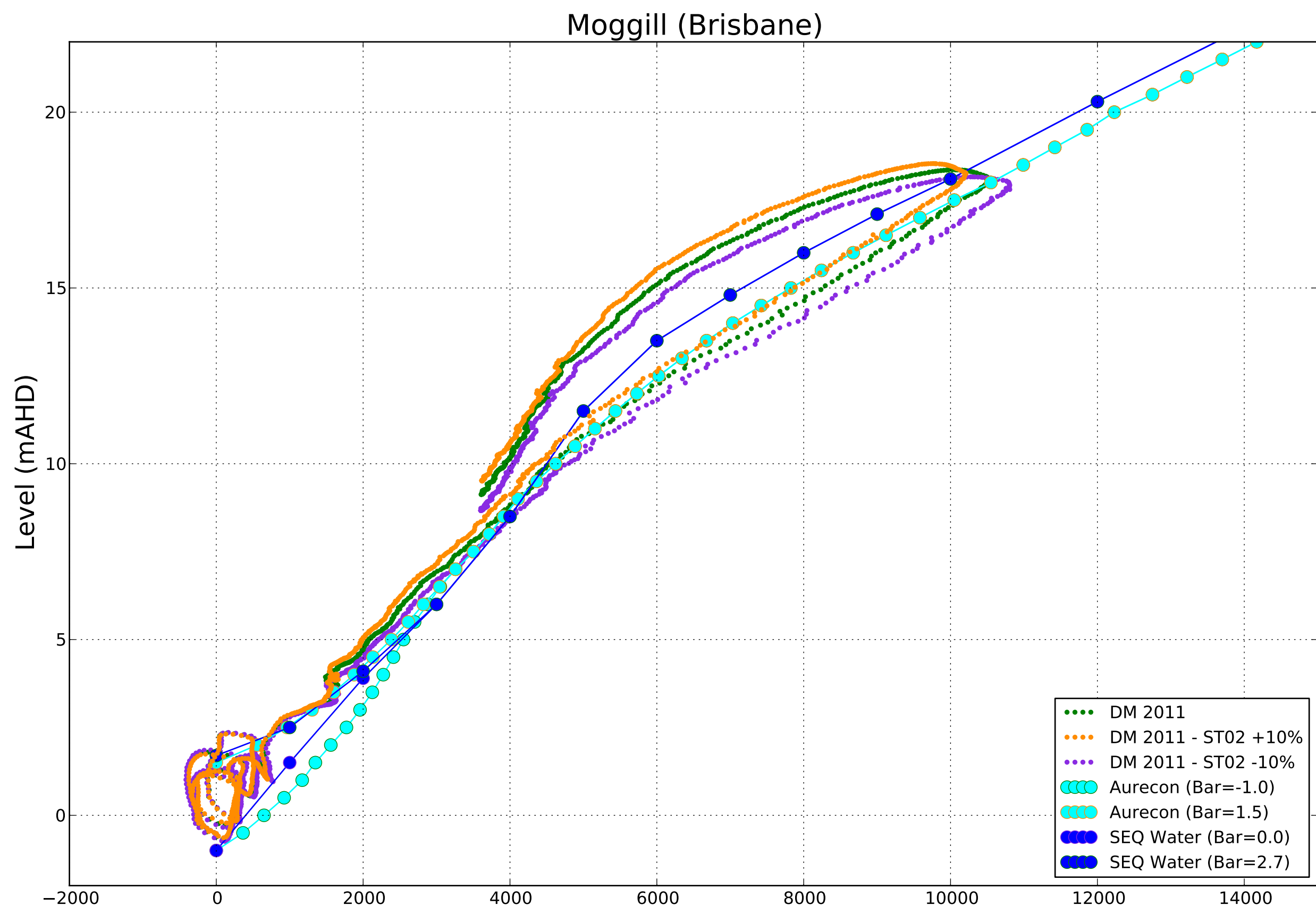
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 38 ST02 DM Mannings n and Bend Loss $\pm 10\%$
2011 Lockyer / Bremer Longitudinal Profiles

