Appendix L: Observed and predicted daily average chloride

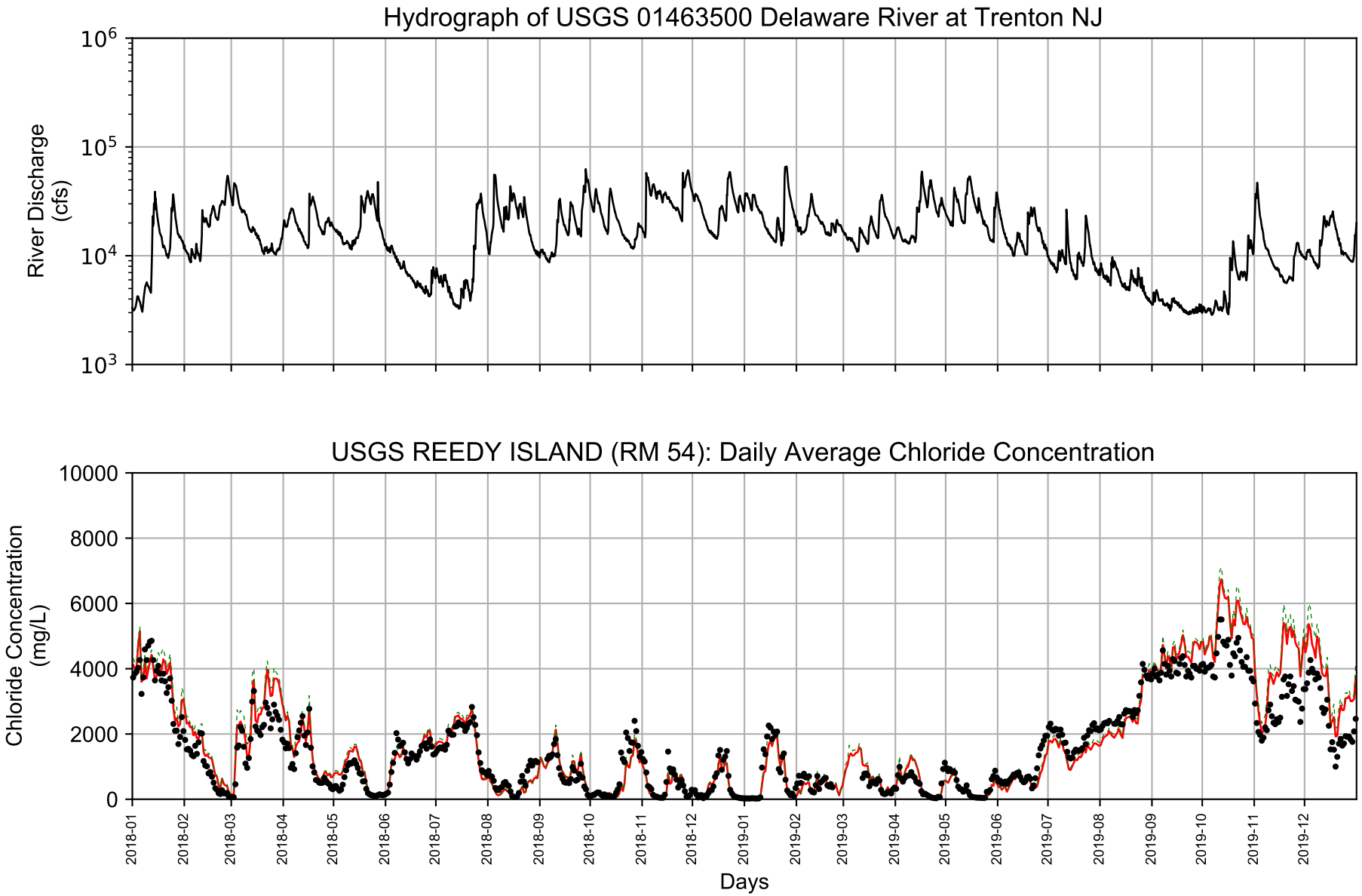

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Figure 3.3-17 (1)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS REEDY ISLAND (RM 54)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01482800, USGS REEDY ISLAND (RM 54)
Run ID: EFDC_HYDRO_G72_2020-05-16, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean surface salinity B.C. based on Lewes data.

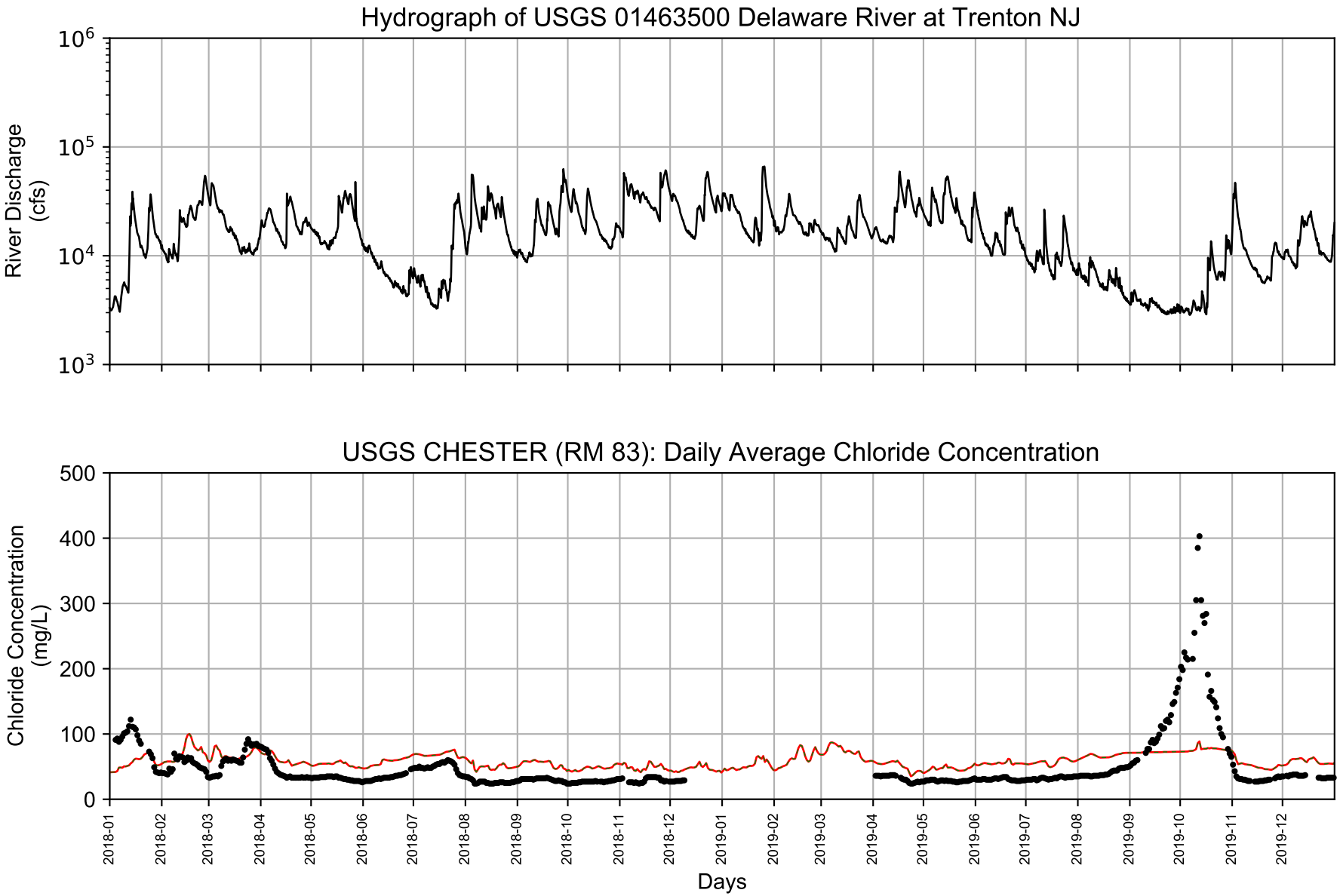

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Figure 3.3-17 (2)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS CHESTER (RM 83)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01477050, USGS CHESTER (RM 83)
Run ID: EFDC_HYDRO_G72_2020-05-16, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean surface salinity B.C. based on Lewes data.

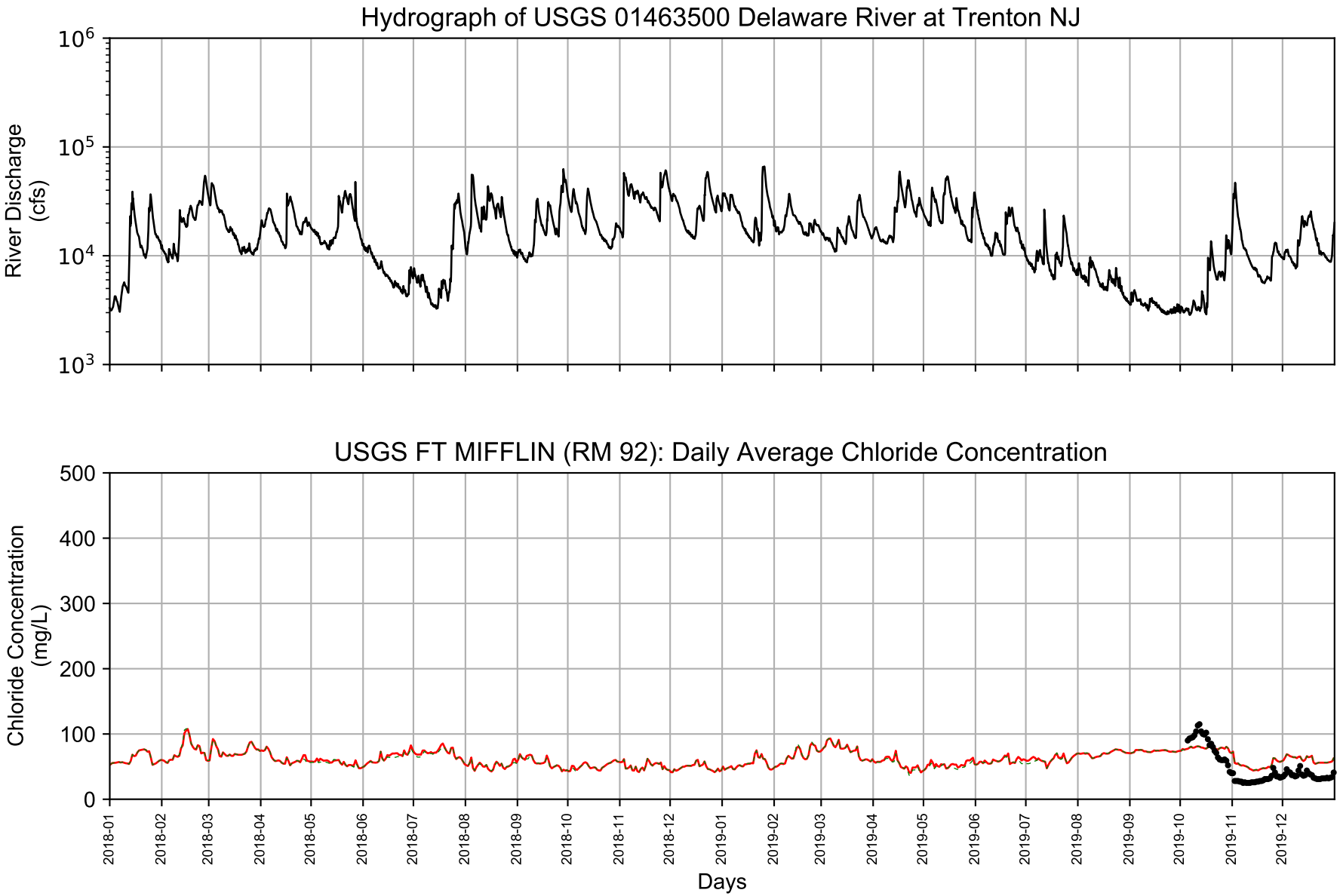

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Figure 3.3-17 (3)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS FT MIFFLIN (RM 92)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01474703, USGS FT MIFFLIN (RM 92)
Run ID: EFDC_HYDRO_G72_2020-05-16, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean surface salinity B.C. based on Lewes data.

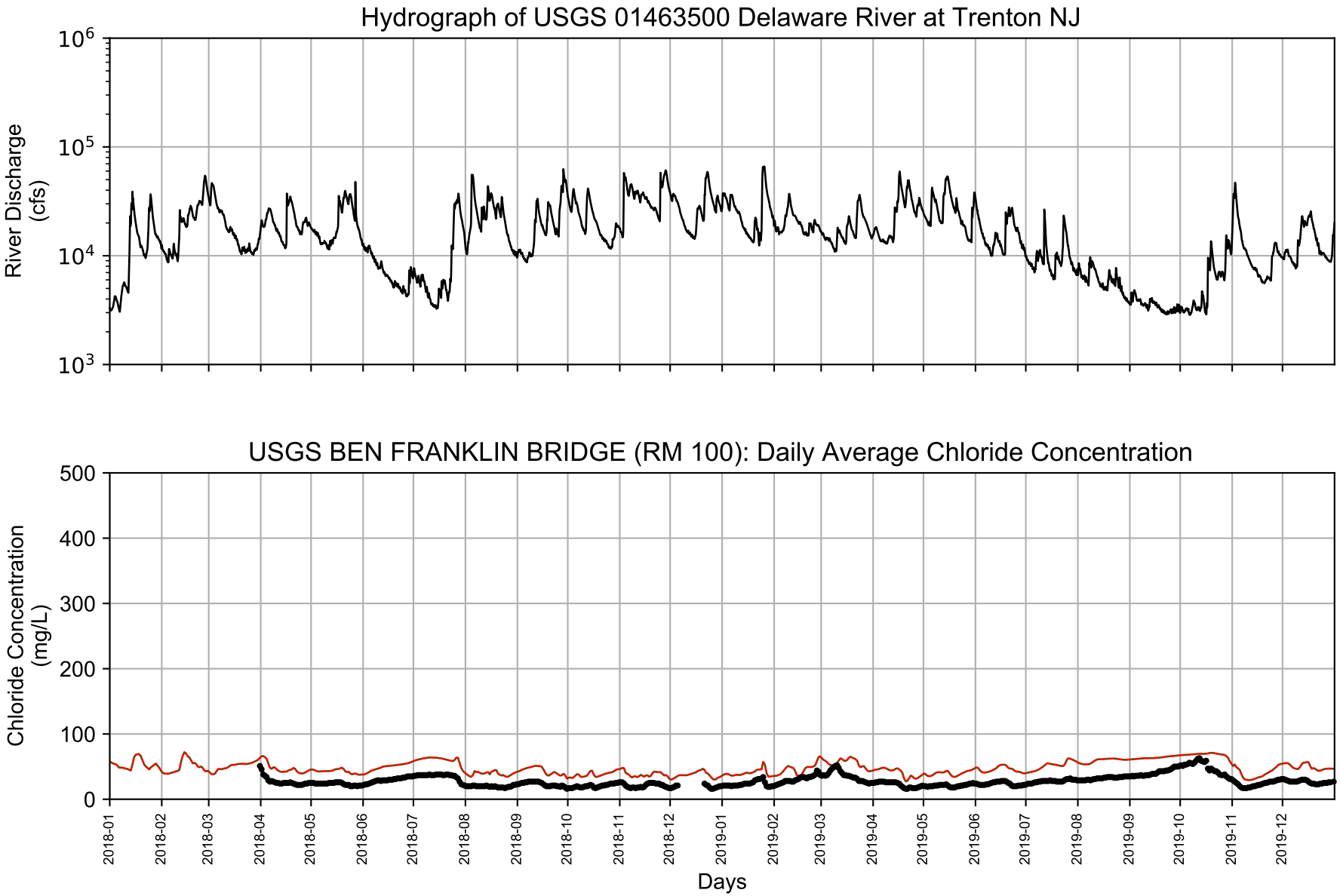

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Figure 3.3-17 (4)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS BEN FRANKLIN BRIDGE (RM 100)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01467200, USGS BEN FRANKLIN BRIDGE (RM 100)
Run ID: EFDC_HYDRO_G72_2020-05-16, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean surface salinity B.C. based on Lewes data.

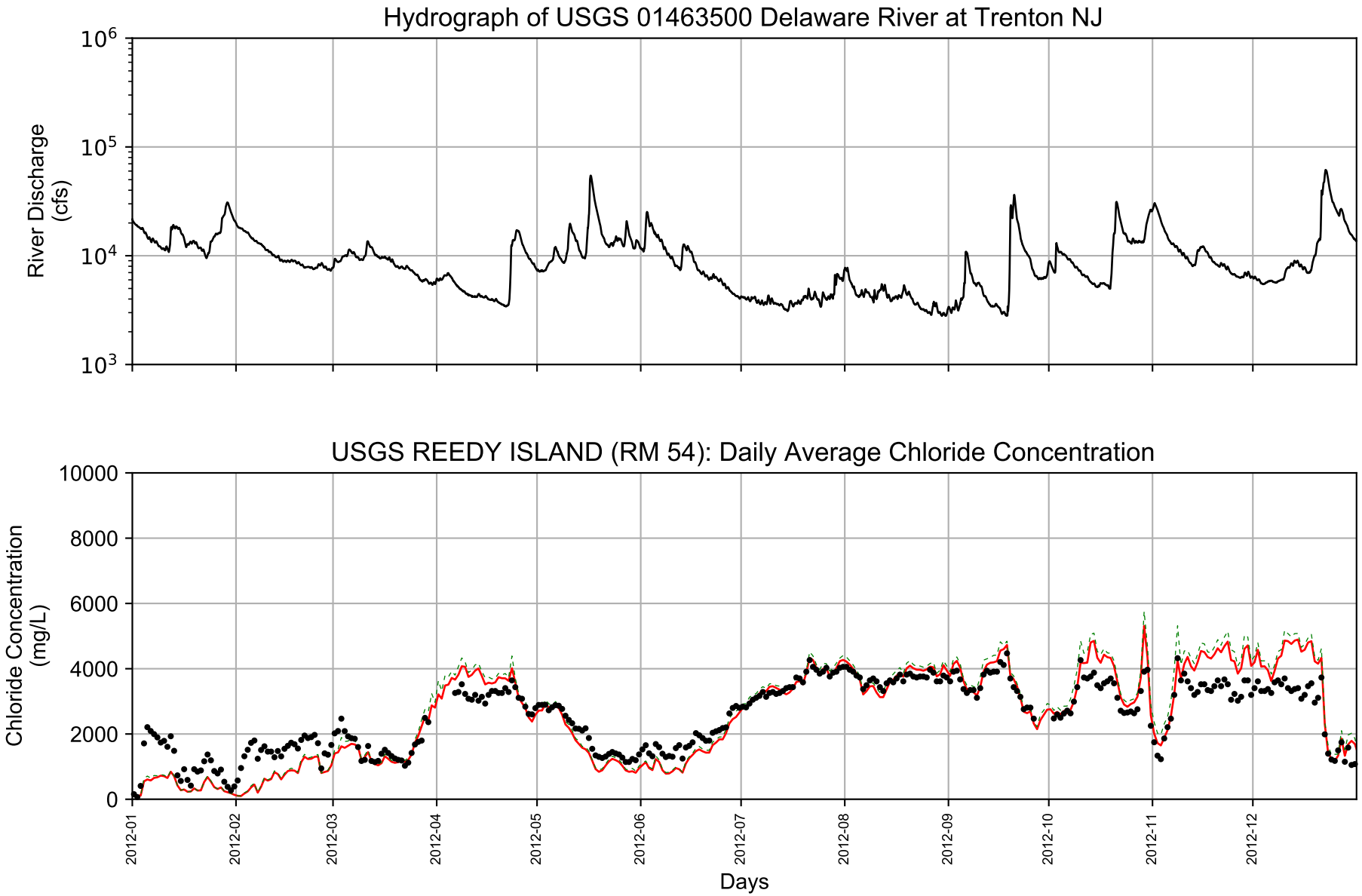

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Figure 3.3-18 (1)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS REEDY ISLAND (RM 54)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01482800, USGS REEDY ISLAND (RM 54)
Run ID: EFDC_HYDRO_G72_2020-07-04, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean salinity B.C. 3 ppt higher than oberved salinity at Brandywine.

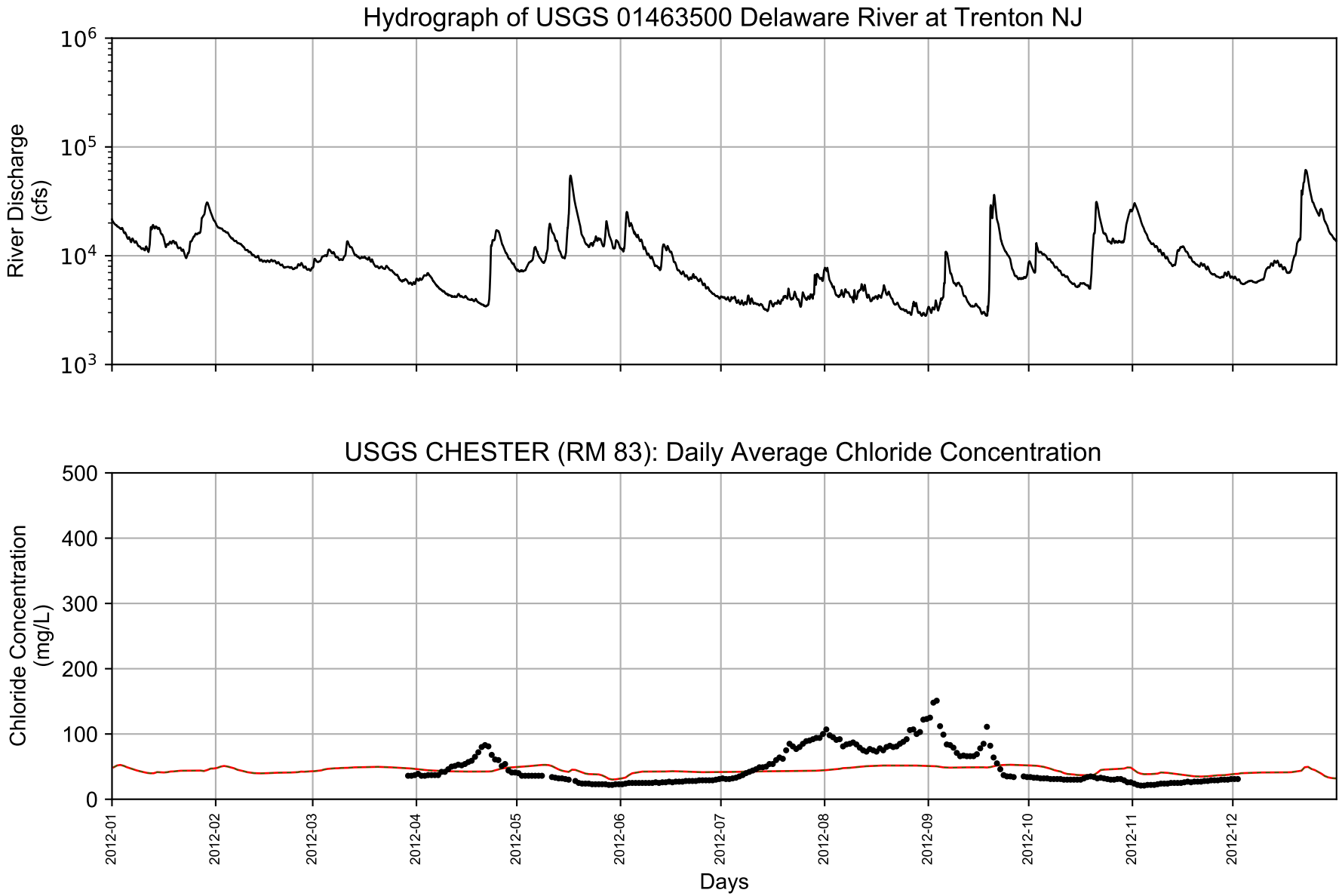

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Figure 3.3-18 (2)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS CHESTER (RM 83)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01477050, USGS CHESTER (RM 83)
Run ID: EFDC_HYDRO_G72_2020-07-04, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean salinity B.C. 3 ppt higher than oberved salinity at Brandywine.

