

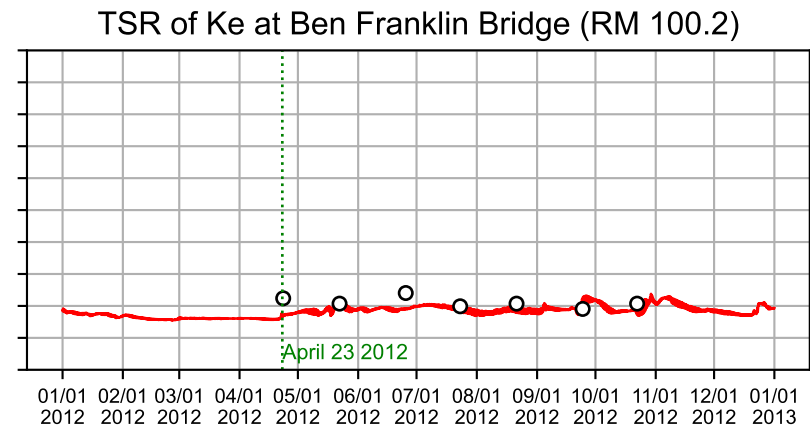
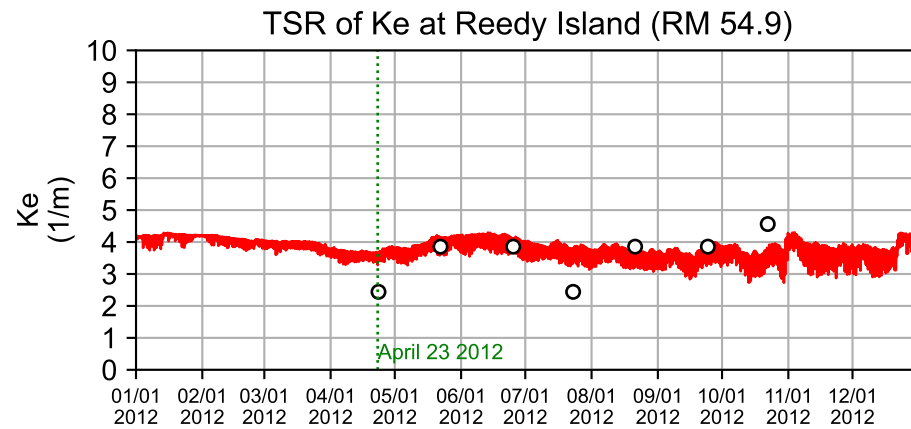
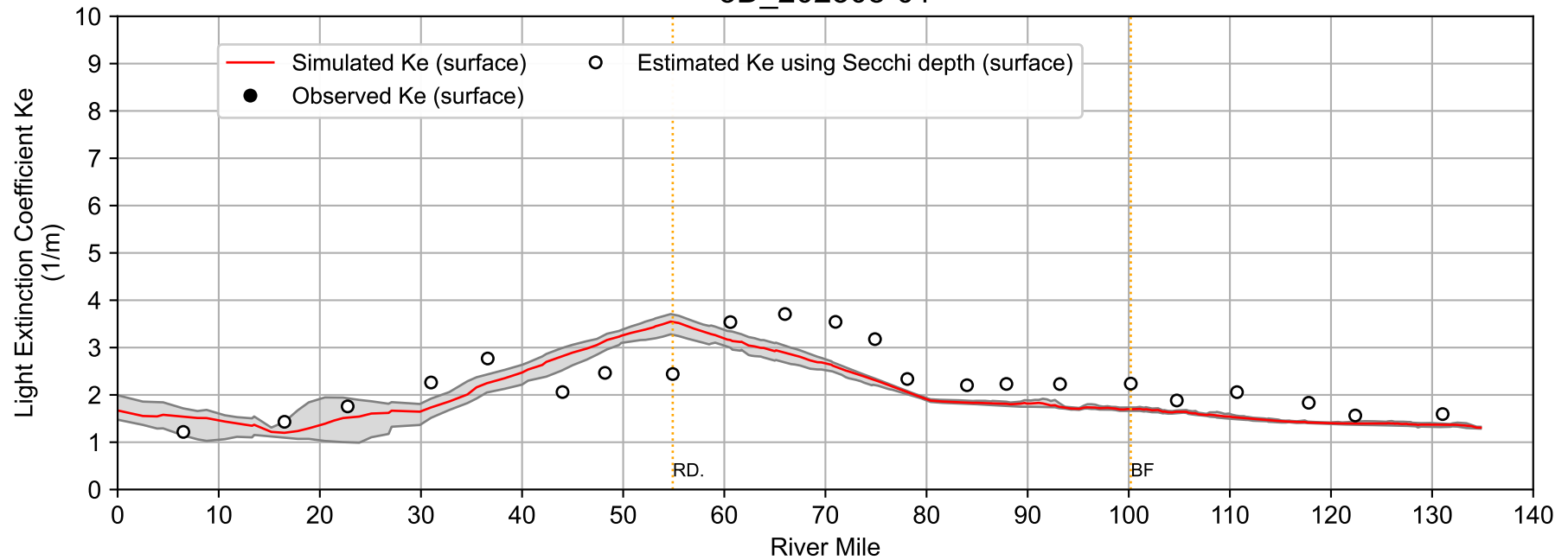
Appendix F: Model to Data Comparisons

Appendix F-6: Light extinction (K_e)

This appendix is in connection with Section 4.4.1.5 in the main report – Phytoplankton. It contains the complete comparison plots for K_e from all surveys during the calibration years 2018–2019 and corroboration year 2012.

Note: Light extinction is not measured directly. The model-data comparison figures throughout this section use the word “Observed” to denote K_e values that were derived based on PAR measurements collected at the surface and at 1-meter depth (equation 3-45 in main report). Gaps in the PAR-derived K_e estimates (denoted “Observed”) during boat run surveys were filled in using a simple regression between PAR-derived K_e estimates and secchi depth measurements ($R^2=0.78$); these are denoted on the figures as “Estimated K_e using Secchi depth.”

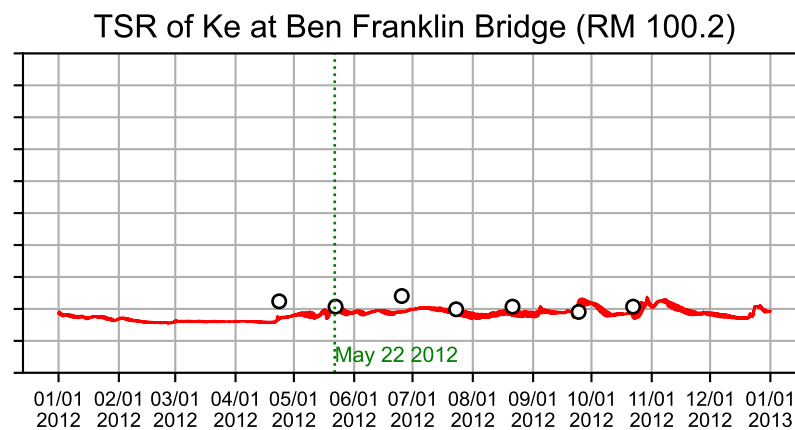
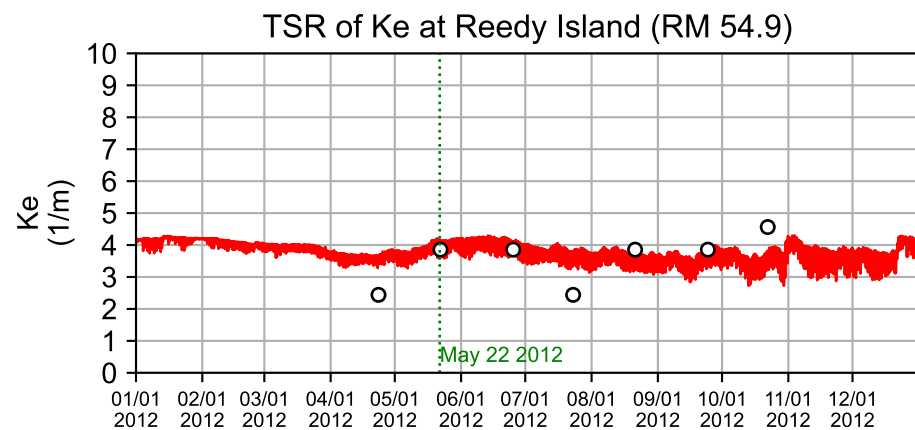
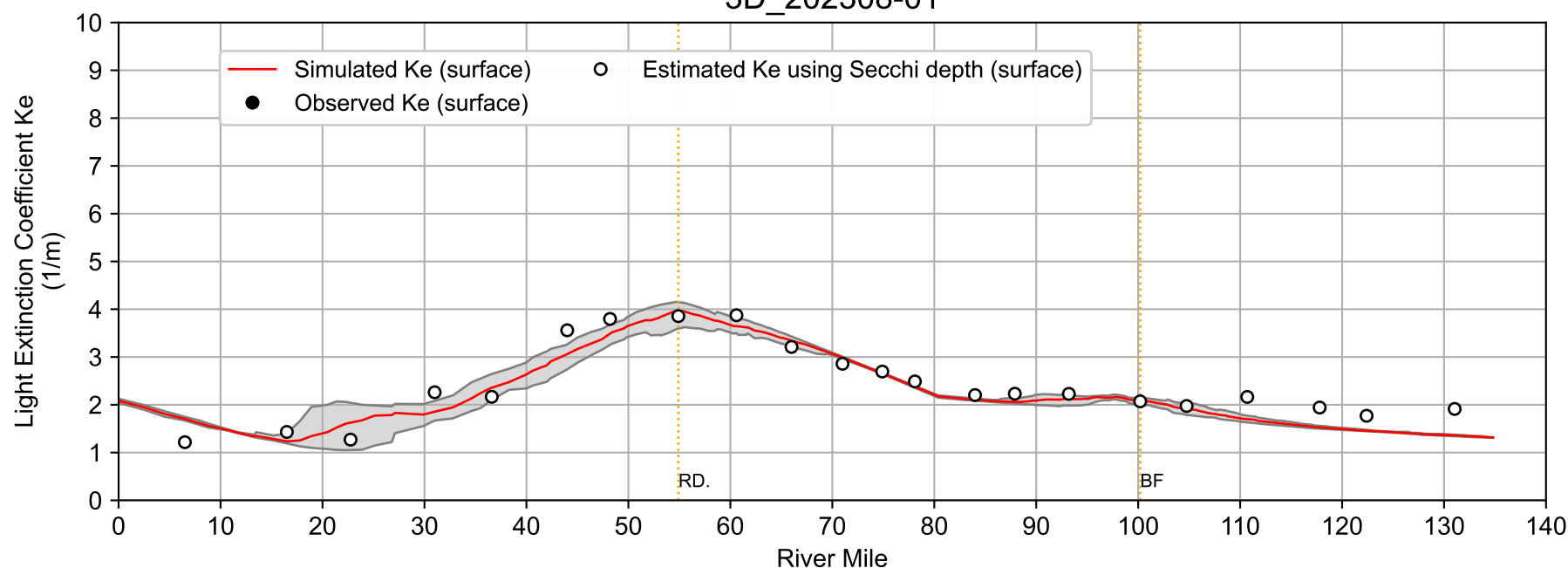
Simulated and Observed Ke at Surface Layer. Sample Date: April 23 2012 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 04/23/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

Simulated and Observed Ke at Surface Layer. Sample Date: May 22 2012 3D_202308-01

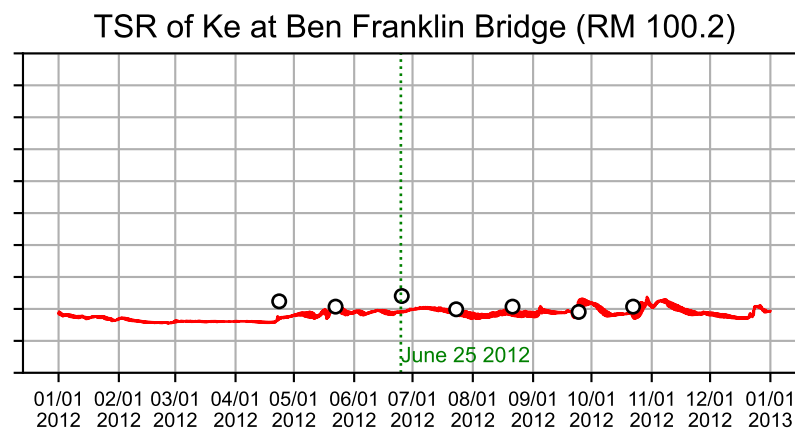
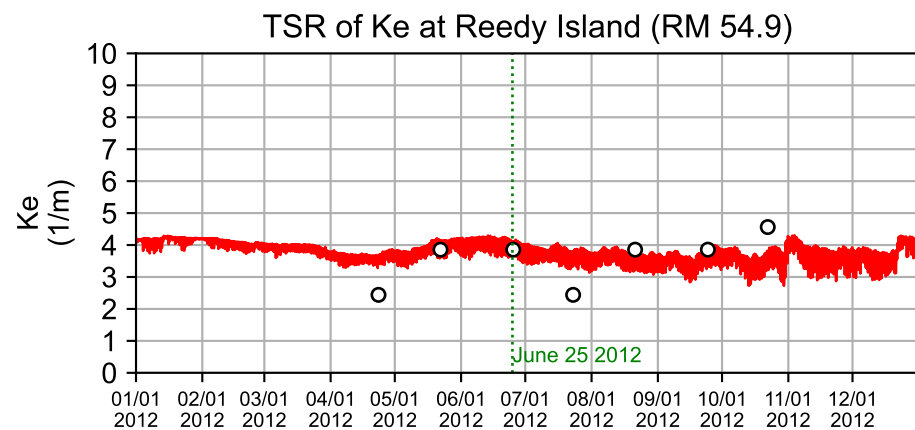
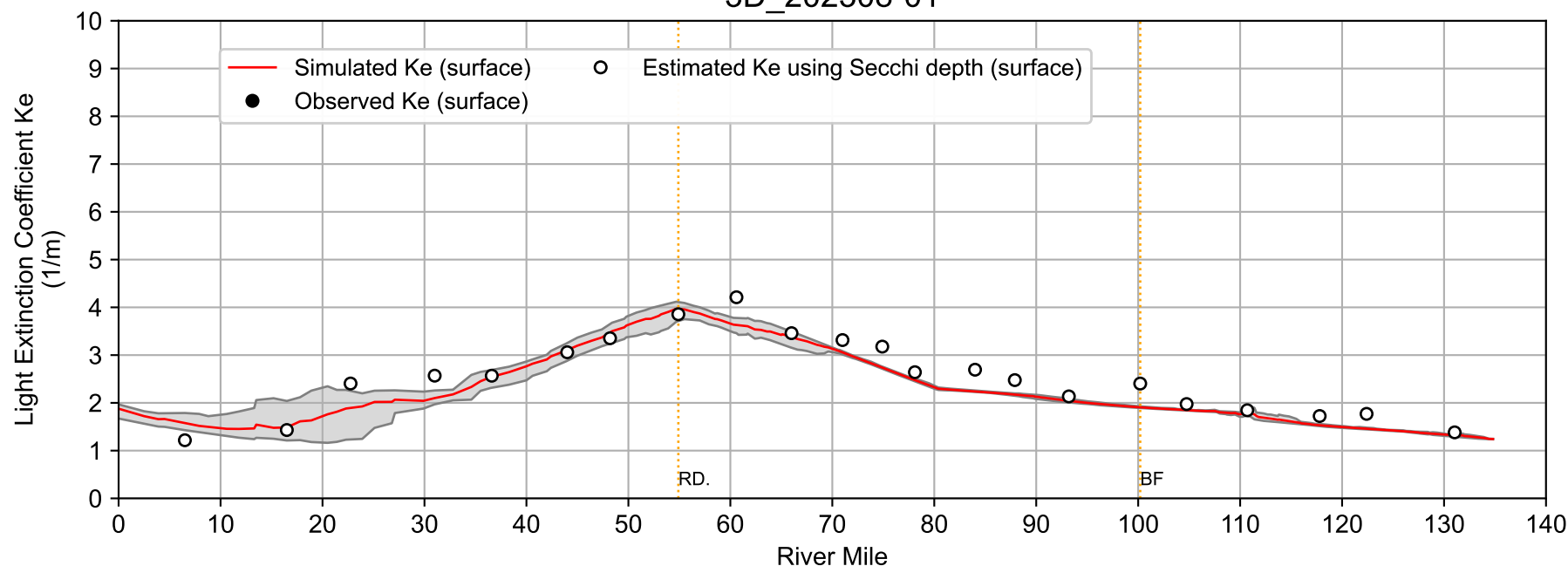


Simulated and Observed Light Extinction Coefficient K_e
Model results from 05/22/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: June 25 2012 3D_202308-01