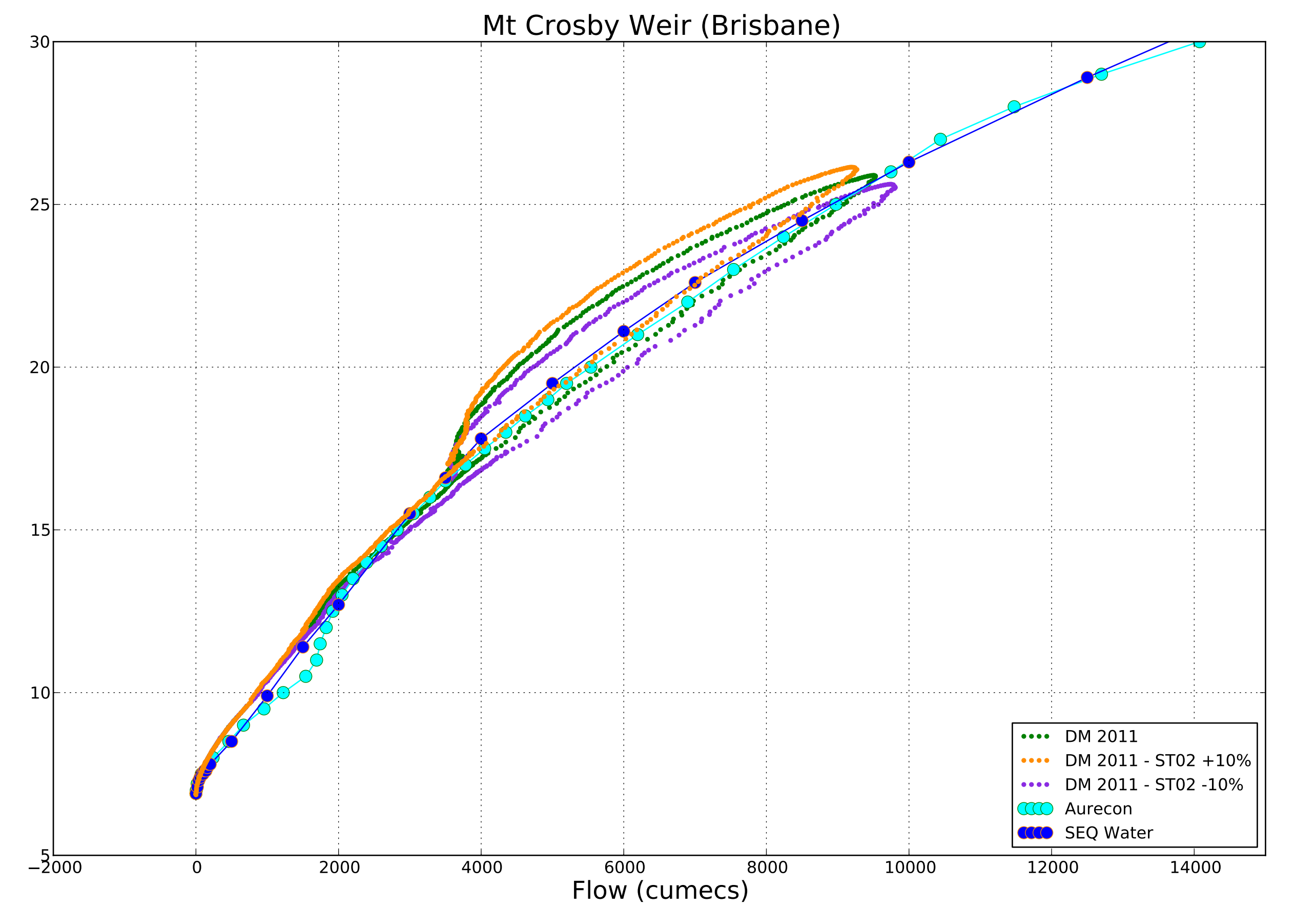
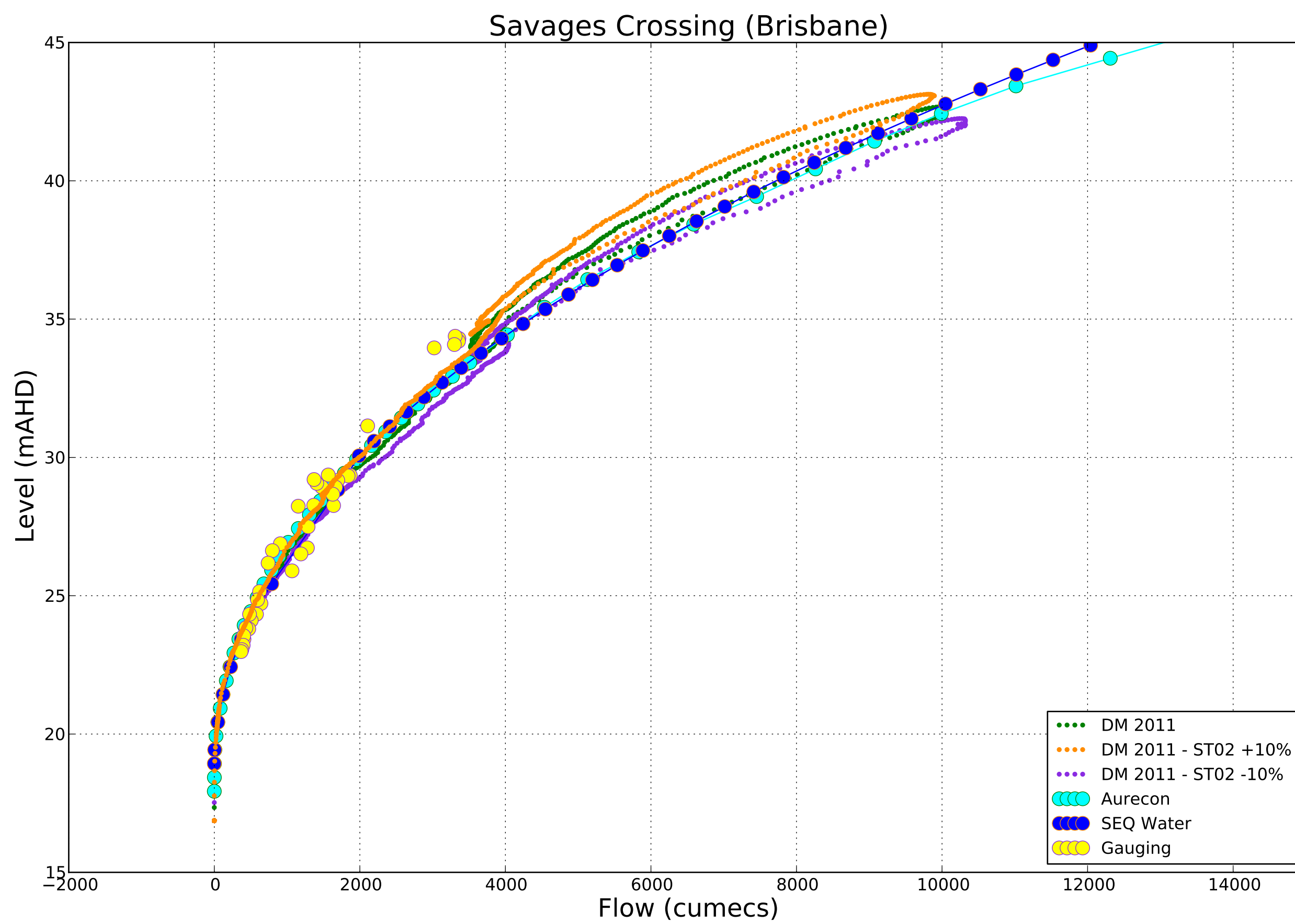
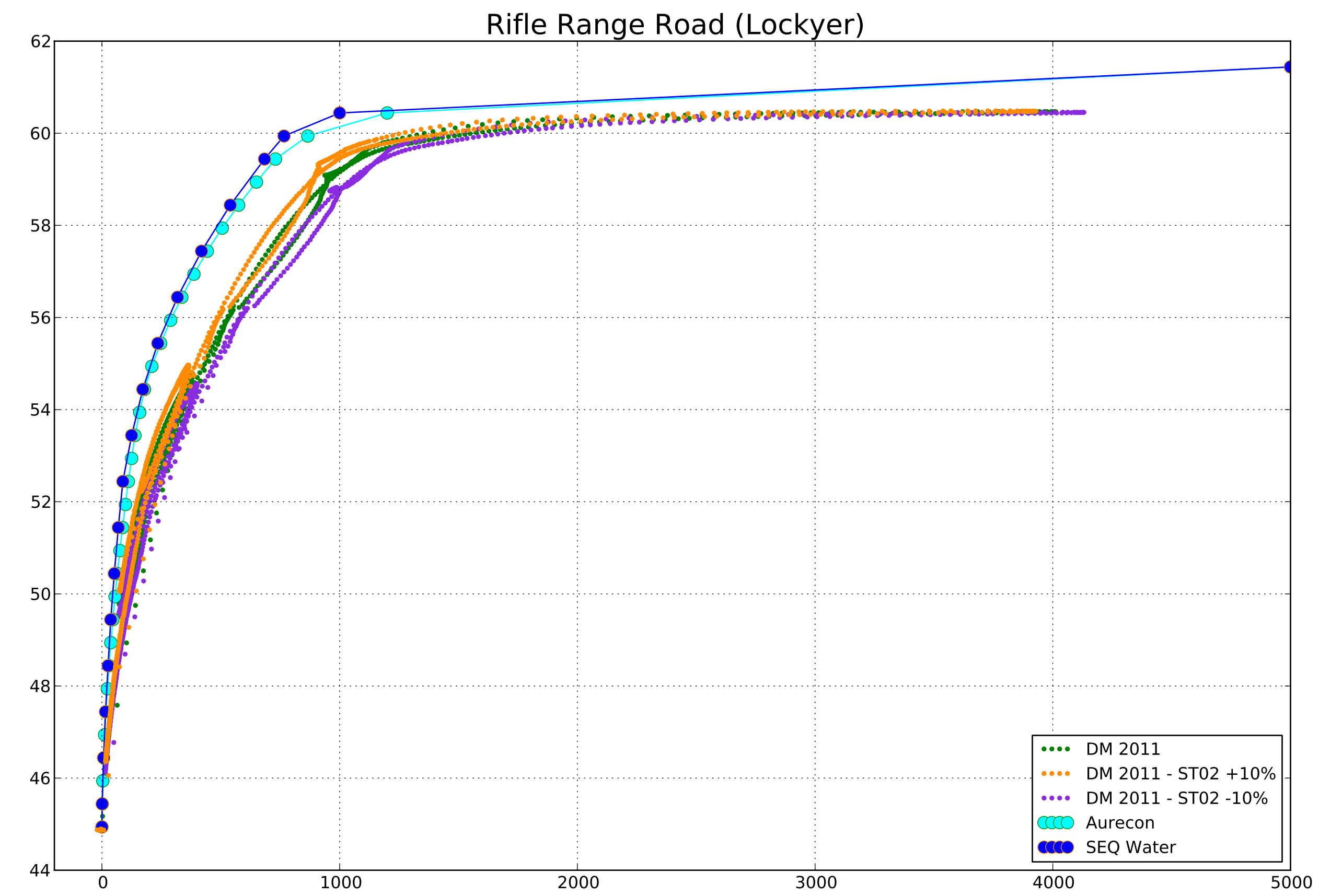
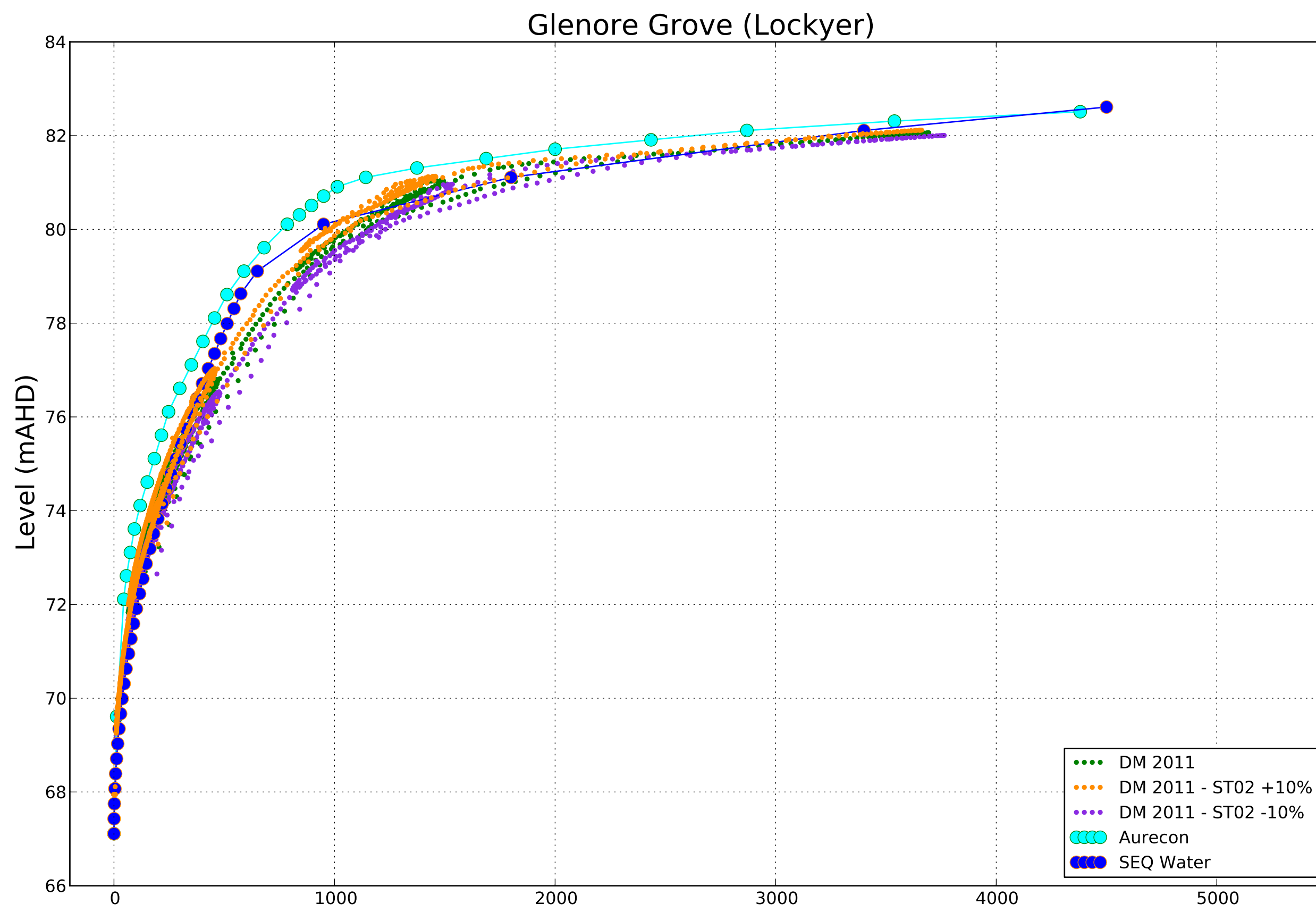