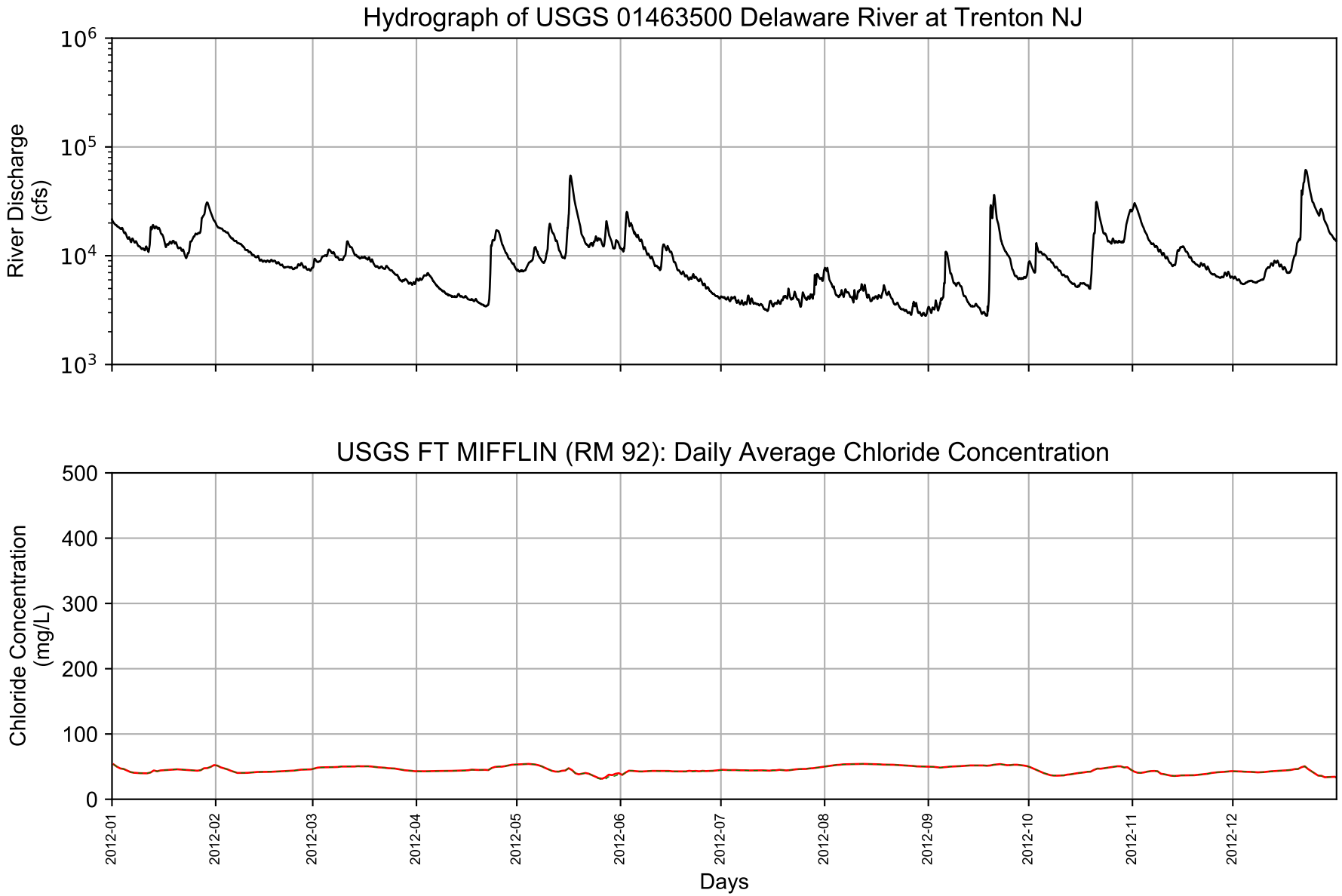

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Figure 3.3-18 (3)
Observed and Predicted Daily Average Chloride Concentration at USGS Station USGS FT MIFFLIN (RM 92)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01474703, USGS FT MIFFLIN (RM 92)
Run ID: EFDC_HYDRO_G72_2020-07-04, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean salinity B.C. 3 ppt higher than oberved salinity at Brandywine.

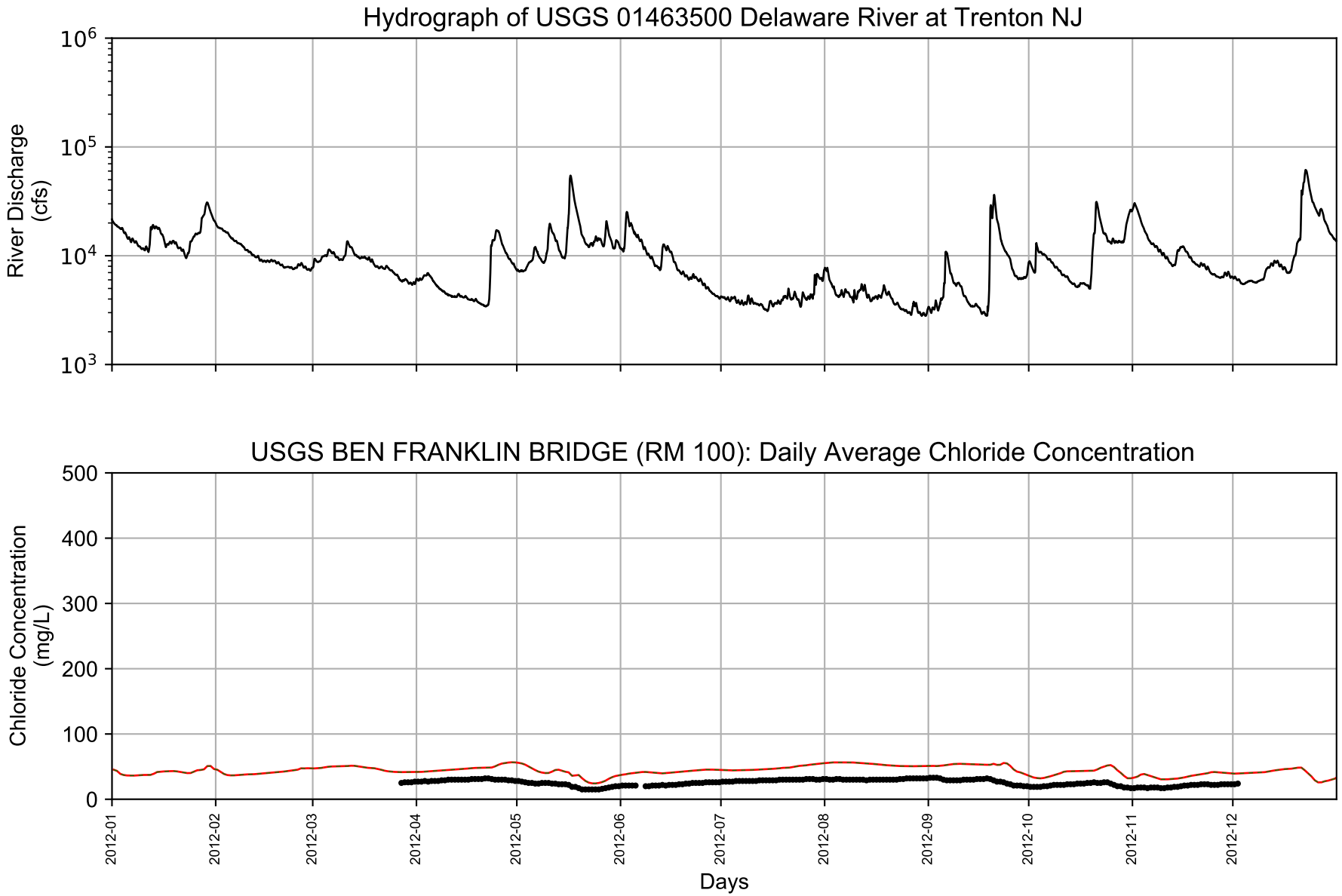

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Figure 3.3-18 (4)
Observed and Predicted Daily Average Chloride Concentration
at USGS Station USGS BEN FRANKLIN BRIDGE (RM 100)

Notes: Chloride concentration were derived from specific conductance.
Station ID: USGS01467200, USGS BEN FRANKLIN BRIDGE (RM 100)
Run ID: EFDC_HYDRO_G72_2020-07-04, GVC, KC =12, Grid 7.2 CTE3=12. Set ocean salinity B.C. 3 ppt higher than oberved salinity at Brandywine.

Appendix M: Longitudinal profile of salinity in Delaware River and Bay

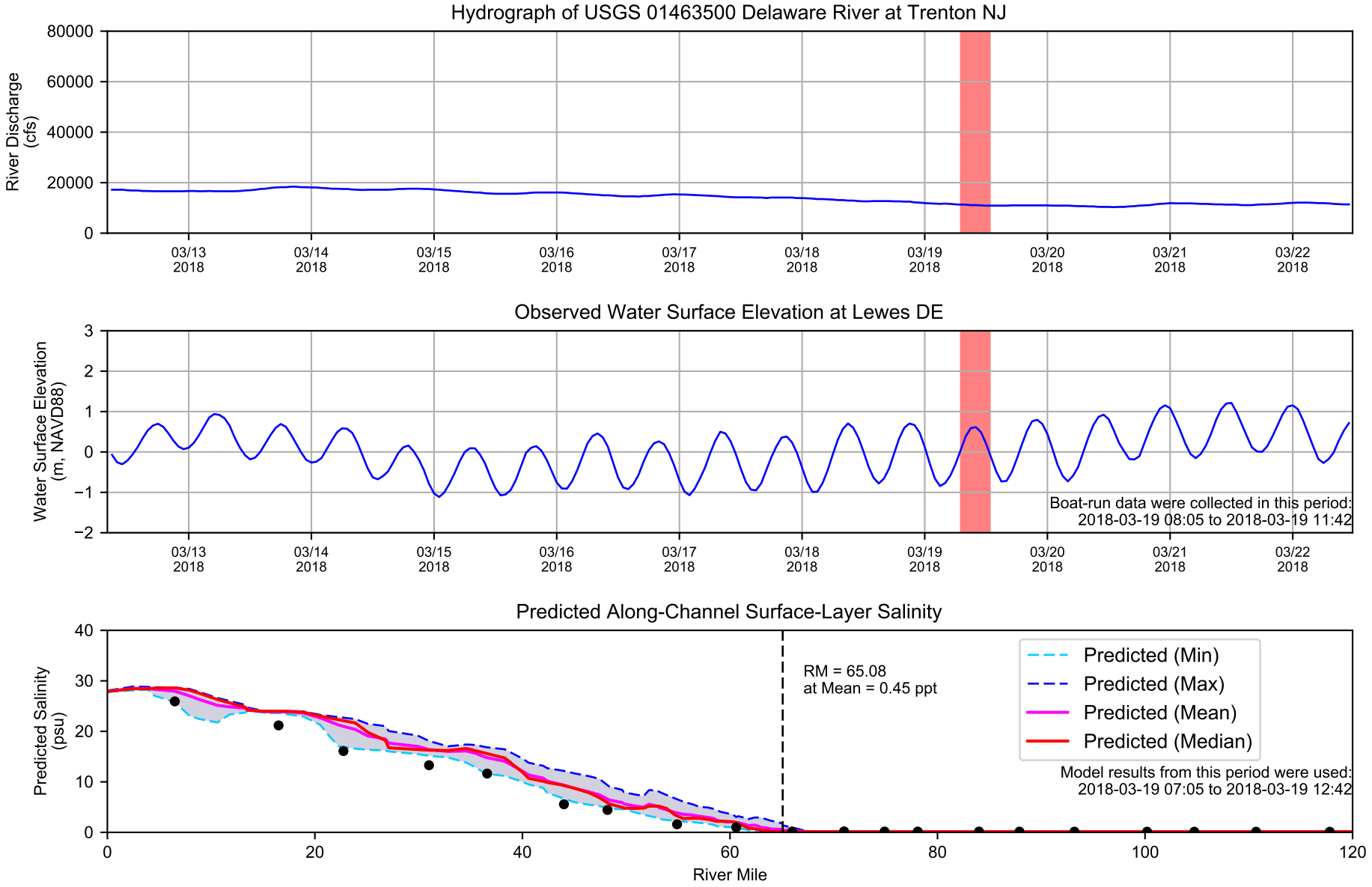

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Figure 3.3-19 (1)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-03-19 08:05 to 2018-03-19 11:42
Model results along the navigation channel during period of 2018-03-19 07:05 to 2018-03-19 12:42 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:13:58

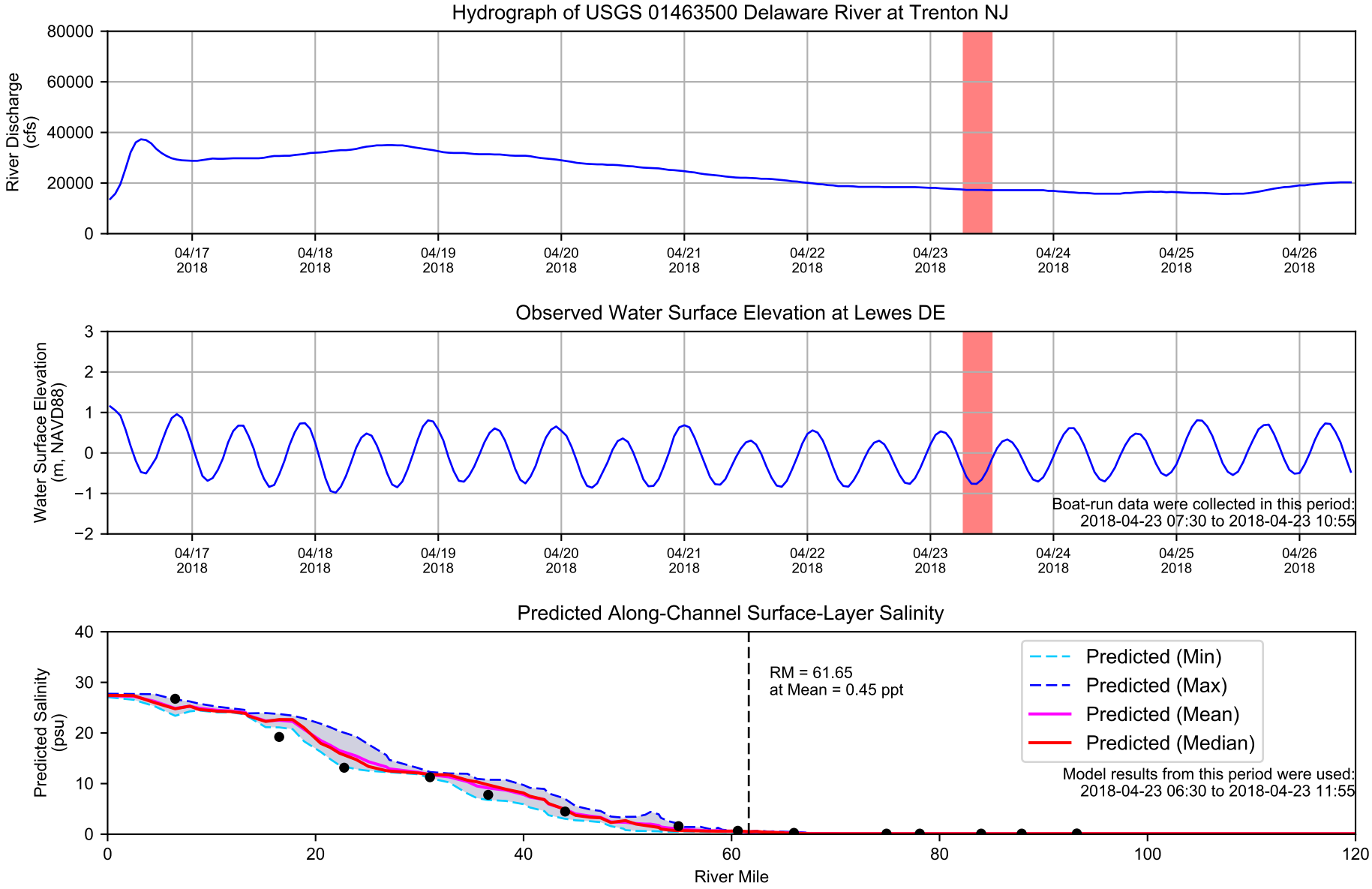

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Figure 3.3-19 (2)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-04-23 07:30 to 2018-04-23 10:55
Model results along the navigation channel during period of 2018-04-23 06:30 to 2018-04-23 11:55 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:13:59

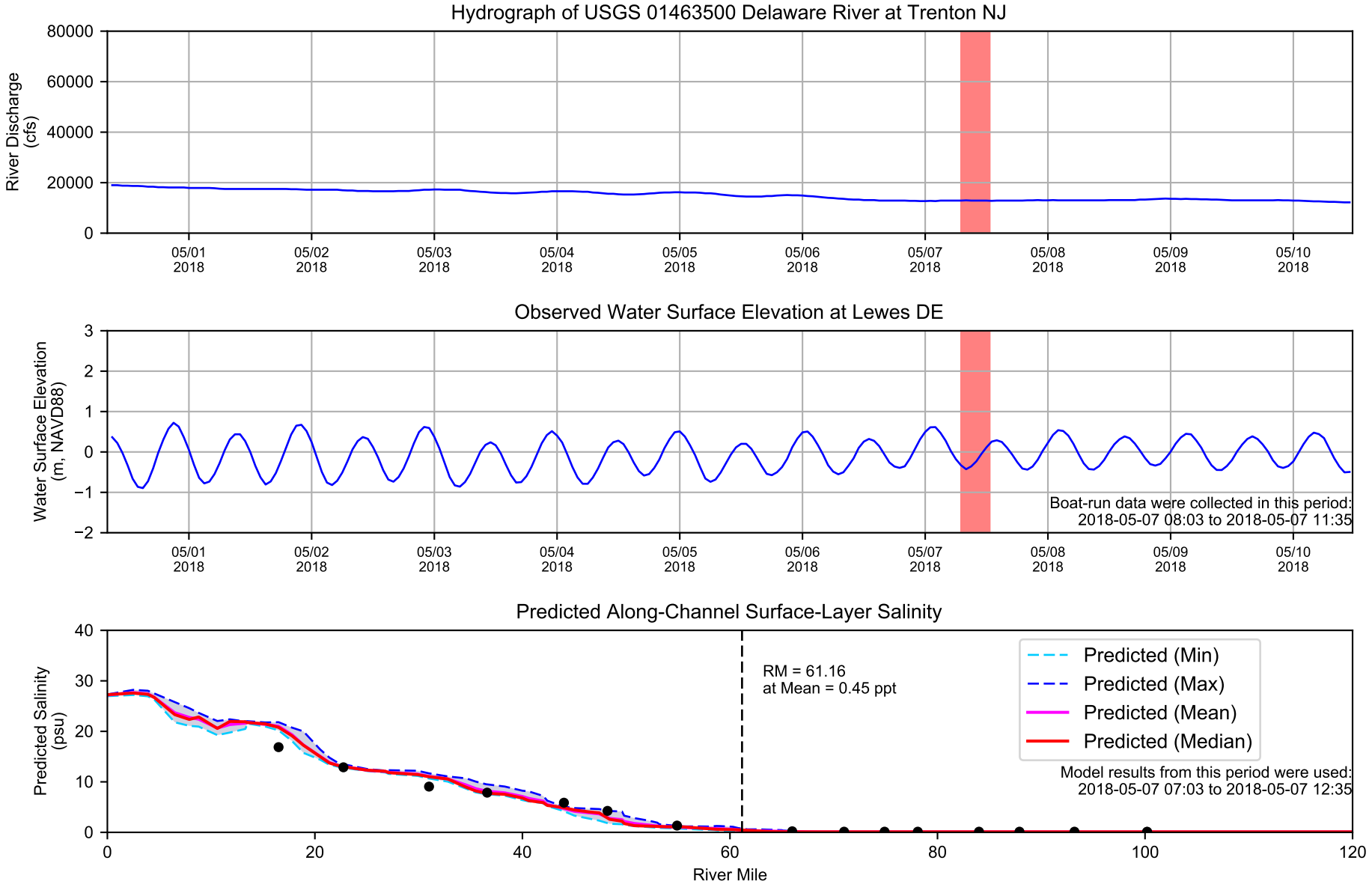

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Figure 3.3-19 (3)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-05-07 08:03 to 2018-05-07 11:35
Model results along the navigation channel during period of 2018-05-07 07:03 to 2018-05-07 12:35 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:0

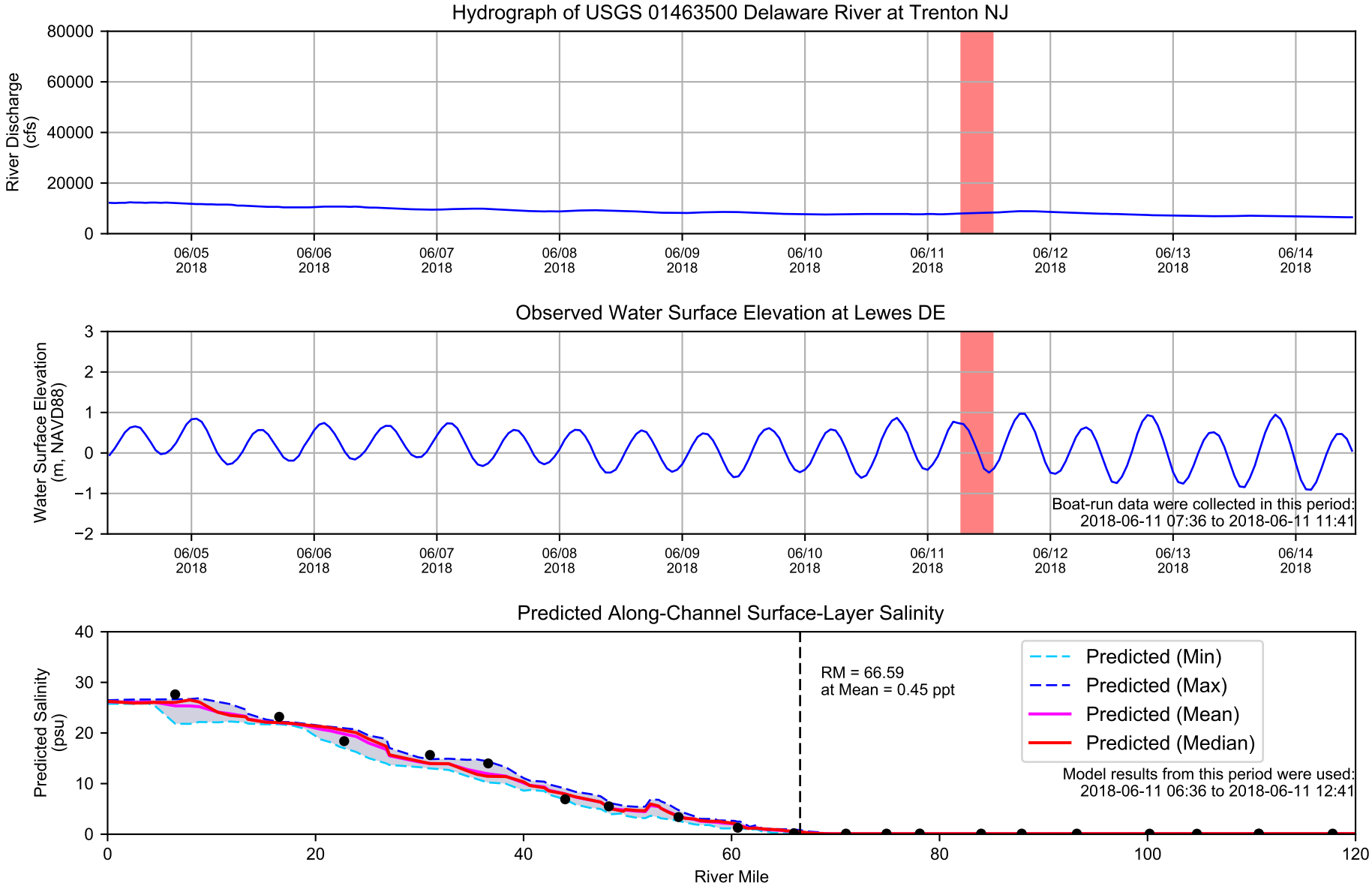

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Figure 3.3-19 (4)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-06-11 07:36 to 2018-06-11 11:41
Model results along the navigation channel during period of 2018-06-11 06:36 to 2018-06-11 12:41 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:1