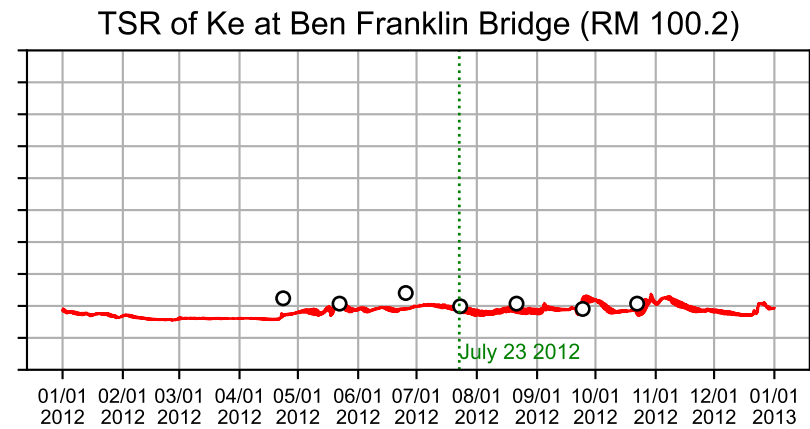
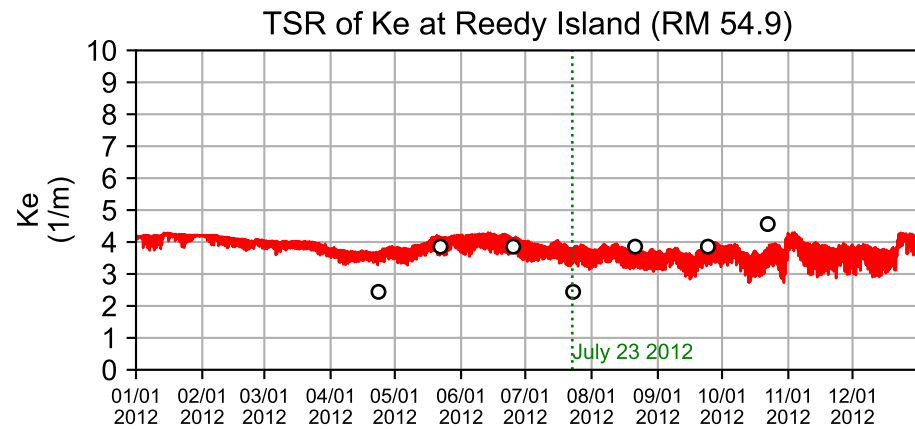
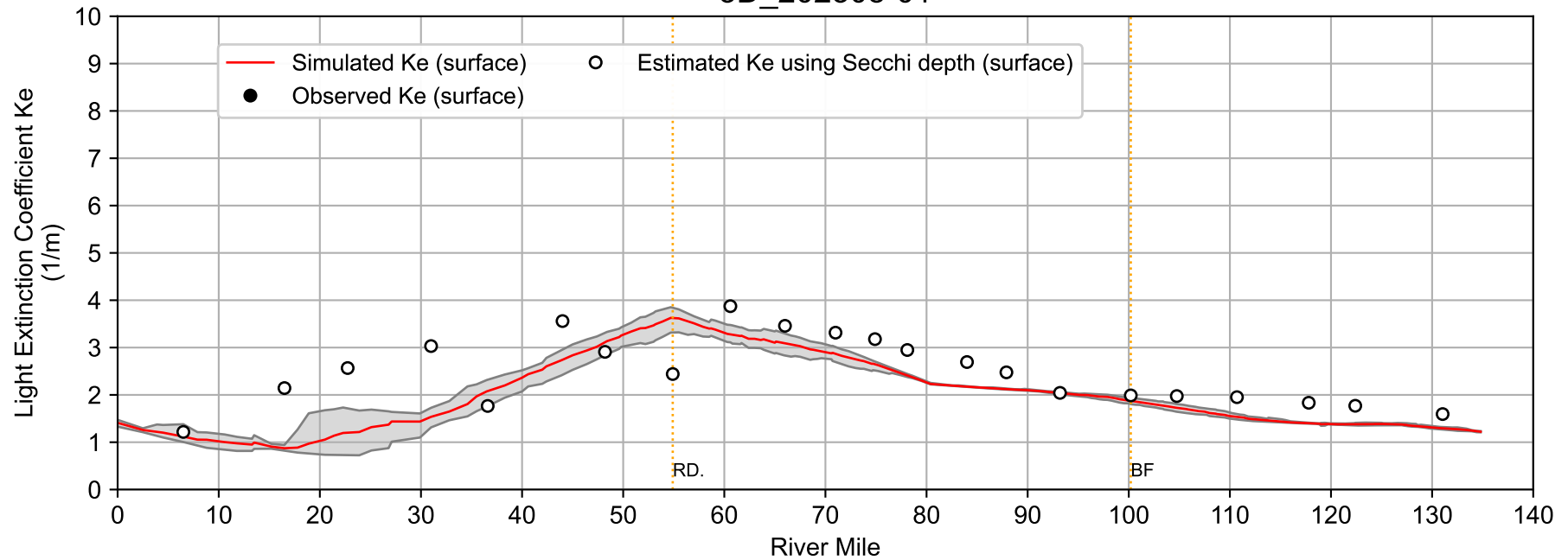


Simulated and Observed Light Extinction Coefficient K_e
Model results from 06/25/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: July 23 2012 3D_202308-01

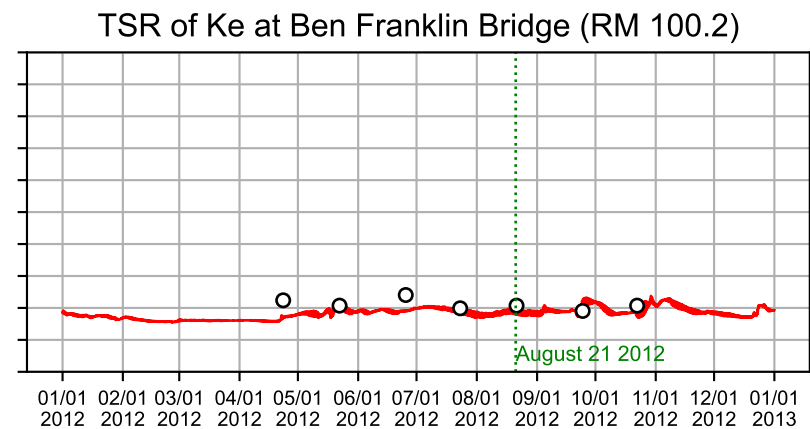
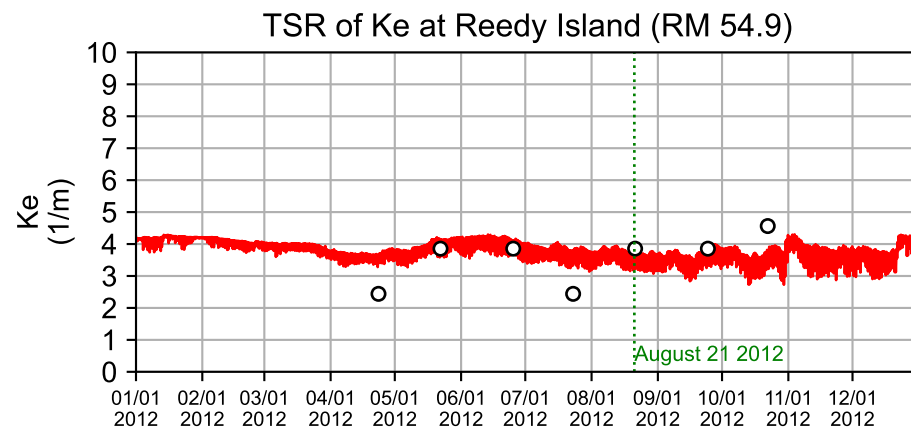
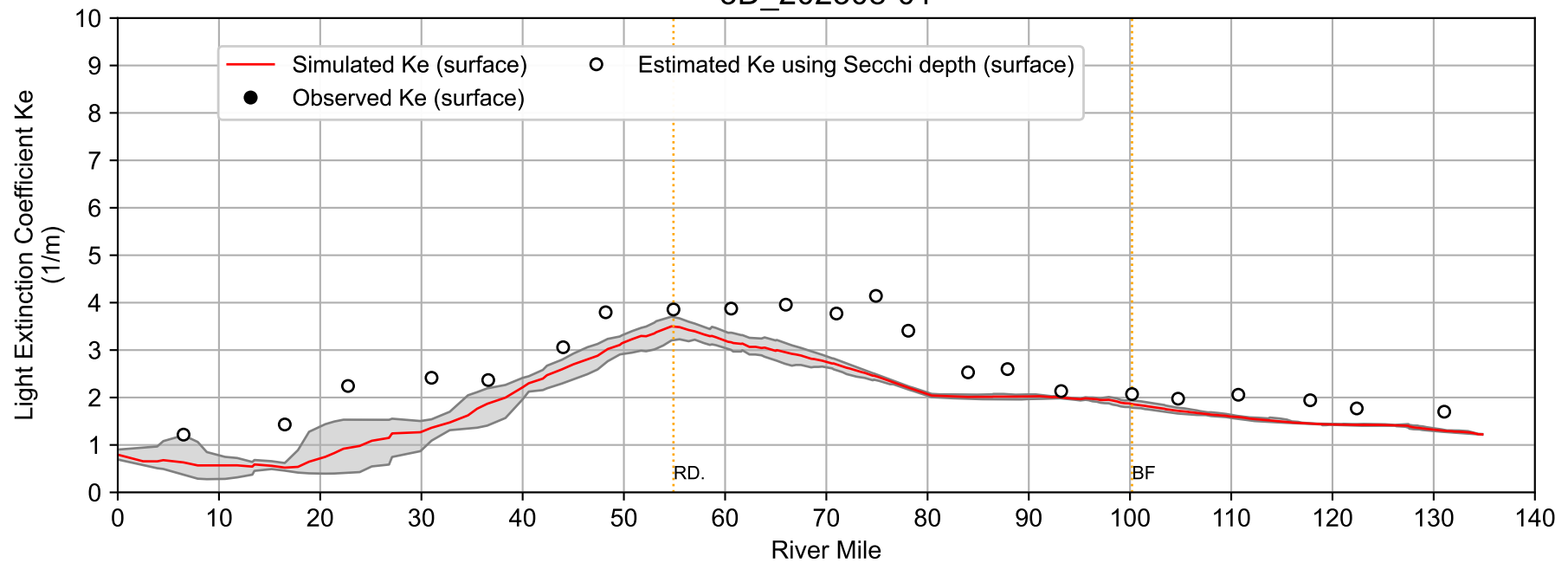


Simulated and Observed Light Extinction Coefficient K_e
Model results from 07/23/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: August 21 2012 3D_202308-01

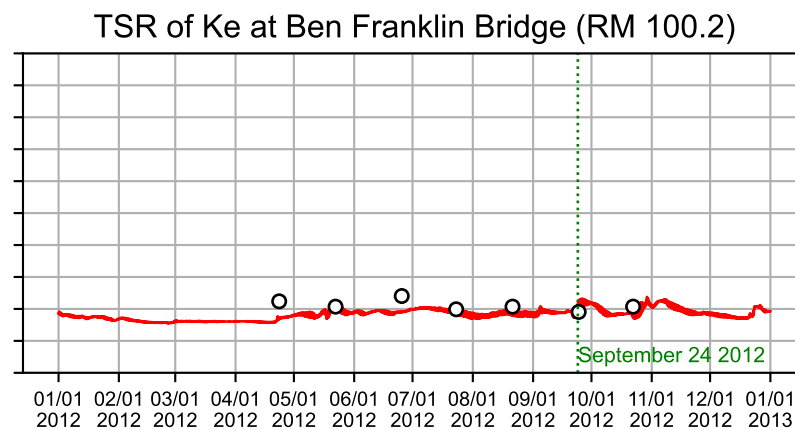
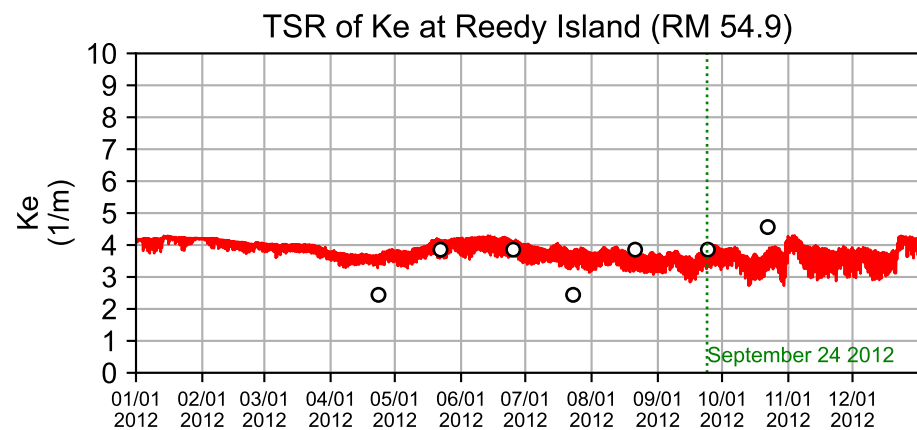
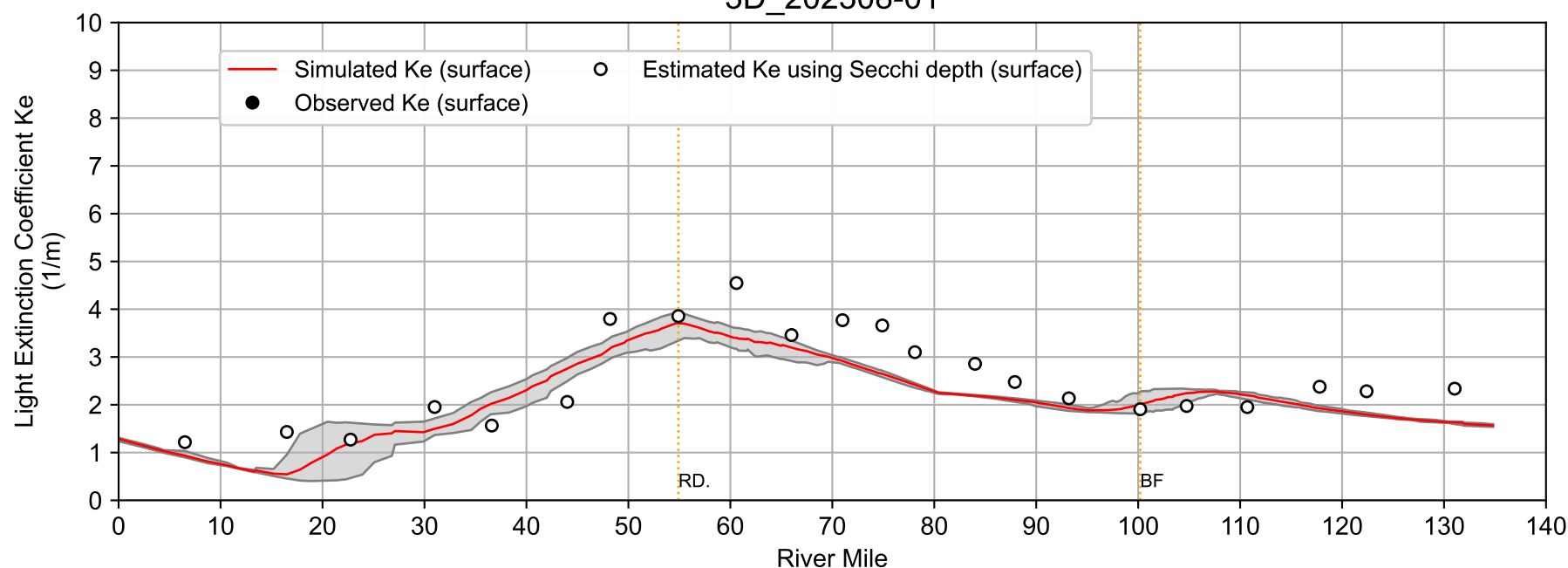


Simulated and Observed Light Extinction Coefficient K_e
Model results from 08/21/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: September 24 2012 3D_202308-01

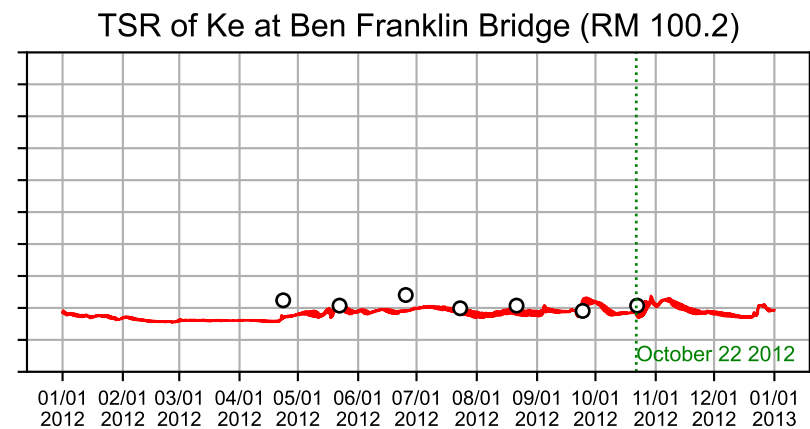
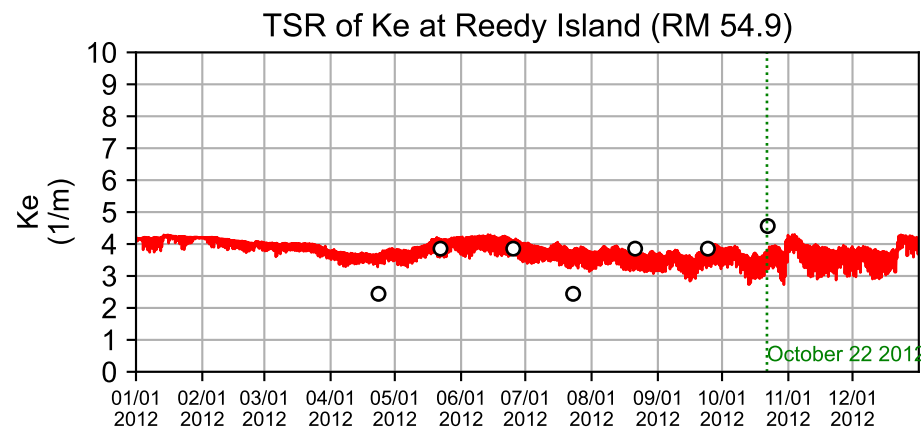
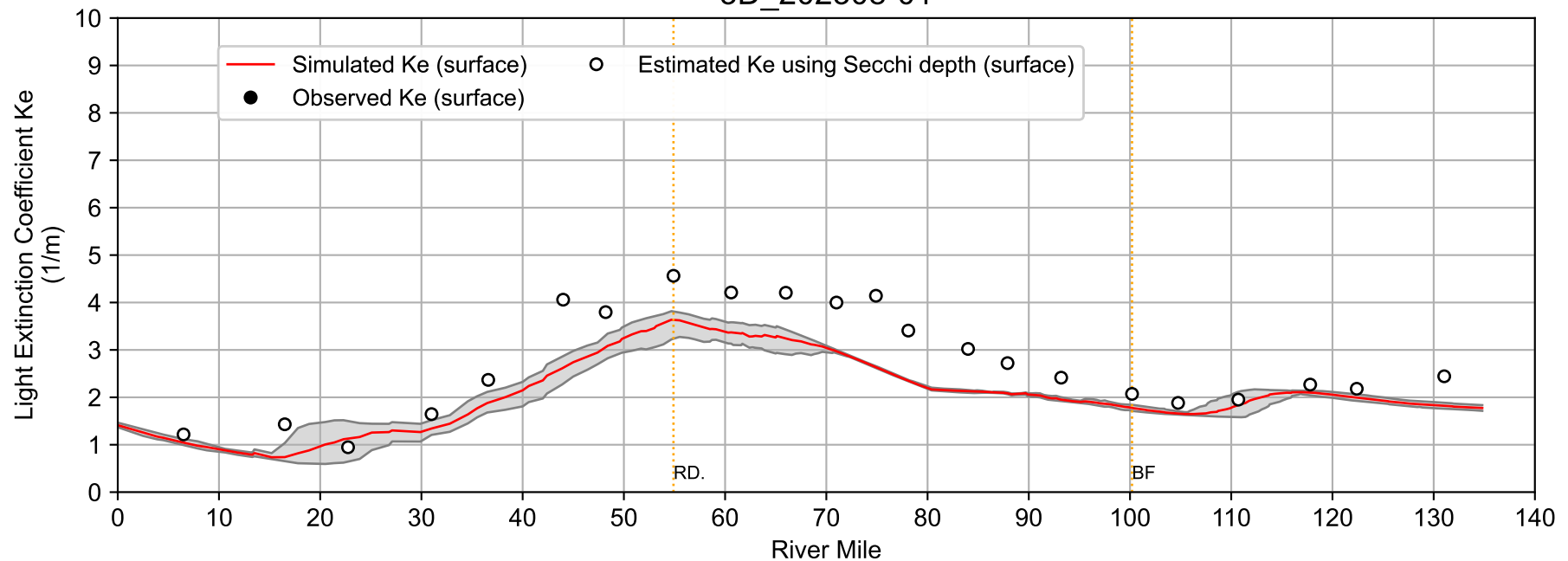