Date Labels are at 00:00 hours on that date

Plot 39 ST02 DM Mannings n and Bend Loss $\pm 10\%$
2011 Centenary Bridge Flow Recordings

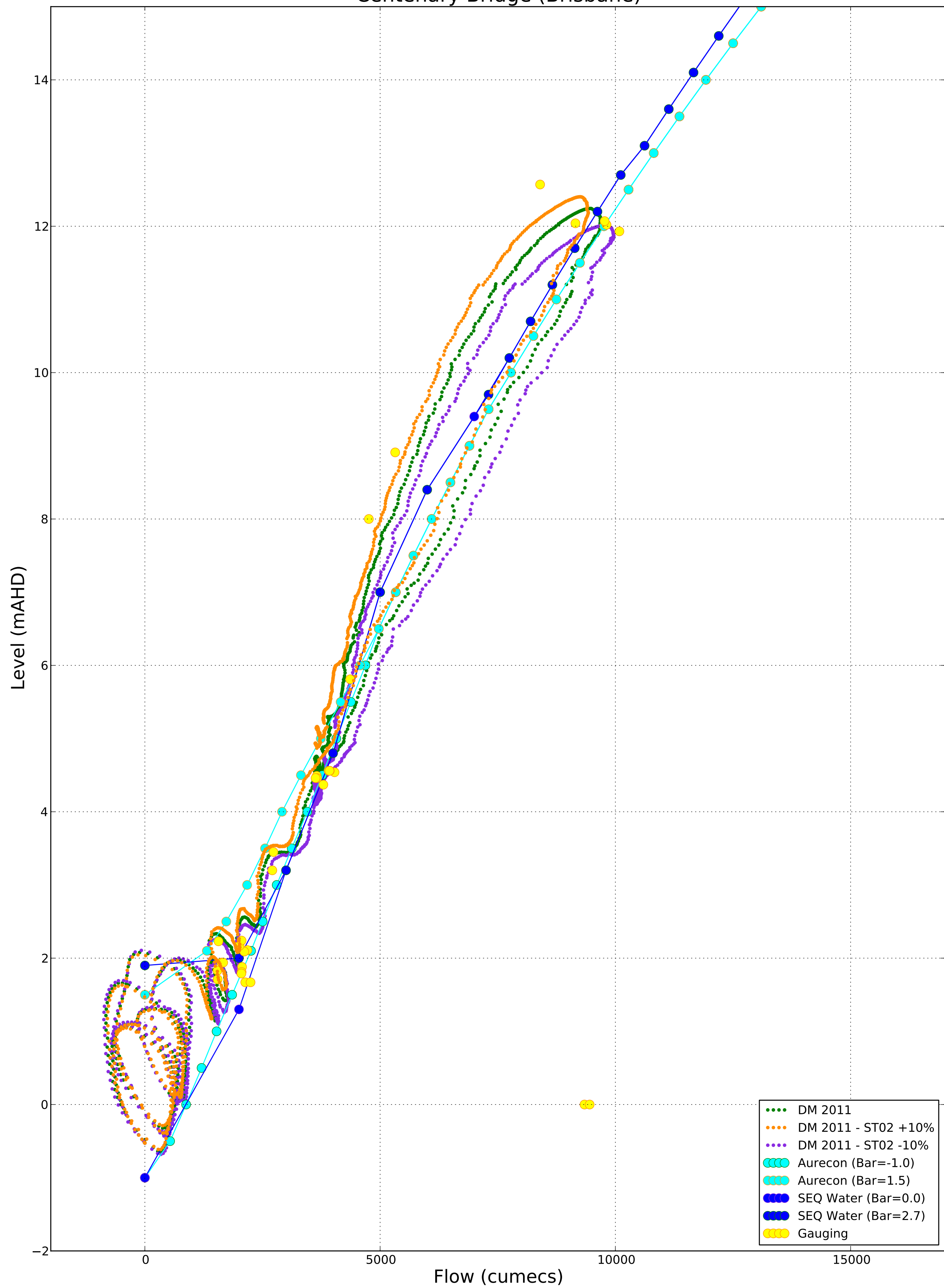