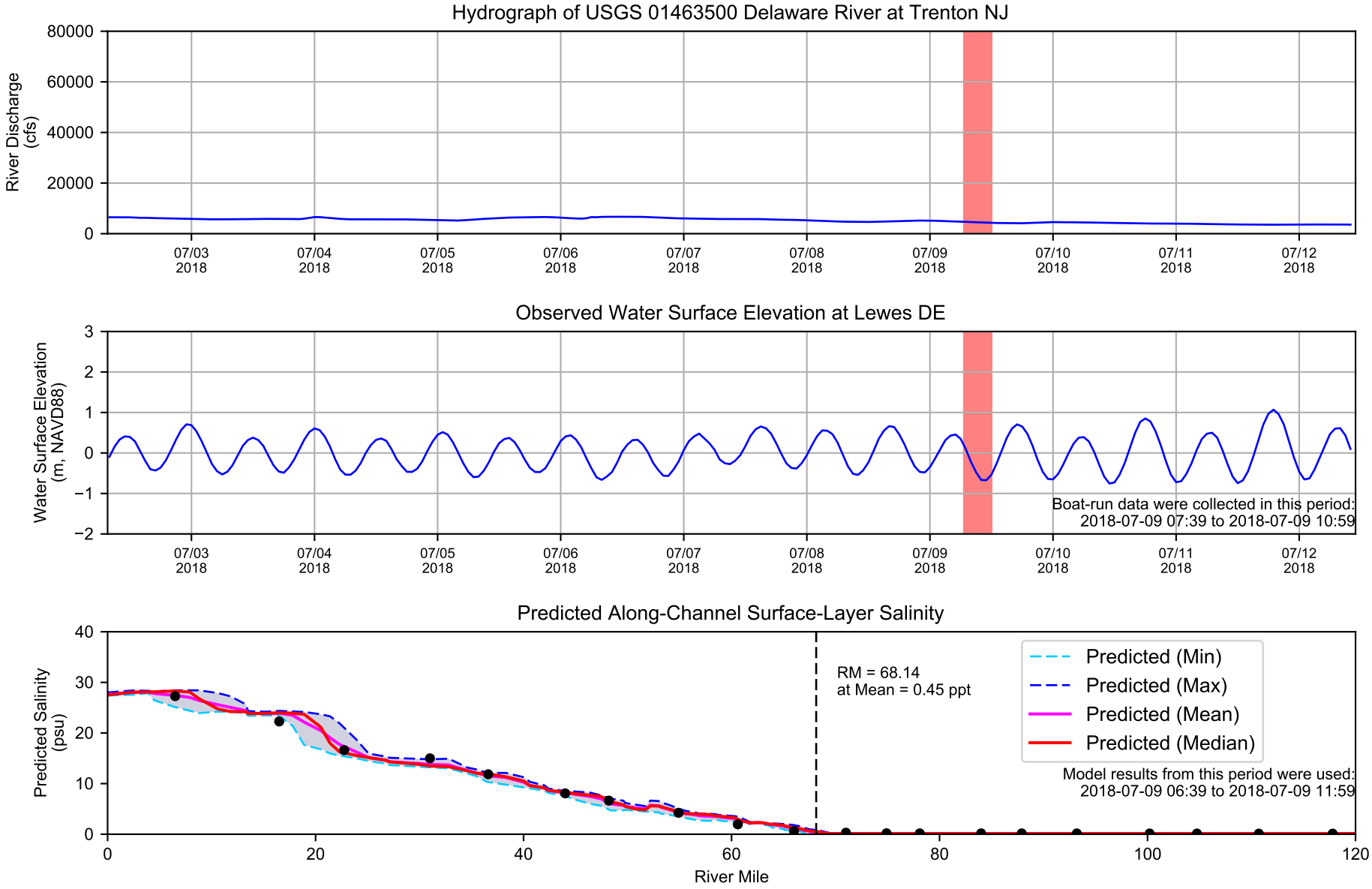

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Figure 3.3-19 (5)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-07-09 07:39 to 2018-07-09 10:59
Model results along the navigation channel during period of 2018-07-09 06:39 to 2018-07-09 11:59 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:2

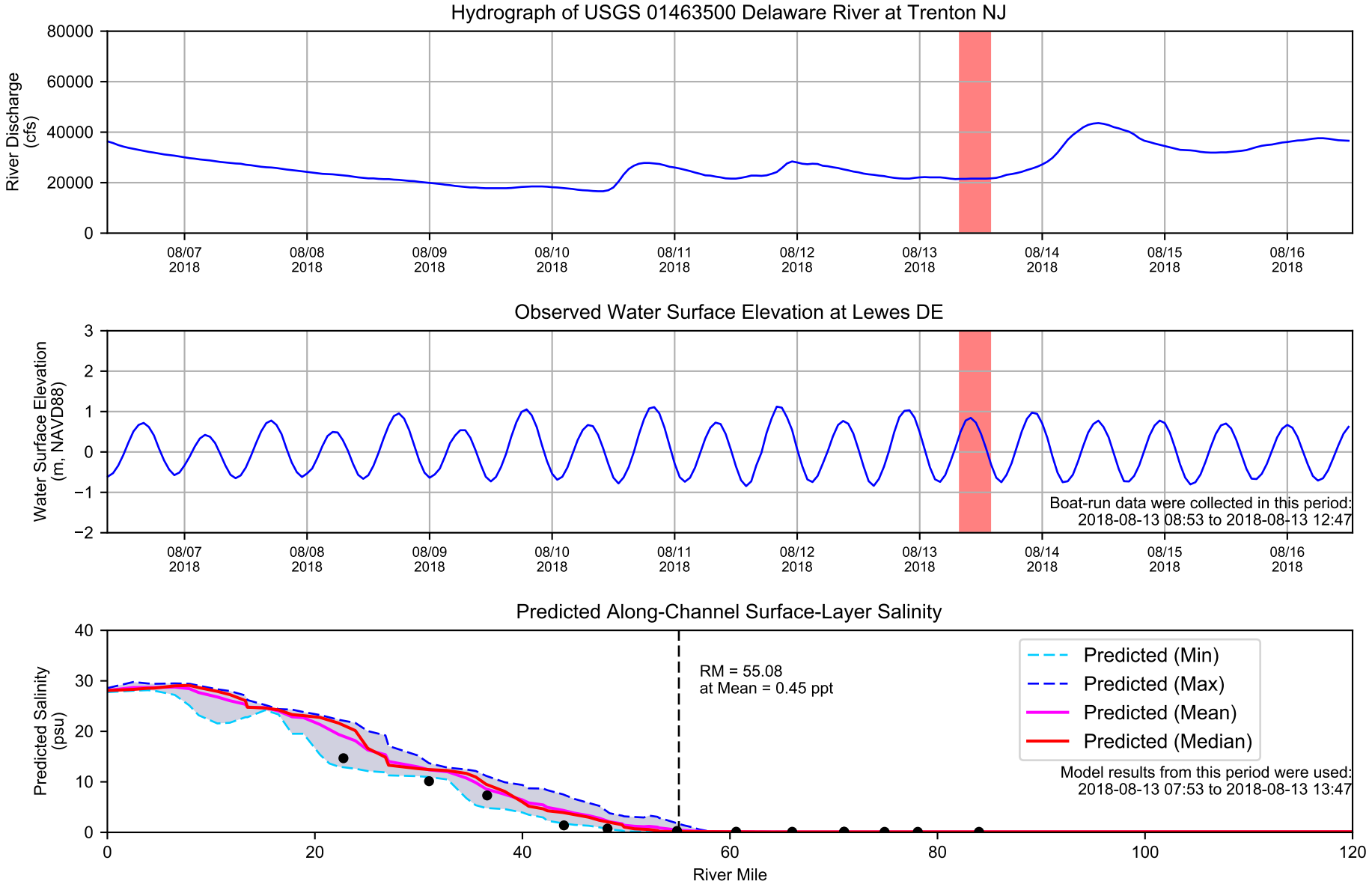

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Figure 3.3-19 (6)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-08-13 08:53 to 2018-08-13 12:47
Model results along the navigation channel during period of 2018-08-13 07:53 to 2018-08-13 13:47 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:2

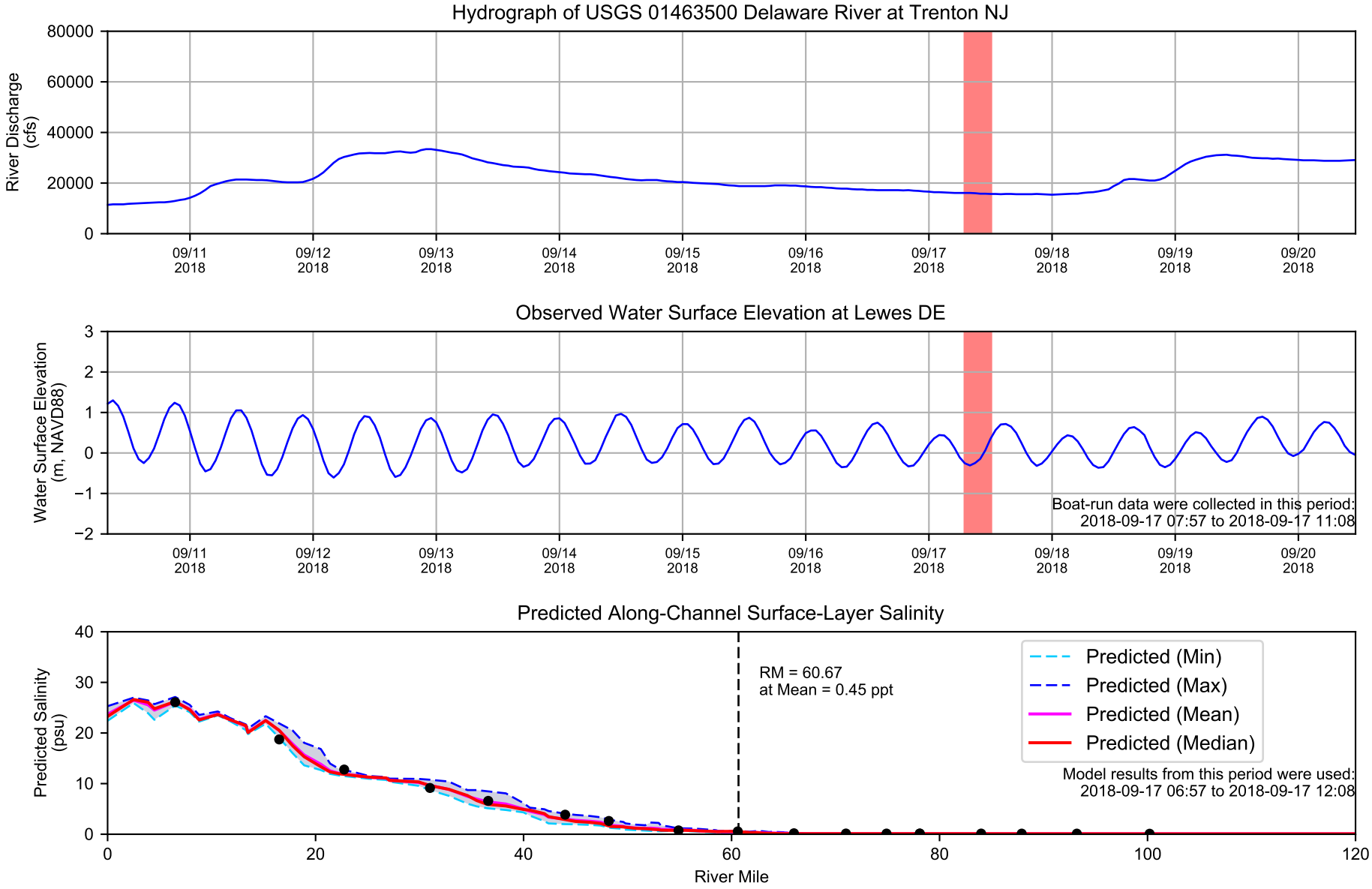

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Figure 3.3-19 (7)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-09-17 07:57 to 2018-09-17 11:08
Model results along the navigation channel during period of 2018-09-17 06:57 to 2018-09-17 12:08 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

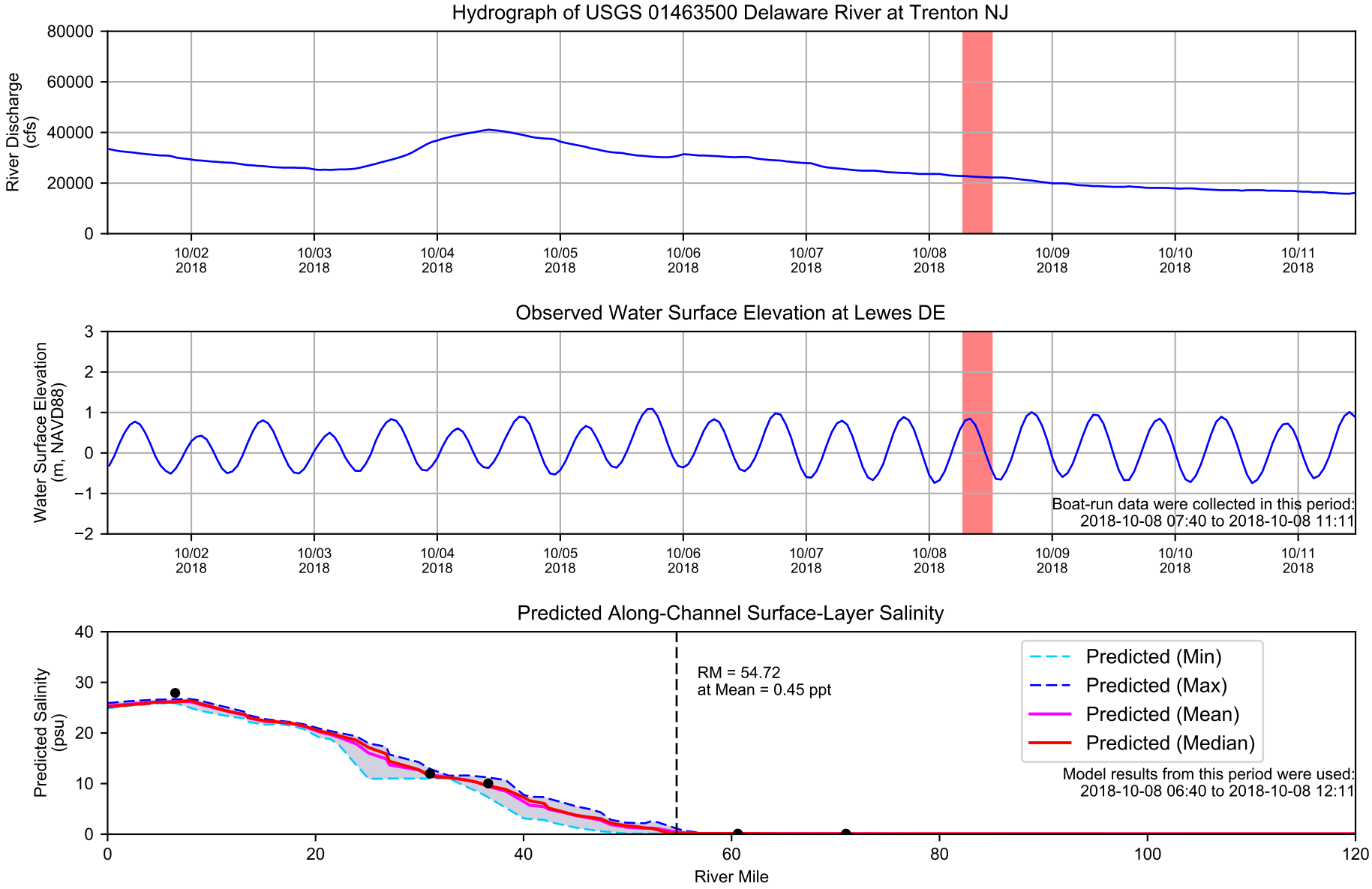

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Figure 3.3-19 (8)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-10-08 07:40 to 2018-10-08 11:11
Model results along the navigation channel during period of 2018-10-08 06:40 to 2018-10-08 12:11 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:4

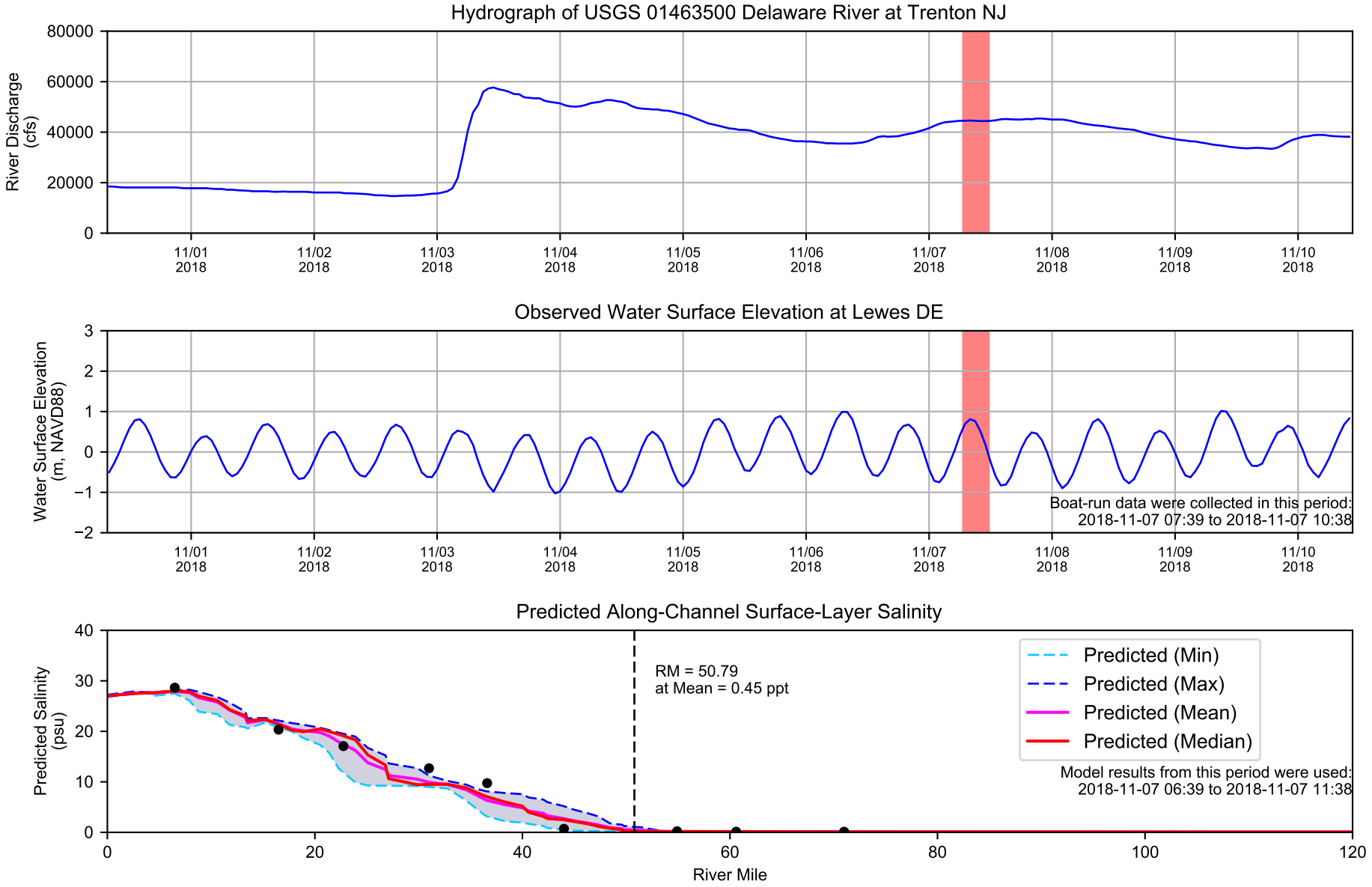

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Figure 3.3-19 (9)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2018-11-07 07:39 to 2018-11-07 10:38
Model results along the navigation channel during period of 2018-11-07 06:39 to 2018-11-07 11:38 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:5

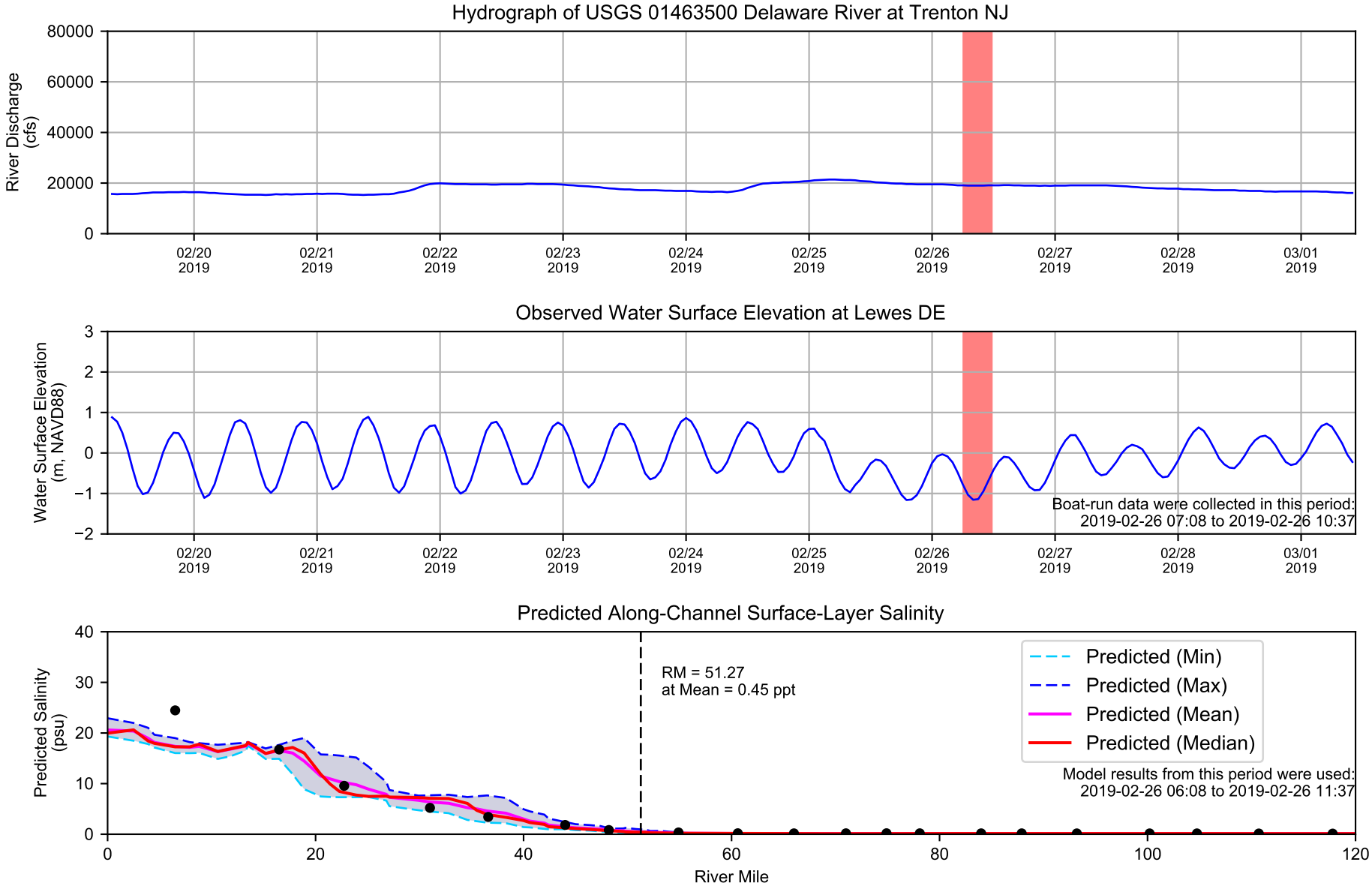

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Figure 3.3-19 (10)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-02-26 07:08 to 2019-02-26 10:37
Model results along the navigation channel during period of 2019-02-26 06:08 to 2019-02-26 11:37 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:6