Simulated and Observed Light Extinction Coefficient K_e
Model results from 09/24/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: October 22 2012 3D_202308-01

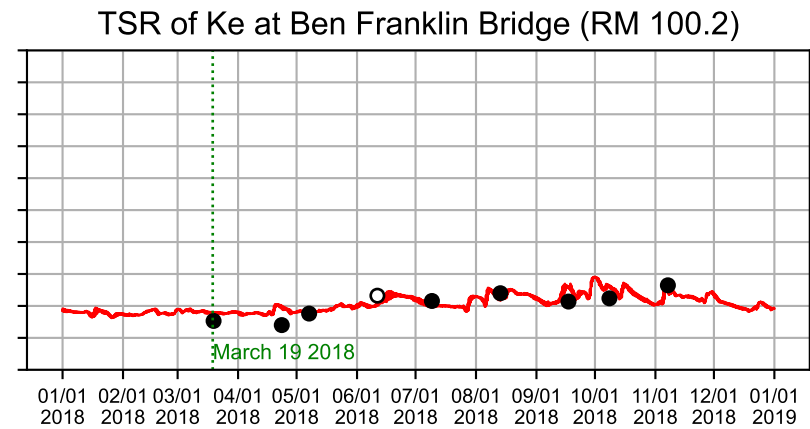
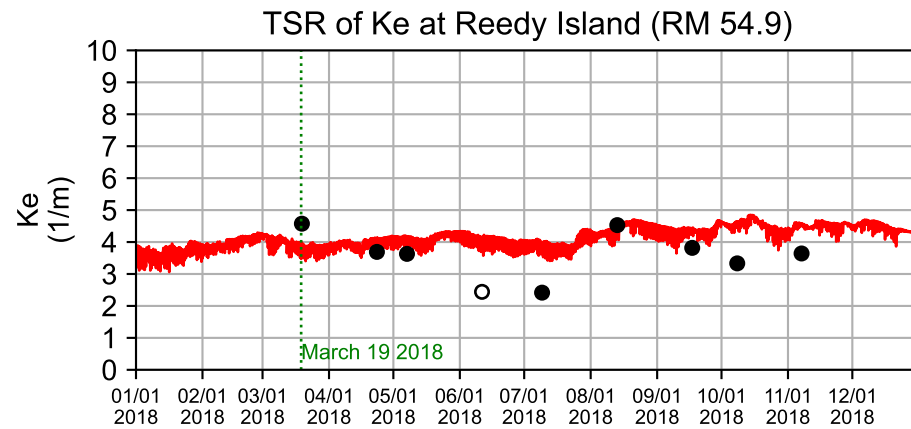
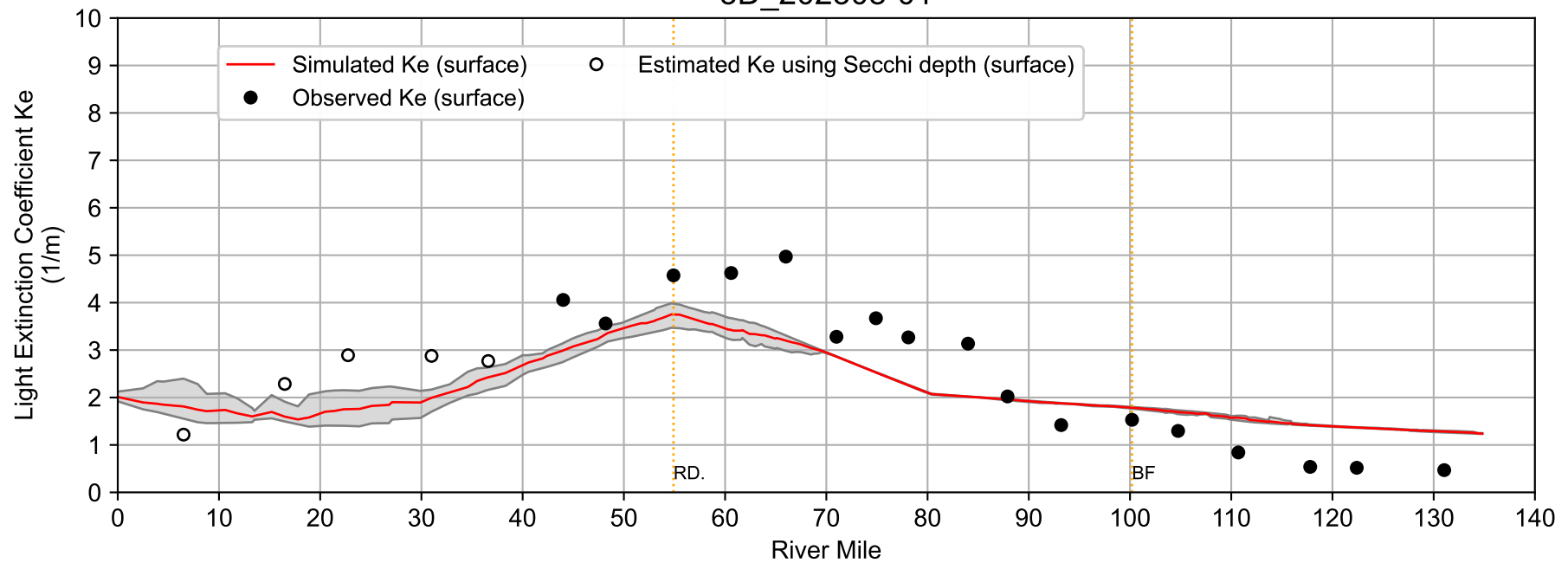


Simulated and Observed Light Extinction Coefficient K_e
Model results from 10/22/2012 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: March 19 2018 3D_202308-01

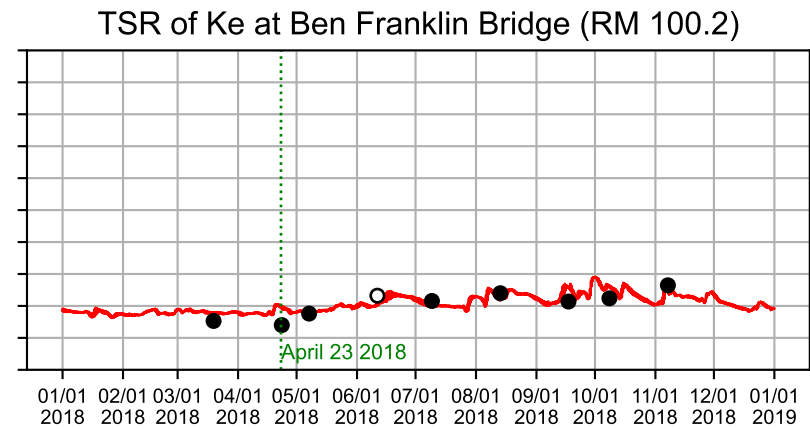
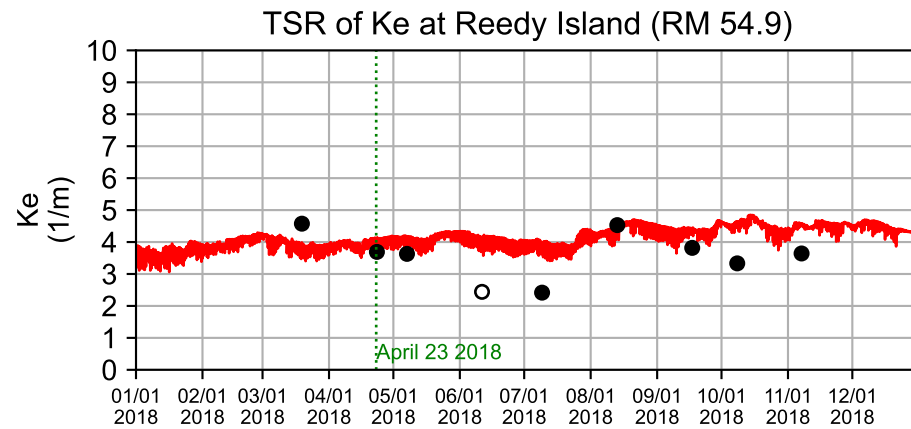
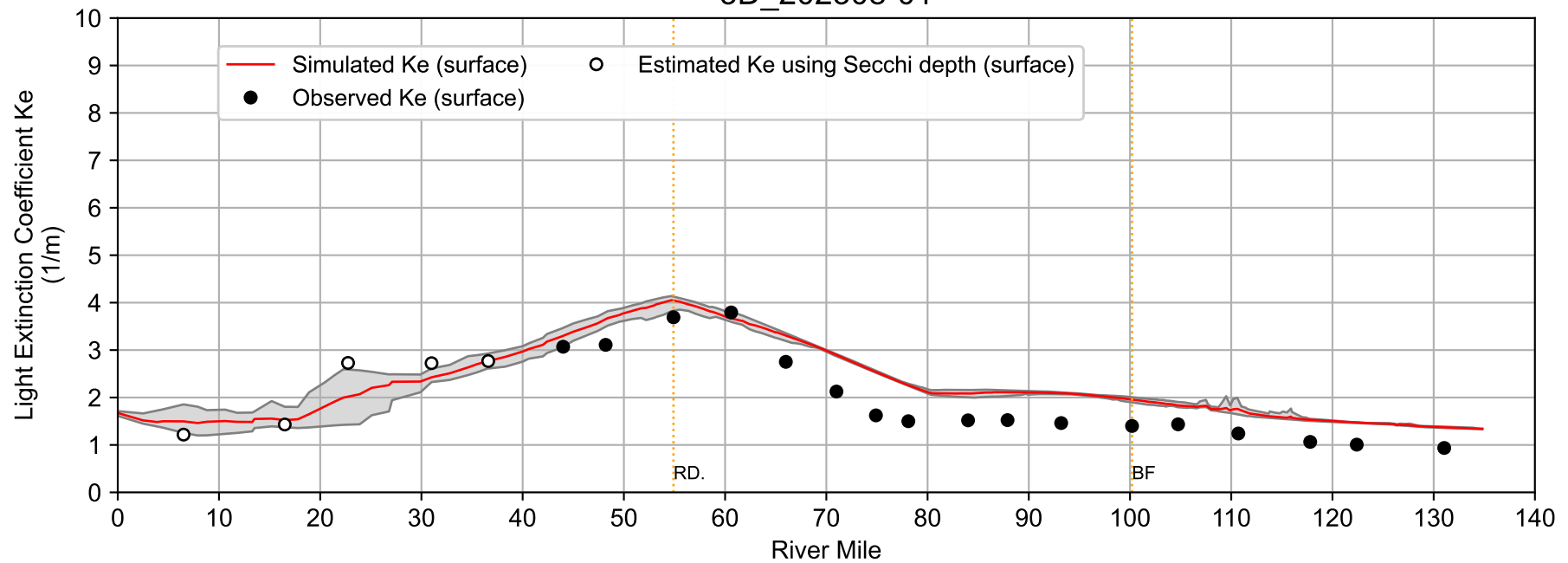


Simulated and Observed Light Extinction Coefficient K_e
 Model results from 03/19/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
 Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: April 23 2018 3D_202308-01

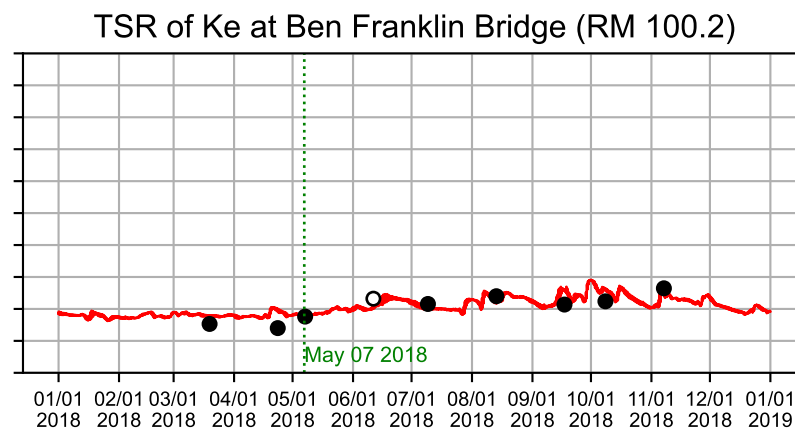
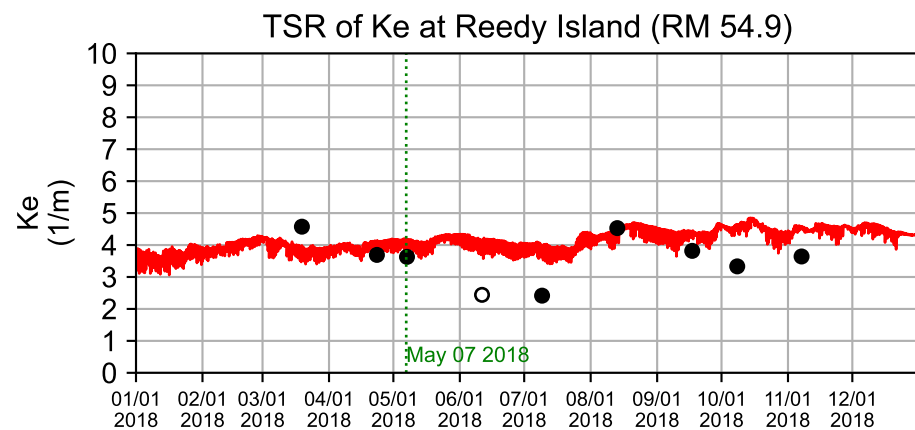
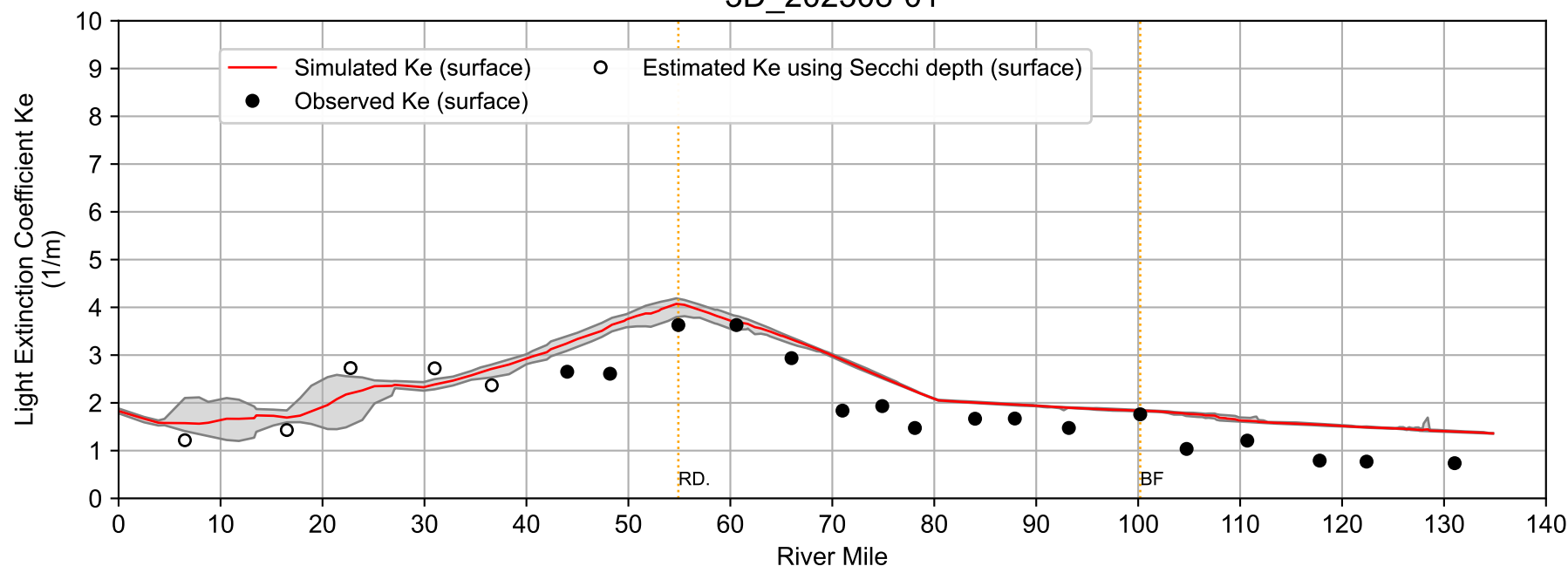


Simulated and Observed Light Extinction Coefficient K_e
Model results from 04/23/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



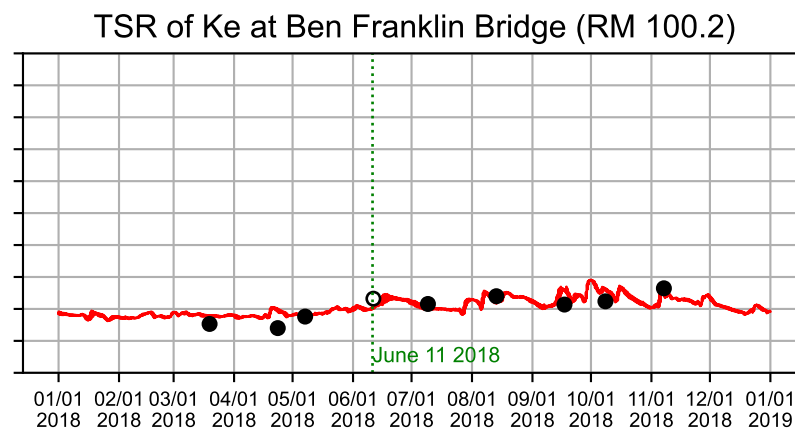
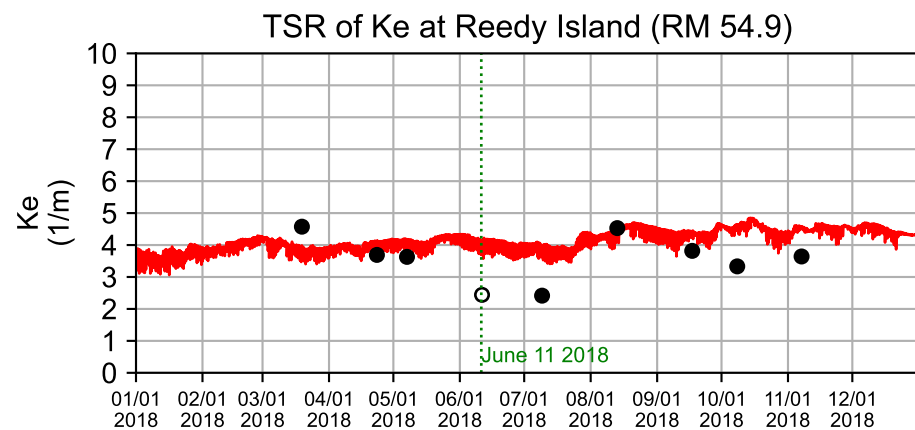
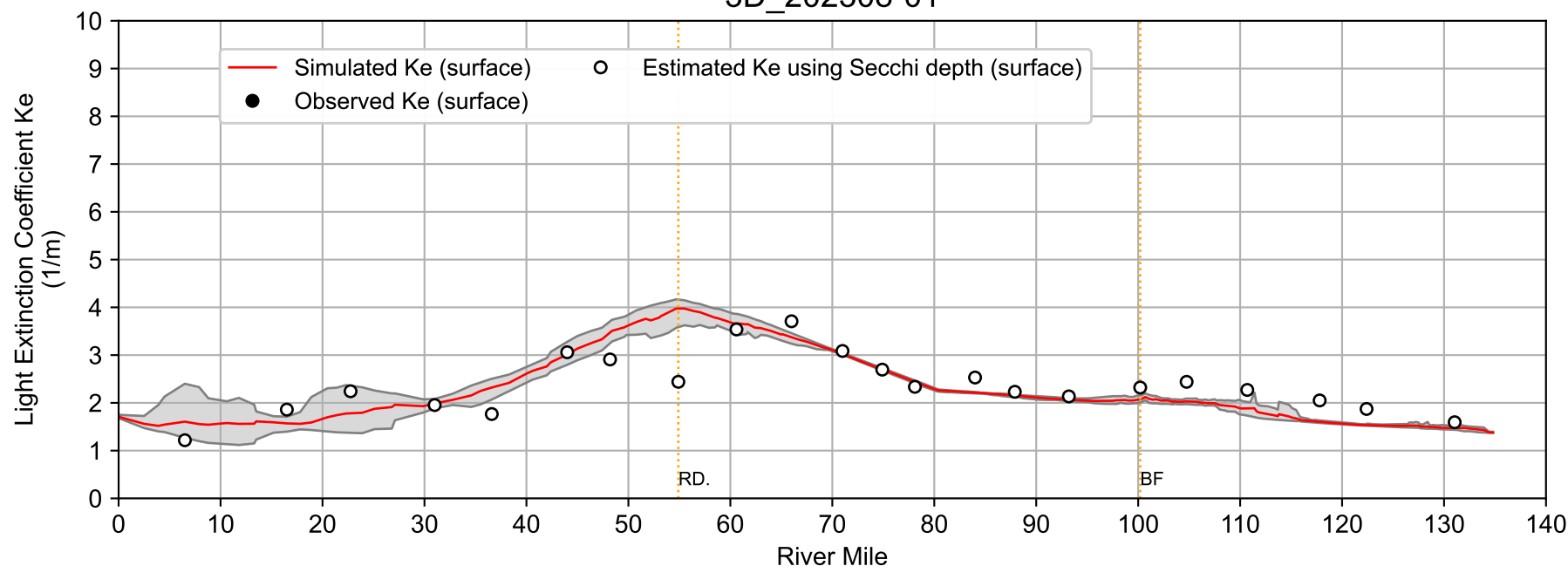
Simulated and Observed Ke at Surface Layer. Sample Date: May 07 2018 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 05/07/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