Plot 40 ST02 DM 2011 Events Rating Curve Comparison - Sheet A

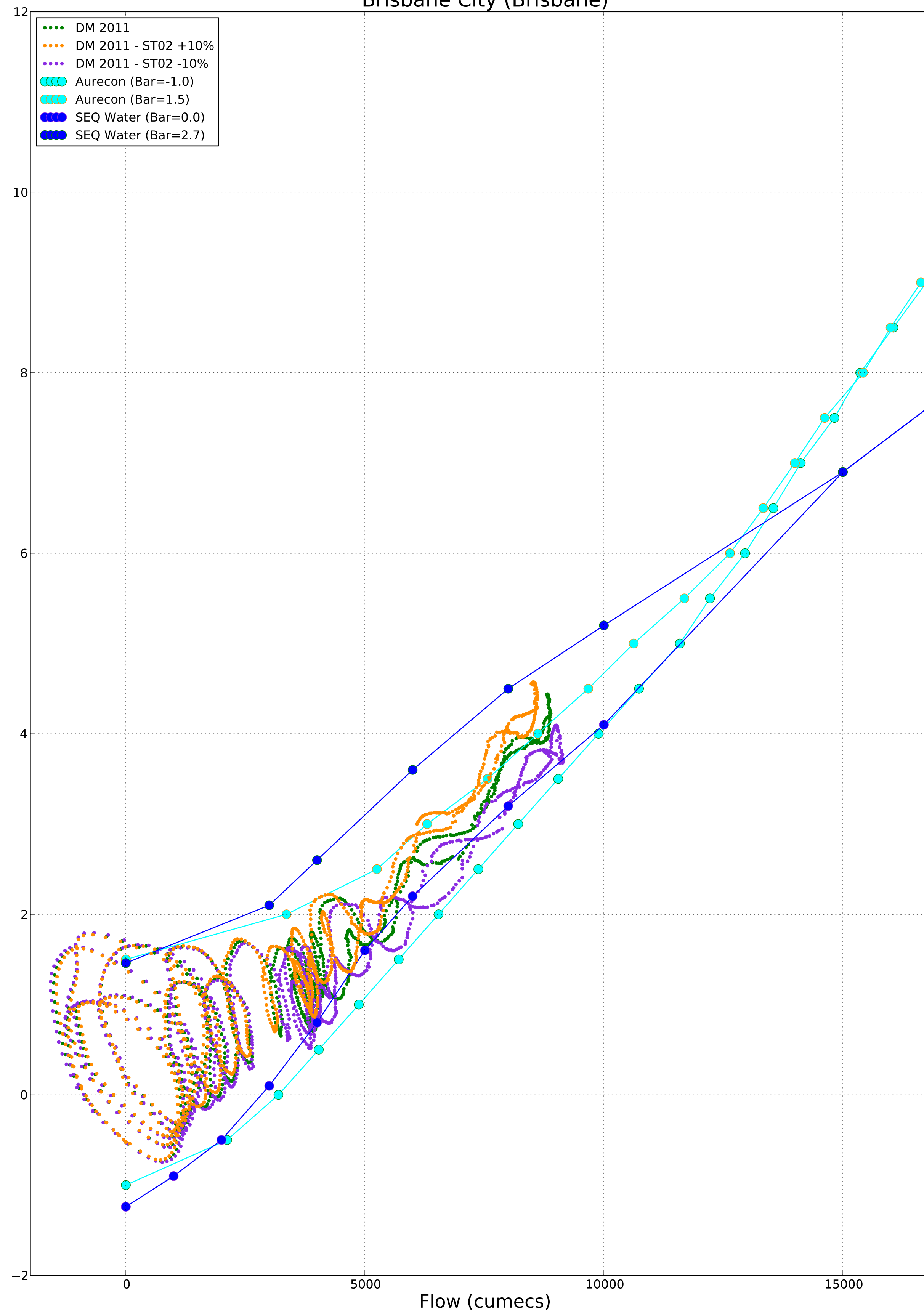


Plot 41 ST02 DM 2011 Events Rating Curve Comparison - Sheet B

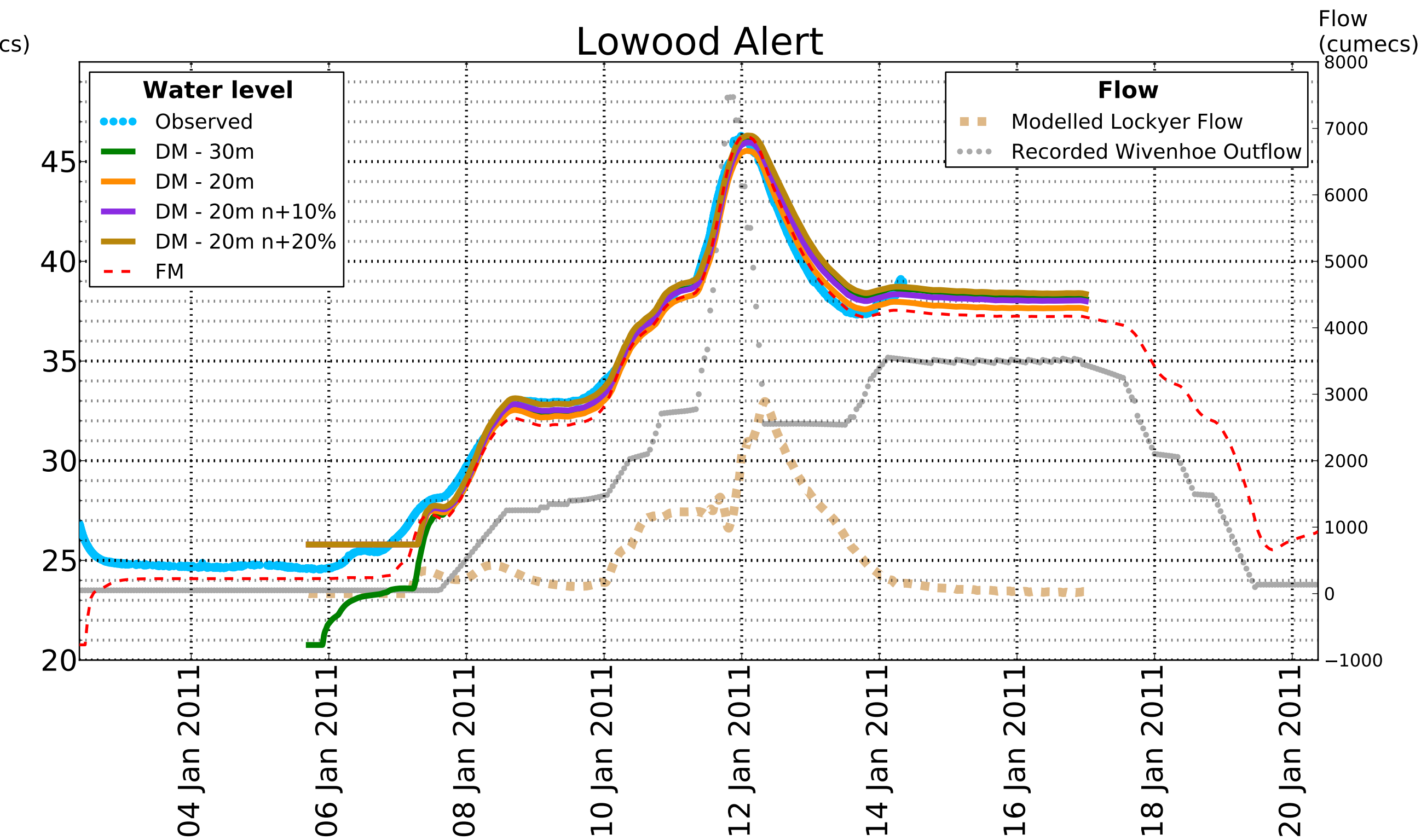
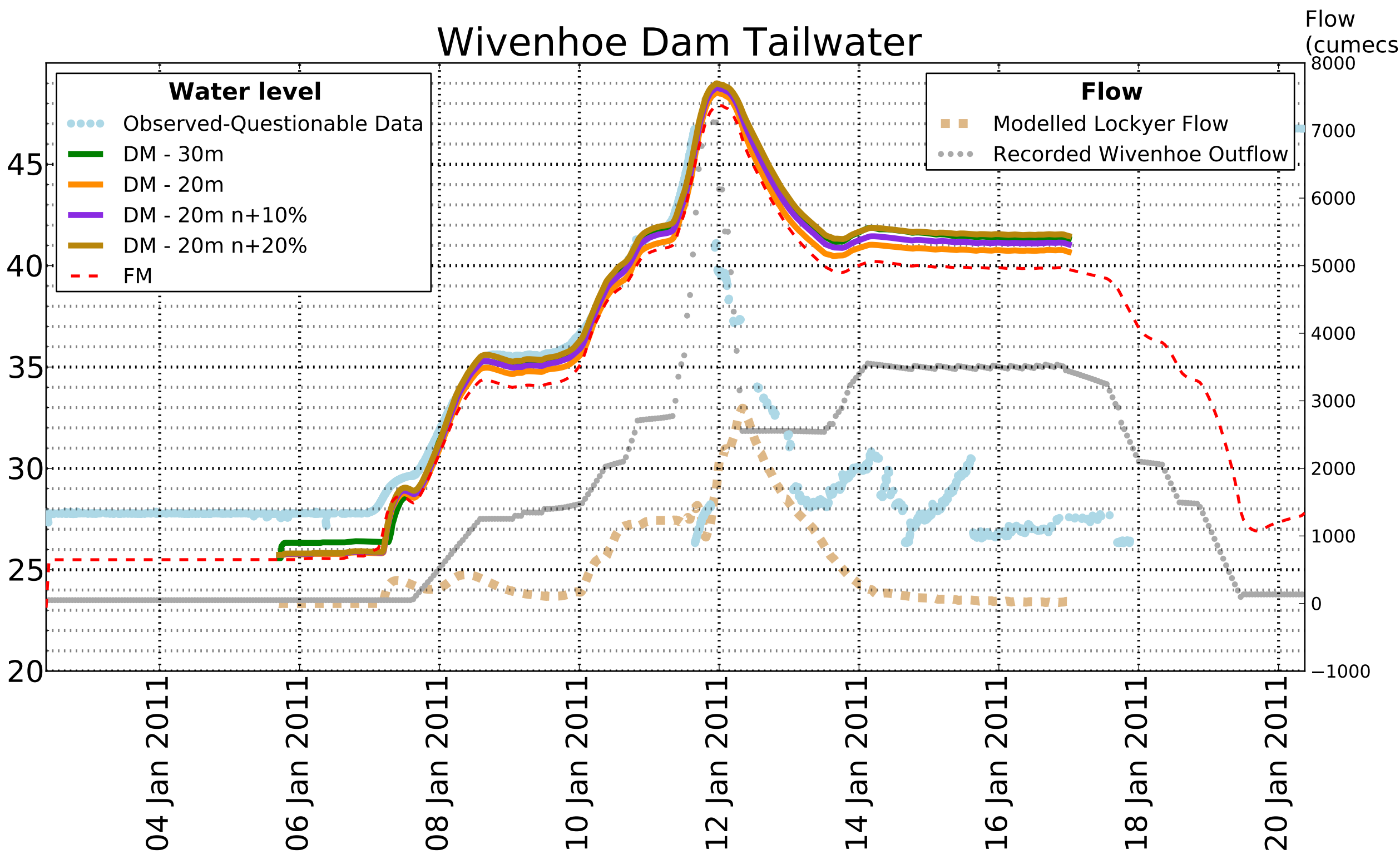