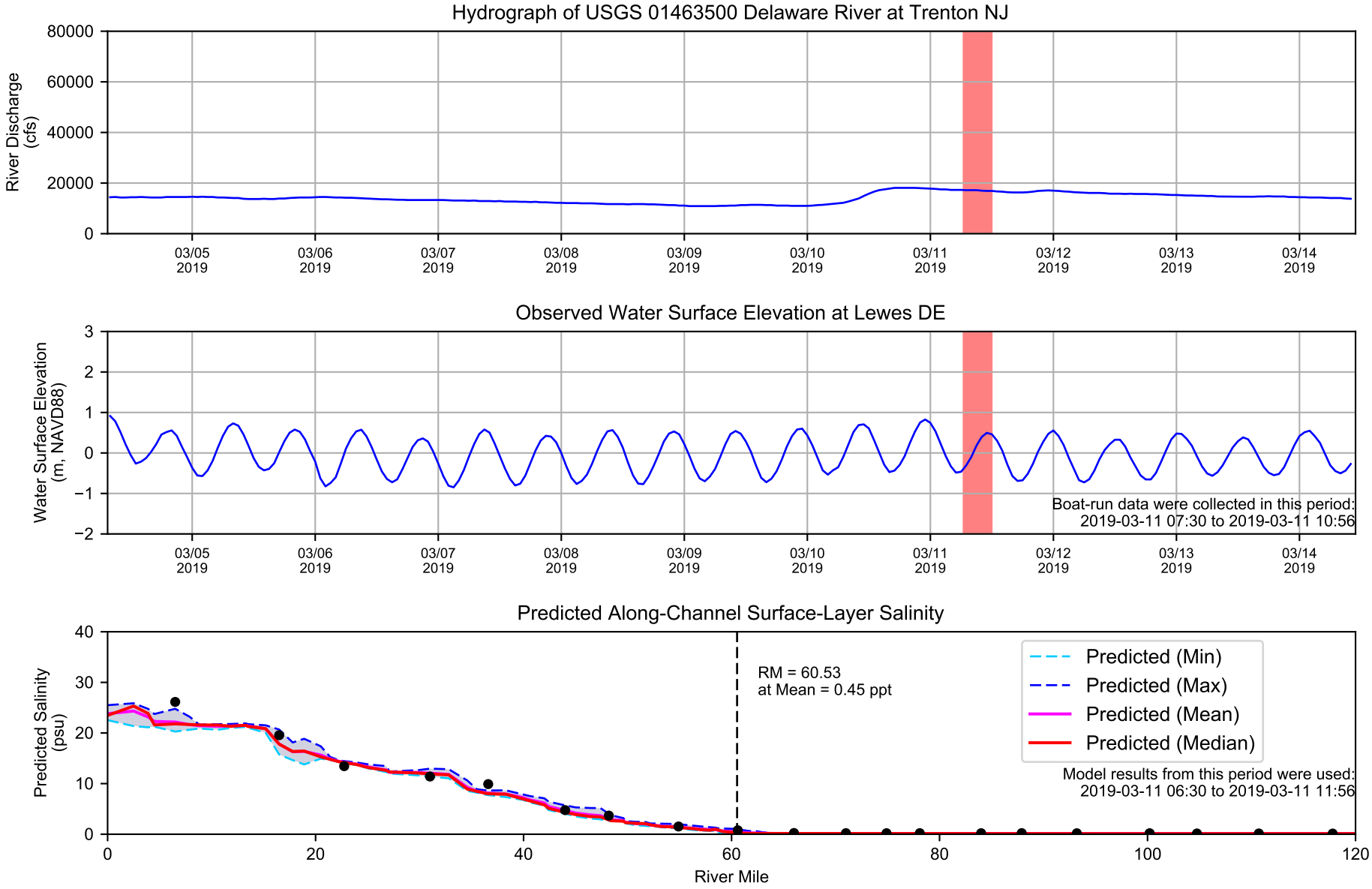

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Figure 3.3-19 (11)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-03-11 07:30 to 2019-03-11 10:56
Model results along the navigation channel during period of 2019-03-11 06:30 to 2019-03-11 11:56 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:7

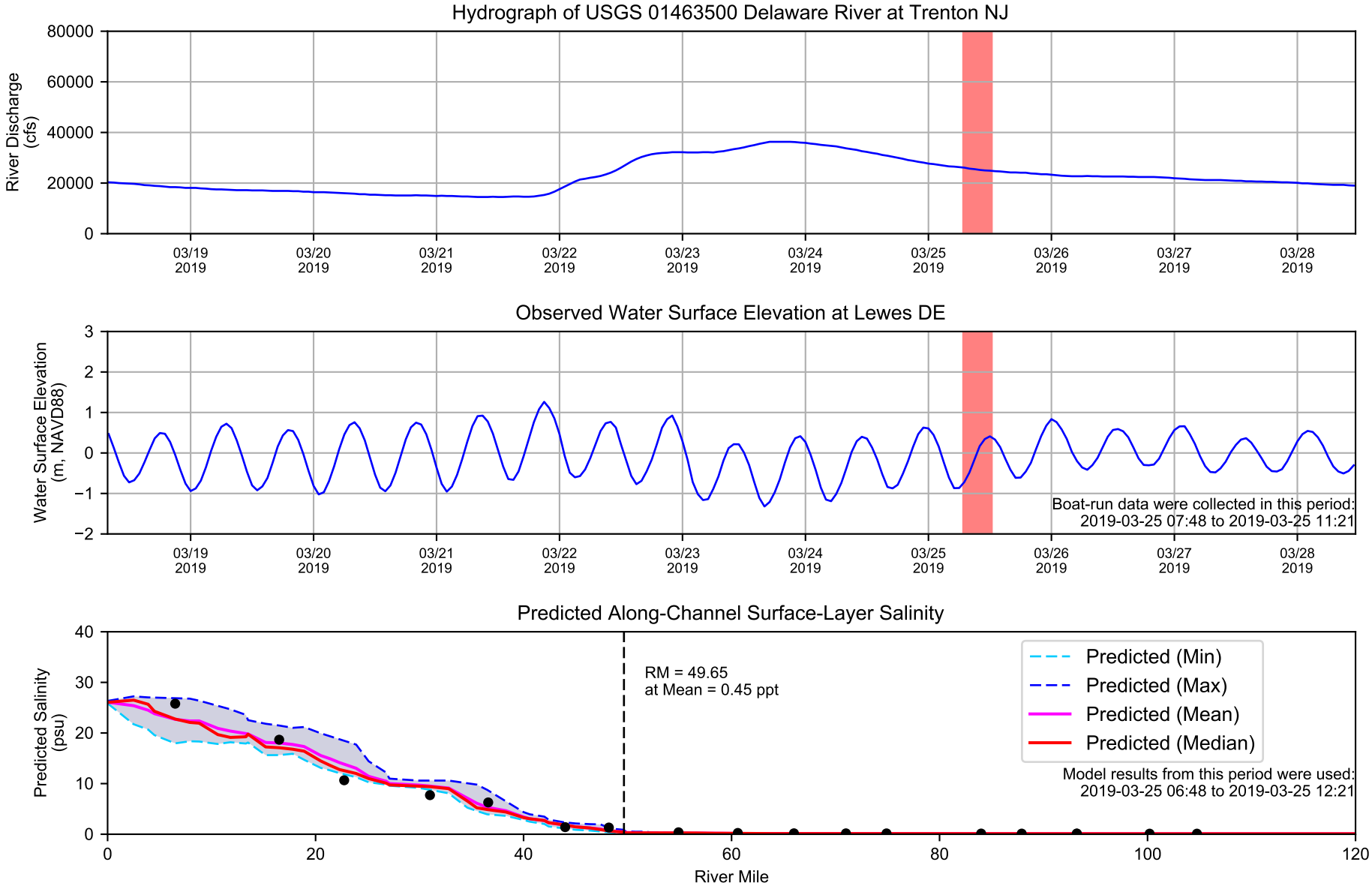

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Figure 3.3-19 (12)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-03-25 07:48 to 2019-03-25 11:21
Model results along the navigation channel during period of 2019-03-25 06:48 to 2019-03-25 12:21 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:7

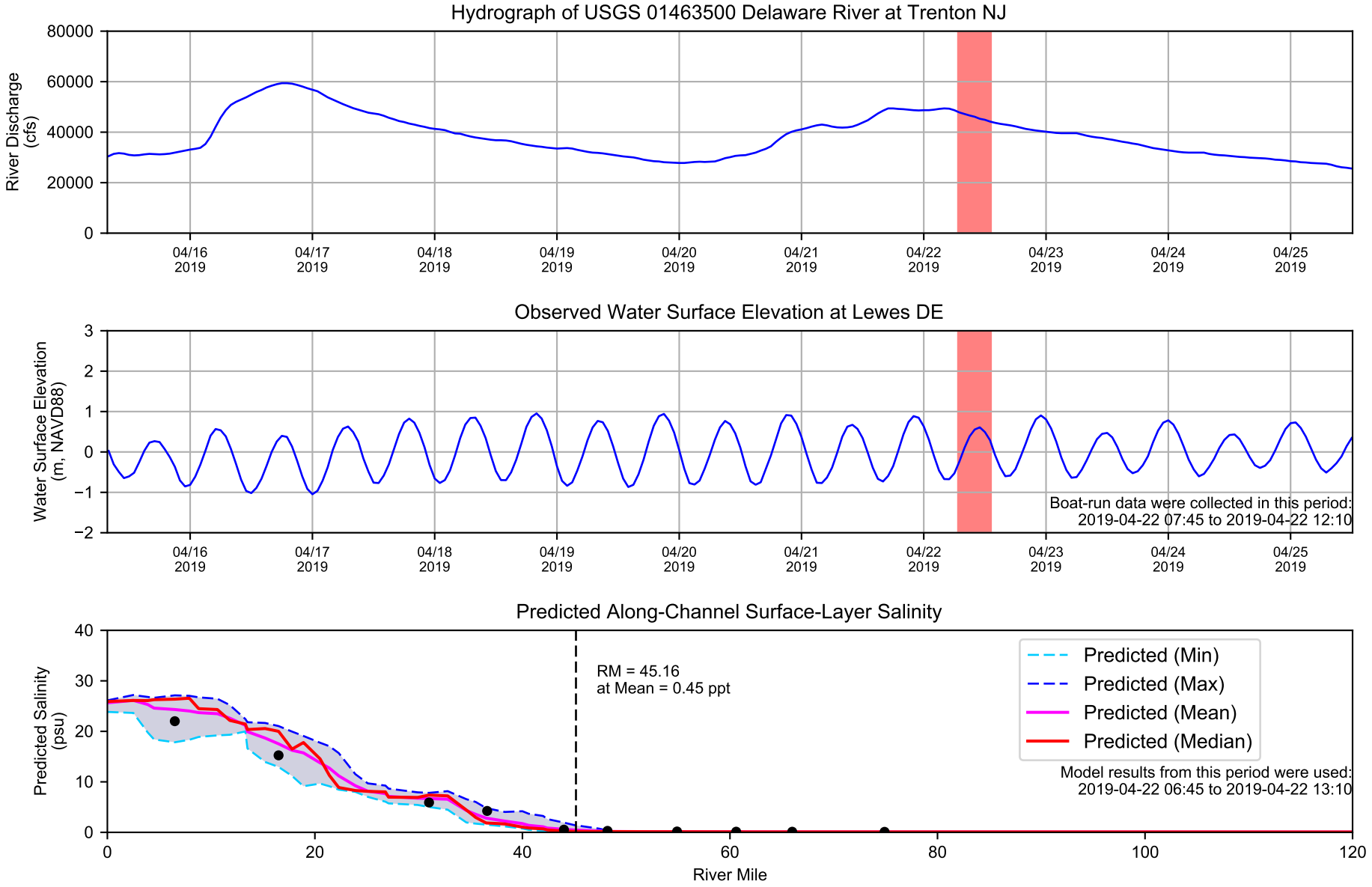

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Figure 3.3-19 (13)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-04-22 07:45 to 2019-04-22 12:10
Model results along the navigation channel during period of 2019-04-22 06:45 to 2019-04-22 13:10 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:8

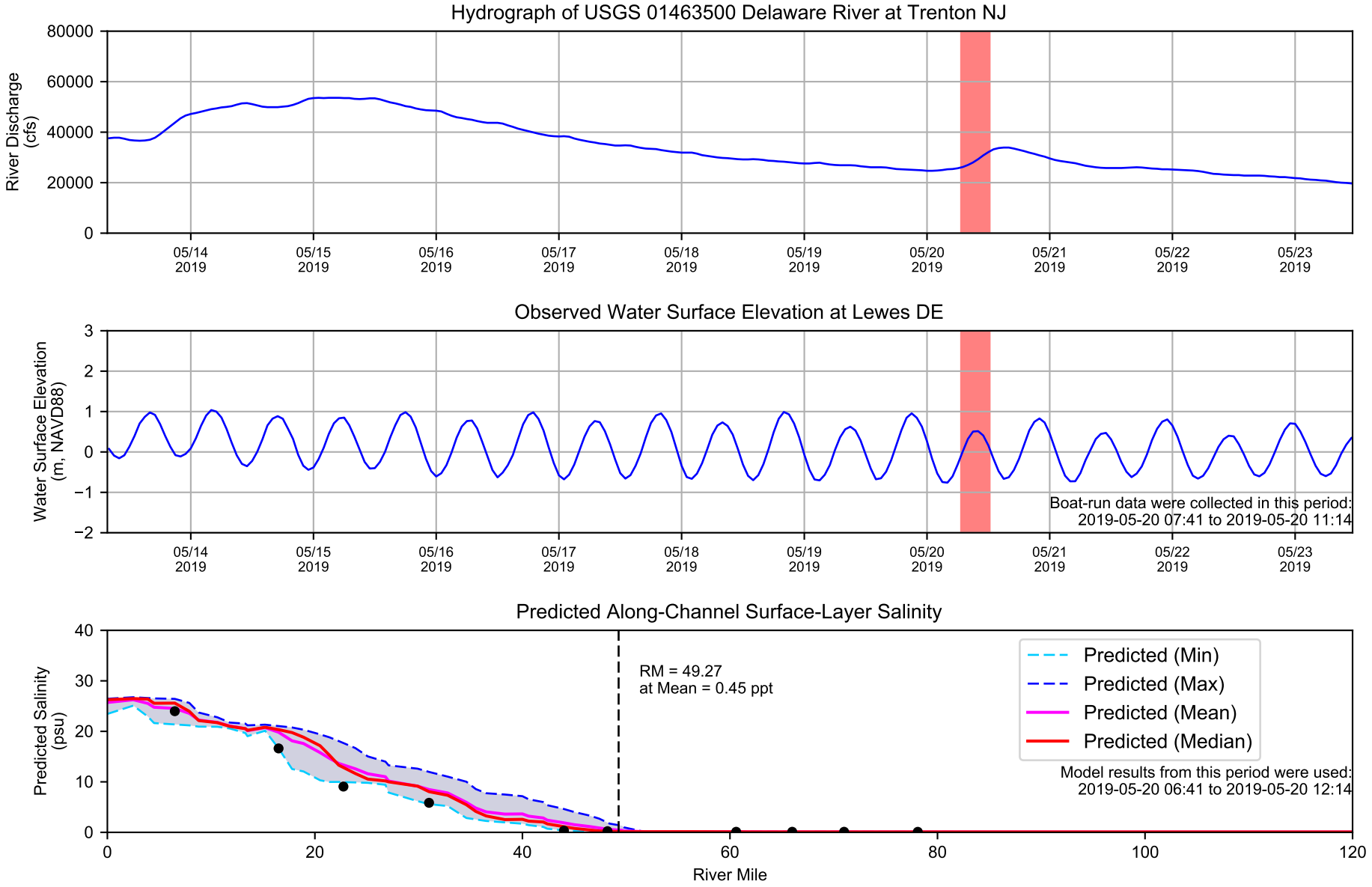

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Figure 3.3-19 (14)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-05-20 07:41 to 2019-05-20 11:14
Model results along the navigation channel during period of 2019-05-20 06:41 to 2019-05-20 12:14 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:9

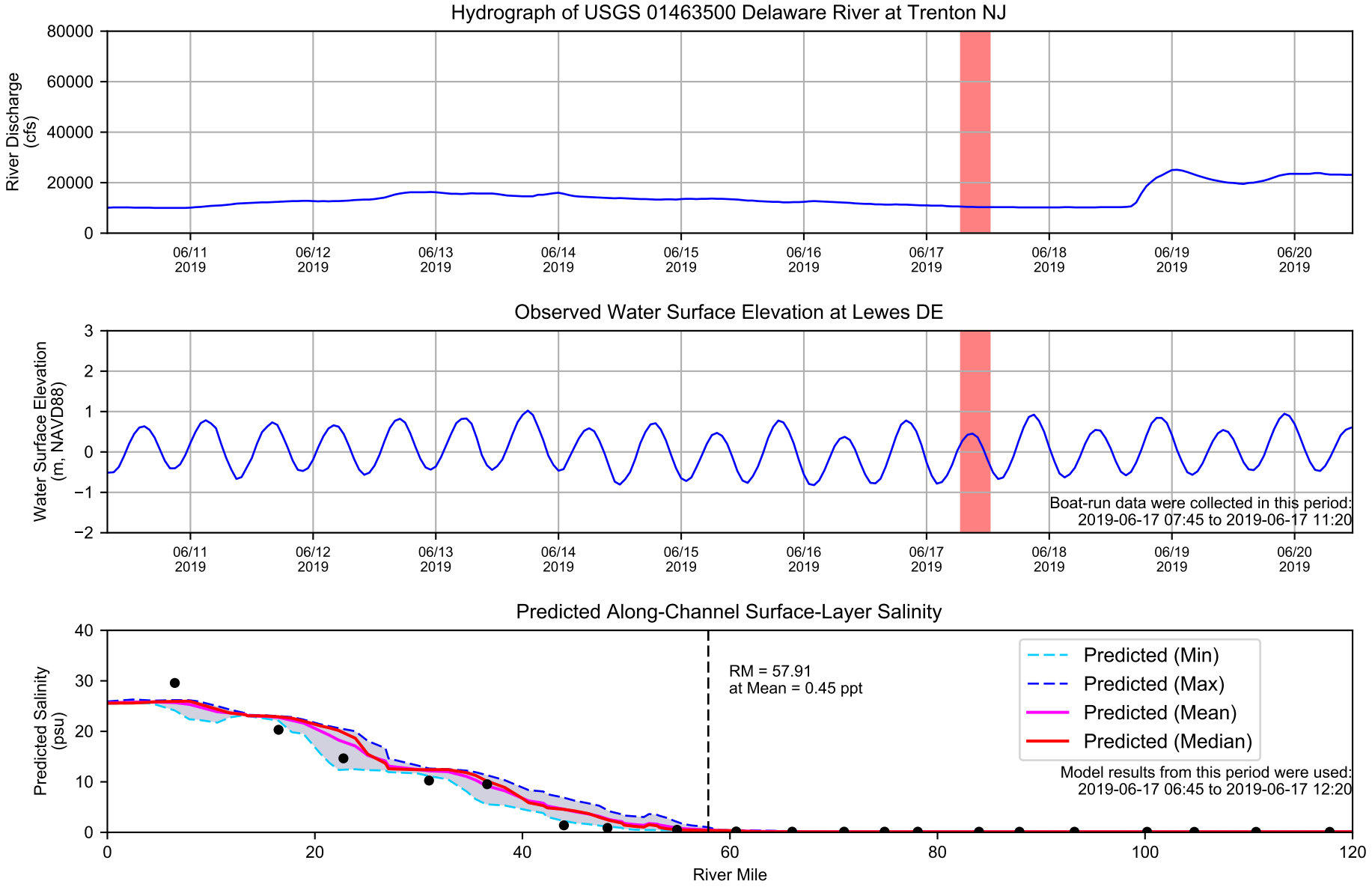

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Figure 3.3-19 (15)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-06-17 07:45 to 2019-06-17 11:20
Model results along the navigation channel during period of 2019-06-17 06:45 to 2019-06-17 12:20 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:10

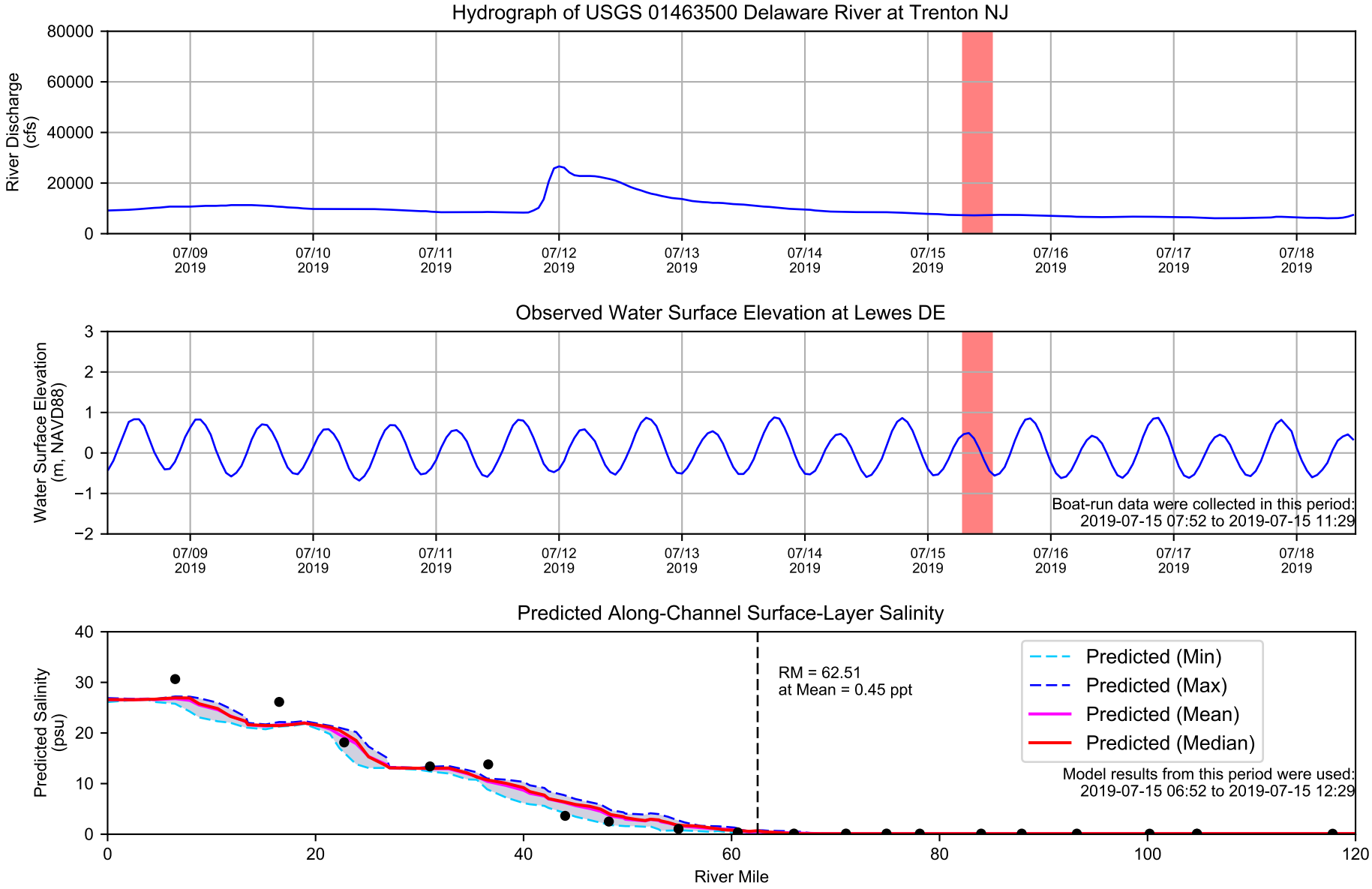

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Figure 3.3-19 (16)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-07-15 07:52 to 2019-07-15 11:29
Model results along the navigation channel during period of 2019-07-15 06:52 to 2019-07-15 12:29 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:11