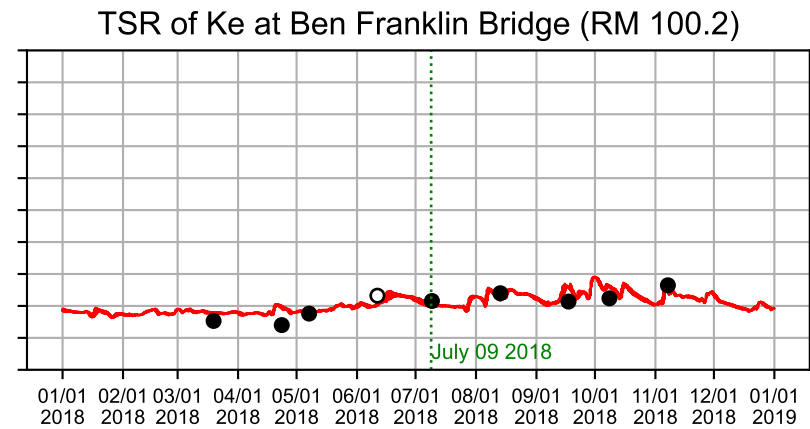
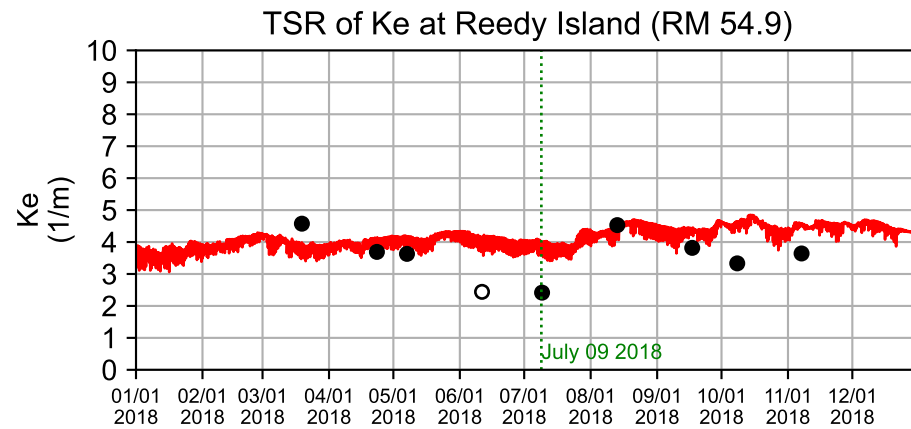
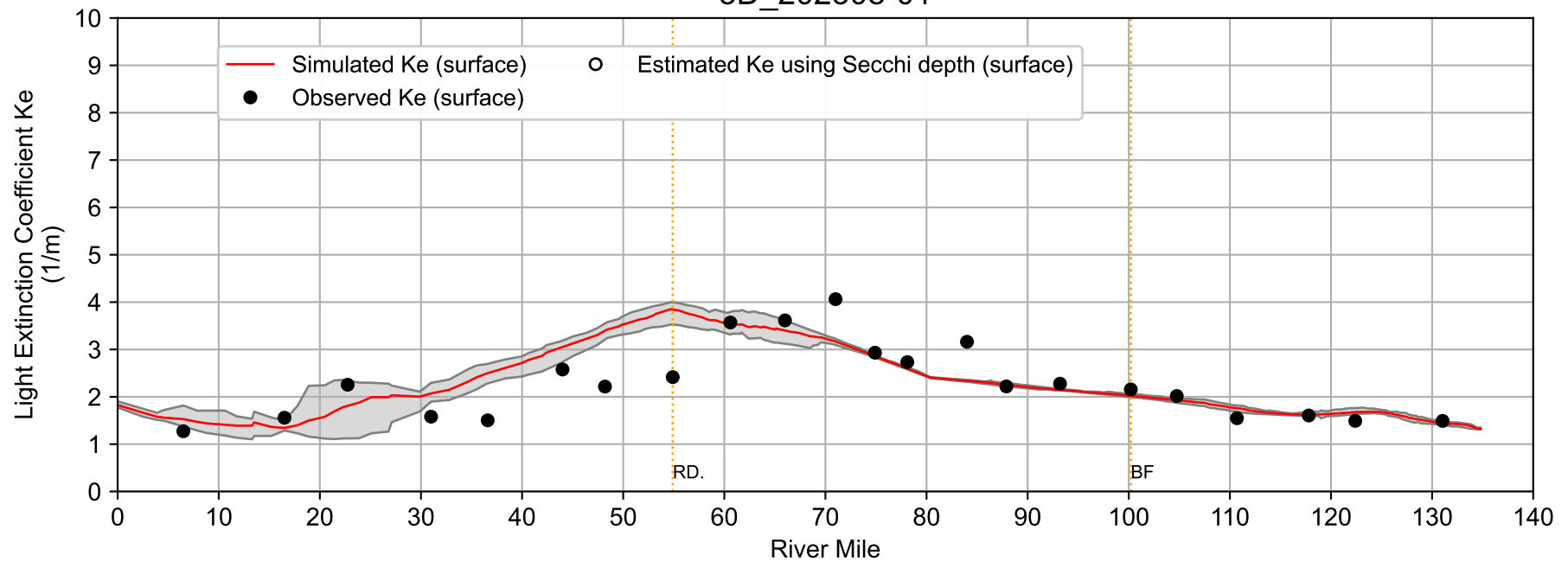
Simulated and Observed Ke at Surface Layer. Sample Date: June 11 2018 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
 Model results from 06/11/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
 Run ID: 3D_202308-01

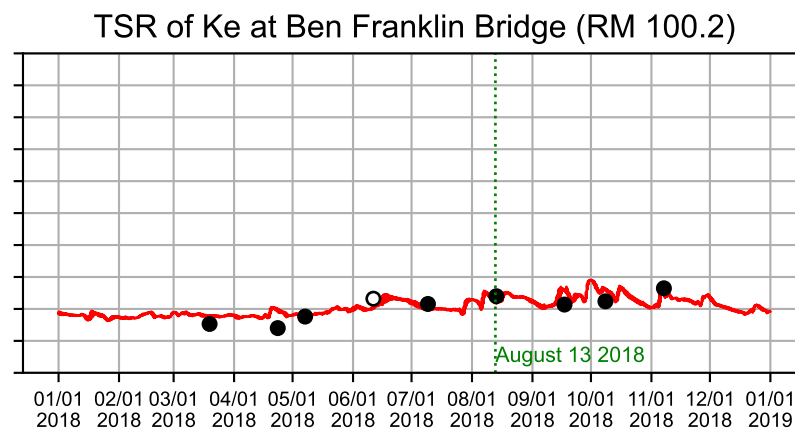
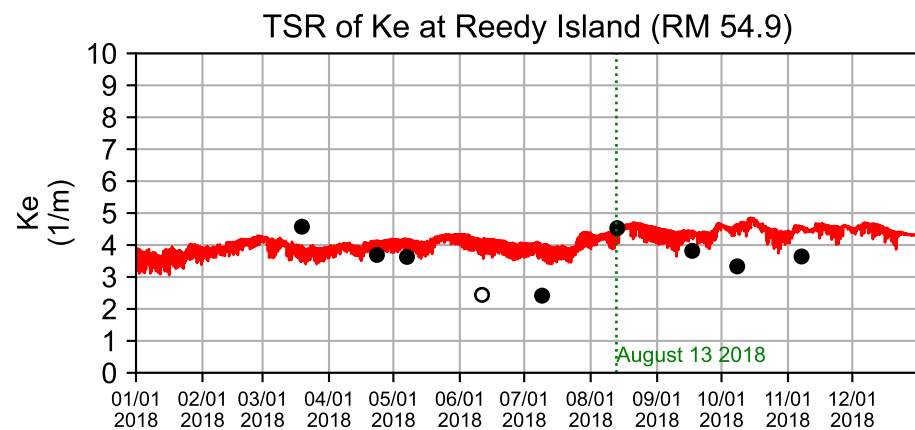
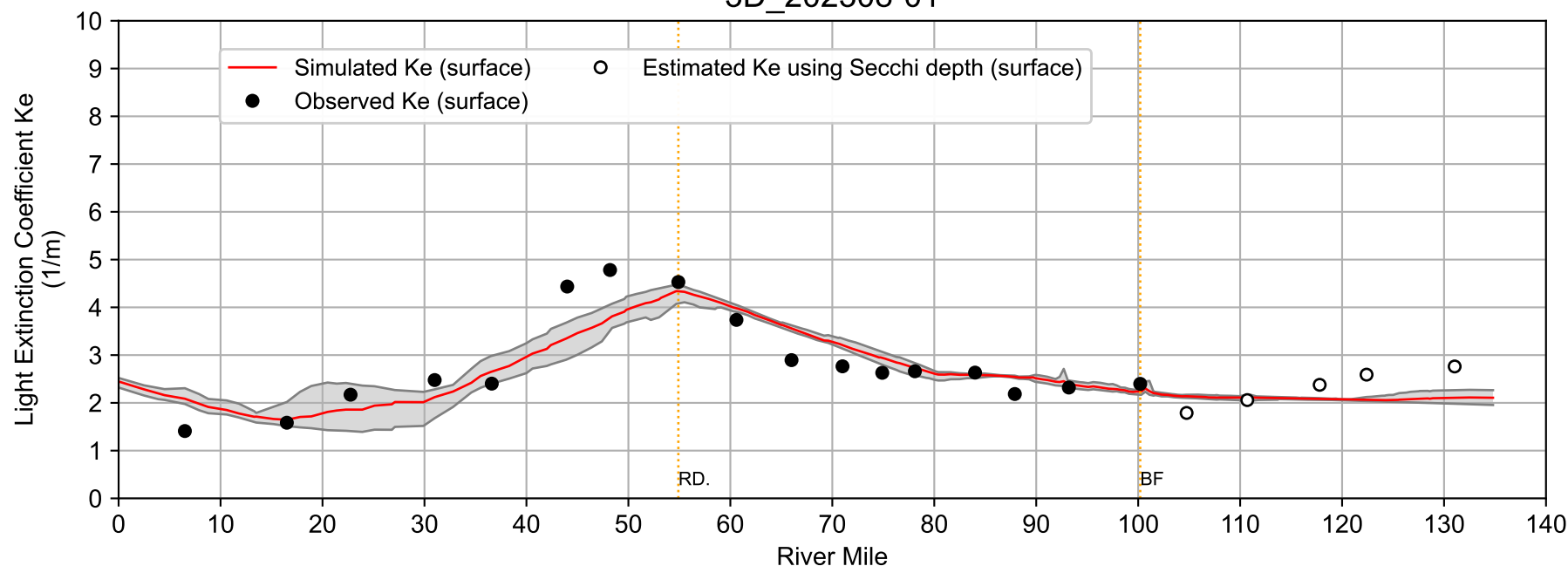
Simulated and Observed Ke at Surface Layer. Sample Date: July 09 2018 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 07/09/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

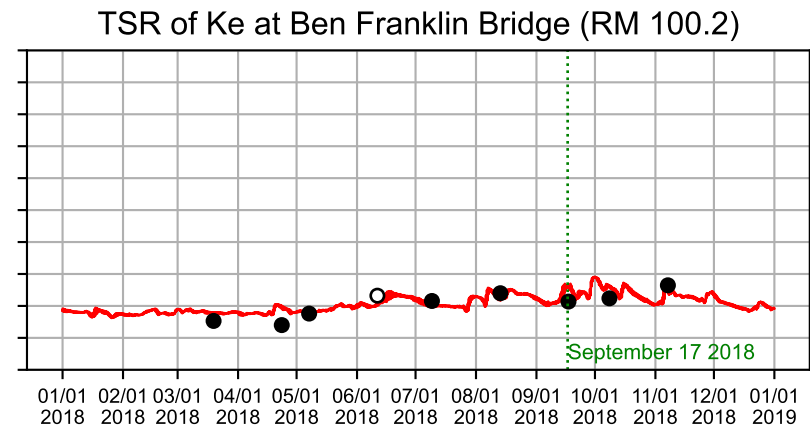
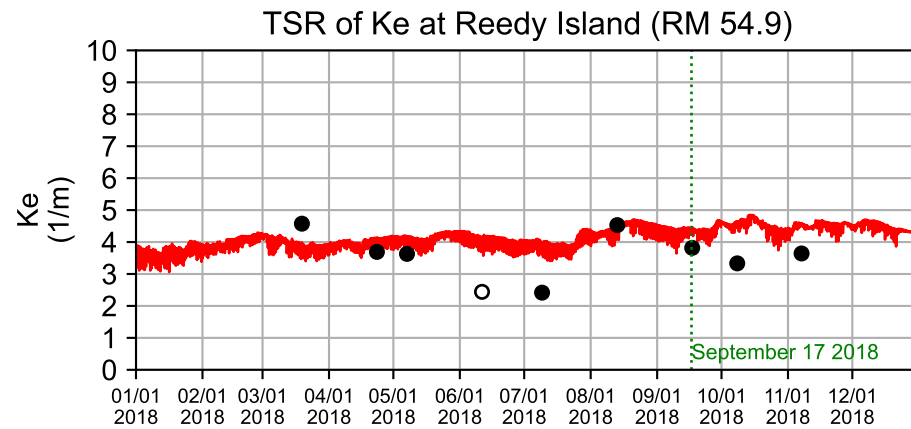
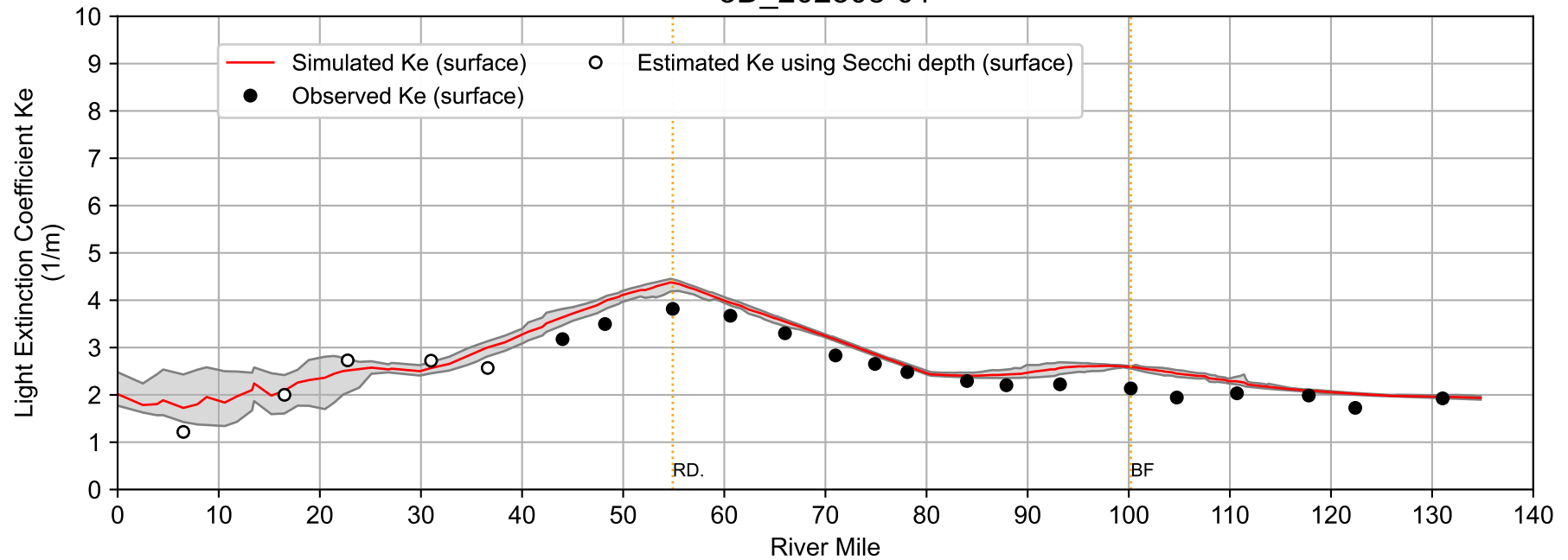
Simulated and Observed Ke at Surface Layer. Sample Date: August 13 2018 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 08/13/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

Simulated and Observed Ke at Surface Layer. Sample Date: September 17 2018 3D_202308-01