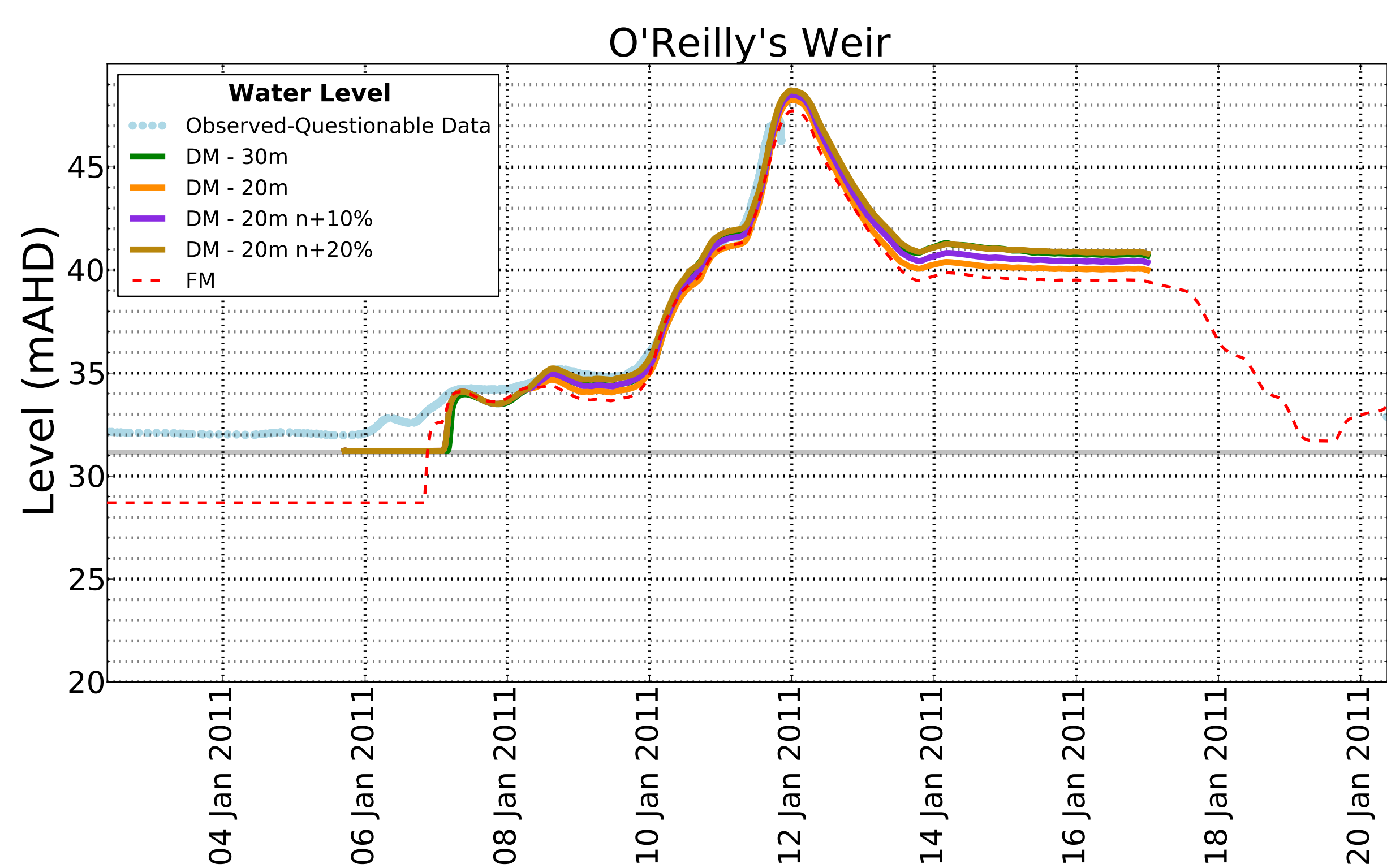
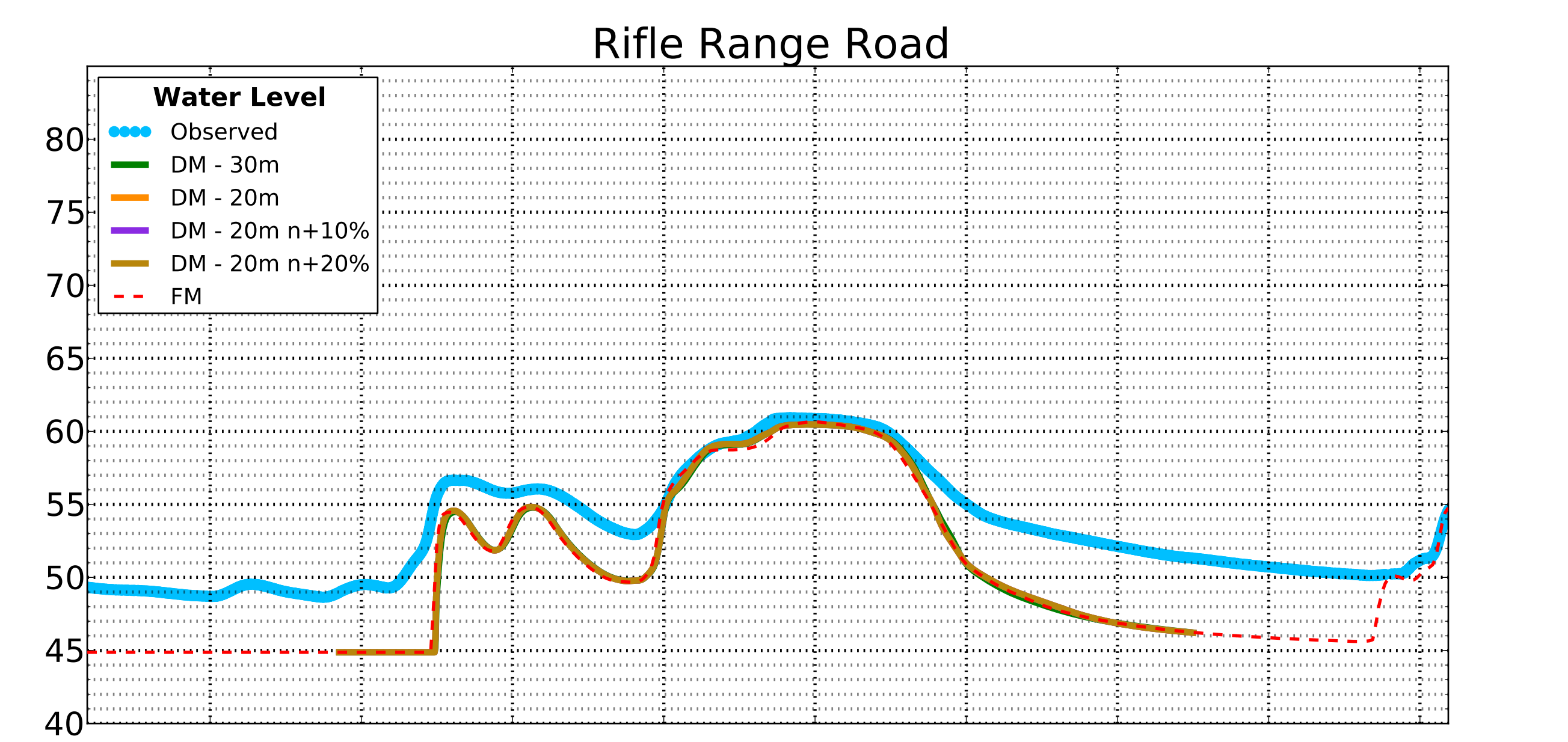
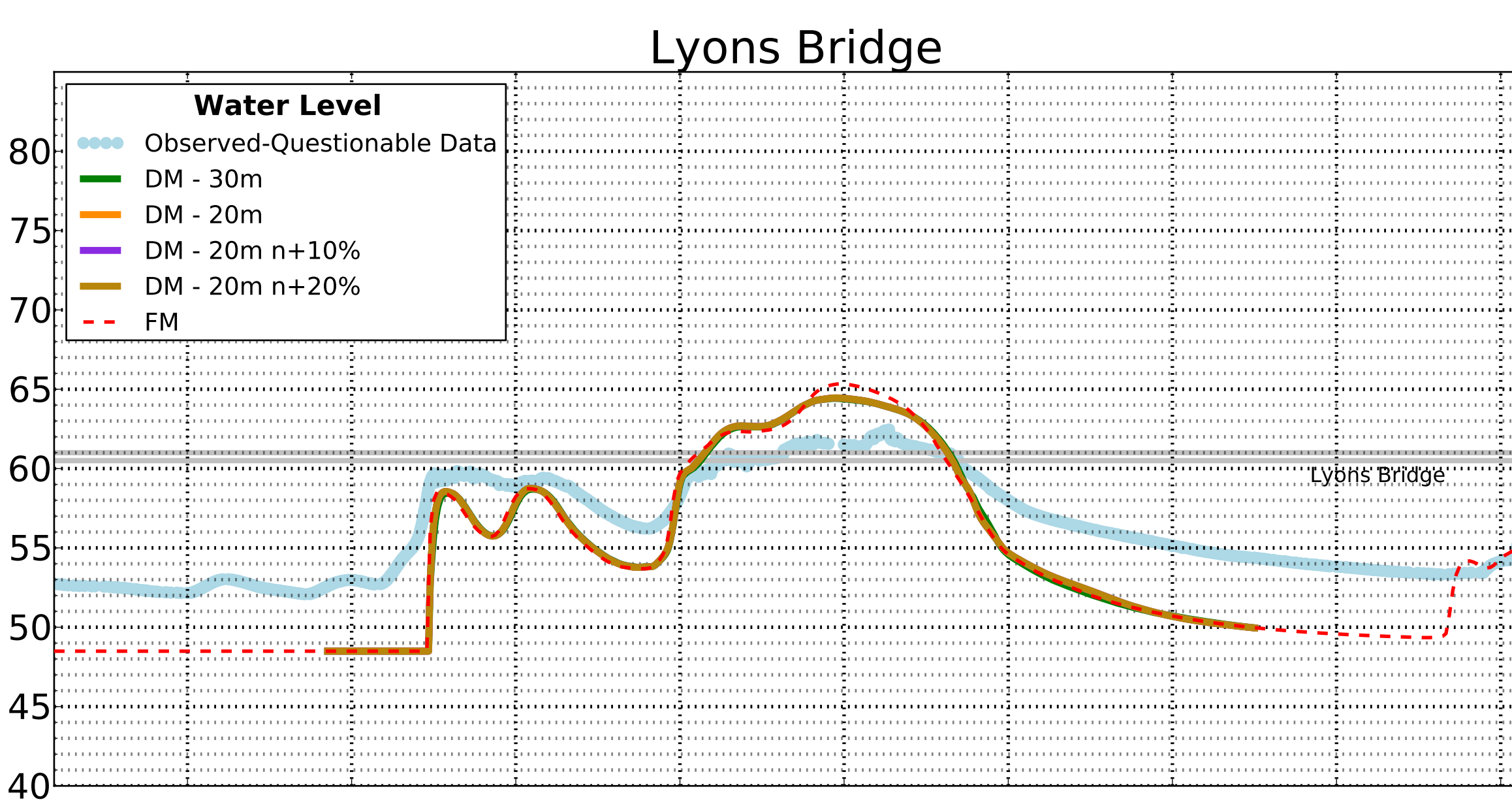
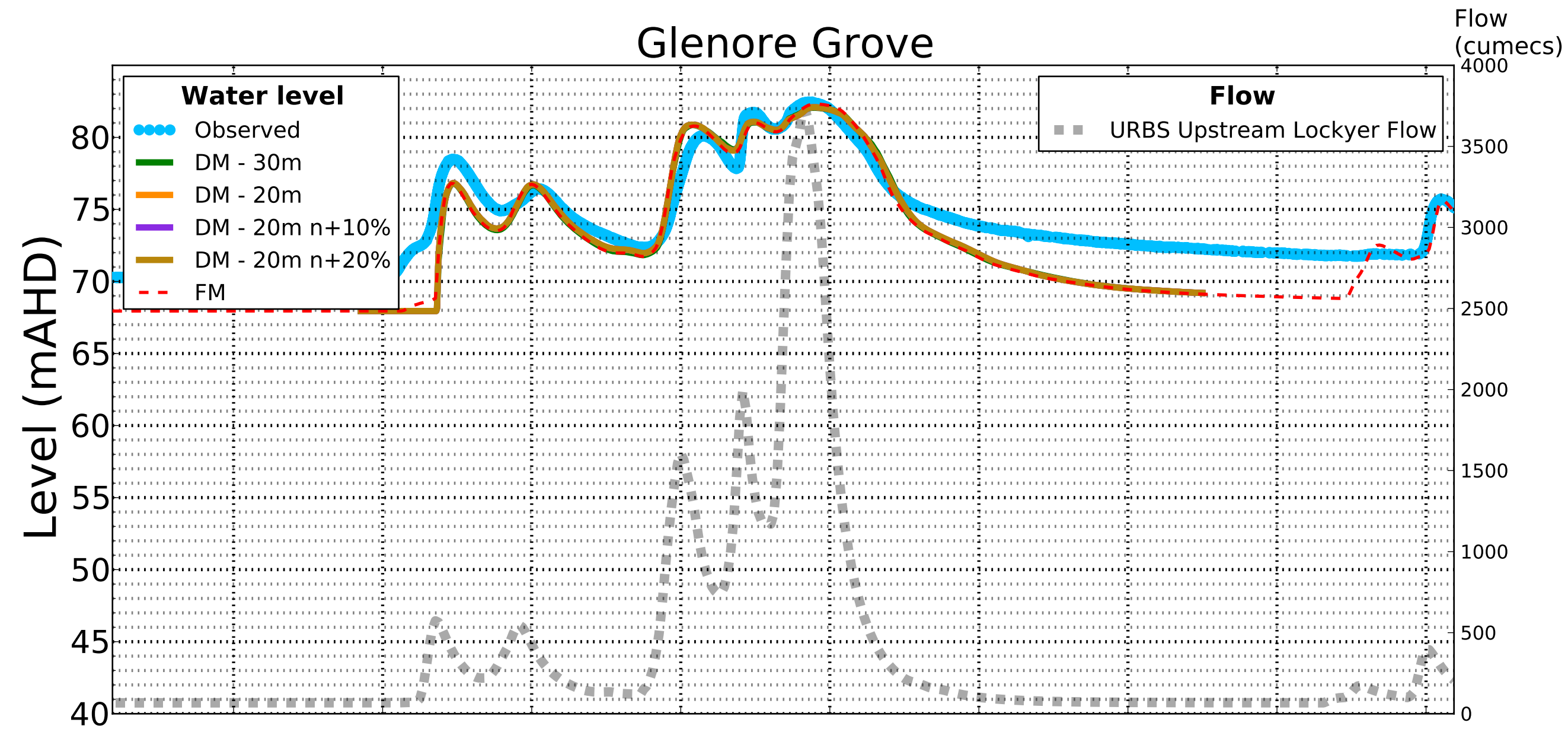
Centenary Bridge (Brisbane)