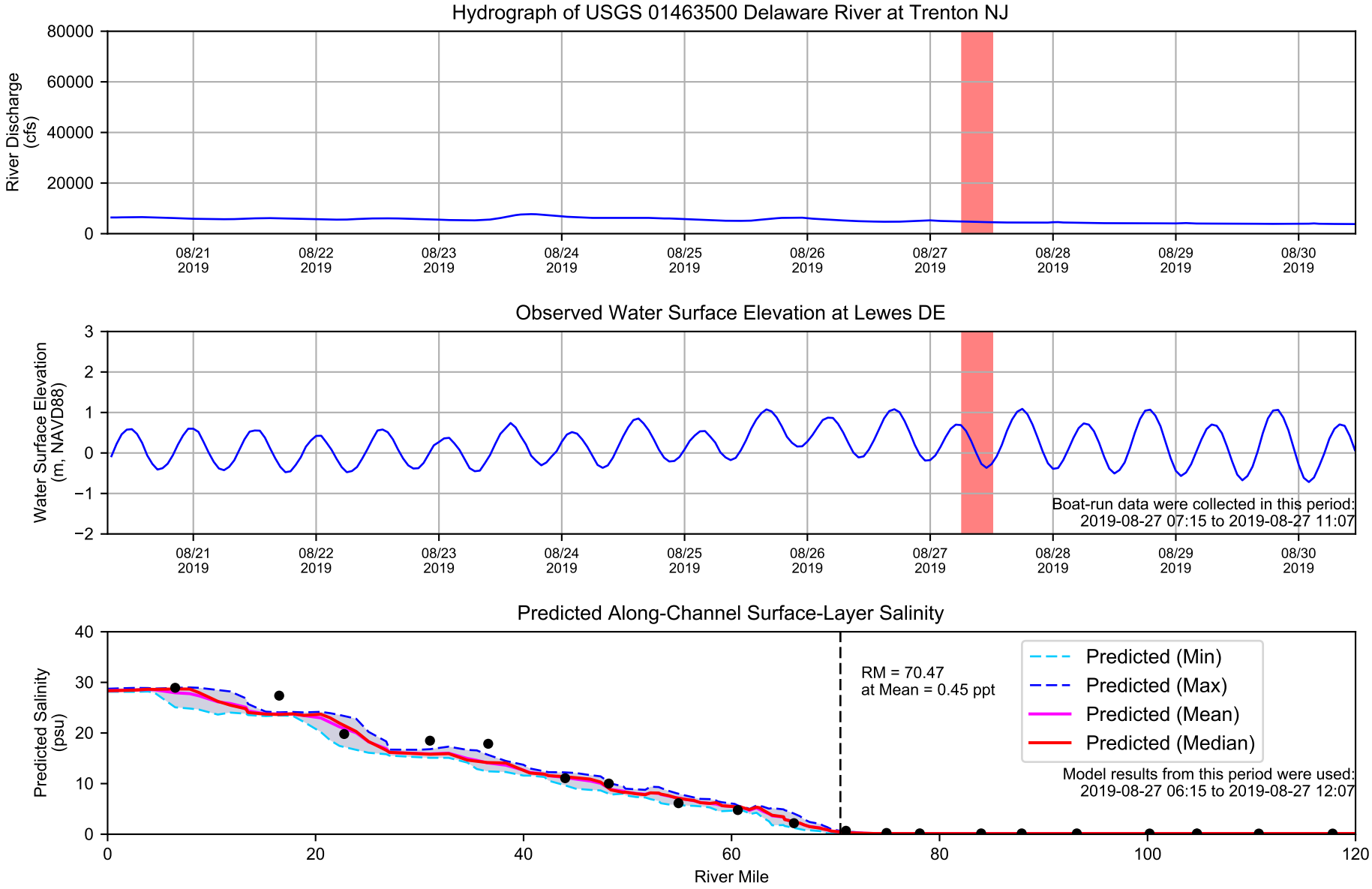

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Figure 3.3-19 (17)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-08-27 07:15 to 2019-08-27 11:07
Model results along the navigation channel during period of 2019-08-27 06:15 to 2019-08-27 12:07 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

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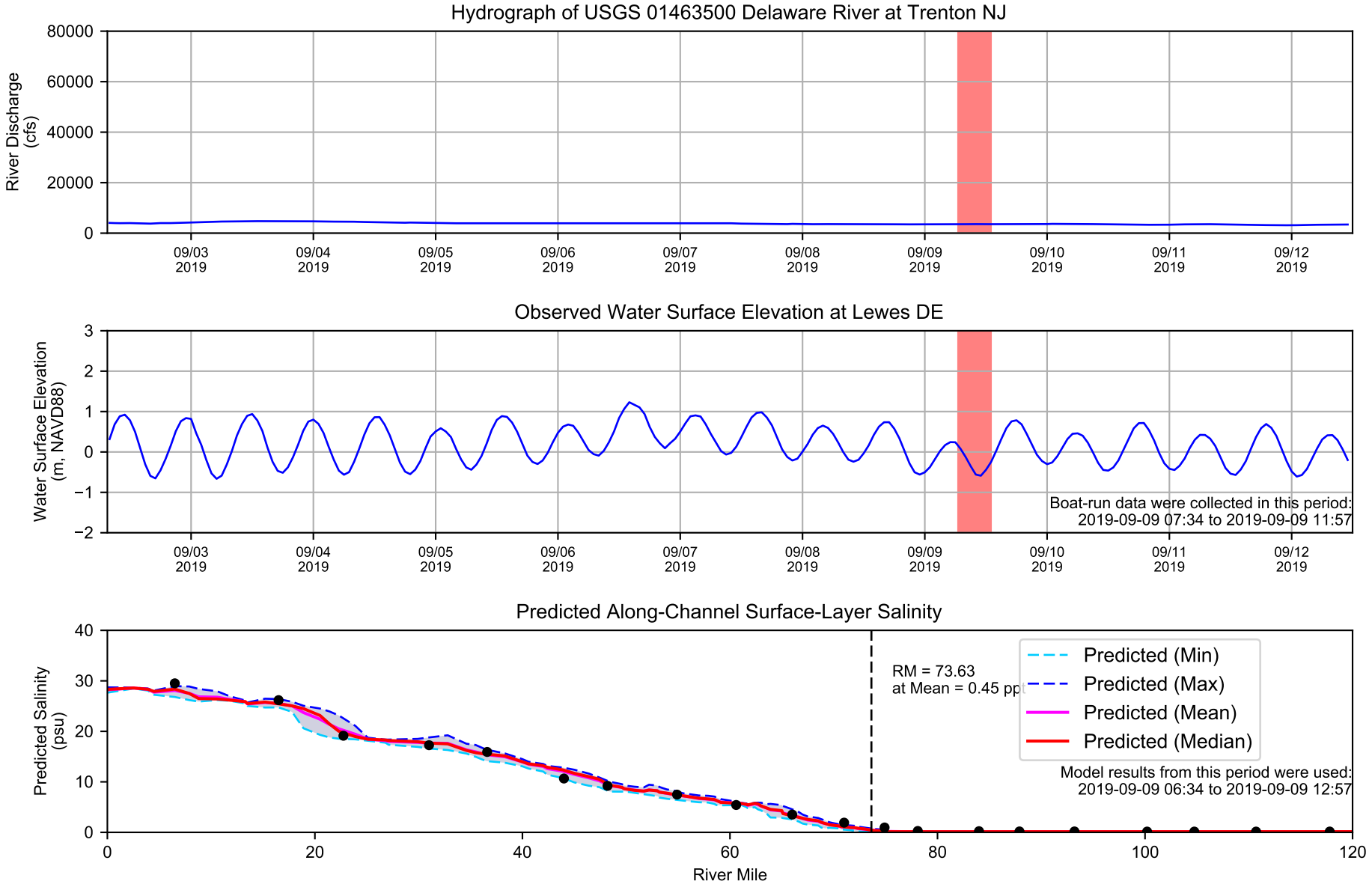

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Figure 3.3-19 (18)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-09-09 07:34 to 2019-09-09 11:57
Model results along the navigation channel during period of 2019-09-09 06:34 to 2019-09-09 12:57 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

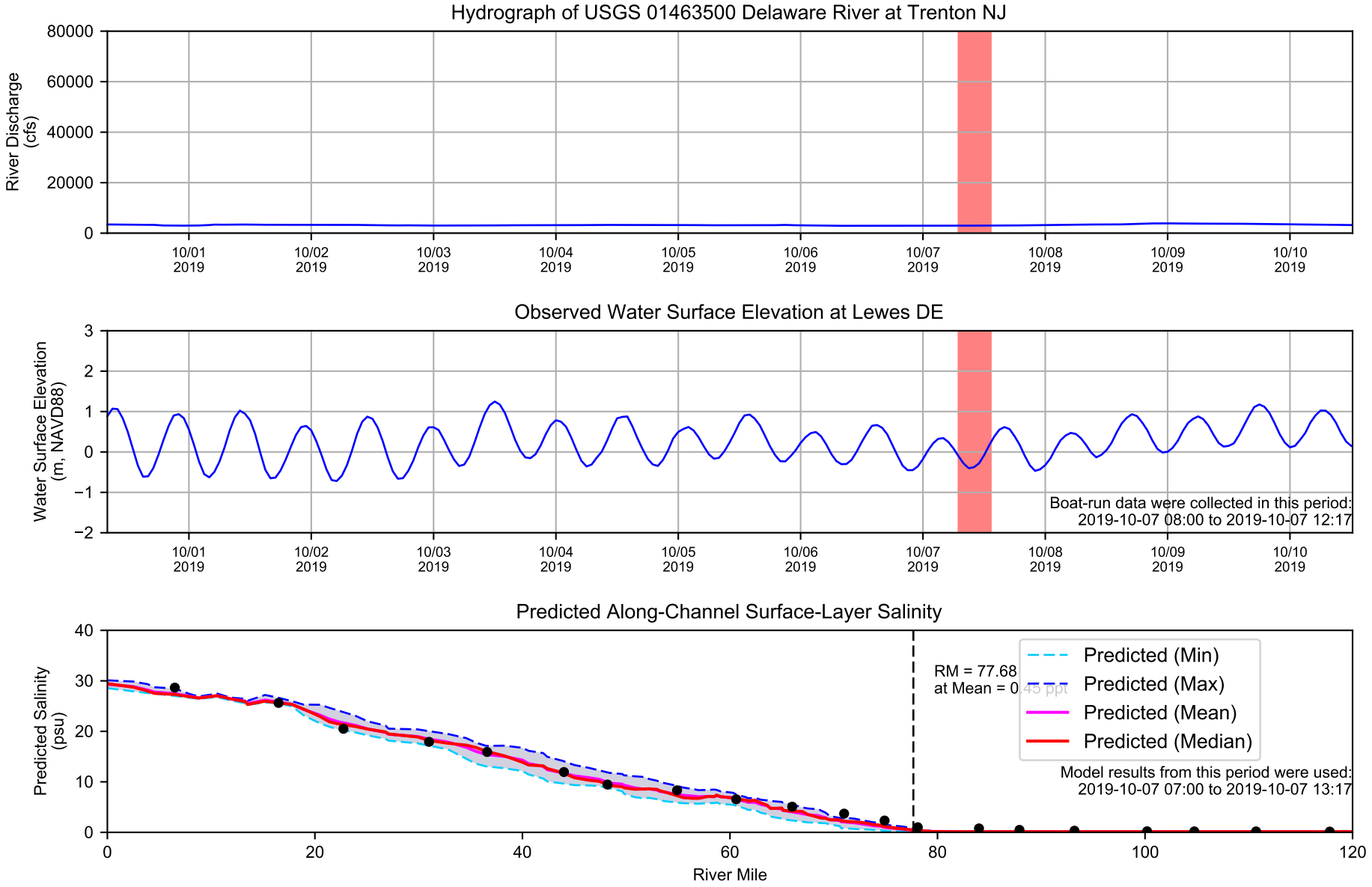

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Figure 3.3-19 (19)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-10-07 08:00 to 2019-10-07 12:17
Model results along the navigation channel during period of 2019-10-07 07:00 to 2019-10-07 13:17 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

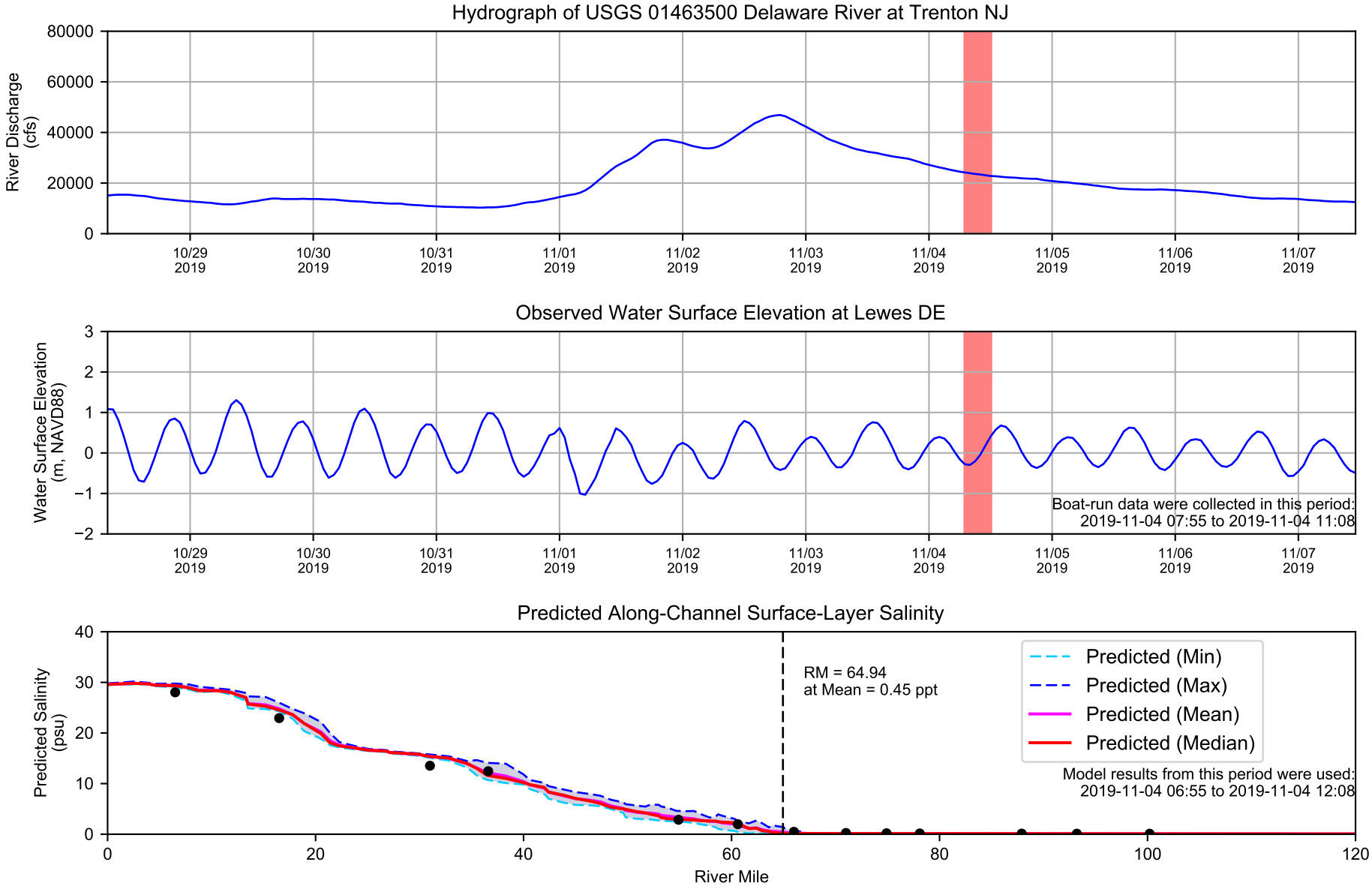

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Figure 3.3-19 (20)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-11-04 07:55 to 2019-11-04 11:08
Model results along the navigation channel during period of 2019-11-04 06:55 to 2019-11-04 12:08 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_EFDC_Output_Salinity_profile_along_RM_with_BoatRunData_4p_G72.py 9/30/2020 13:14:14

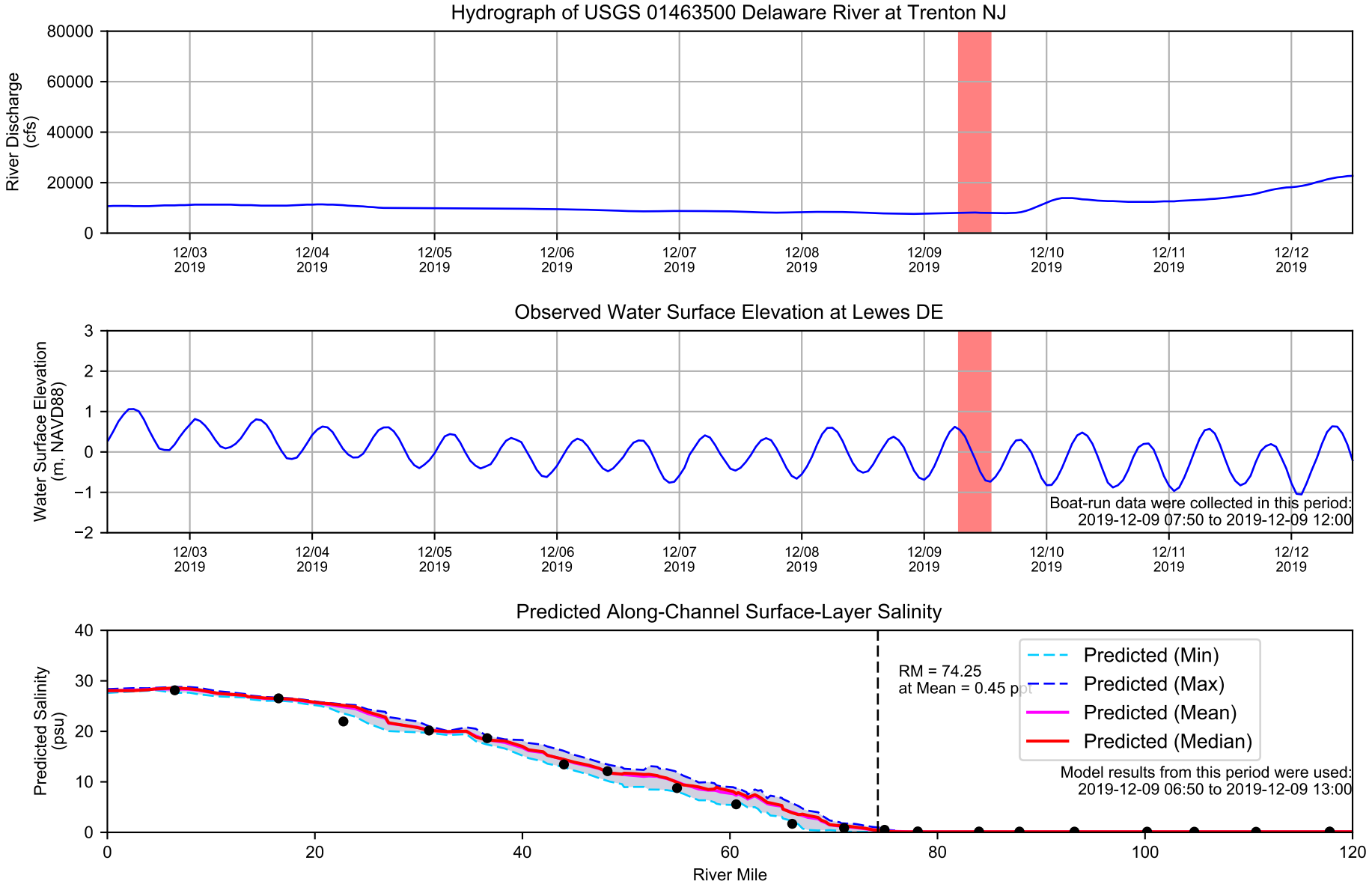

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Figure 3.3-19 (21)

Longitudinal Profile of Salinityin Delaware River and Bay

Notes: Salinity and Chloride data collected by boat-run survey were used. Date that under detention limit were set to half of the detection limit.
Red shaded area indicates the boat run survey time period: 2019-12-09 07:50 to 2019-12-09 12:00
Model results along the navigation channel during period of 2019-12-09 06:50 to 2019-12-09 13:00 were used in this analysis.
Run ID: EFDC_HYDRO_G72_2020-05-16

Appendix N: Evaluation of vertical resolution

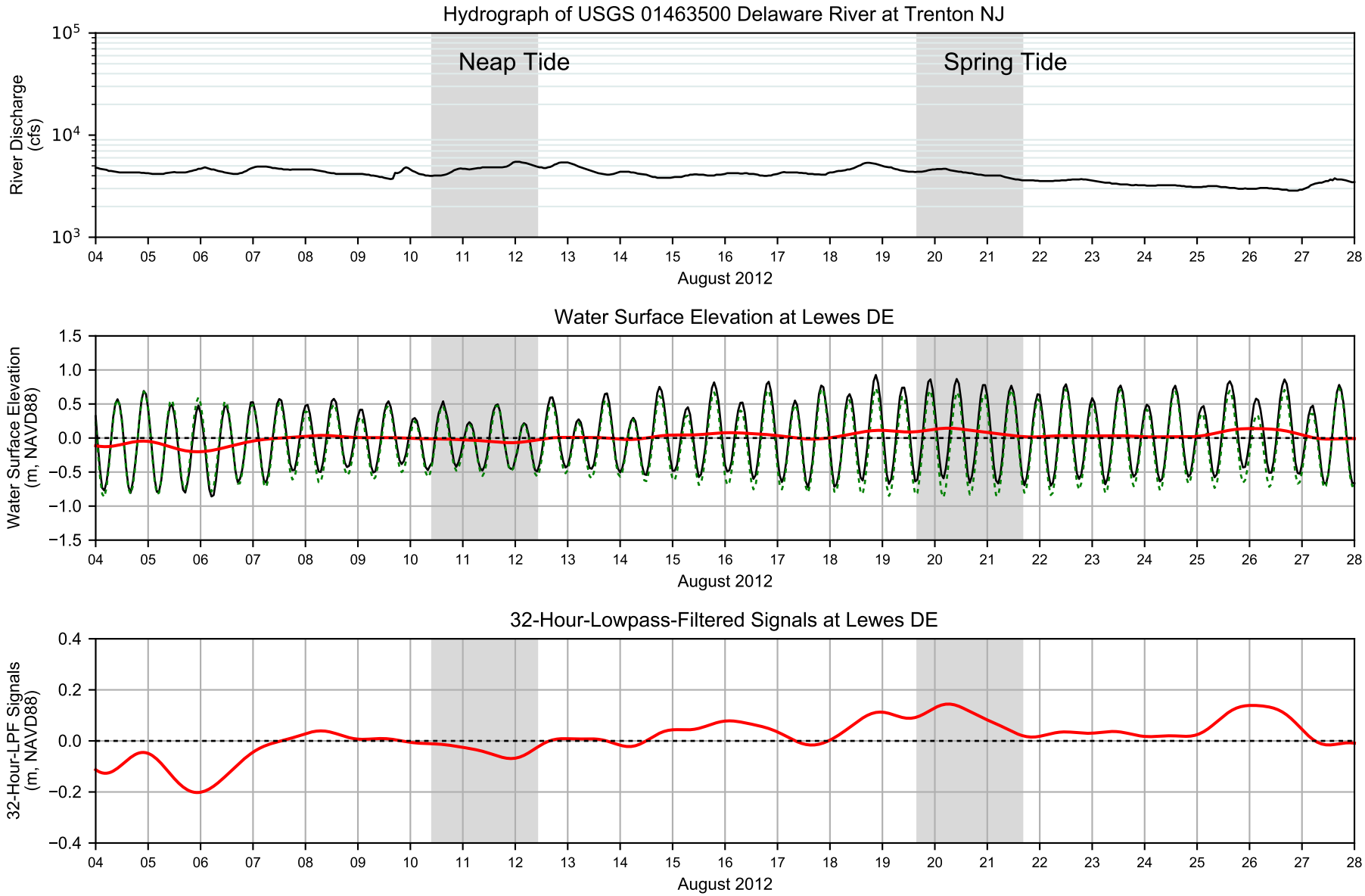

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Figure 3.4-1
River Flow at Trenton and Observed Tide at Lewes during August 2012 Period