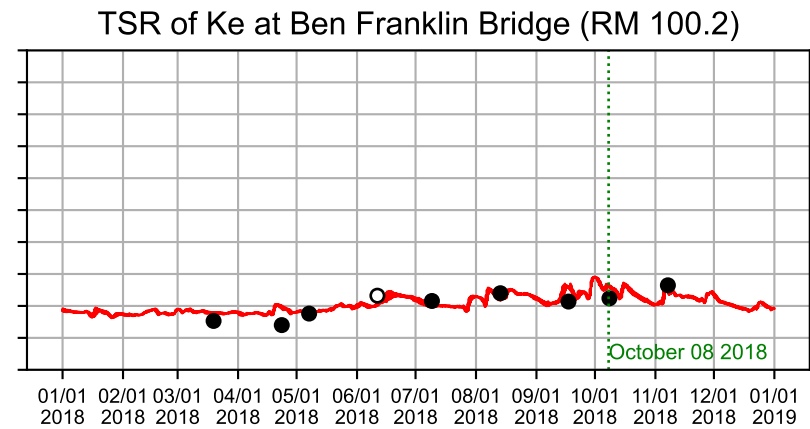
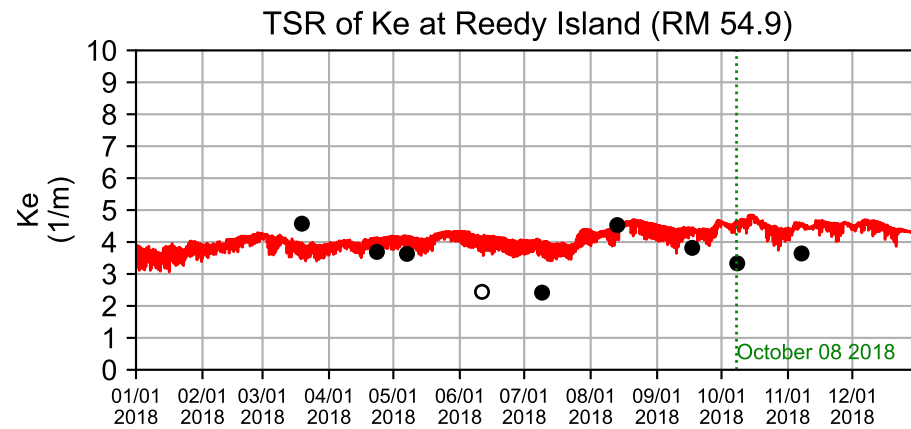
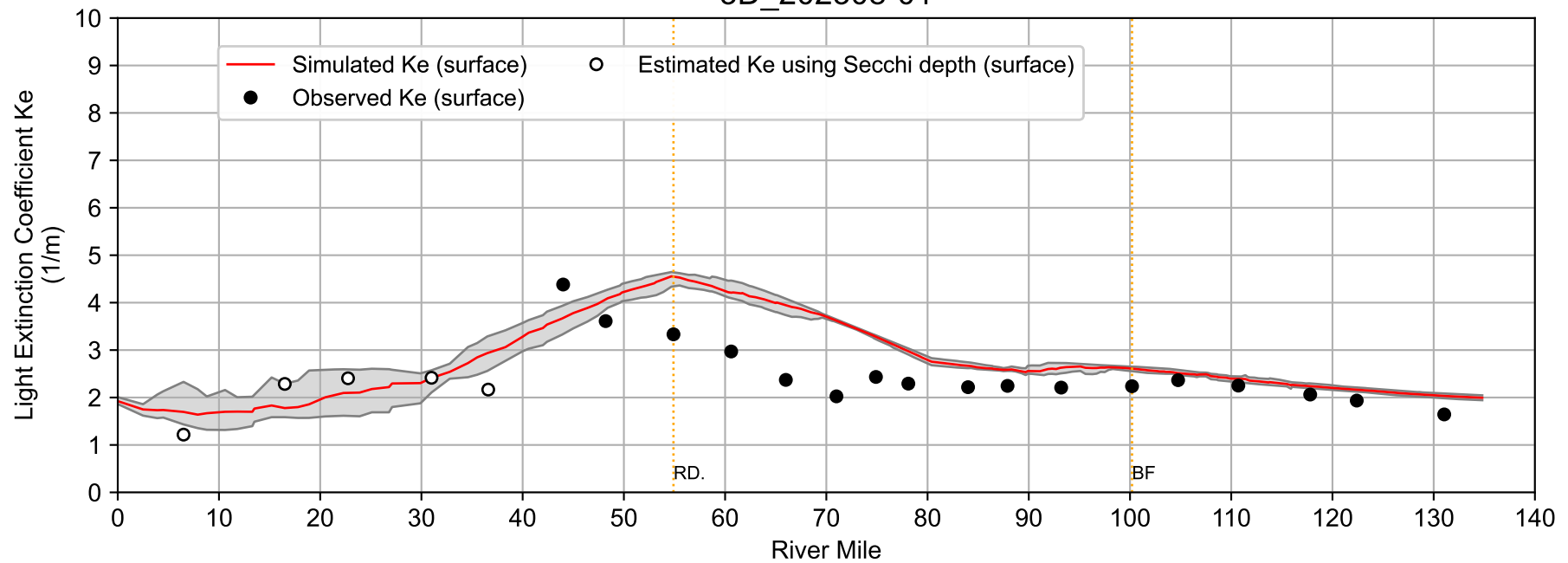


Simulated and Observed Light Extinction Coefficient K_e
Model results from 09/17/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: October 08 2018 3D_202308-01

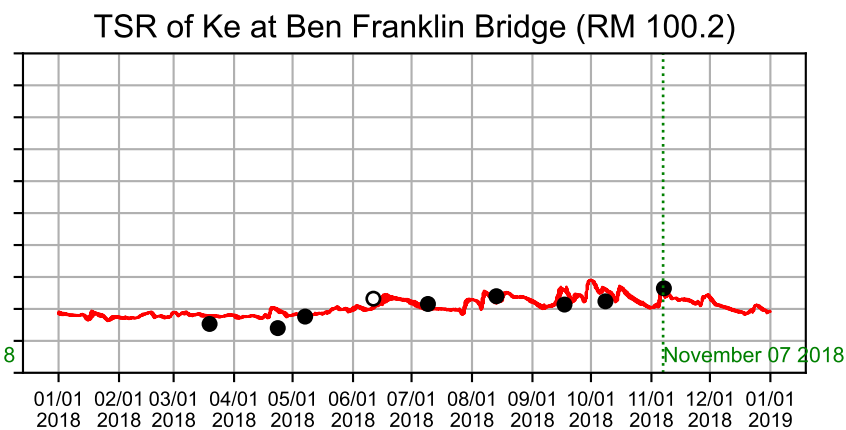
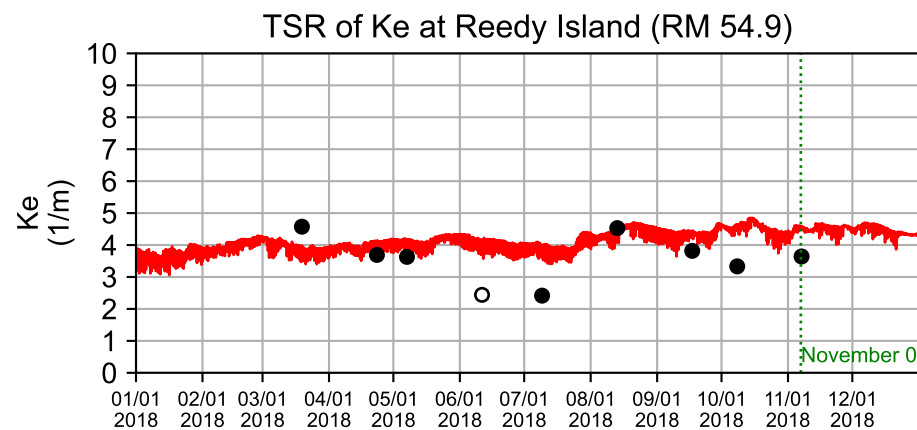
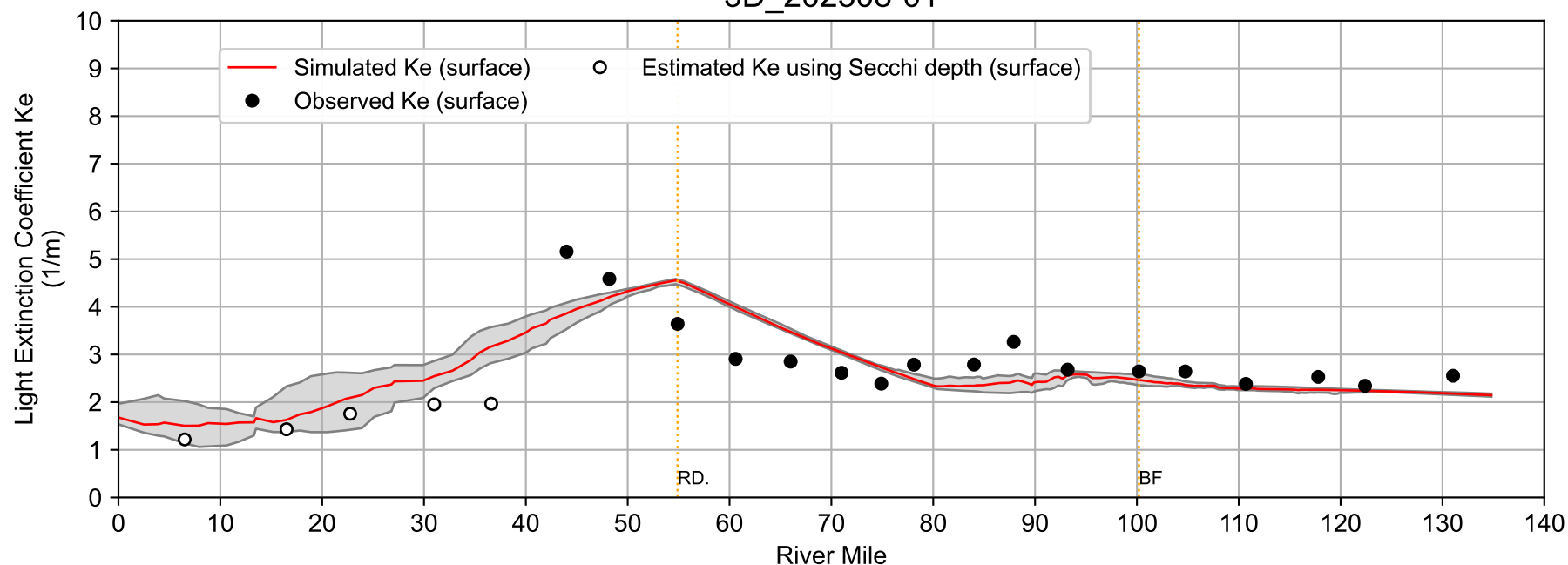


Simulated and Observed Light Extinction Coefficient K_e
Model results from 10/08/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: November 07 2018 3D_202308-01

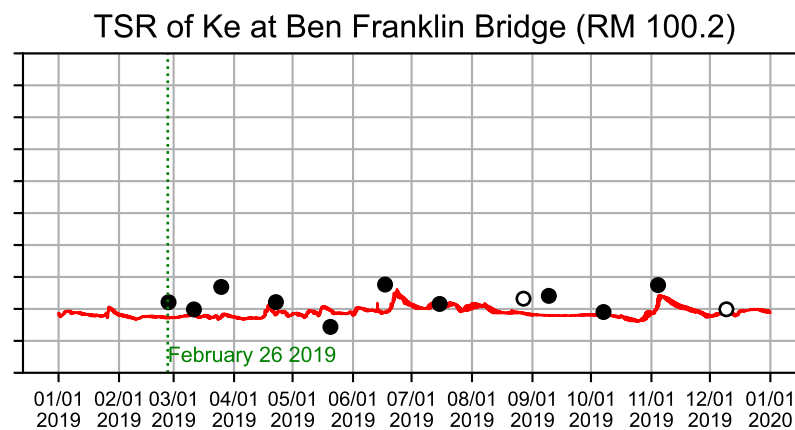
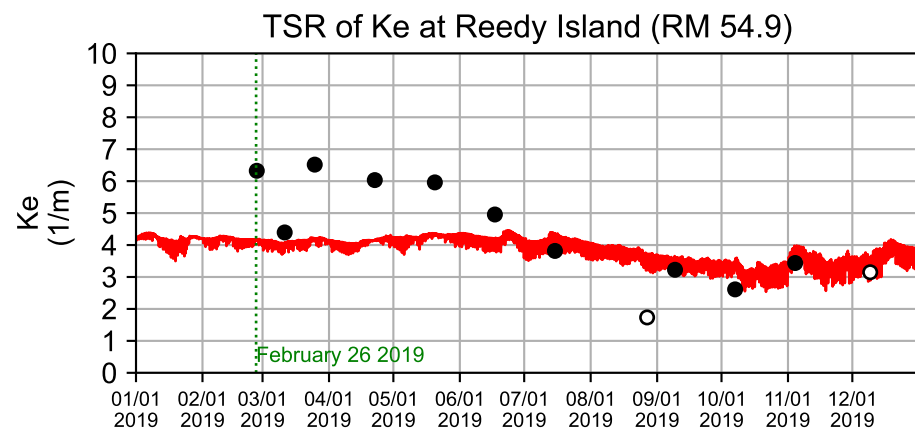
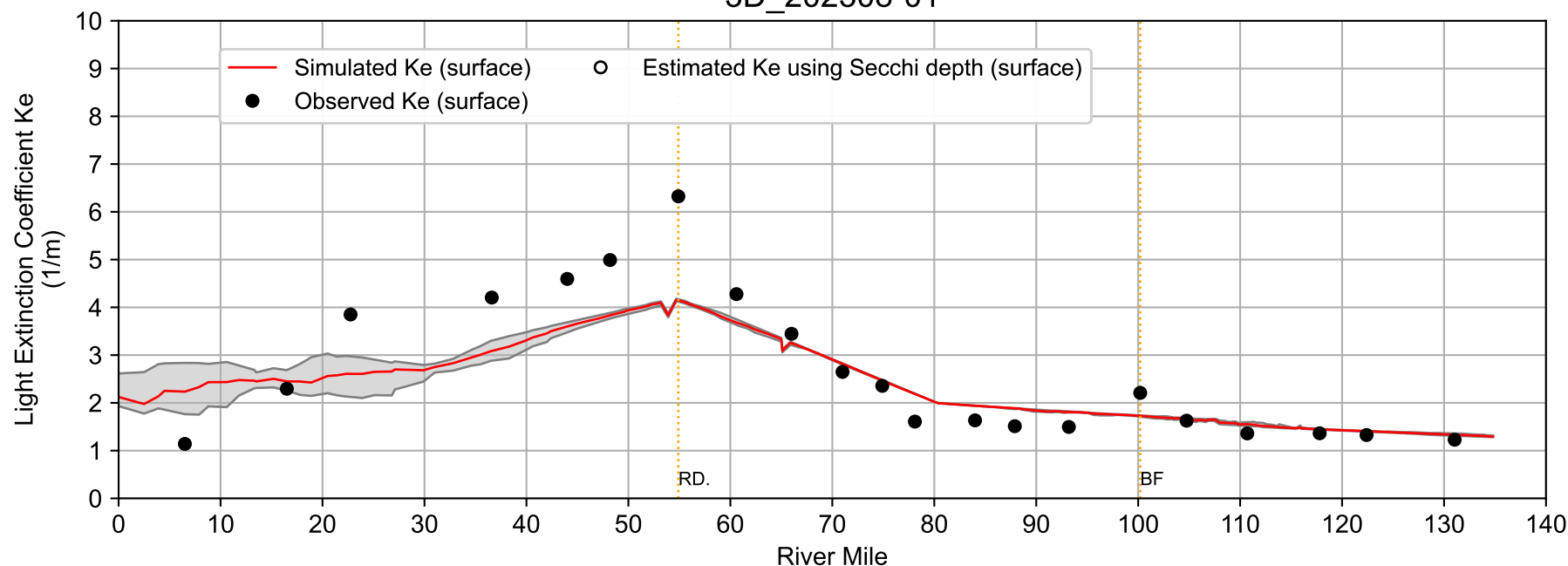


Simulated and Observed Light Extinction Coefficient K_e
Model results from 11/07/2018 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: February 26 2019 3D_202308-01

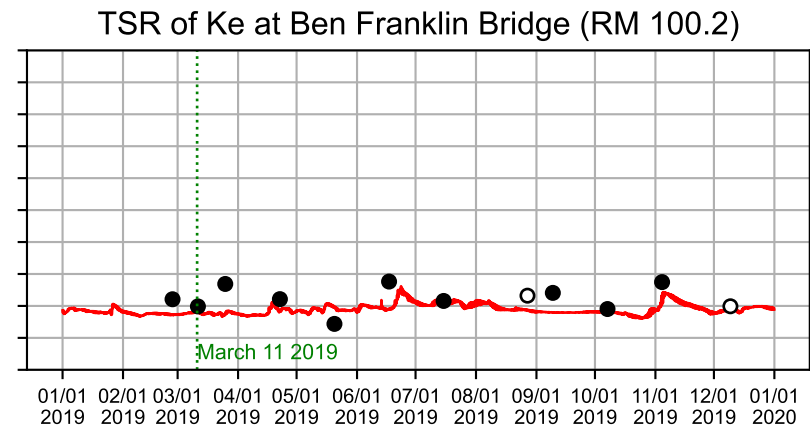
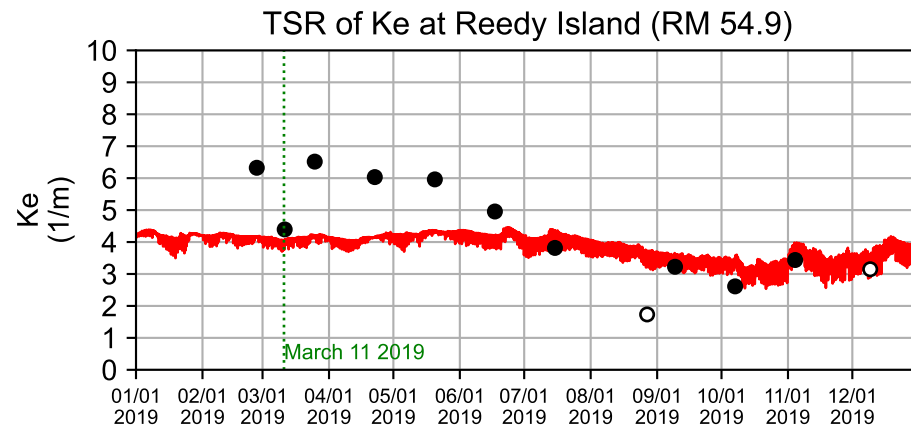
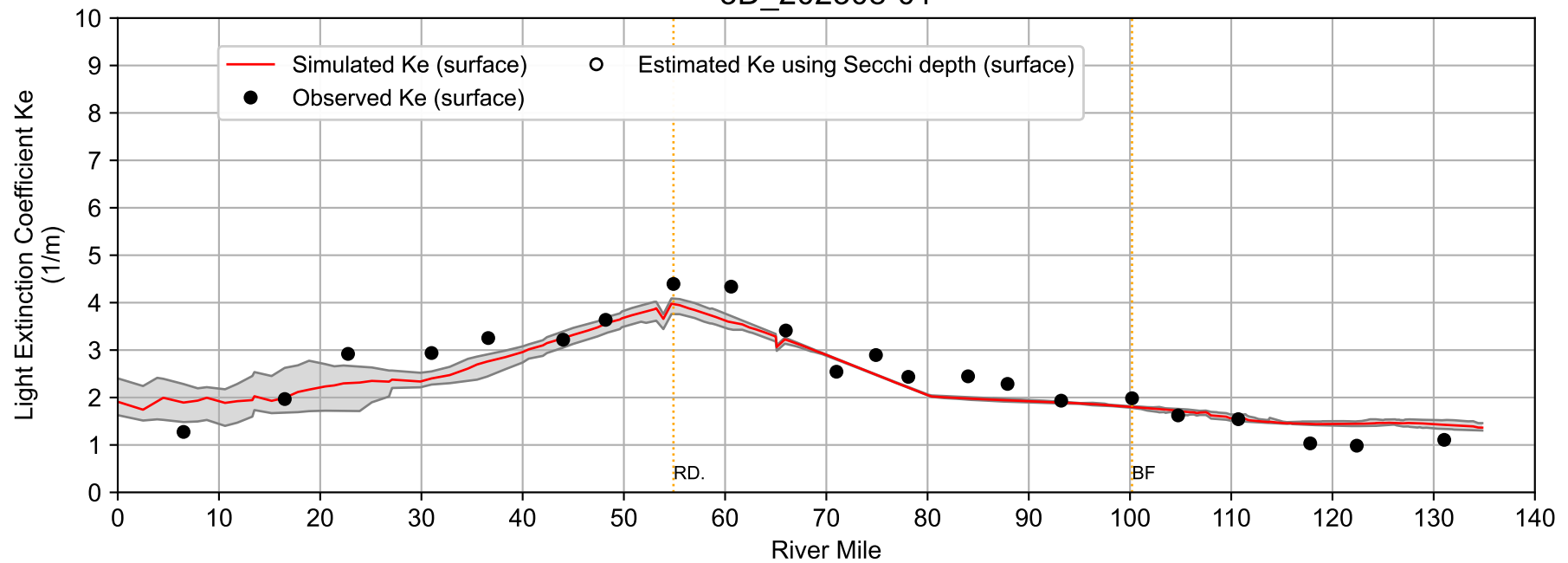