Brisbane City (Brisbane)

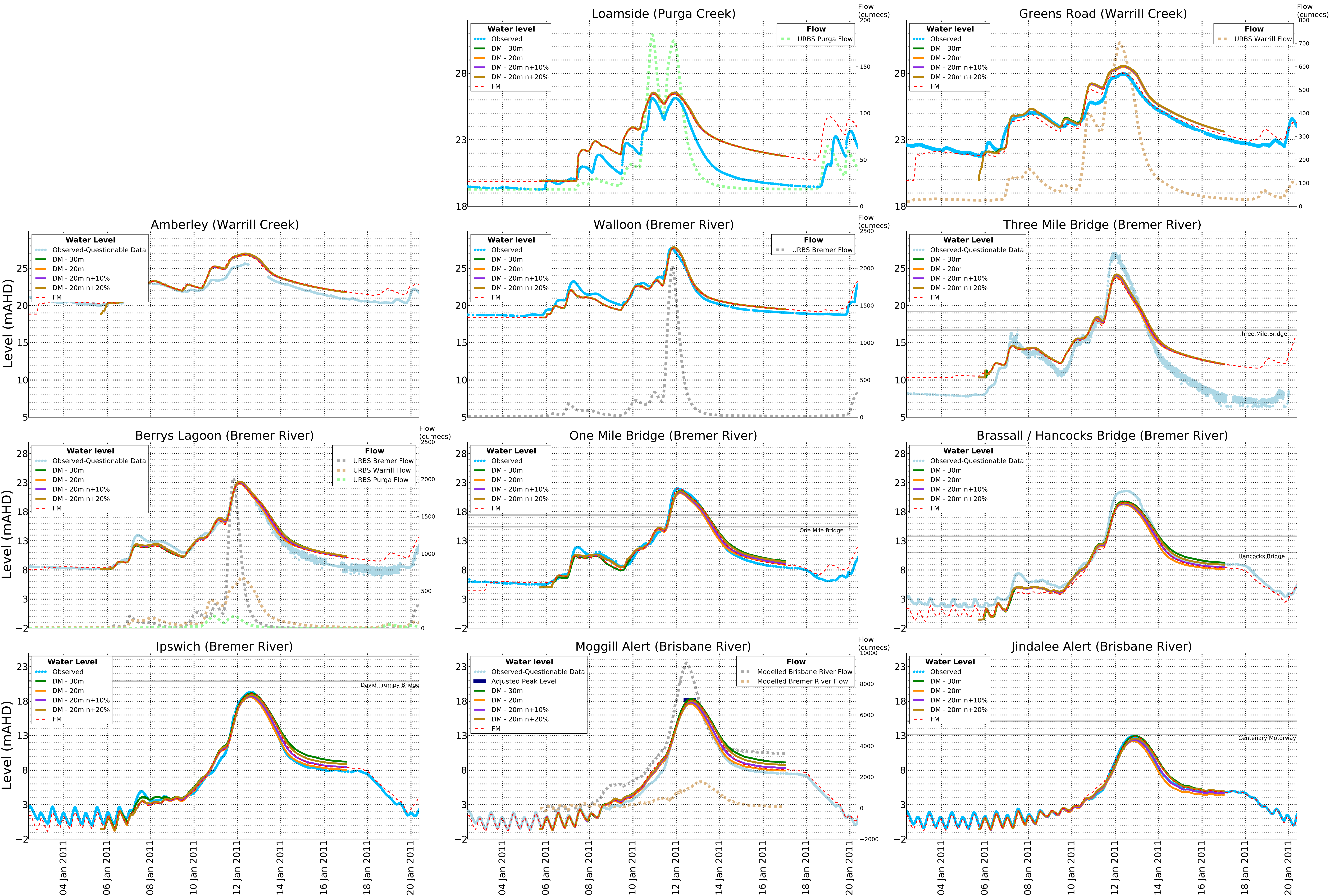


Plot 42 ST02 DM 2011 Events Rating Curve Comparison - Sheet C



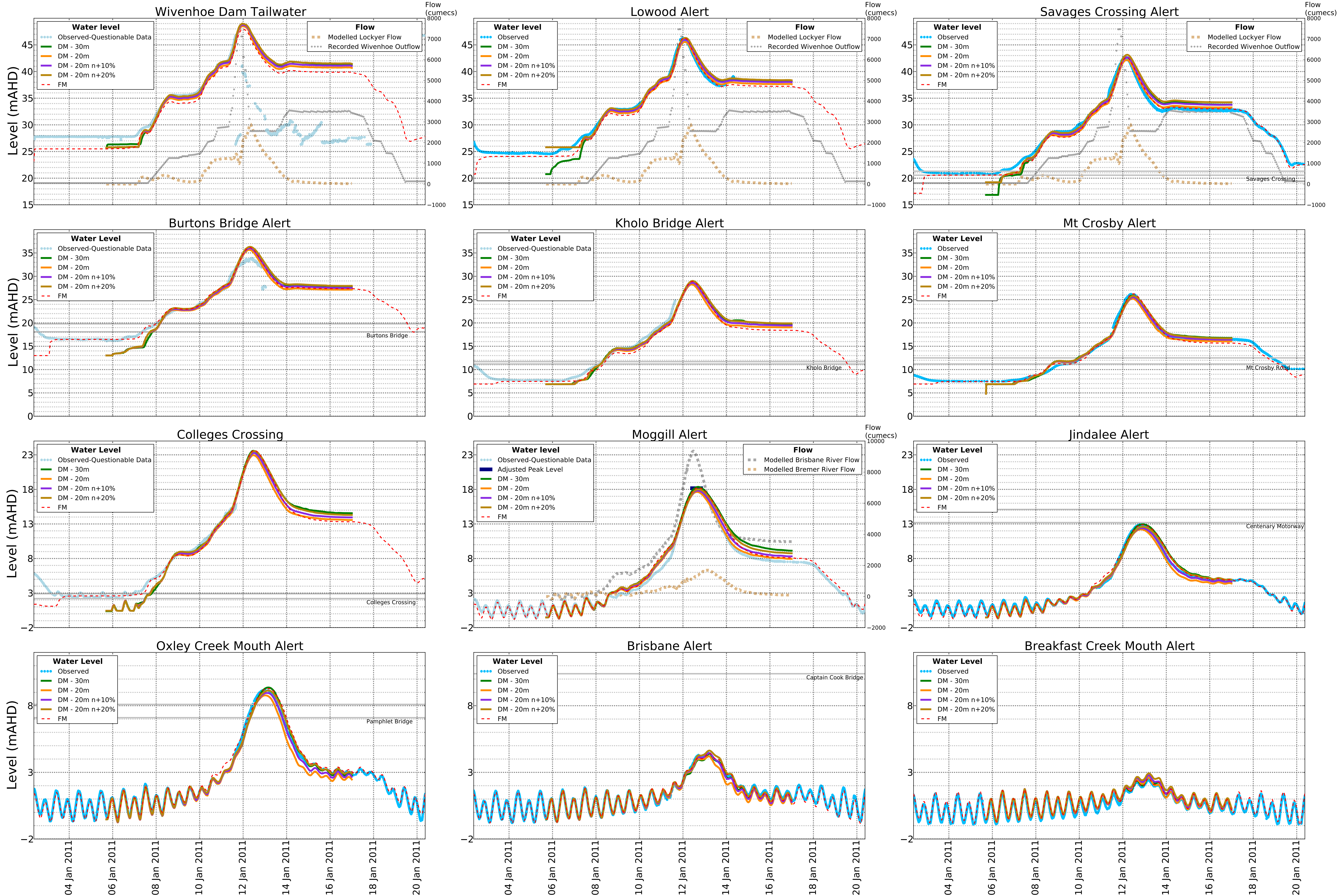
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 43 ST10 DM 20m Grid
 2011 Lockyer Creek Water Level Gauges



Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

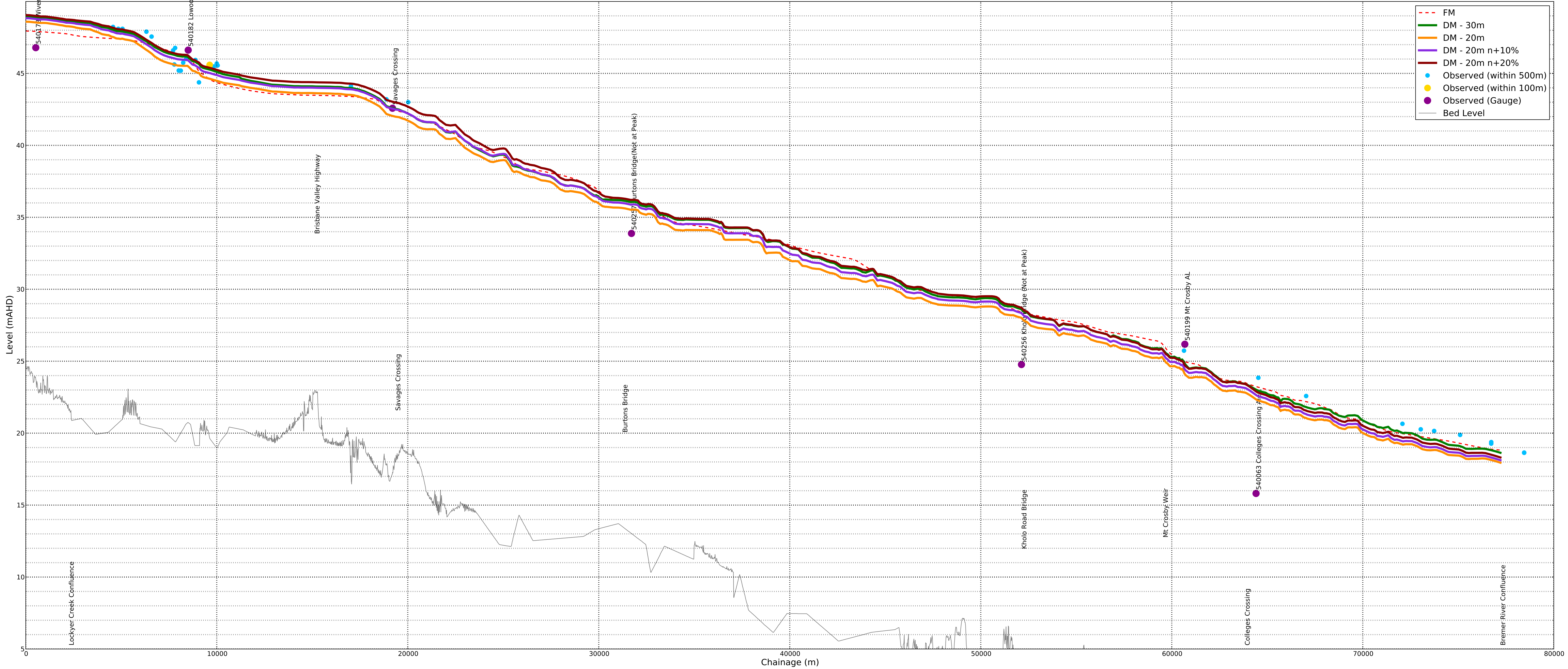
Plot 44 ST10 DM 20m Grid
 2011 Bremer River Water Level Gauges



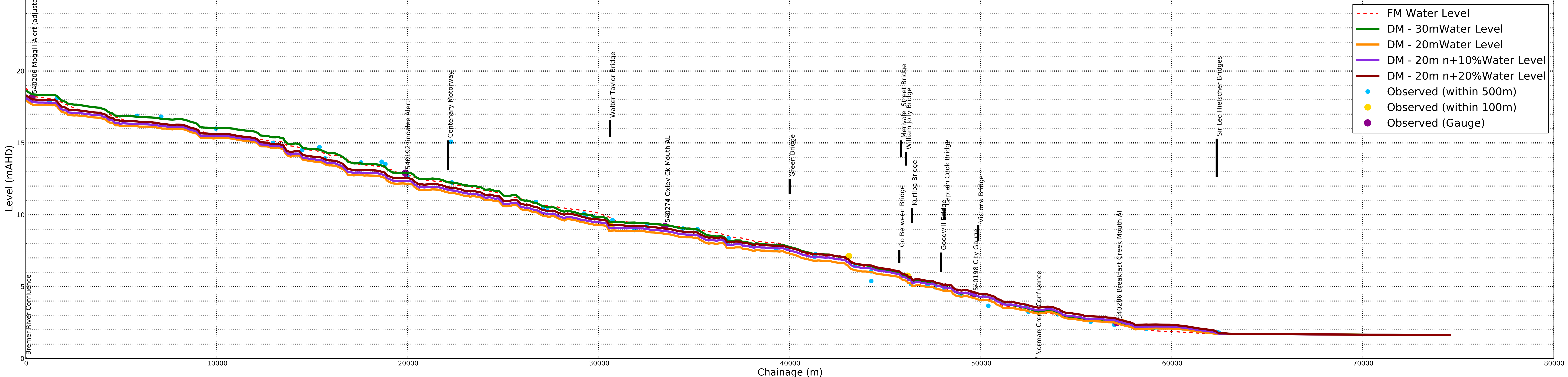
Date Labels are at 00:00 hours on that date
 Bridge Levels shown are lowest soffit and lowest deck level
 Further Details on Questionable or Adjusted data may be provided in Appendix B
 Fast Model Version: 0285 Detailed Model Version: 043