Selected time window for neap tide: 08-10-2012 10:00 to 08-12-2012 10:00
Selected time window for spring tide: 08-19-2012 16:00 to 08-21-2012 16:00

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_VertRes_3P_flow_and_tide_v.py 12/7/2021 10:6:19

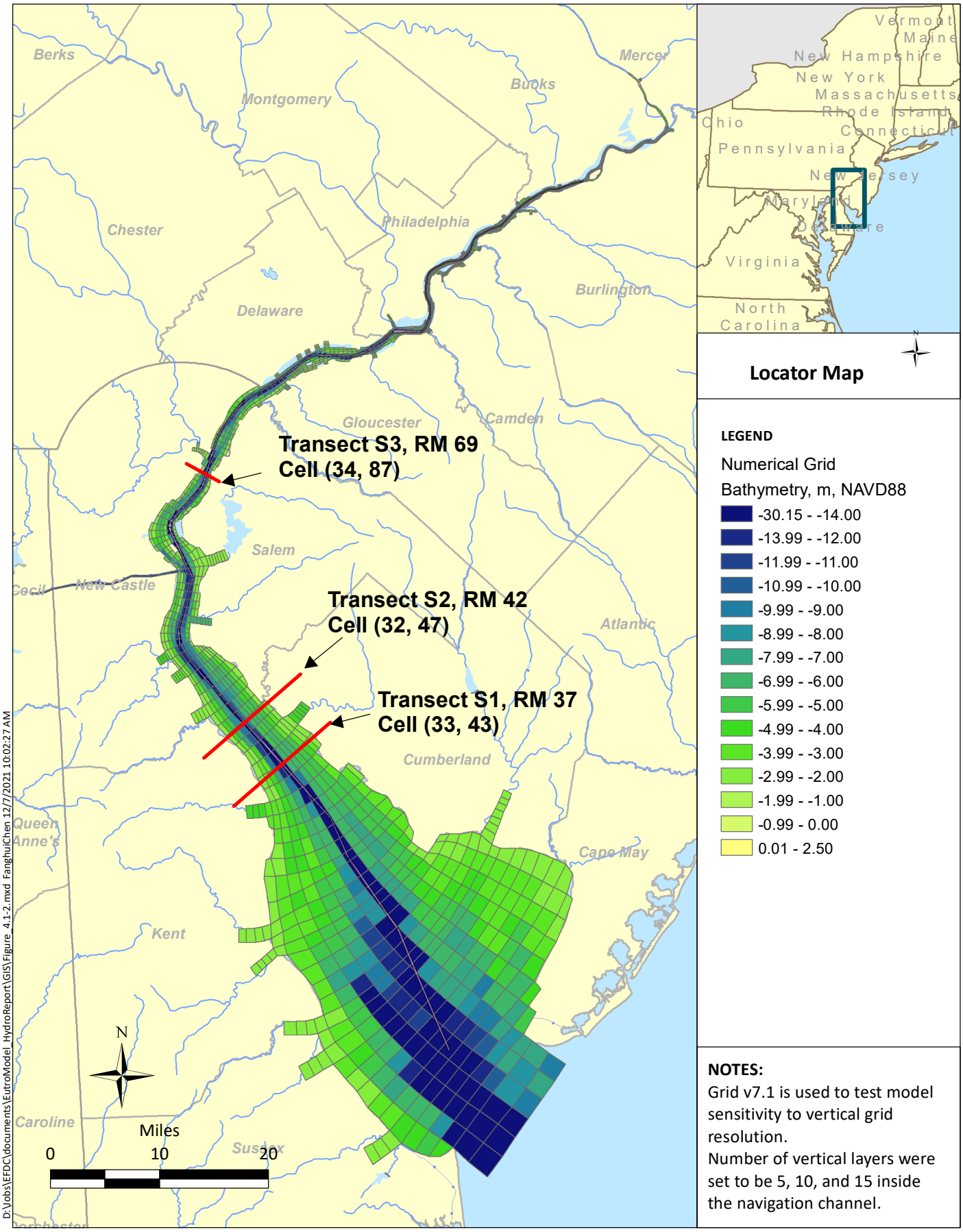

Figure 3.4-2
Numerical Grid with Selected Cells and Transect Locations for Vertical Grid Resolution Sensitivity Analysis

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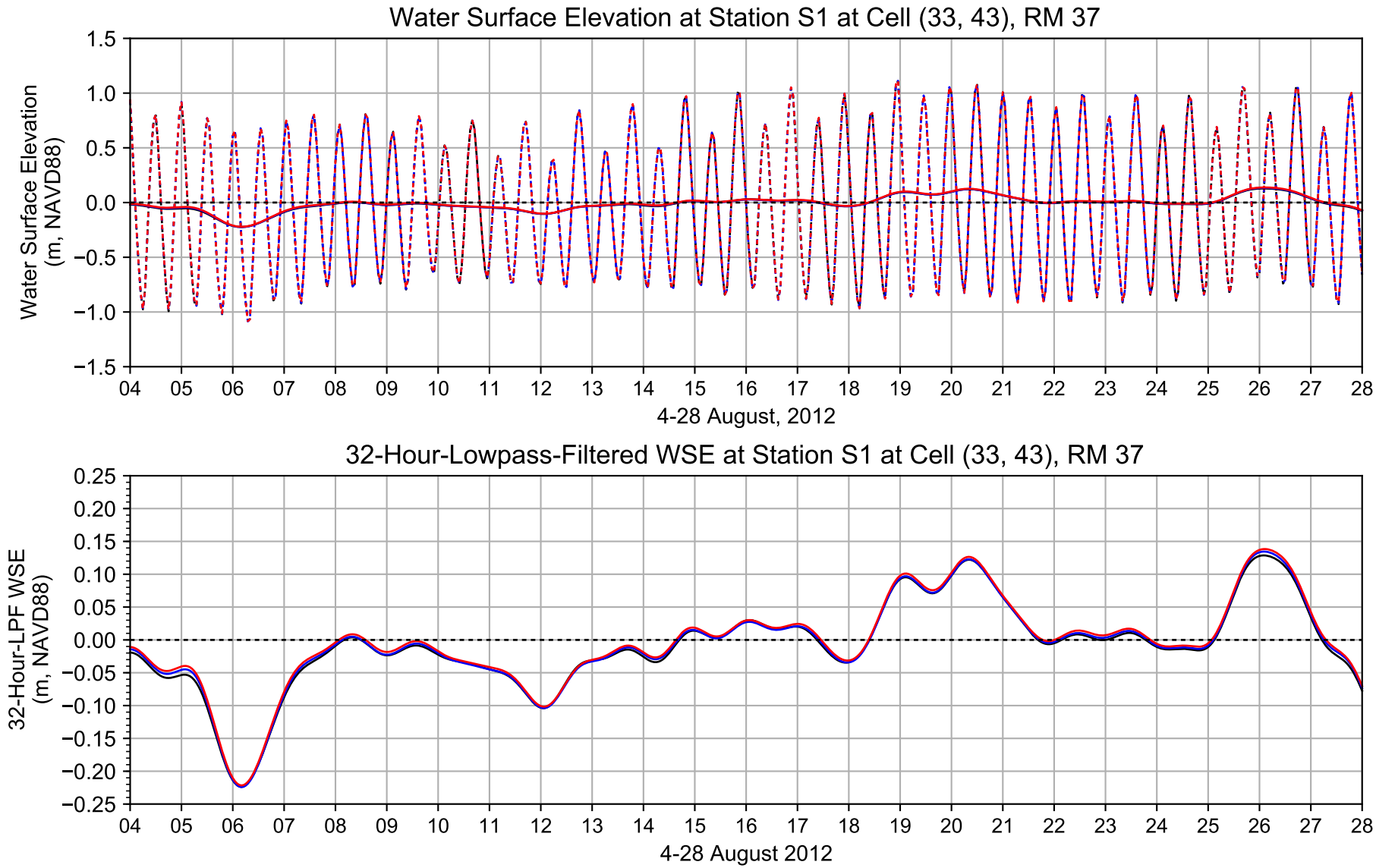

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Figure 3.4-3 (1)
Simulated Hourly and 32-hour-Lowpass-Filtered Water Surface Elevation during 08-04-2012 to 08-28-2012 at Station S1 at Cell (33, 43), RM 37

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_VertRes_mod_wse_32LPF_3M.py 12/7/2021 10:13:11

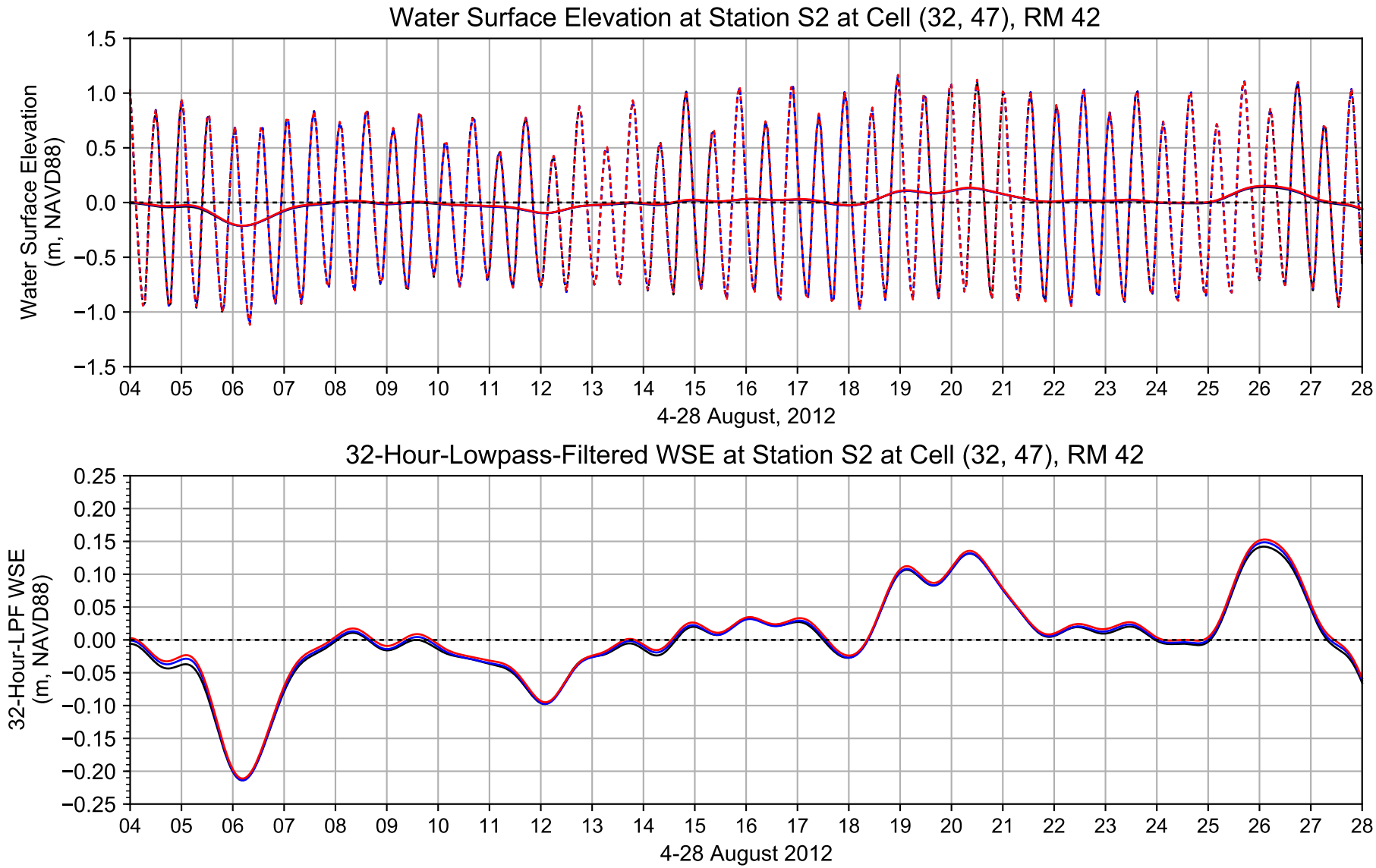

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Figure 3.4-3 (2)
Simulated Hourly and 32-hour-Lowpass-Filtered Water Surface Elevation during 08-04-2012 to 08-28-2012 at Station S2 at Cell (32, 47), RM 42

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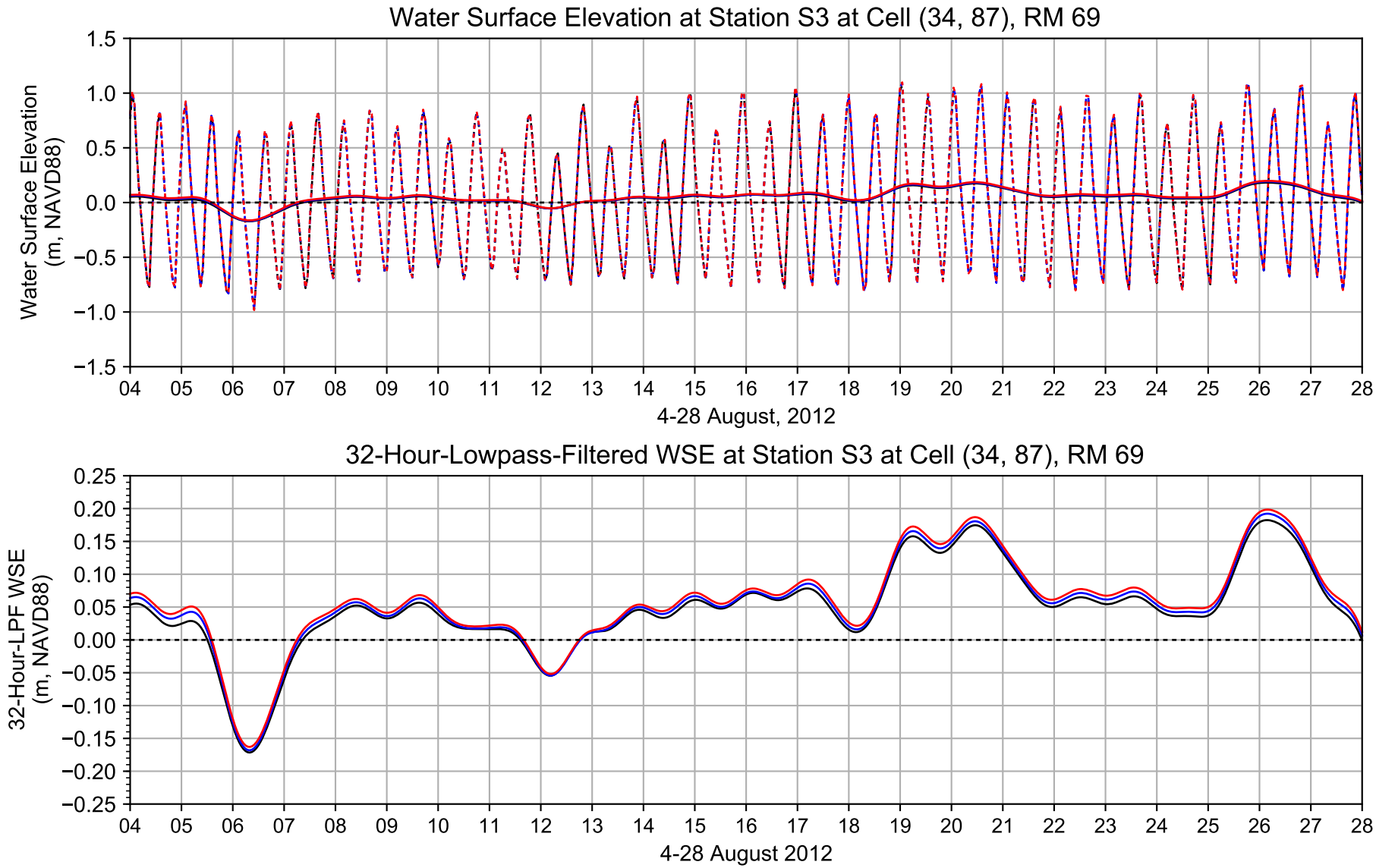

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Figure 3.4-3 (3)
Simulated Hourly and 32-hour-Lowpass-Filtered Water Surface Elevation during 08-04-2012 to 08-28-2012 at Station S3 at Cell (34, 87), RM 69

FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_VertRes_mod_wse_32LPF_3M.py 12/7/2021 10:13:31

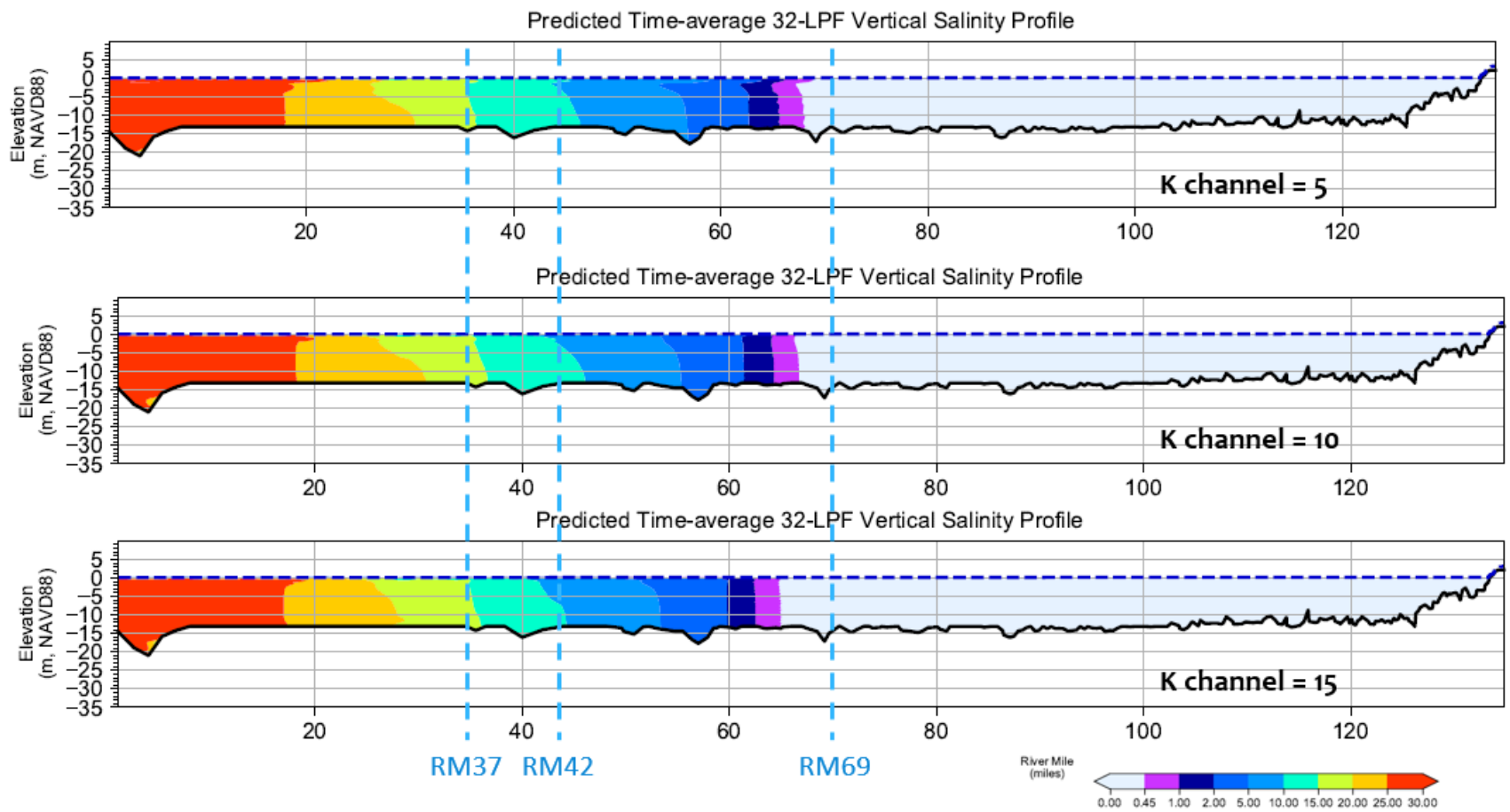

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Figure 3.4-4 (1)
Longitudinal and Vertical Distribution of Tidally-Averaged of Salinity (32-Lowpass-Filtered Results) - Spring Tide
Time period: 08-19-2012 16:00 to 08-21-2012 16:00

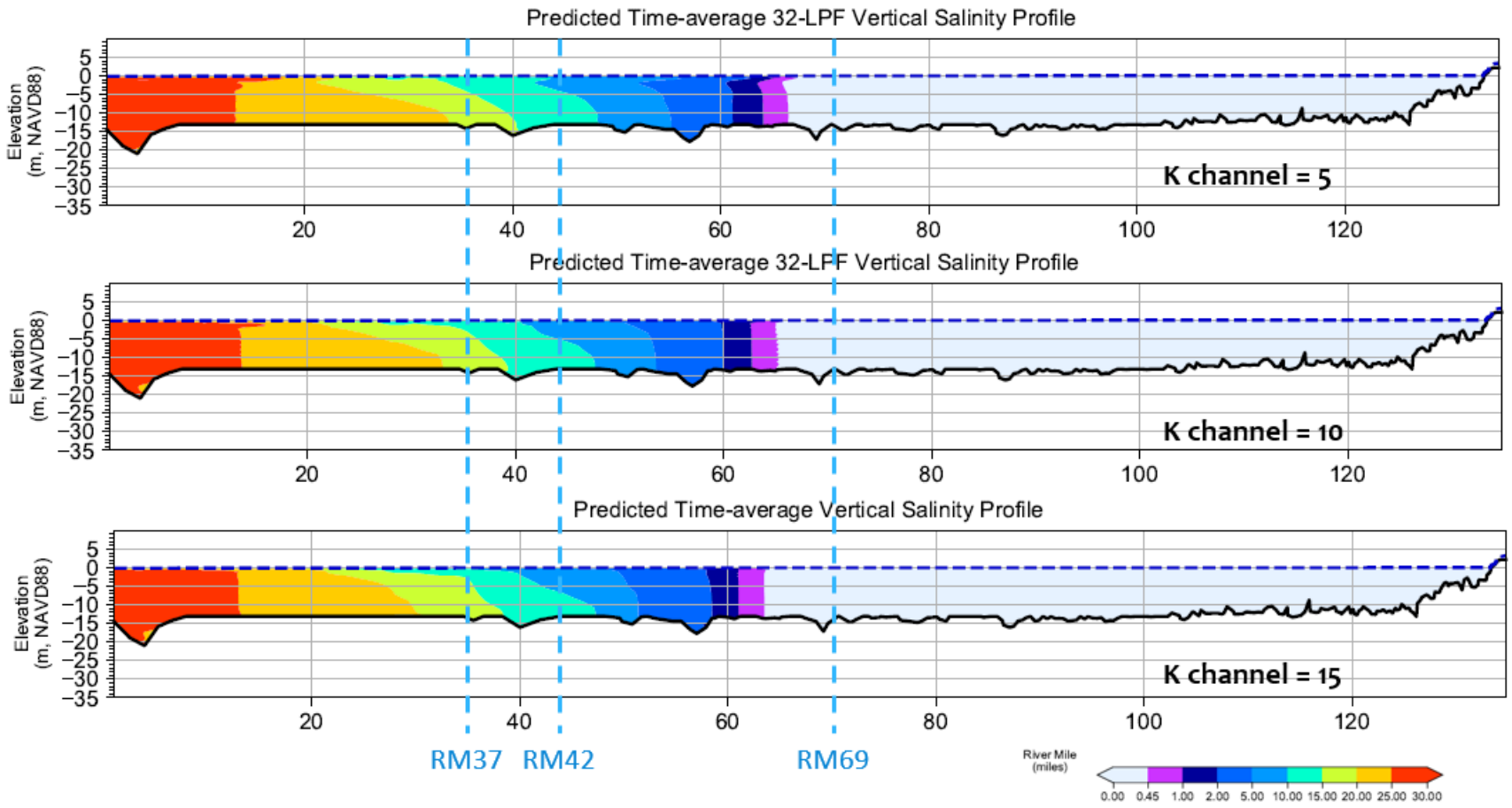

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Figure 3.4-4 (2)
Longitudinal and Vertical Distribution of Tidally-Averaged of Salinity (32-Lowpass-Filtered Results) - Neap Tide
Time period: 08-10-2012 10:00 to 08-12-2012 10:00