Simulated and Observed Light Extinction Coefficient K_e
 Model results from 02/26/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
 Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: March 11 2019 3D_202308-01

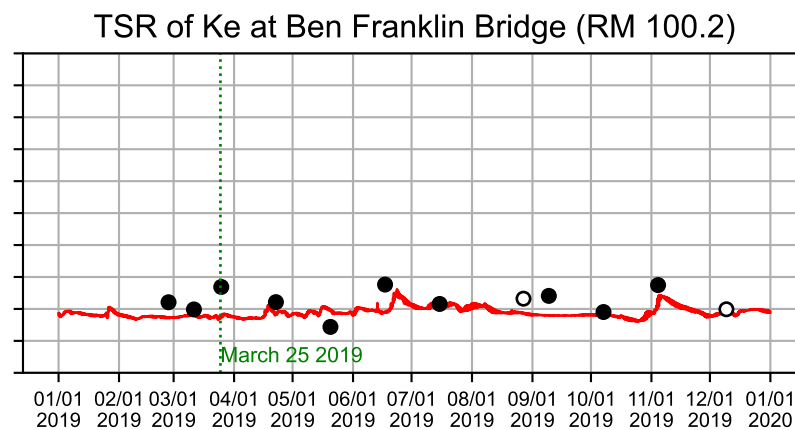
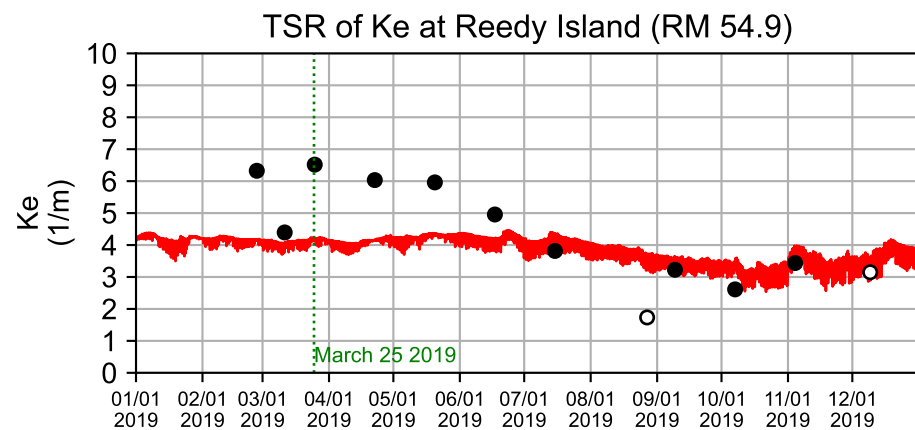
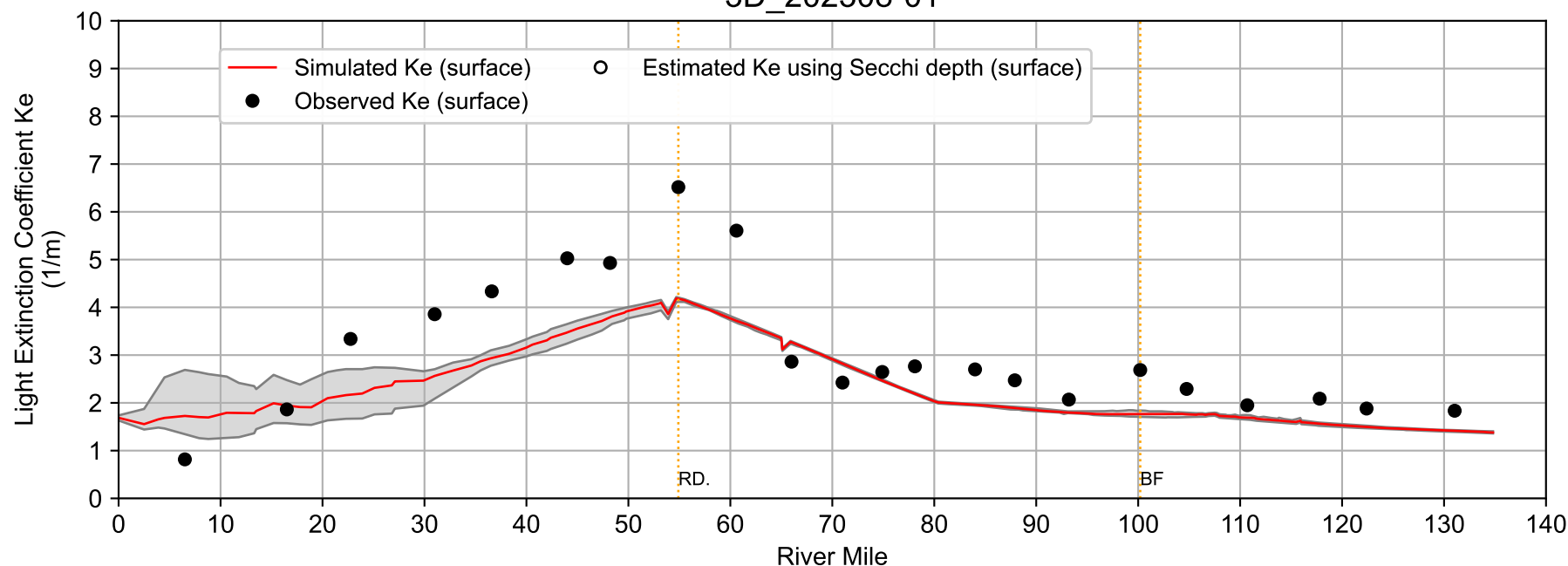


Simulated and Observed Light Extinction Coefficient K_e
Model results from 03/11/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: March 25 2019 3D_202308-01

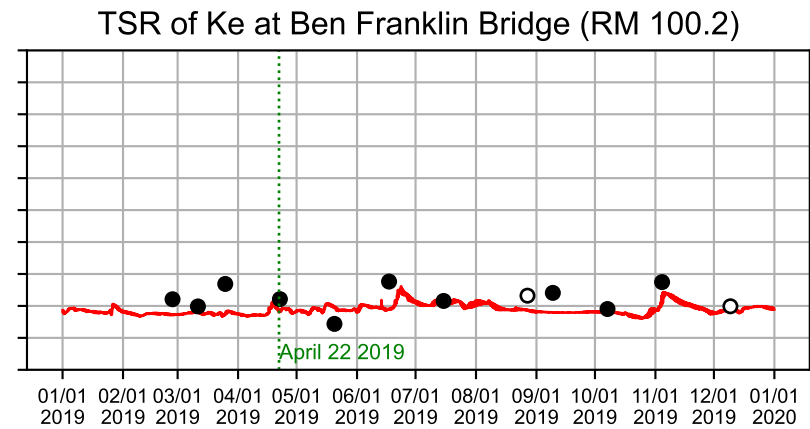
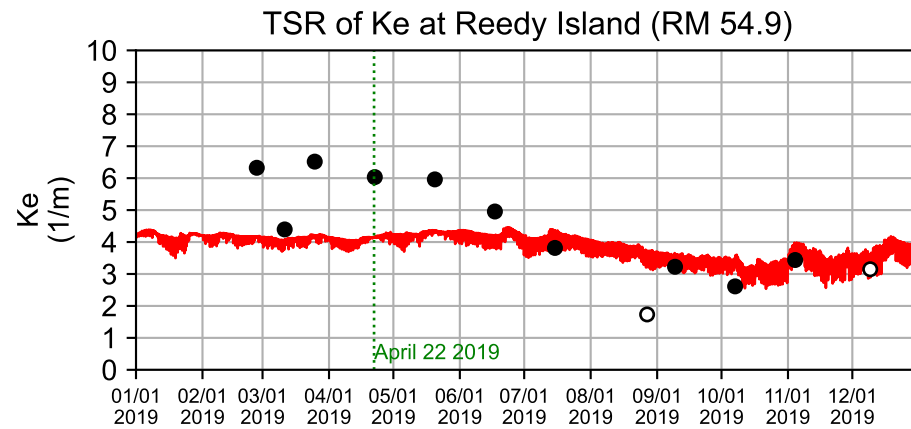
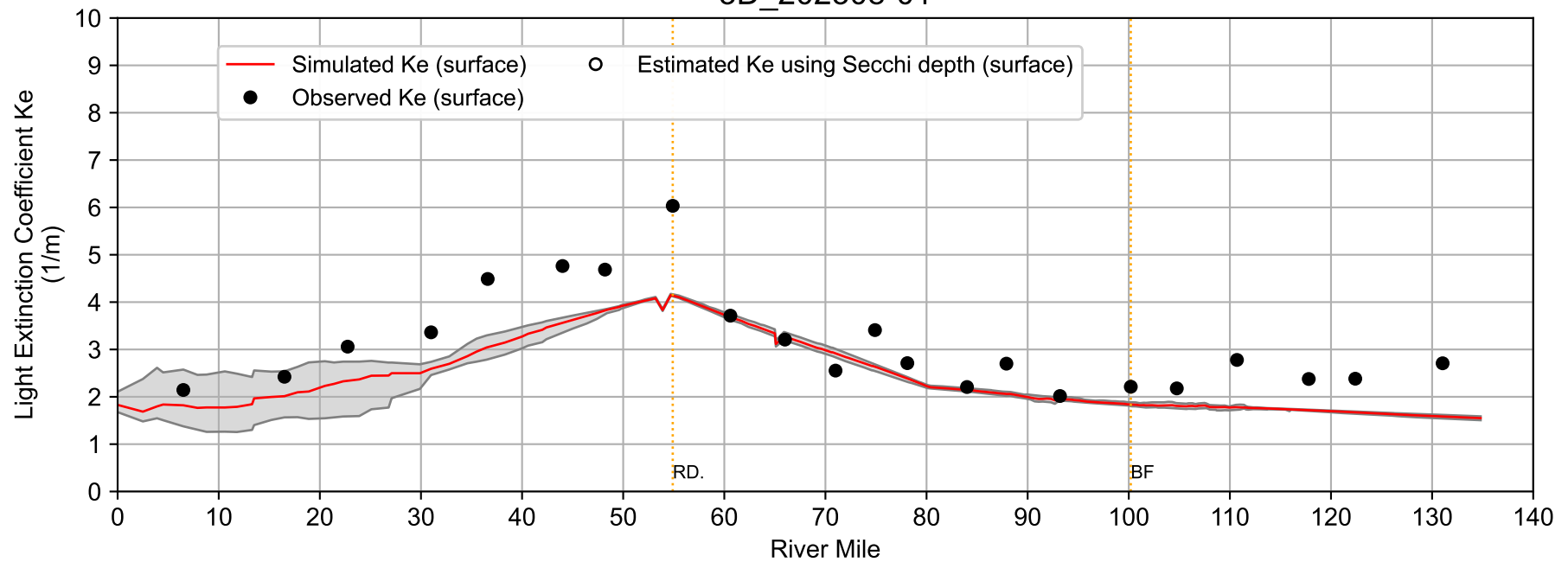


Simulated and Observed Light Extinction Coefficient K_e
 Model results from 03/25/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
 Run ID: 3D_202308-01



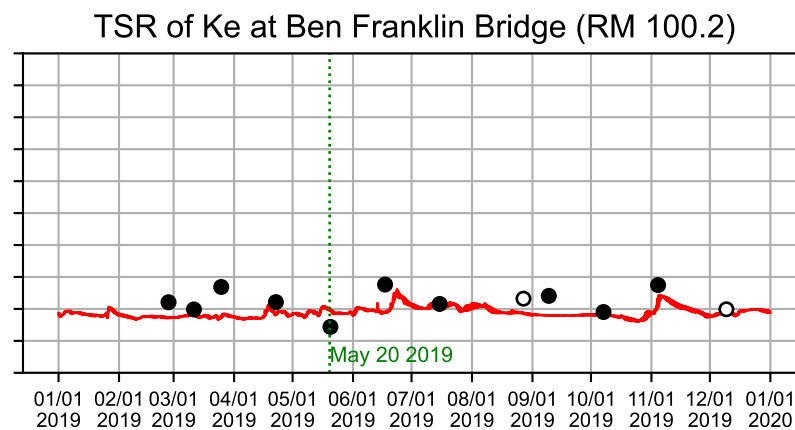
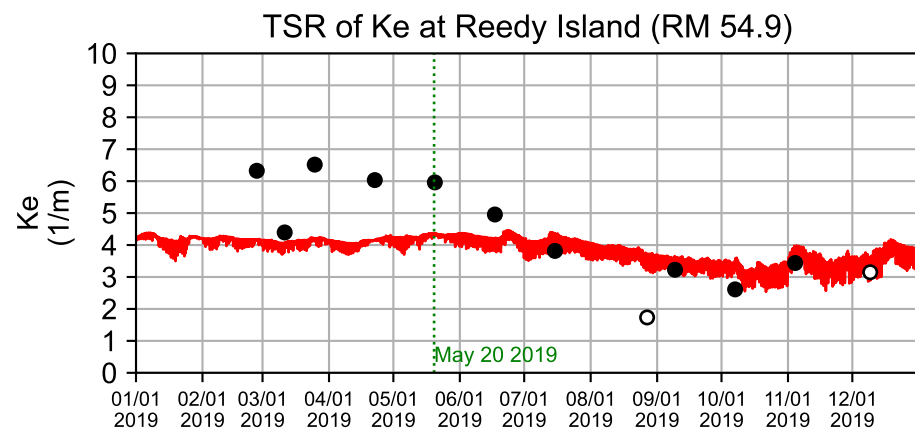
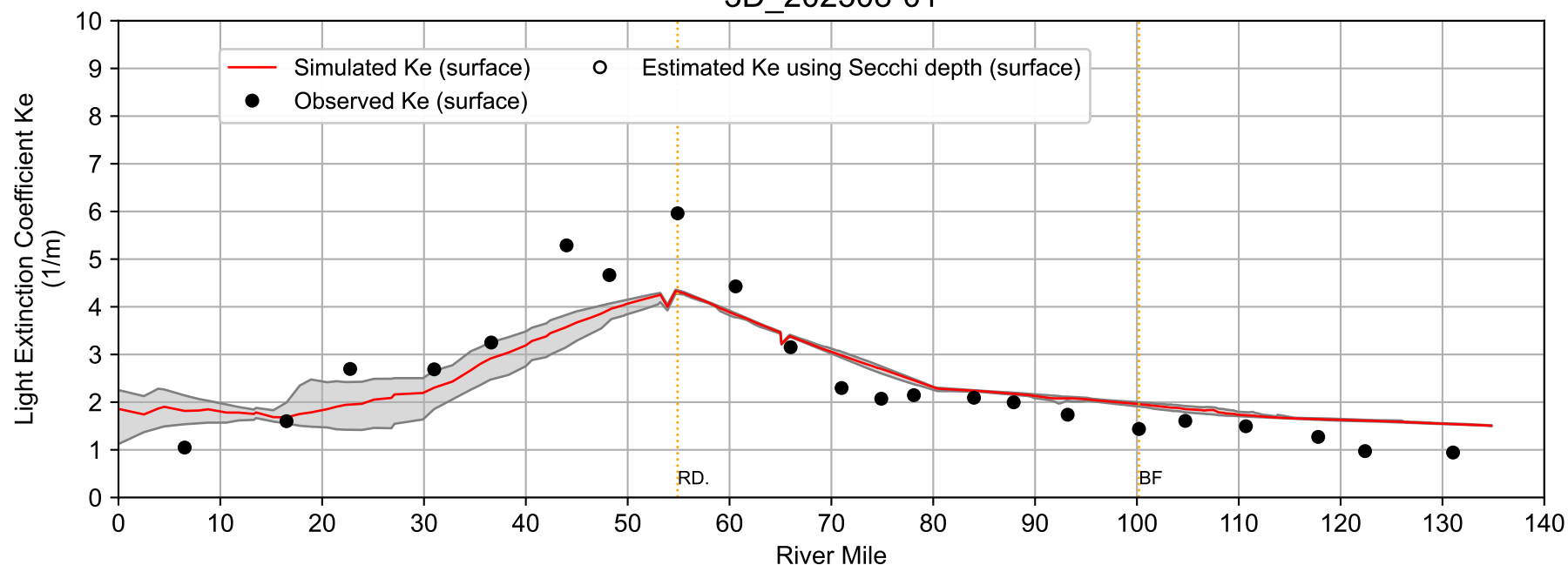
Simulated and Observed Ke at Surface Layer. Sample Date: April 22 2019 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 04/22/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

Simulated and Observed Ke at Surface Layer. Sample Date: May 20 2019 3D_202308-01