Plot 45 ST10 DM 20m Grid
 2011 Brisbane River Water Level Gauges

Mid Brisbane



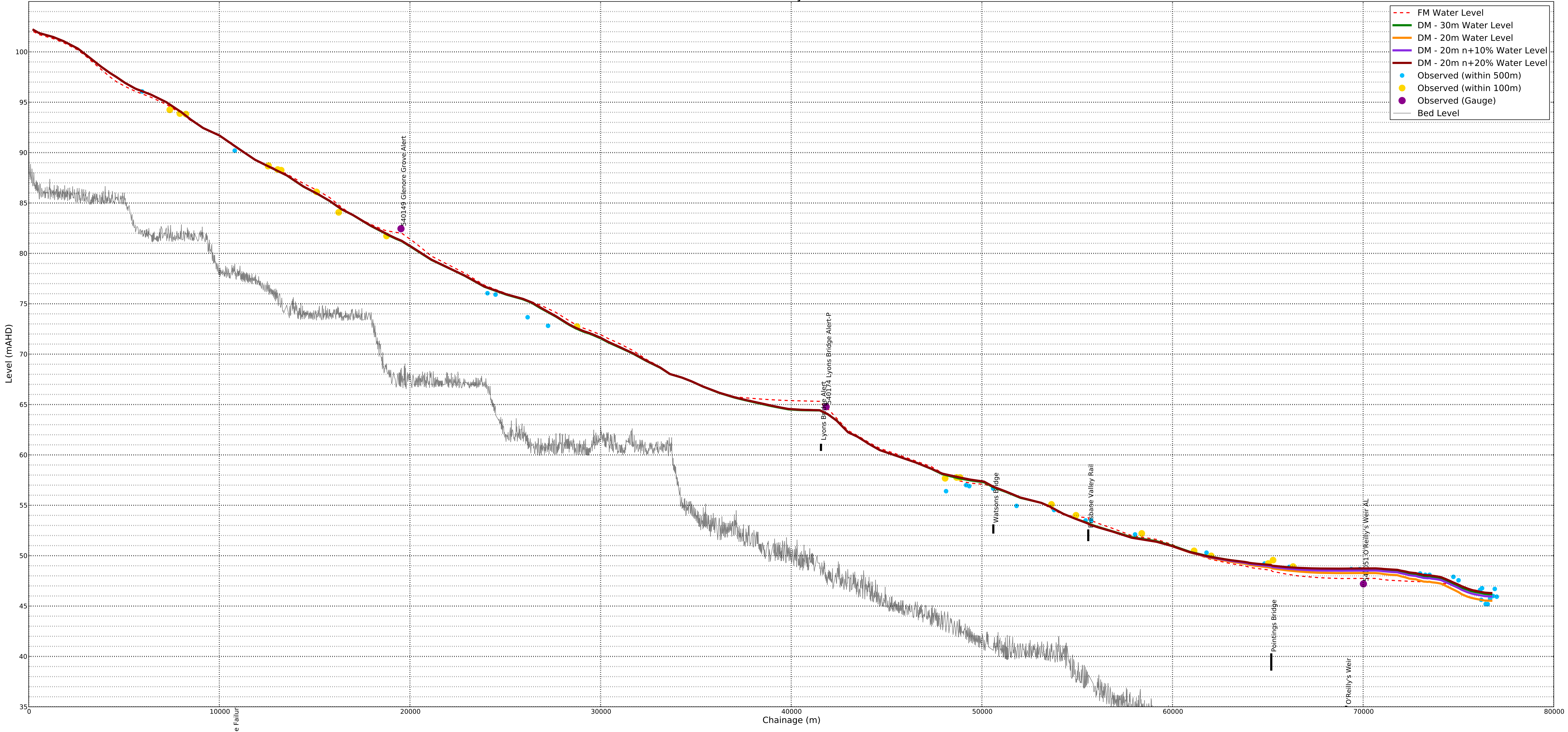
Lower Brisbane



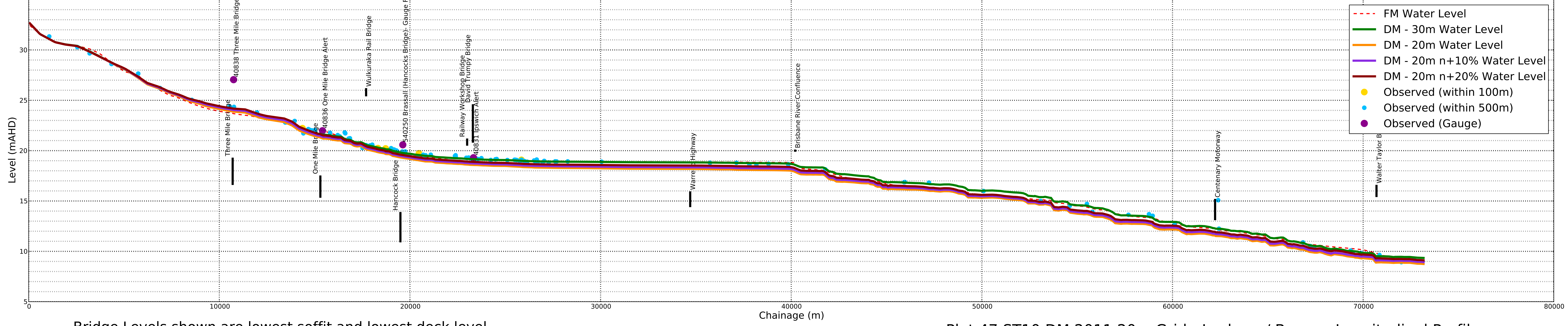
Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 46 ST10 DM 2011 20m Grid - Brisbane River Longitudinal Profiles

Lockyer

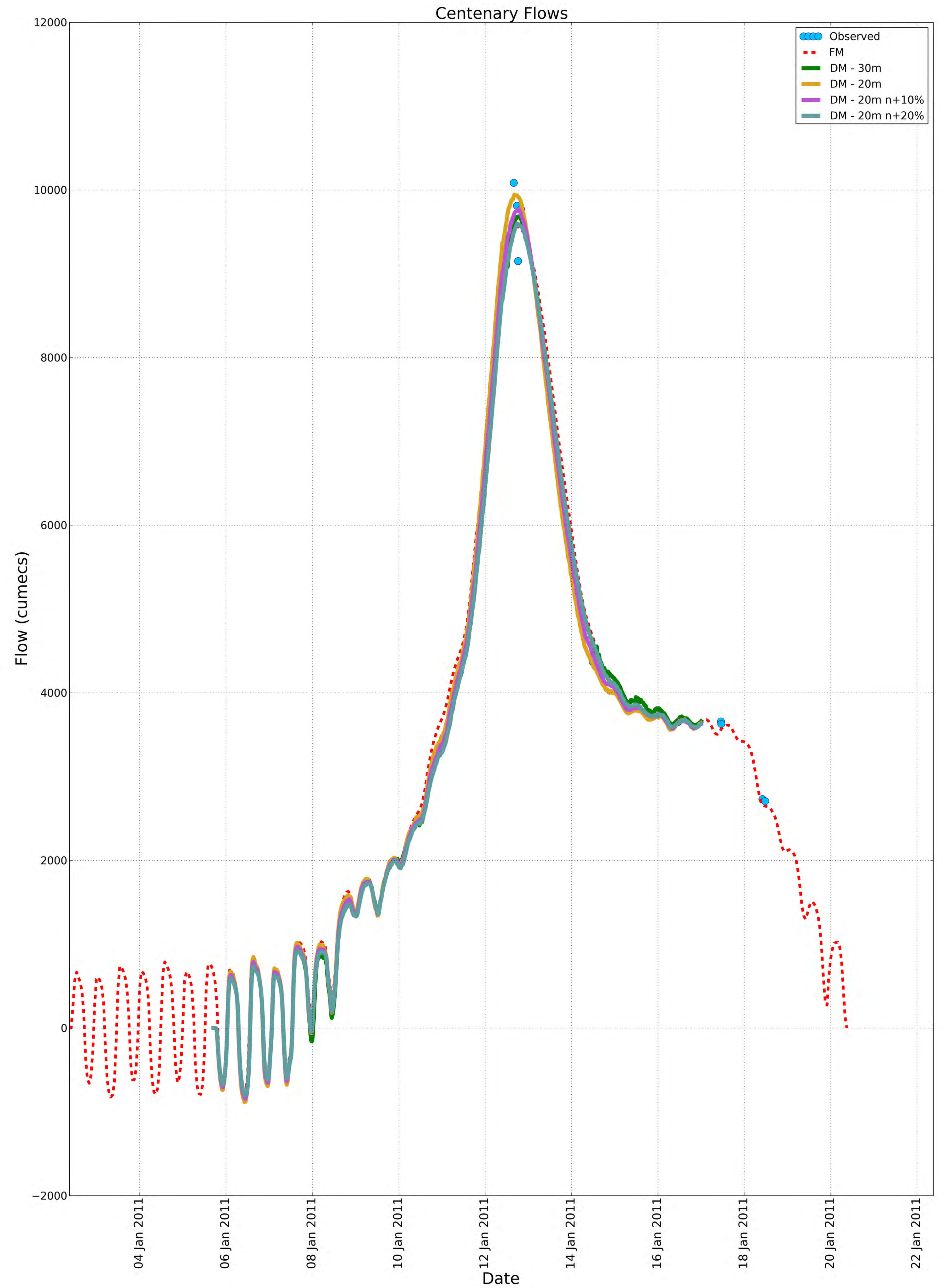
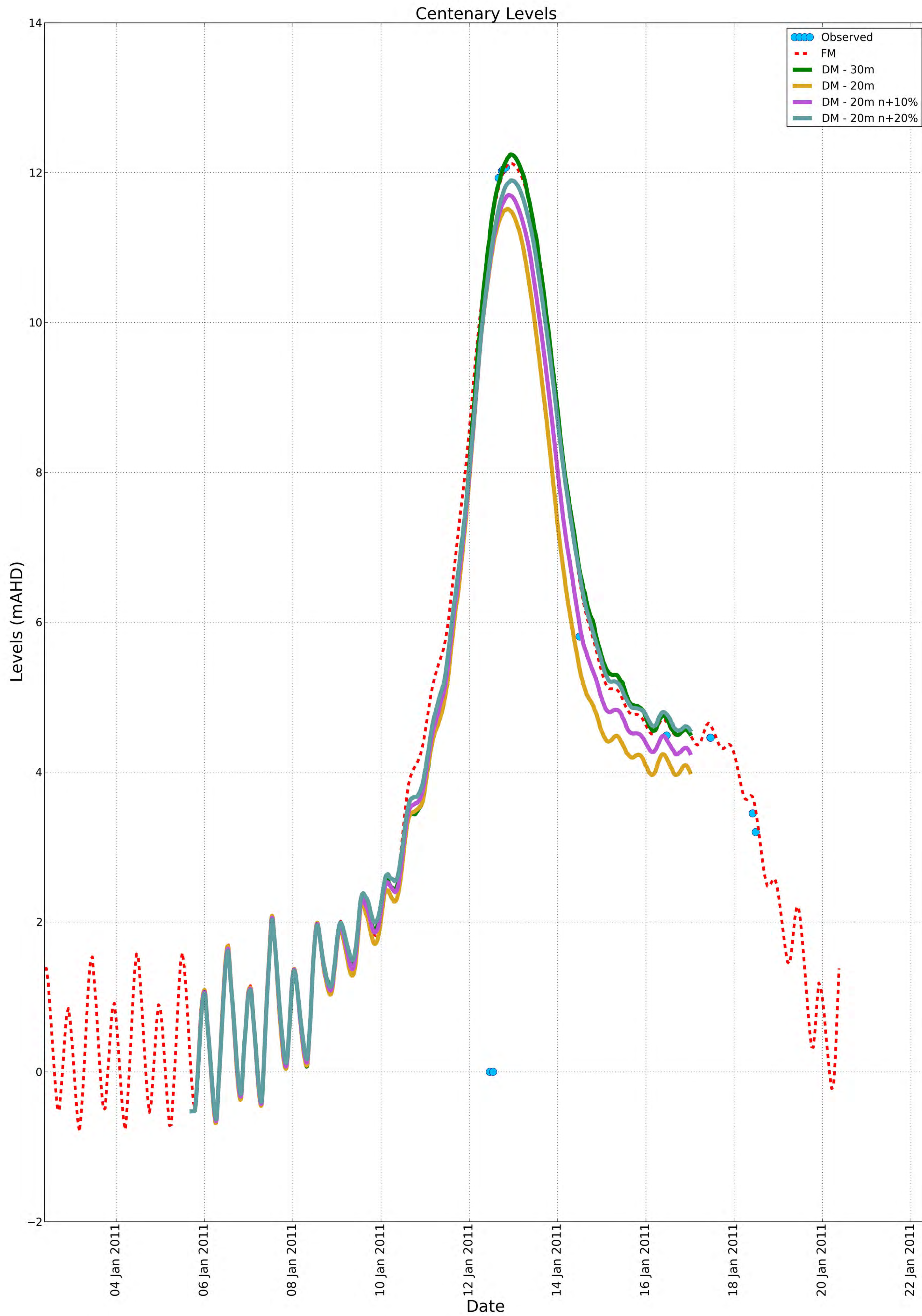


Bremer



Bridge Levels shown are lowest soffit and lowest deck level
Fast Model Version: 0285 Detailed Model Version: 043

Plot 47 ST10 DM 2011 20m Grid - Lockyer / Bremer Longitudinal Profiles



Date Labels are at 00:00 hours on that date

Fast Model Version: 0285 Detailed Model Version: 043

Plot 48 ST10 DM 20m Grid - 2011 Centenary Bridge Flow Recordings