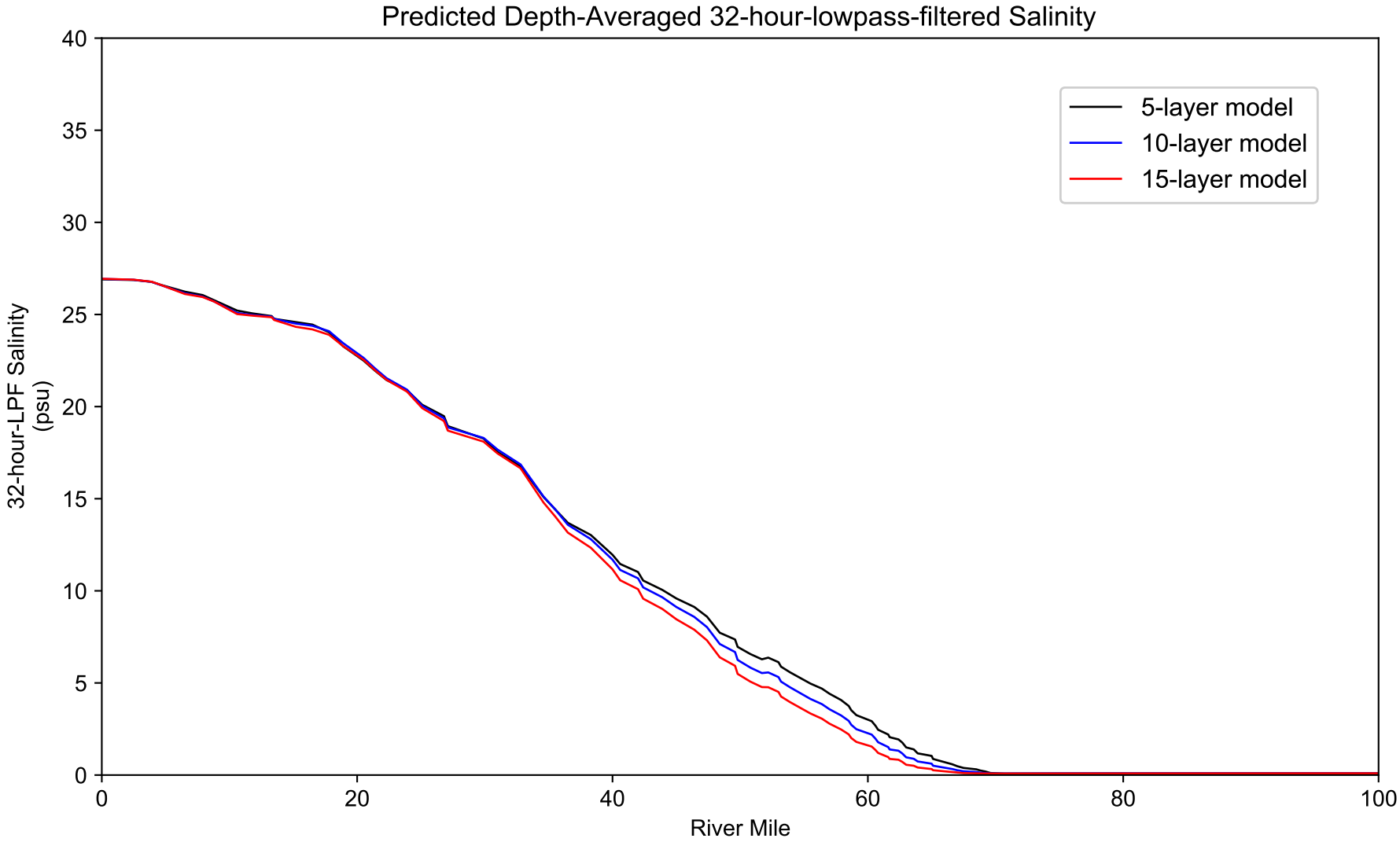

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Figure 3.4-5 (1)
Comparison of Predicted Depth-Averaged 32-hour-lowpass-filtered Salinity
Time-Averaged Values during Period of 08-19-2012 to 08-21-2012 are Shown, Spring Tide

EFDC Run IDs: EFDC_HYDRO_G71_2002-01_KC6_5LY_CET3_8_dt6s_WITH_EVP_10x_yr2012,
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EFDC_HYDRO_G71_2002-03_KC18_15LY_CET3_8_dt6s_WITH_EVP_10x_yr2012

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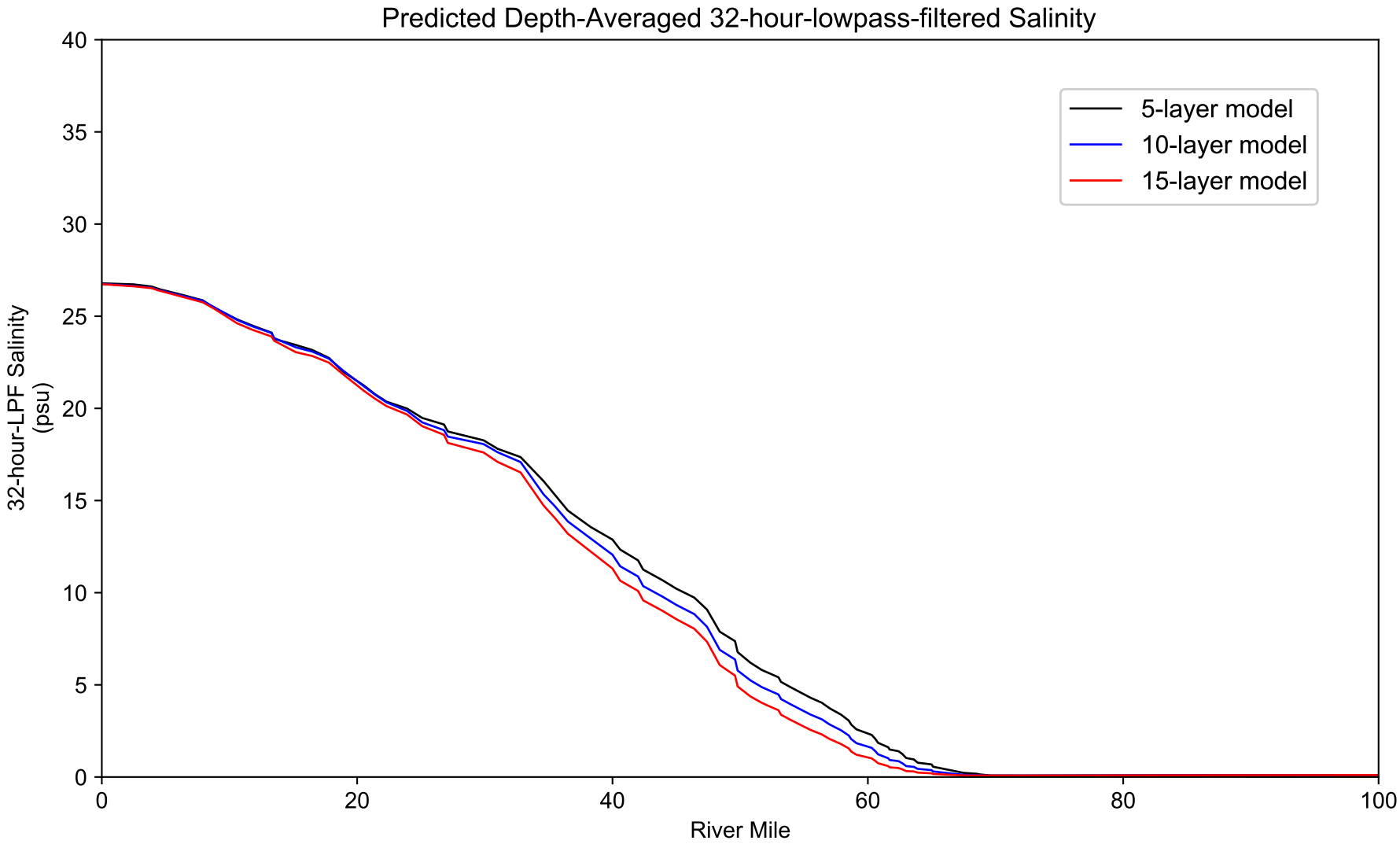

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Figure 3.4-5 (2)
Comparison of Predicted Depth-Averaged 32-hour-lowpass-filtered Salinity
Time-Averaged Values during Period of 08-10-2012 to 08-12-2012 are Shown, Neap Tide

EFDC Run IDs: EFDC_HYDRO_G71_2002-01_KC6_5LY_CET3_8_dt6s_WITH_EVP_10x_yr2012, EFDC_HYDRO_G71_2002-02_KC12_10LY_CET3_8_dt6s_WITH_EVP_10x_yr2012, EFDC_HYDRO_G71_2002-03_KC18_15LY_CET3_8_dt6s_WITH_EVP_10x_yr2012

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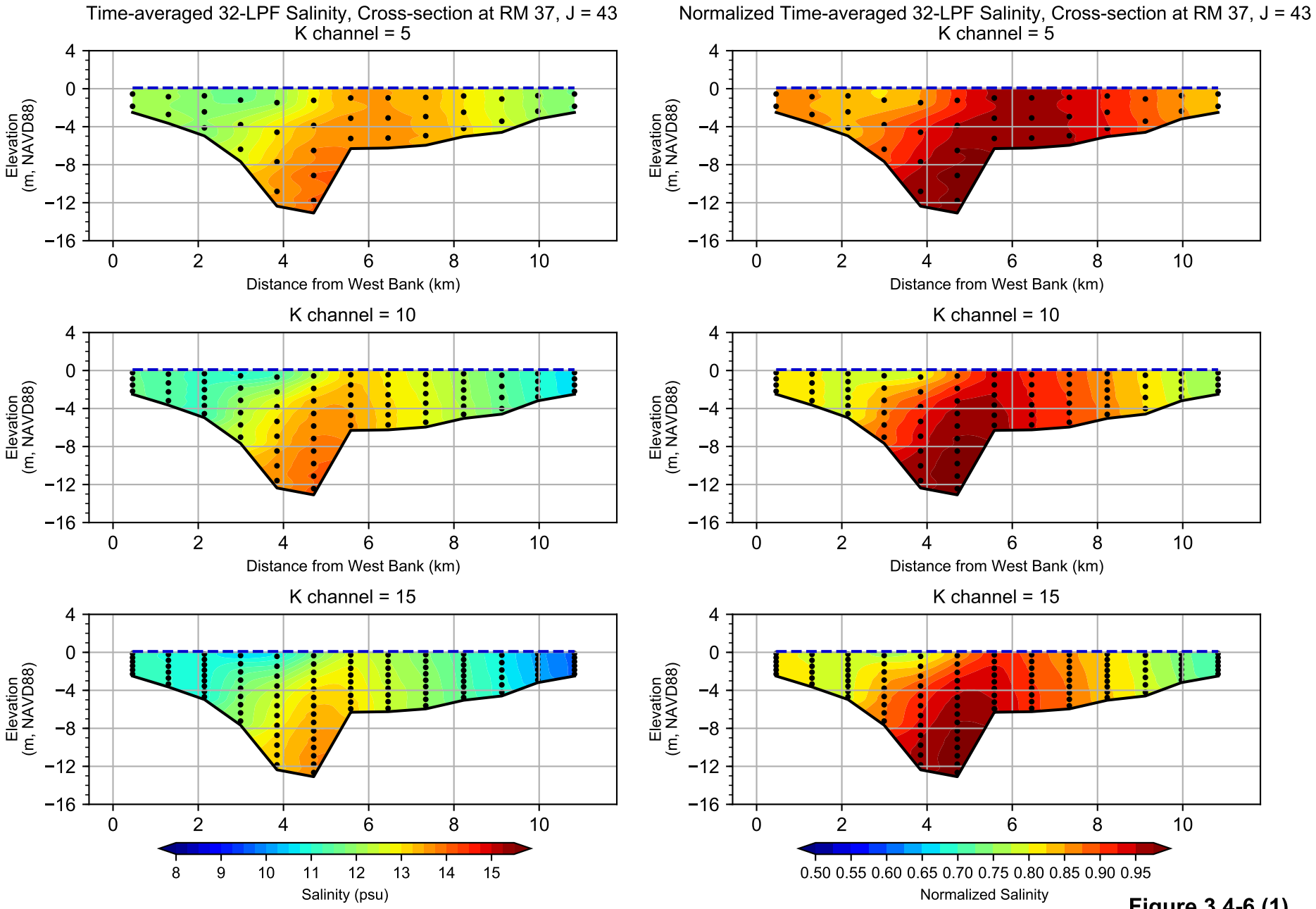

Figure 3.4-6 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 37, J = 43 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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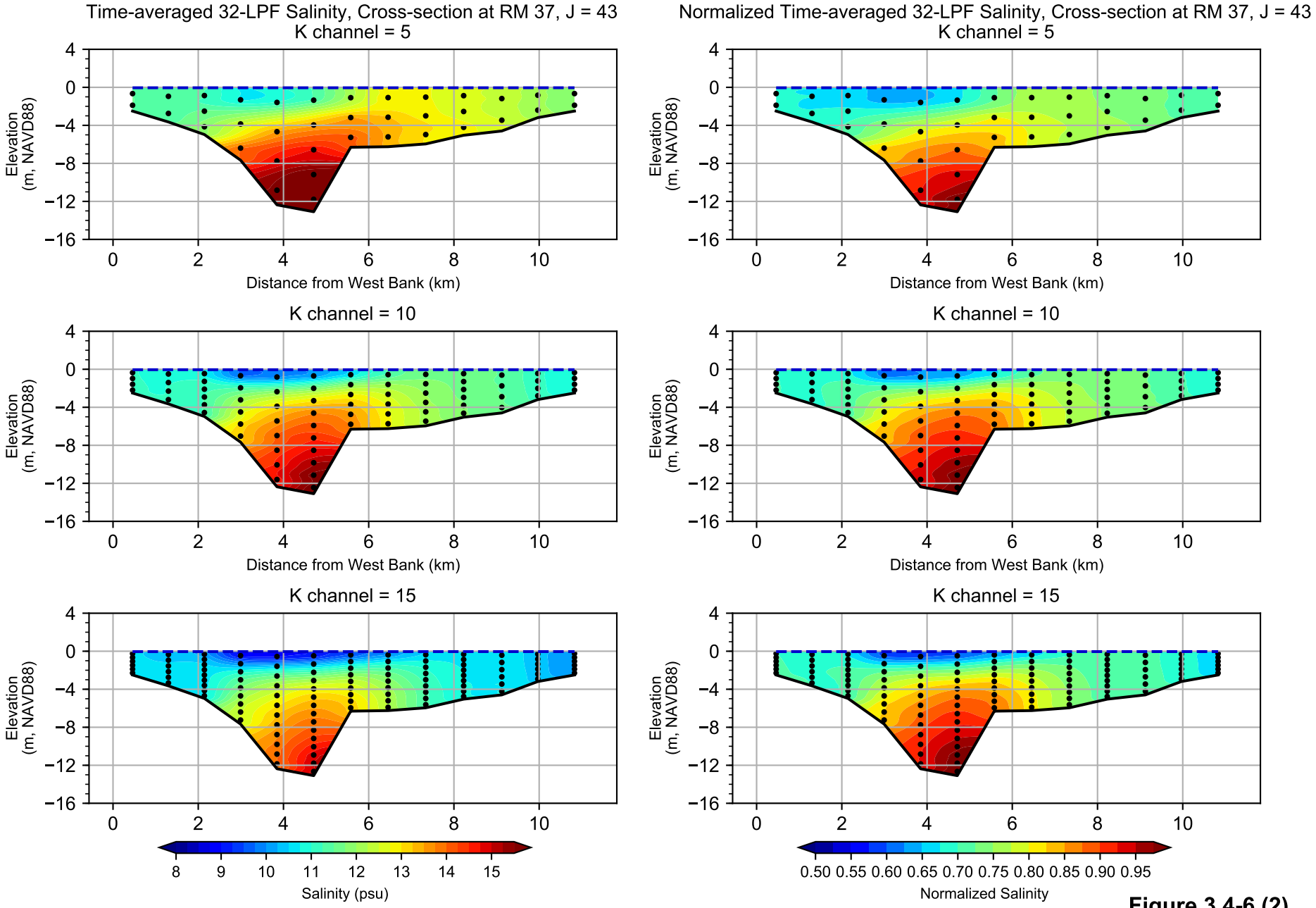

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Figure 3.4-6 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 37, J = 43 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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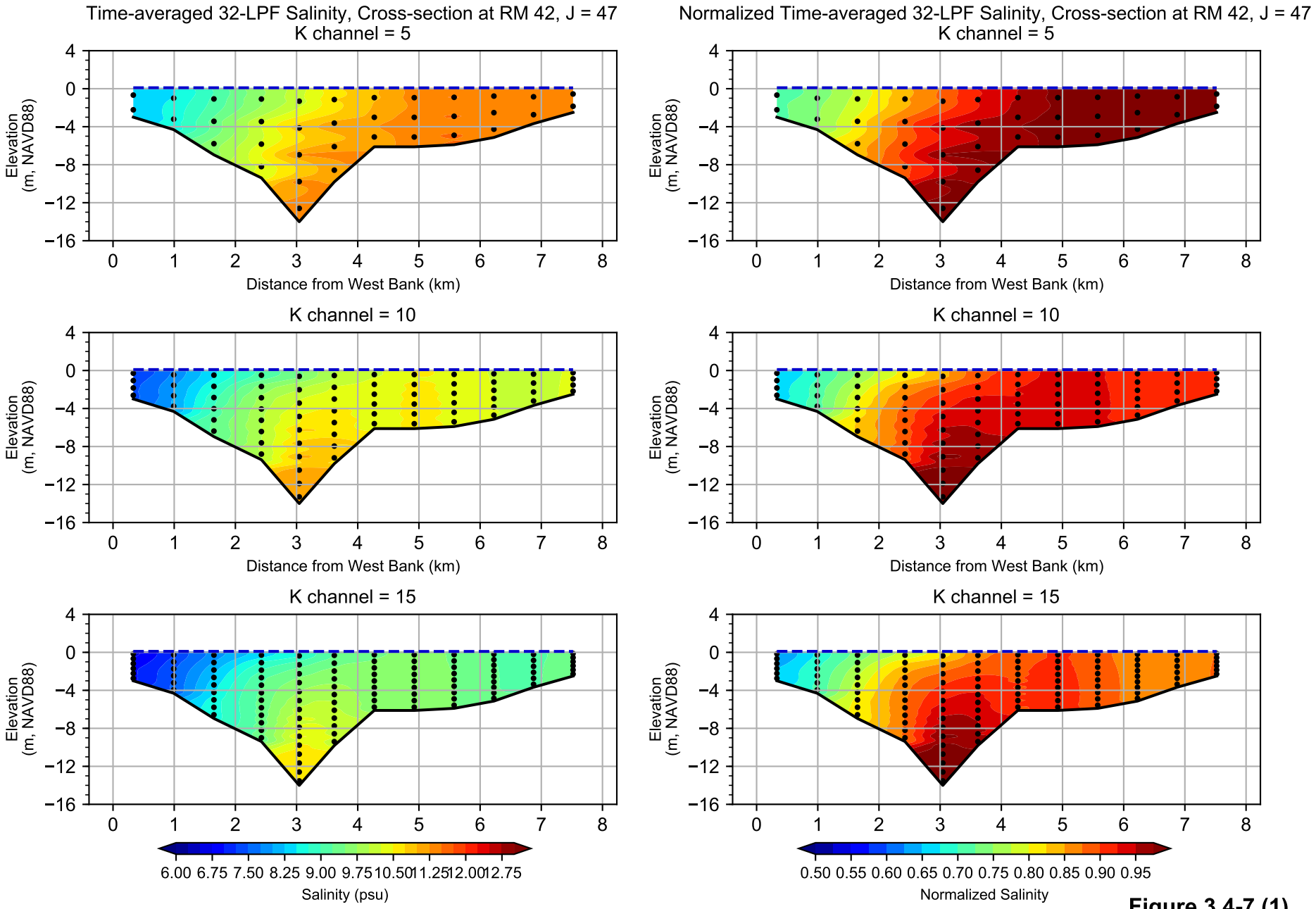

Figure 3.4-7 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 42, J = 47 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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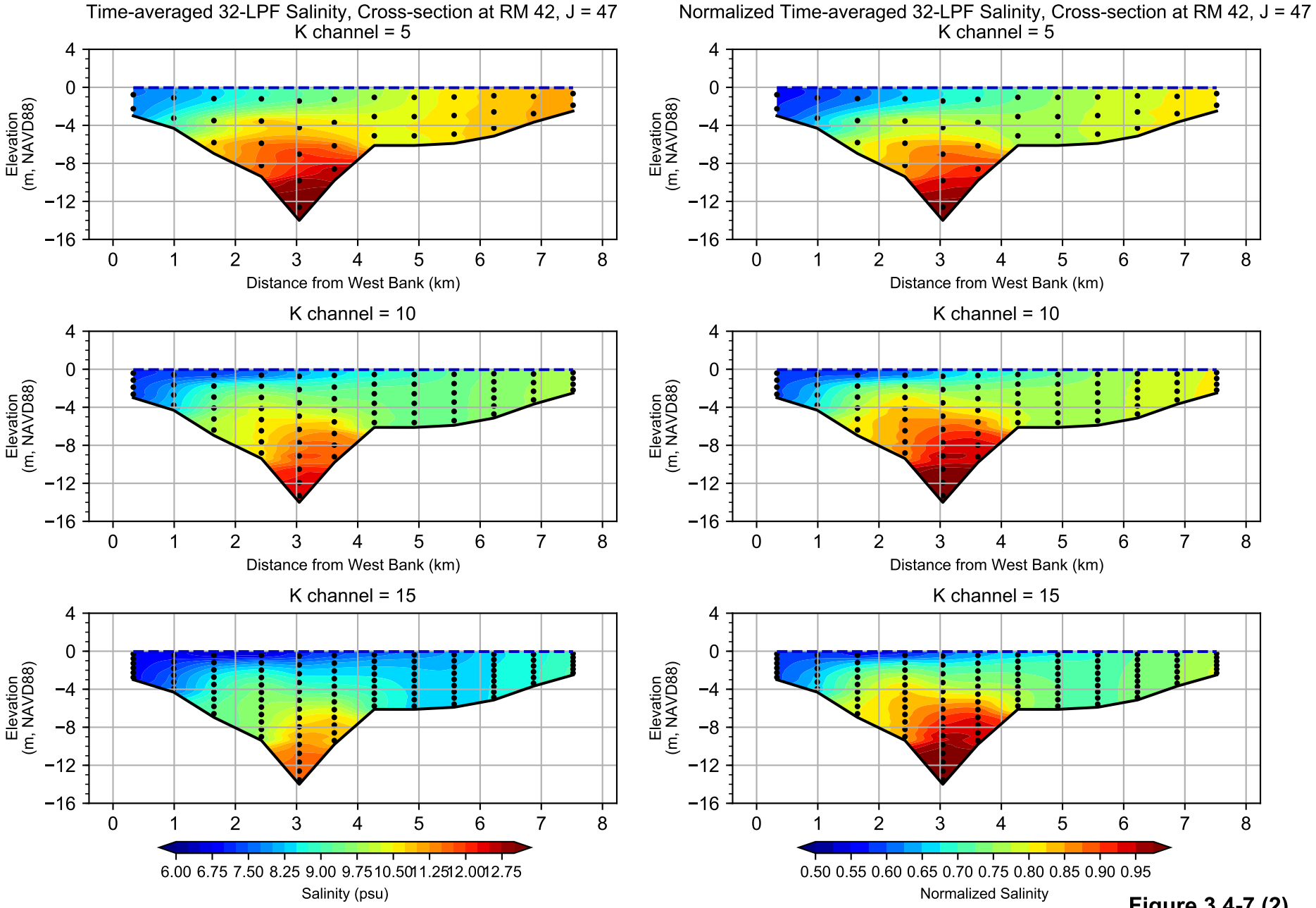