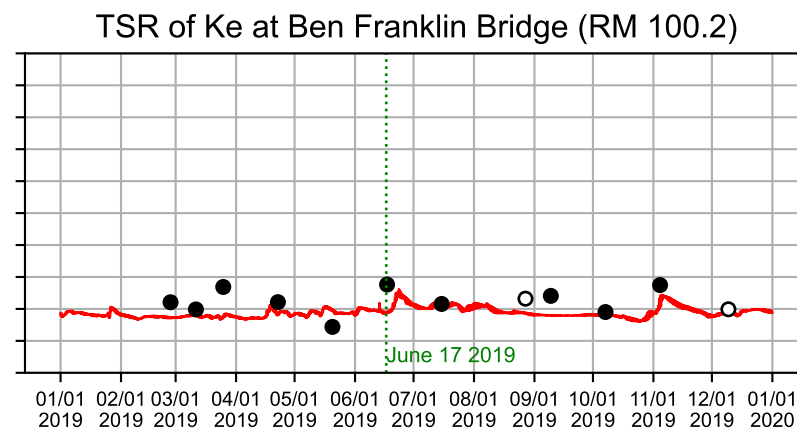
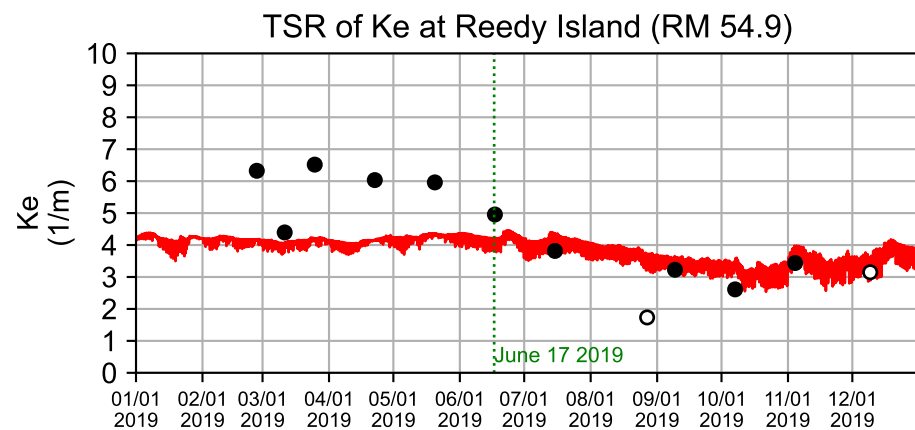
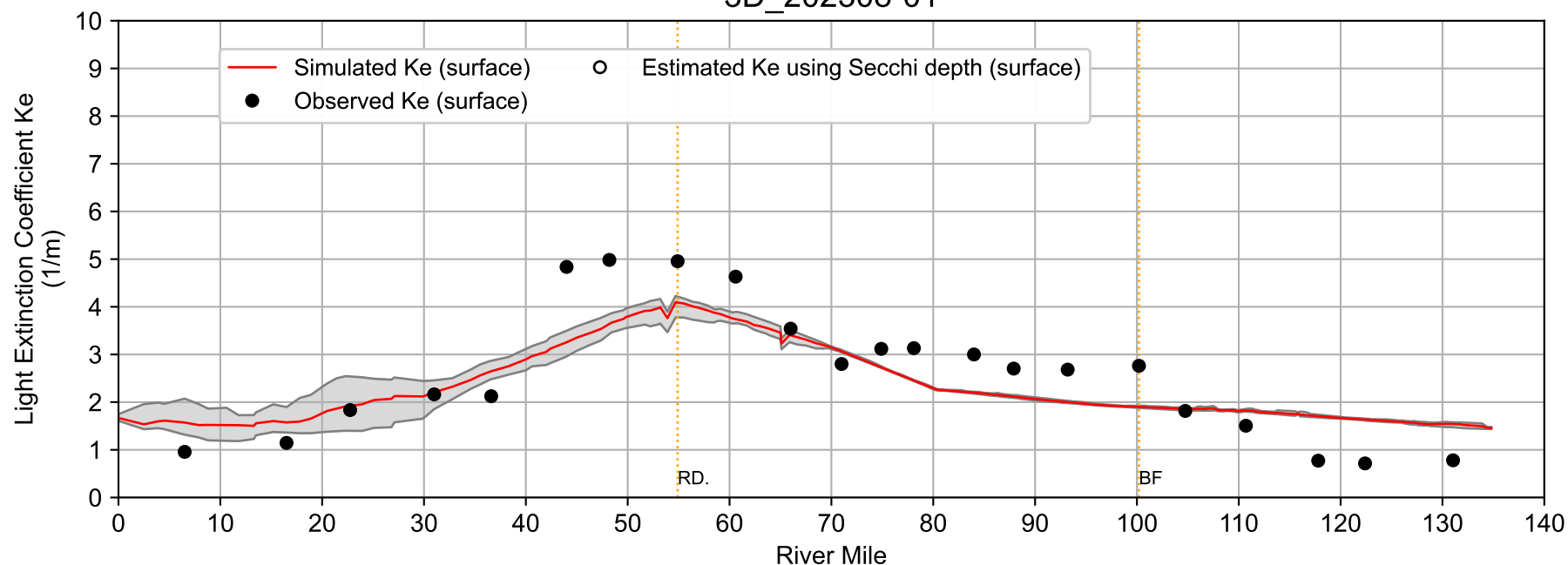


Simulated and Observed Light Extinction Coefficient K_e
 Model results from 05/20/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
 Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: June 17 2019 3D_202308-01

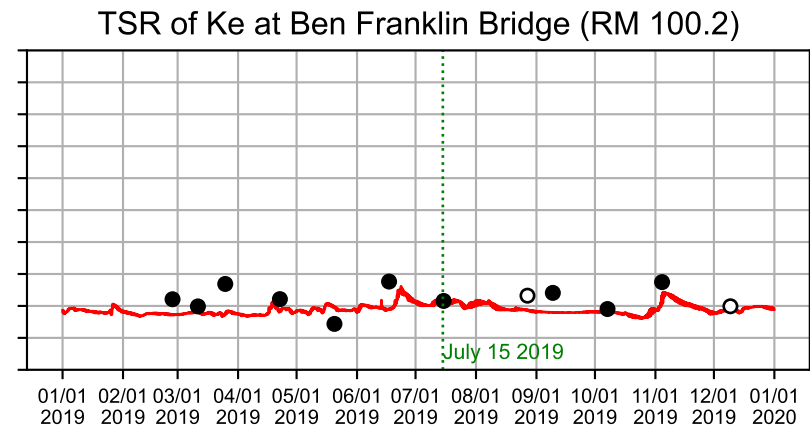
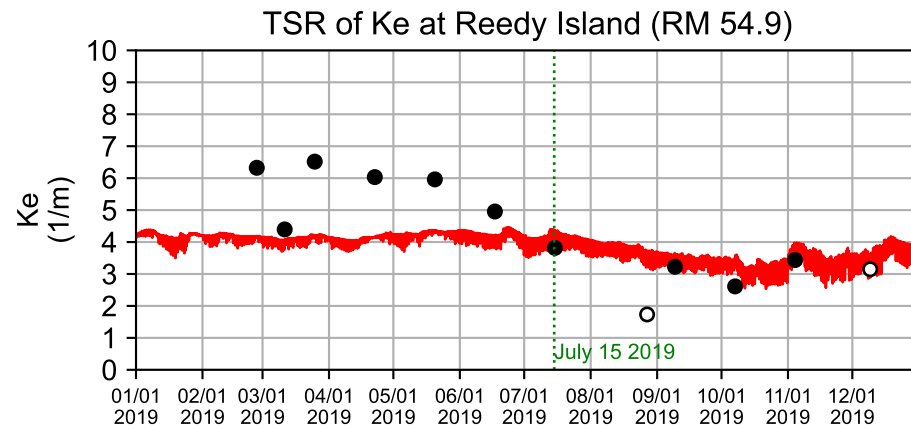
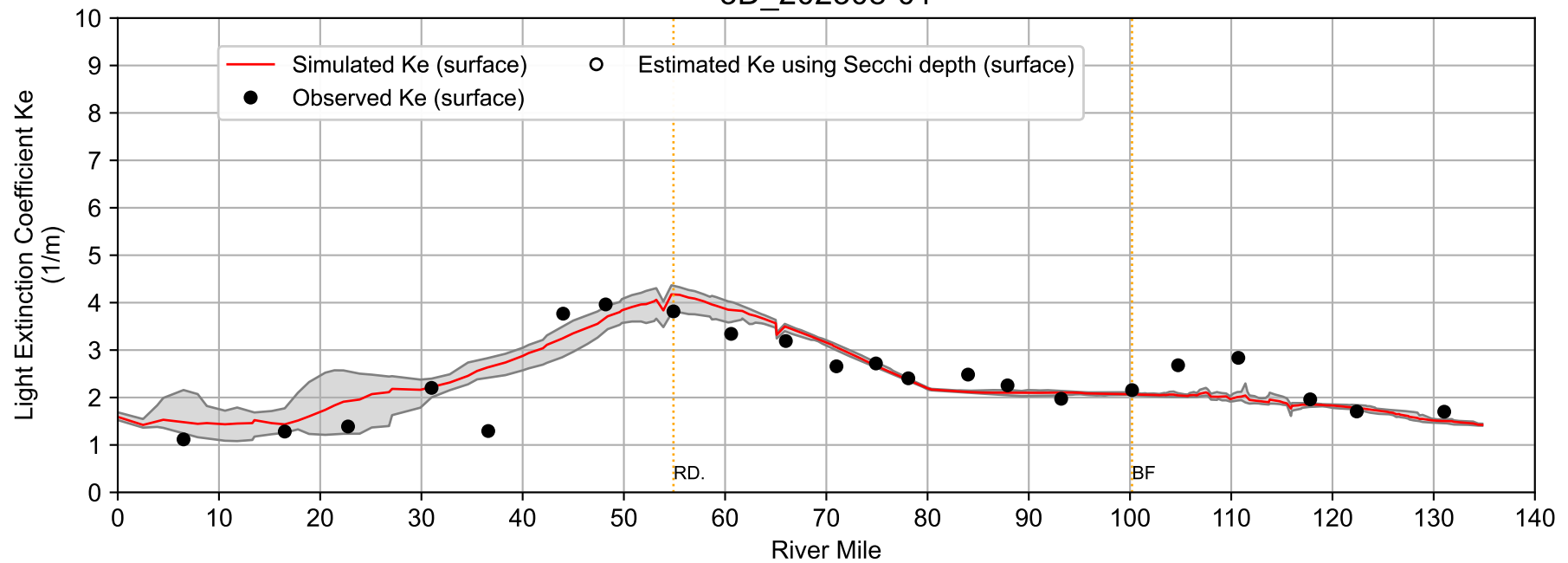


Simulated and Observed Light Extinction Coefficient K_e
Model results from 06/17/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



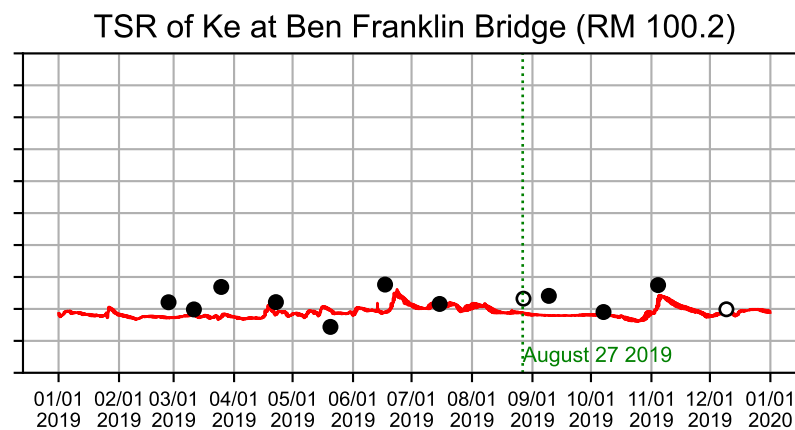
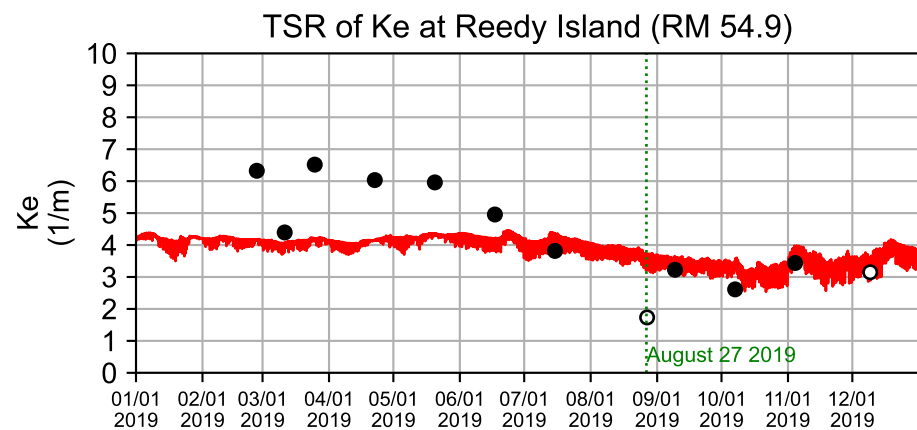
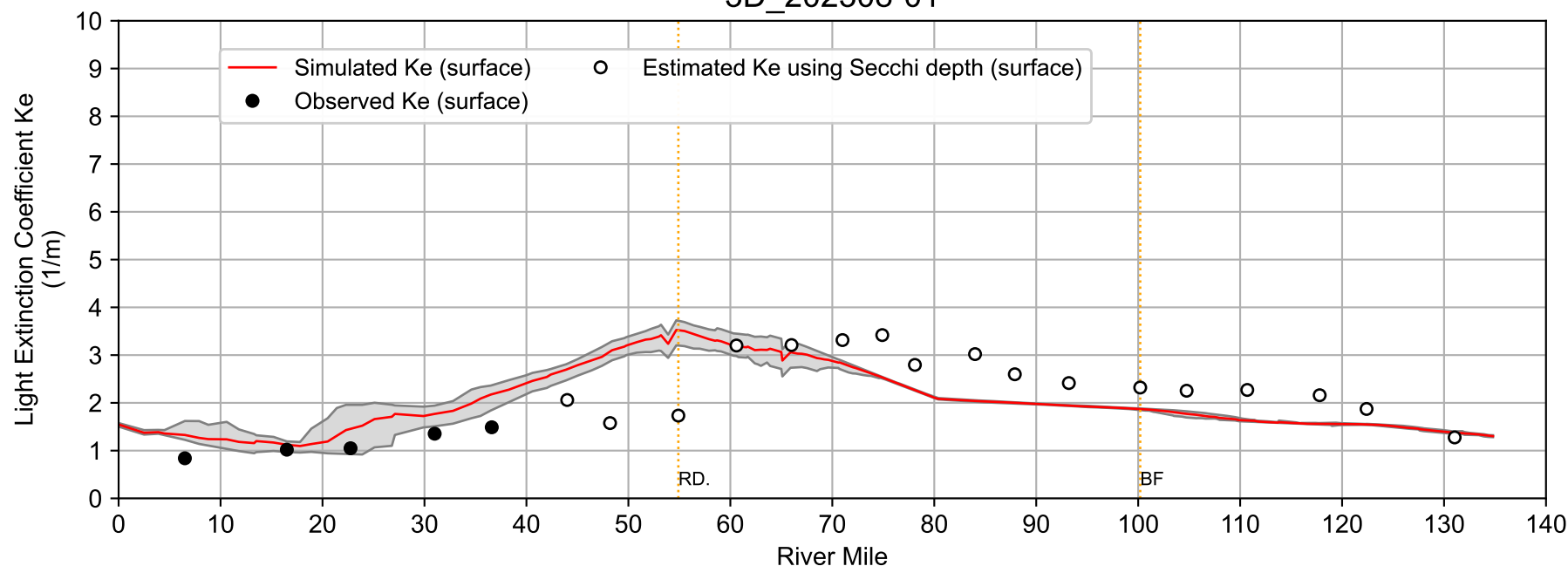
Simulated and Observed Ke at Surface Layer. Sample Date: July 15 2019 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 07/15/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

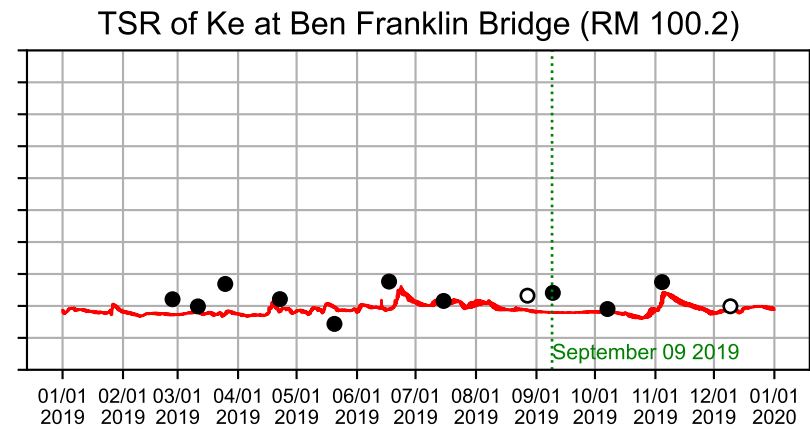
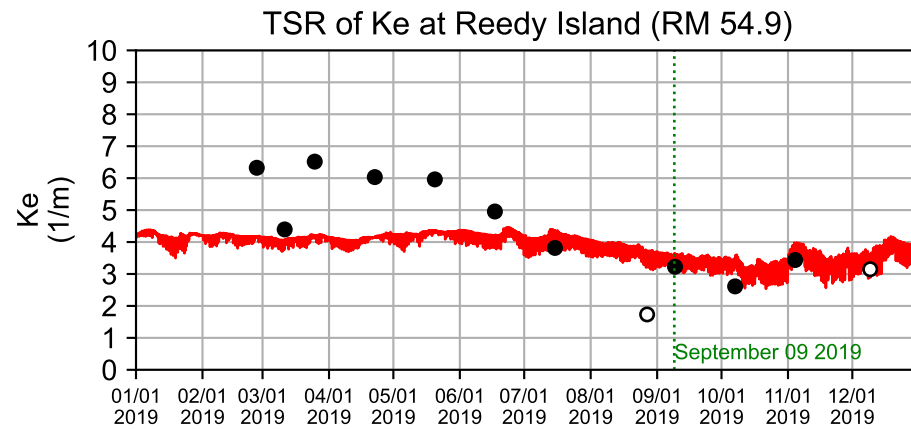
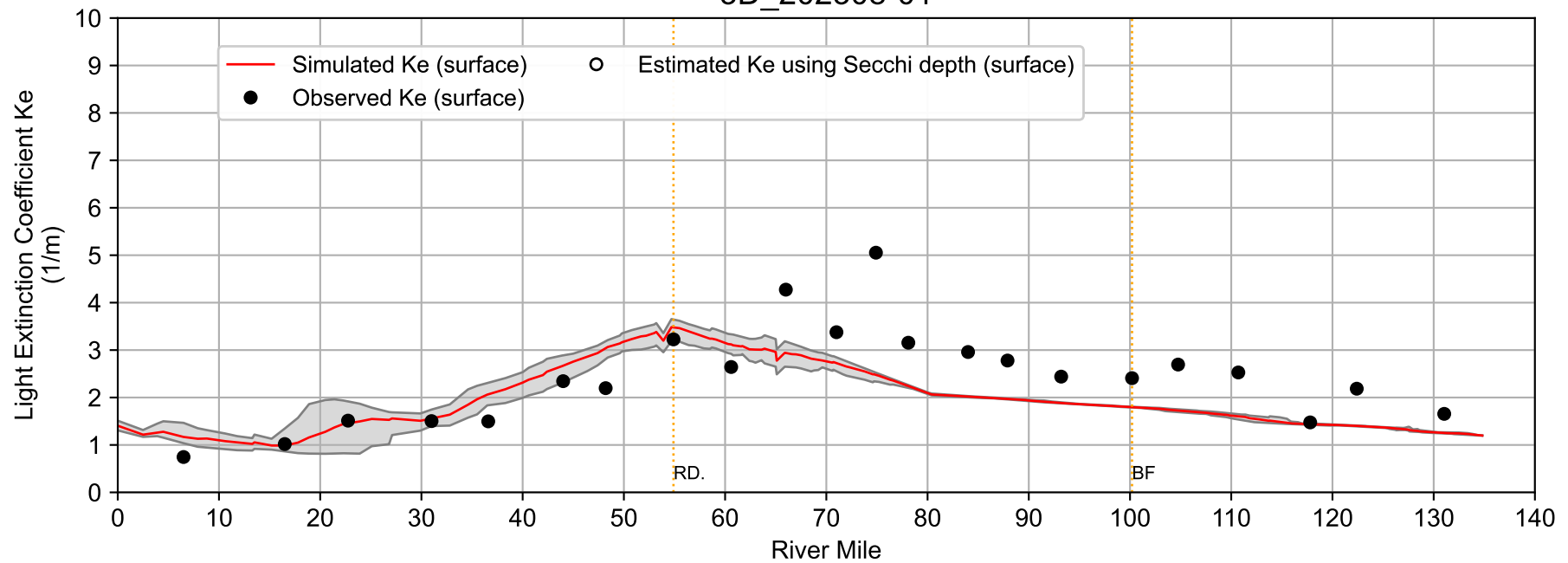
Simulated and Observed Ke at Surface Layer. Sample Date: August 27 2019 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 08/27/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

Simulated and Observed Ke at Surface Layer. Sample Date: September 09 2019 3D_202308-01

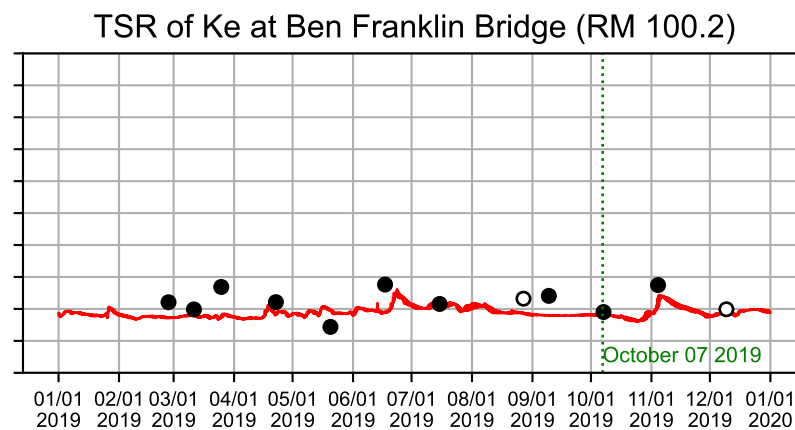
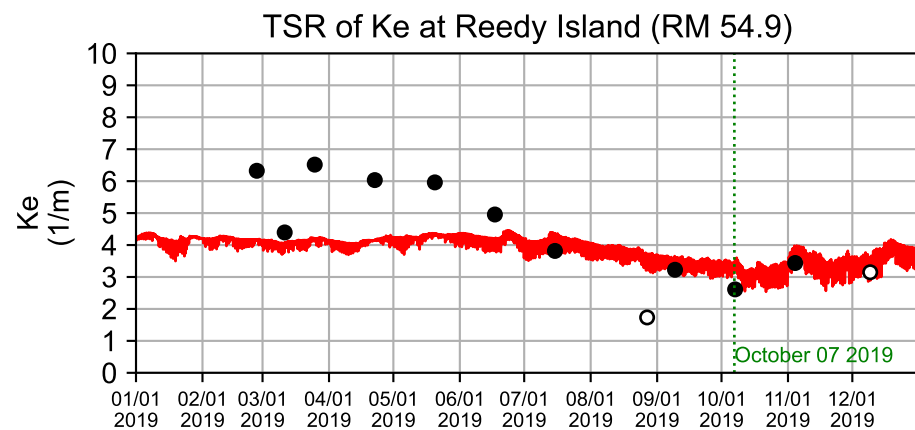
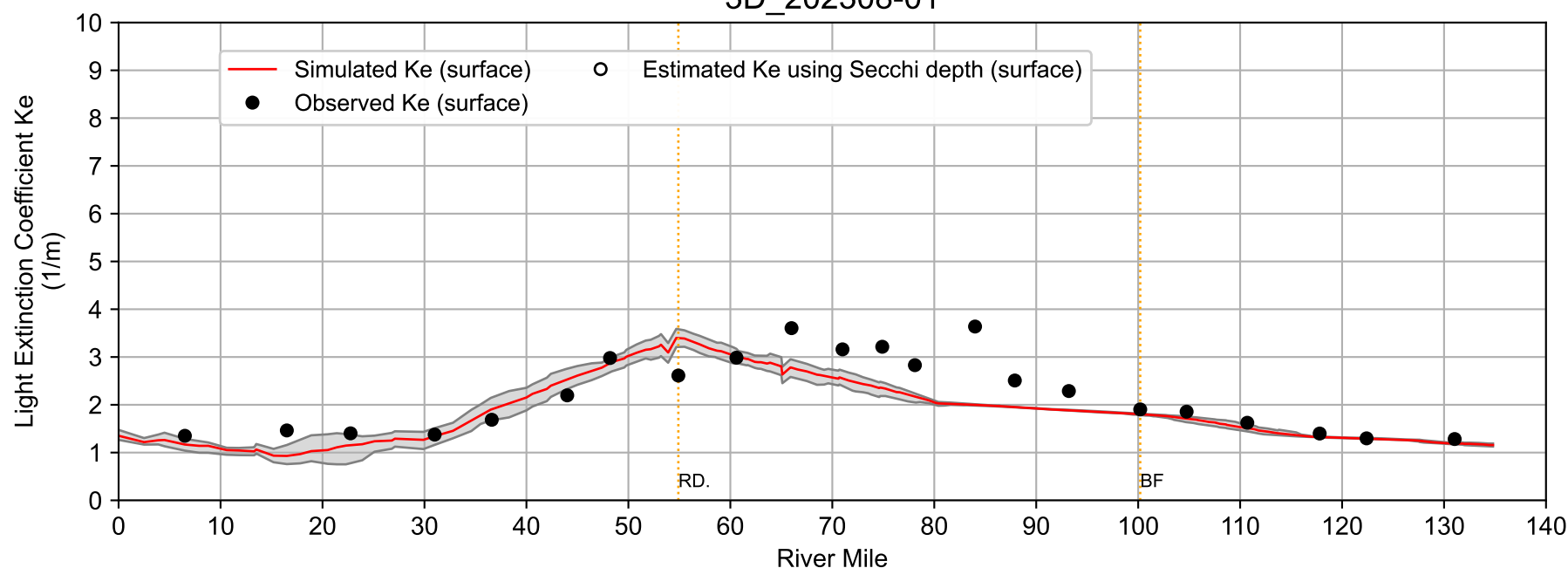


Simulated and Observed Light Extinction Coefficient K_e
Model results from 09/09/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



Simulated and Observed Ke at Surface Layer. Sample Date: October 07 2019 3D_202308-01

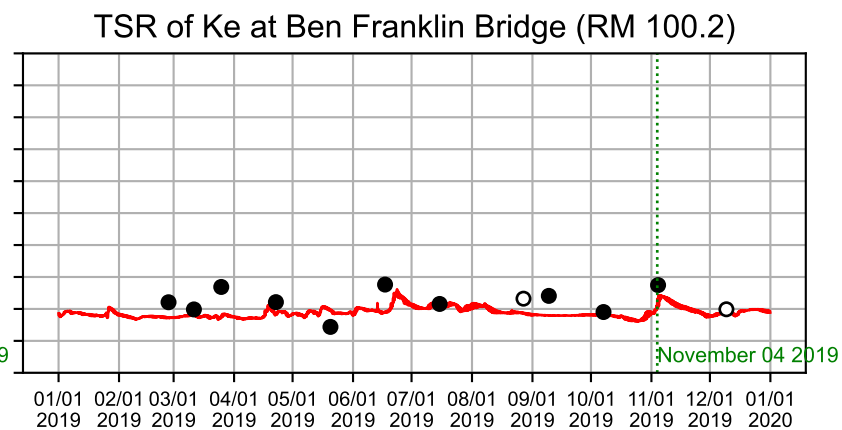
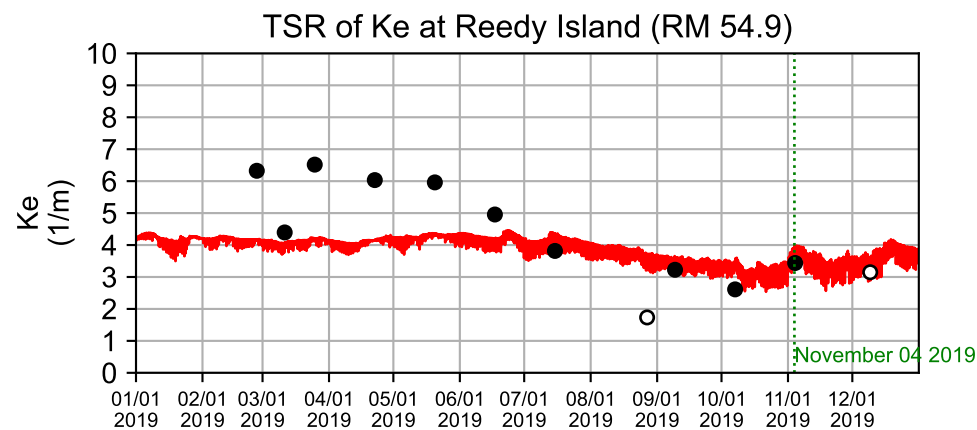
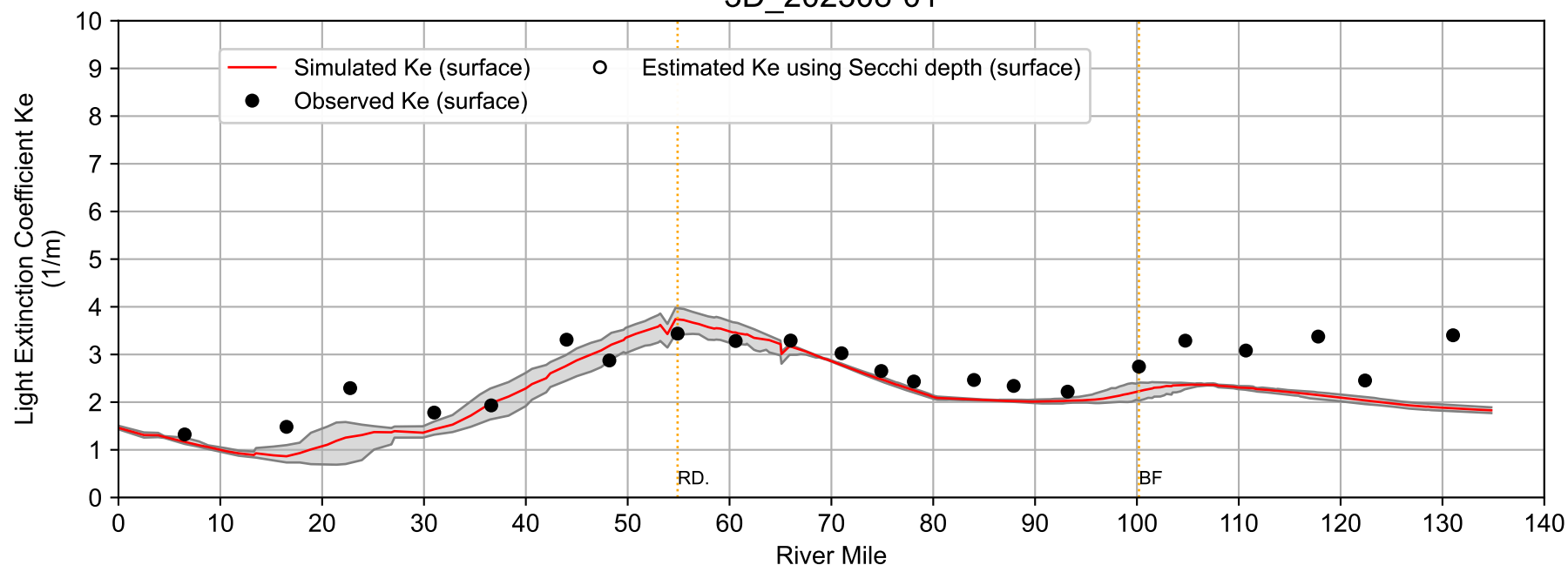


Simulated and Observed Light Extinction Coefficient K_e
Model results from 10/07/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01



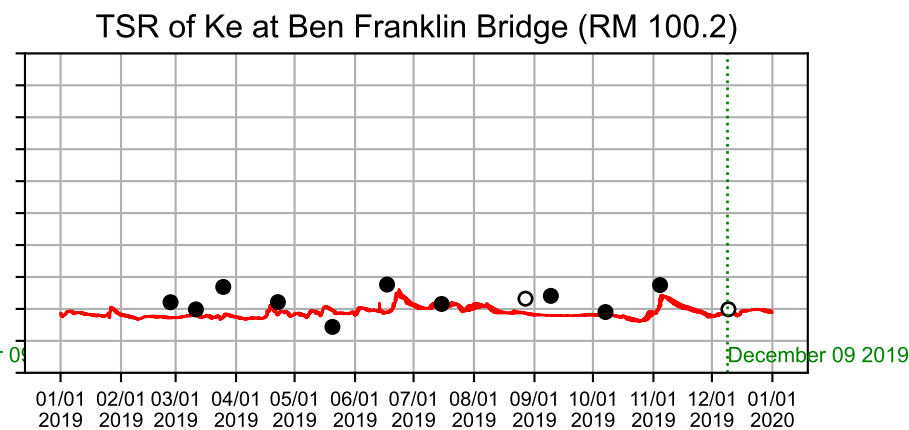
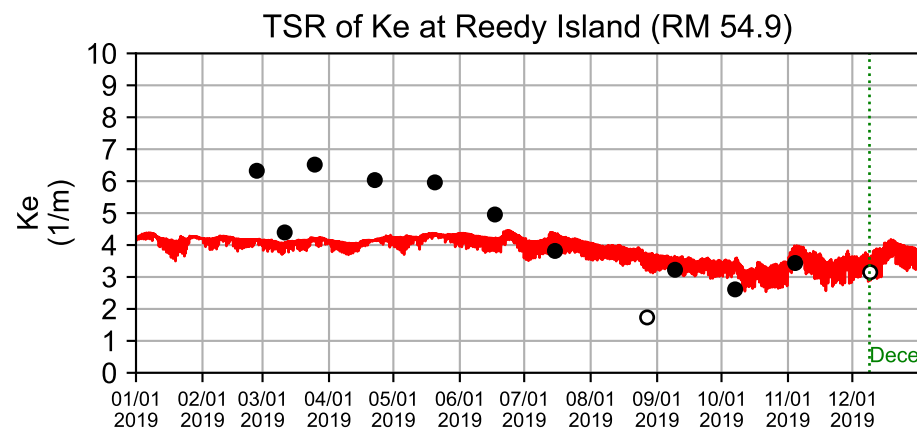
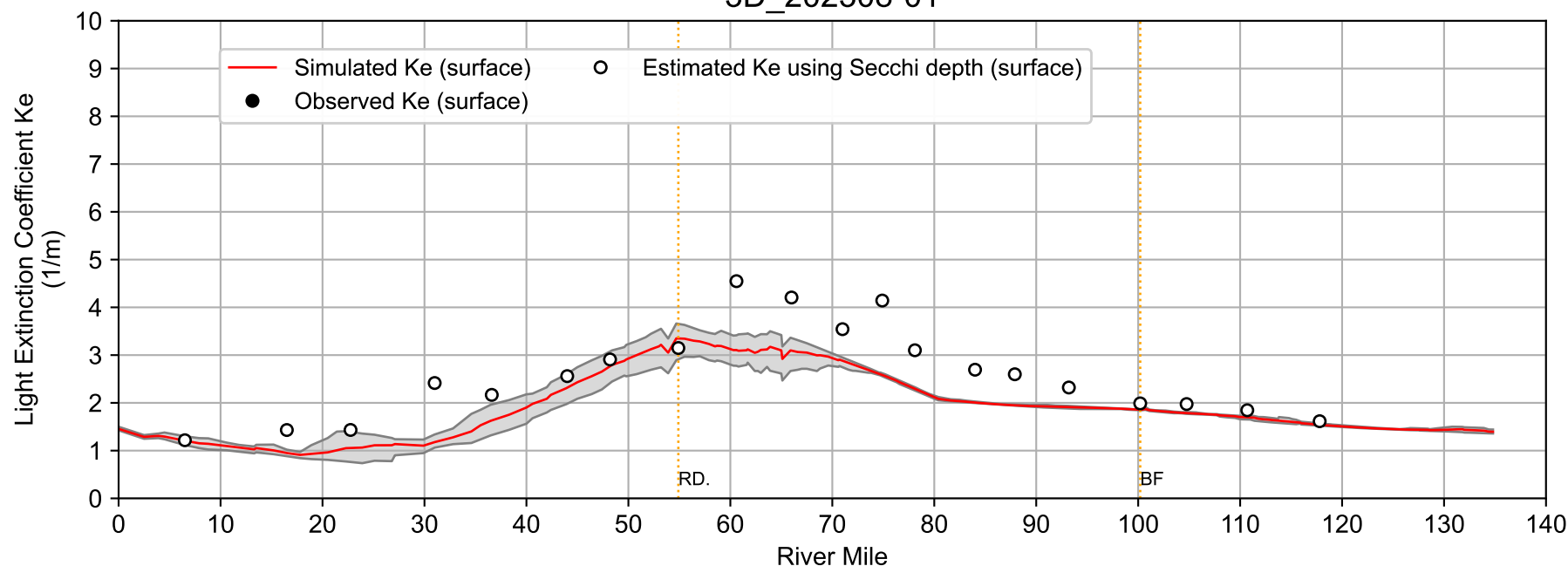
Simulated and Observed Ke at Surface Layer. Sample Date: November 04 2019 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 11/04/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

Simulated and Observed Ke at Surface Layer. Sample Date: December 09 2019 3D_202308-01



Simulated and Observed Light Extinction Coefficient K_e
Model results from 12/09/2019 were used in this analysis.

Note: gray-shaded area represent the range of the simulated K_e .
Run ID: 3D_202308-01