Figure 3.4-7 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 42, J = 47 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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FC - D:\Jobs\EFDC\documents\EutroModel_HydroReport\code\plot_6P_xs_sal_vertical_contour_plot_smoothed_v2.py 12/7/2021 10:22:17

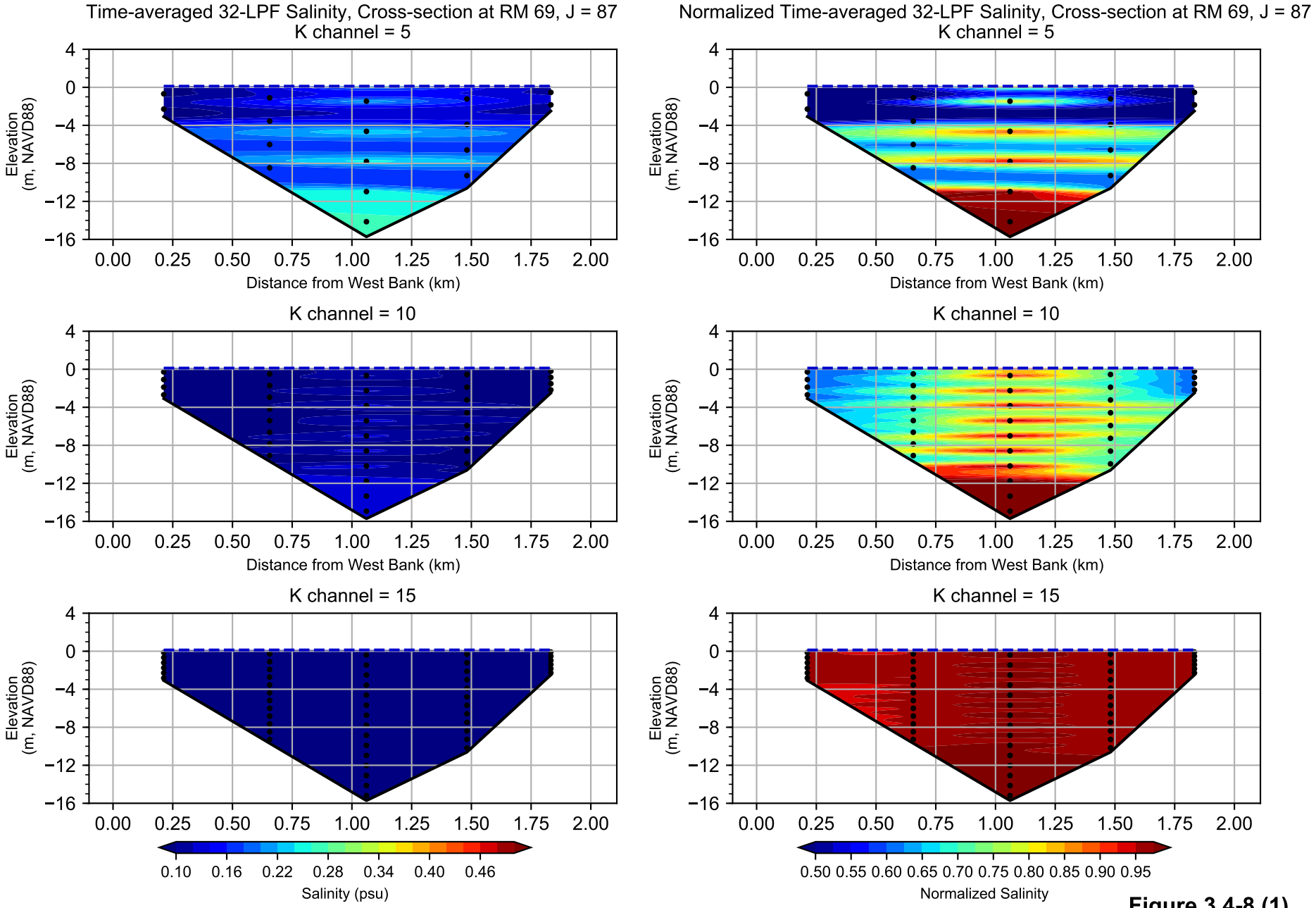

Figure 3.4-8 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 69, J = 87 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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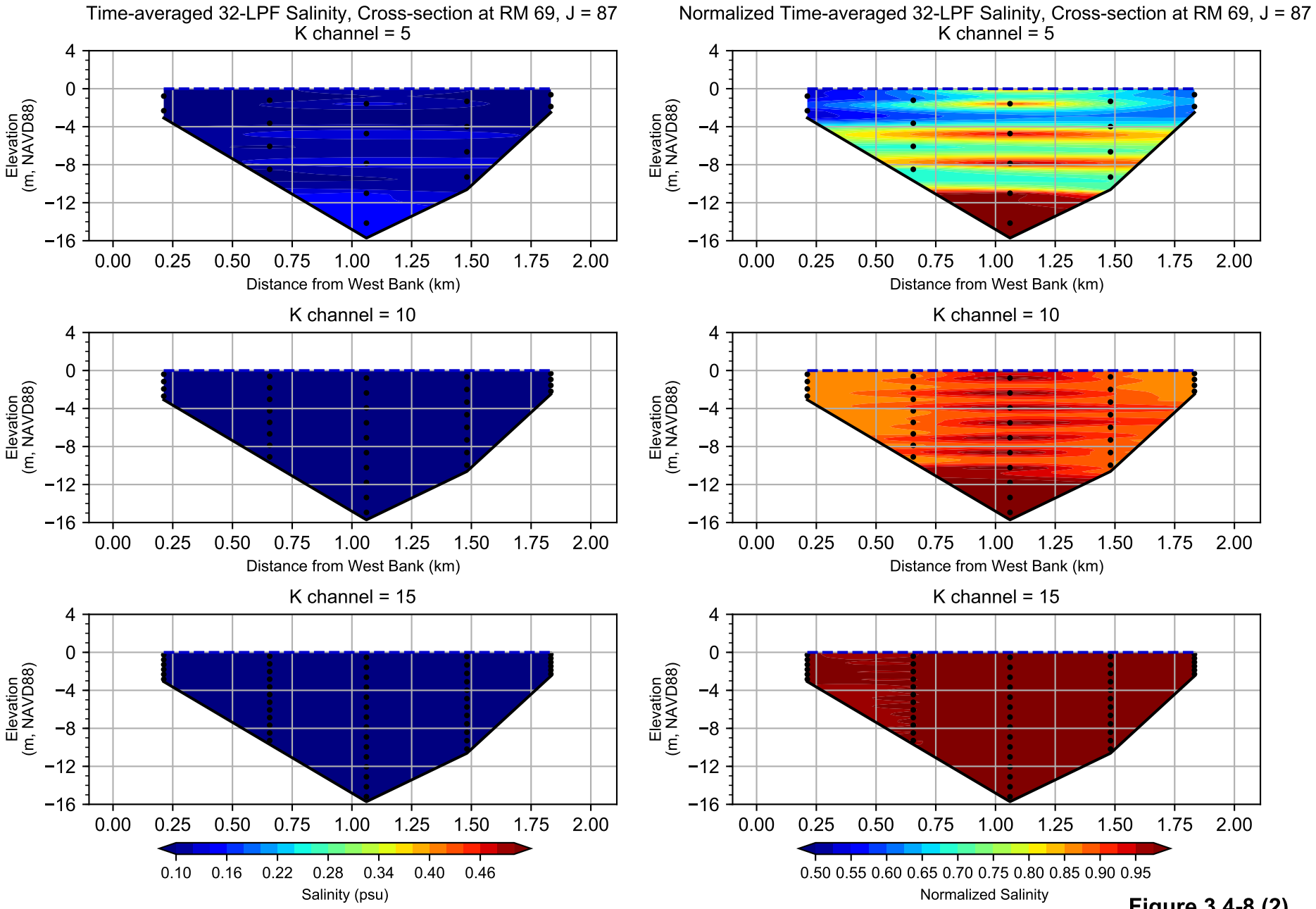

Figure 3.4-8 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Salinity at Cross-section at RM 69, J = 87 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Salinity was normalized against the maximum salinity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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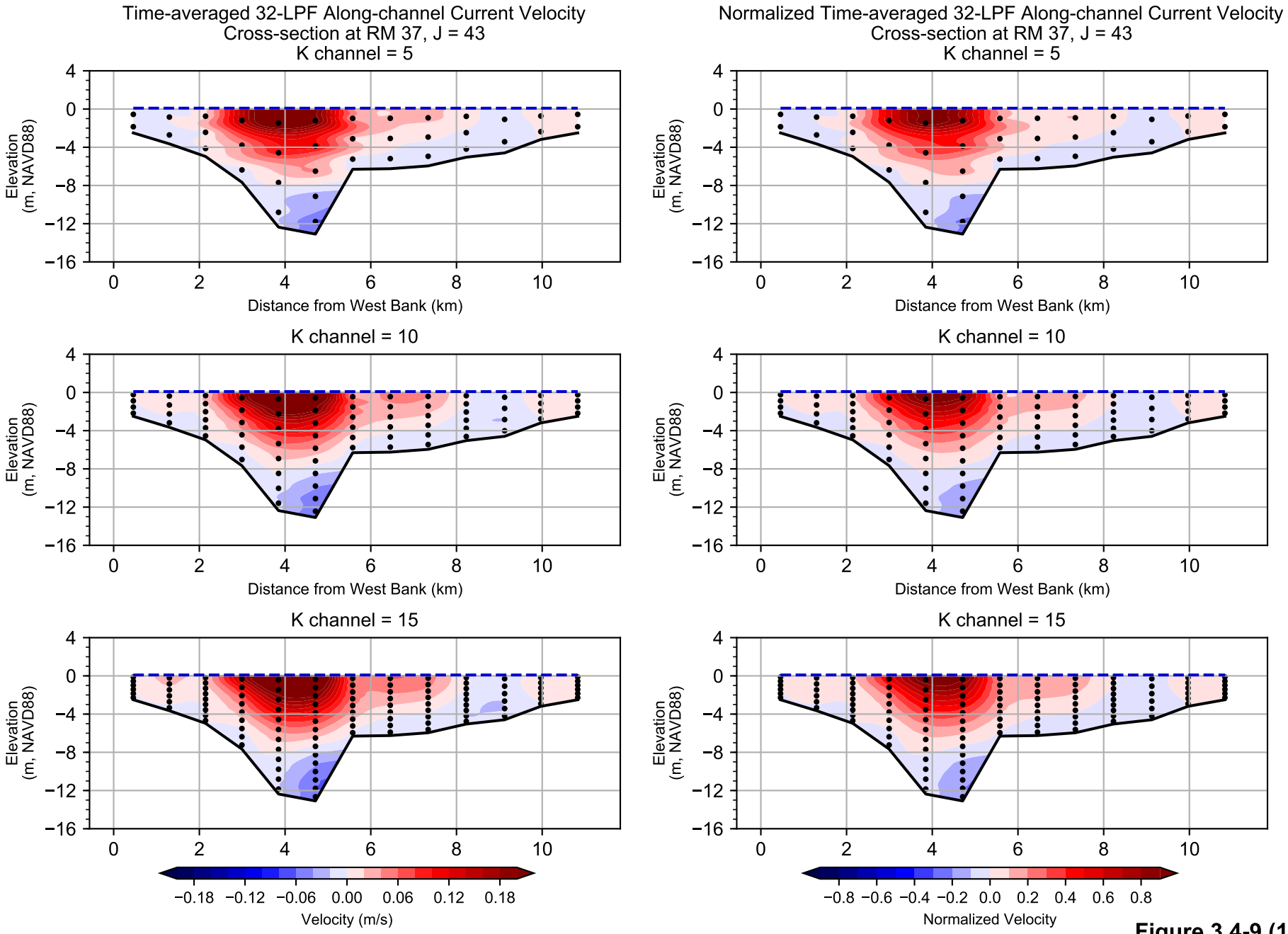

Figure 3.4-9 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 37, J = 43 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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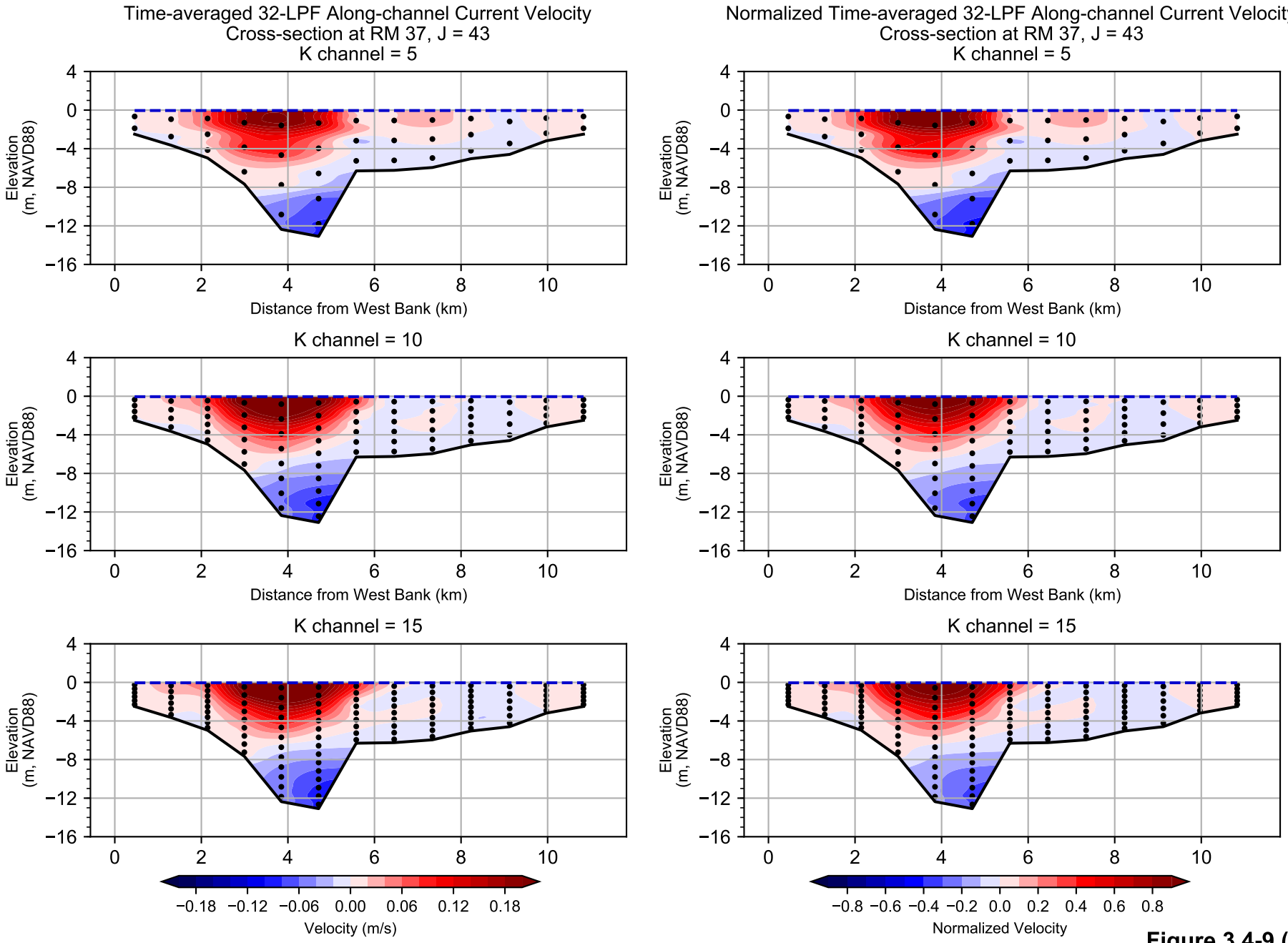

Figure 3.4-9 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 37, J = 43 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

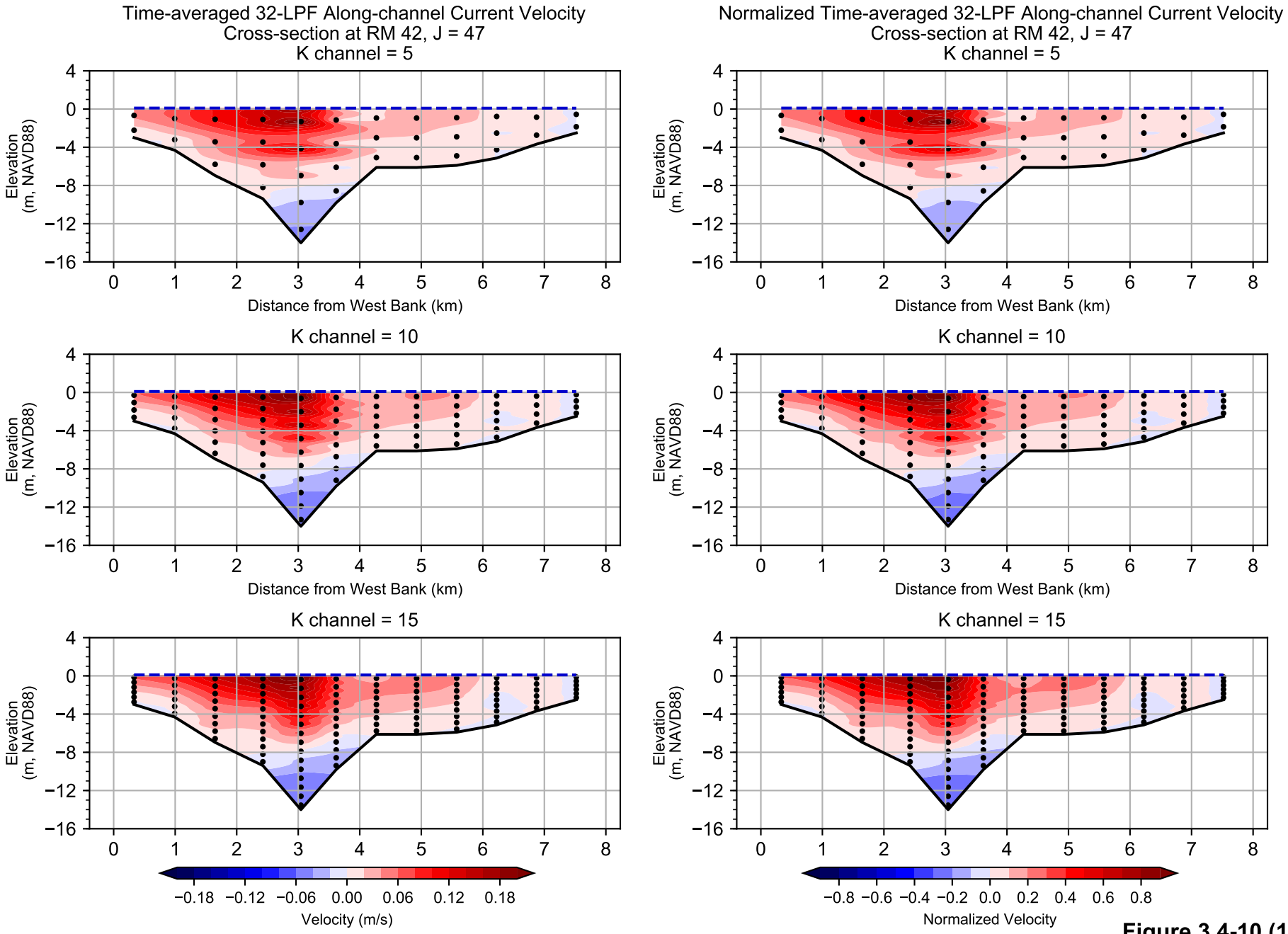

Figure 3.4-10 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 42, J = 47 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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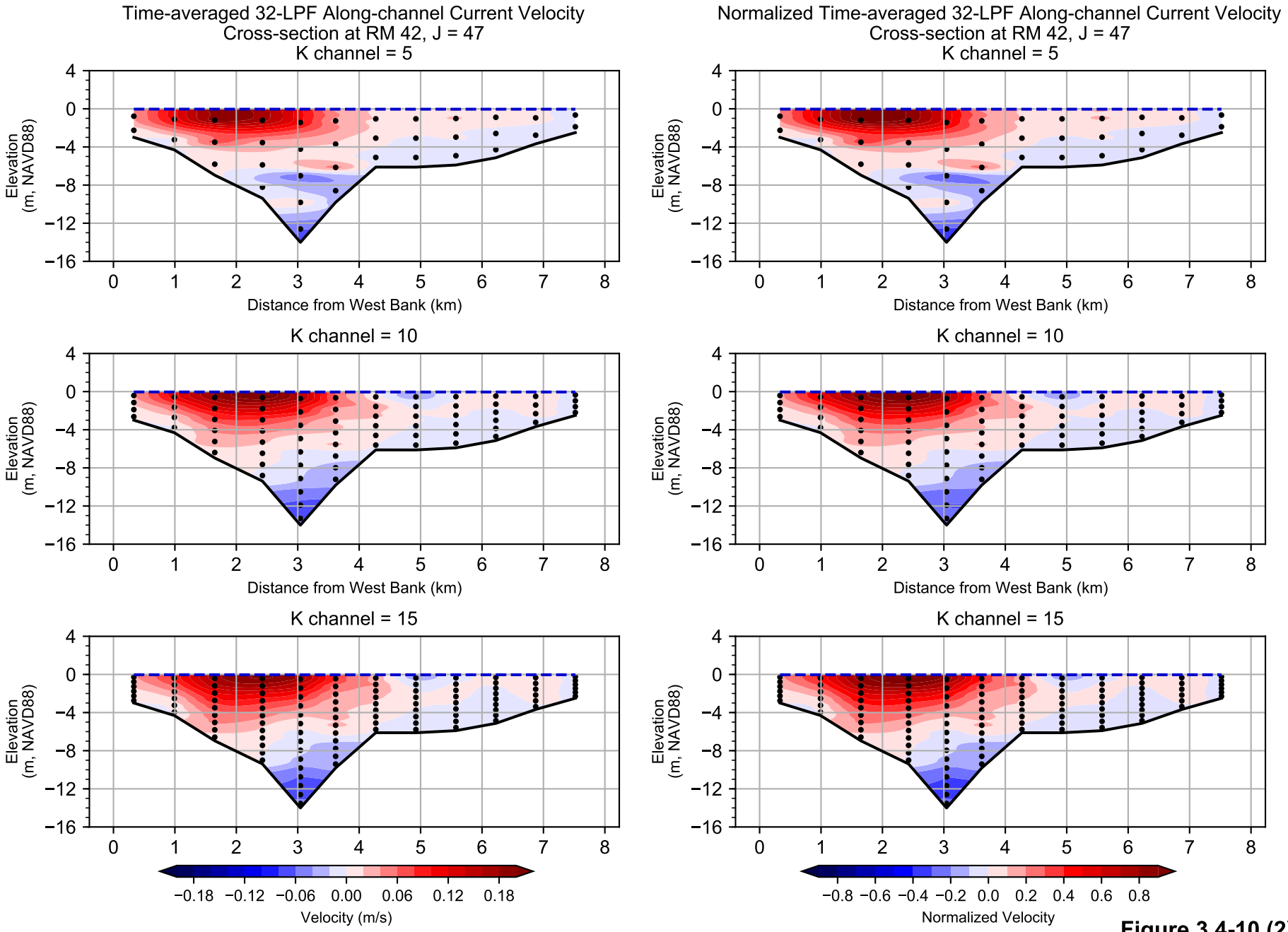

Figure 3.4-10 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 42, J = 47 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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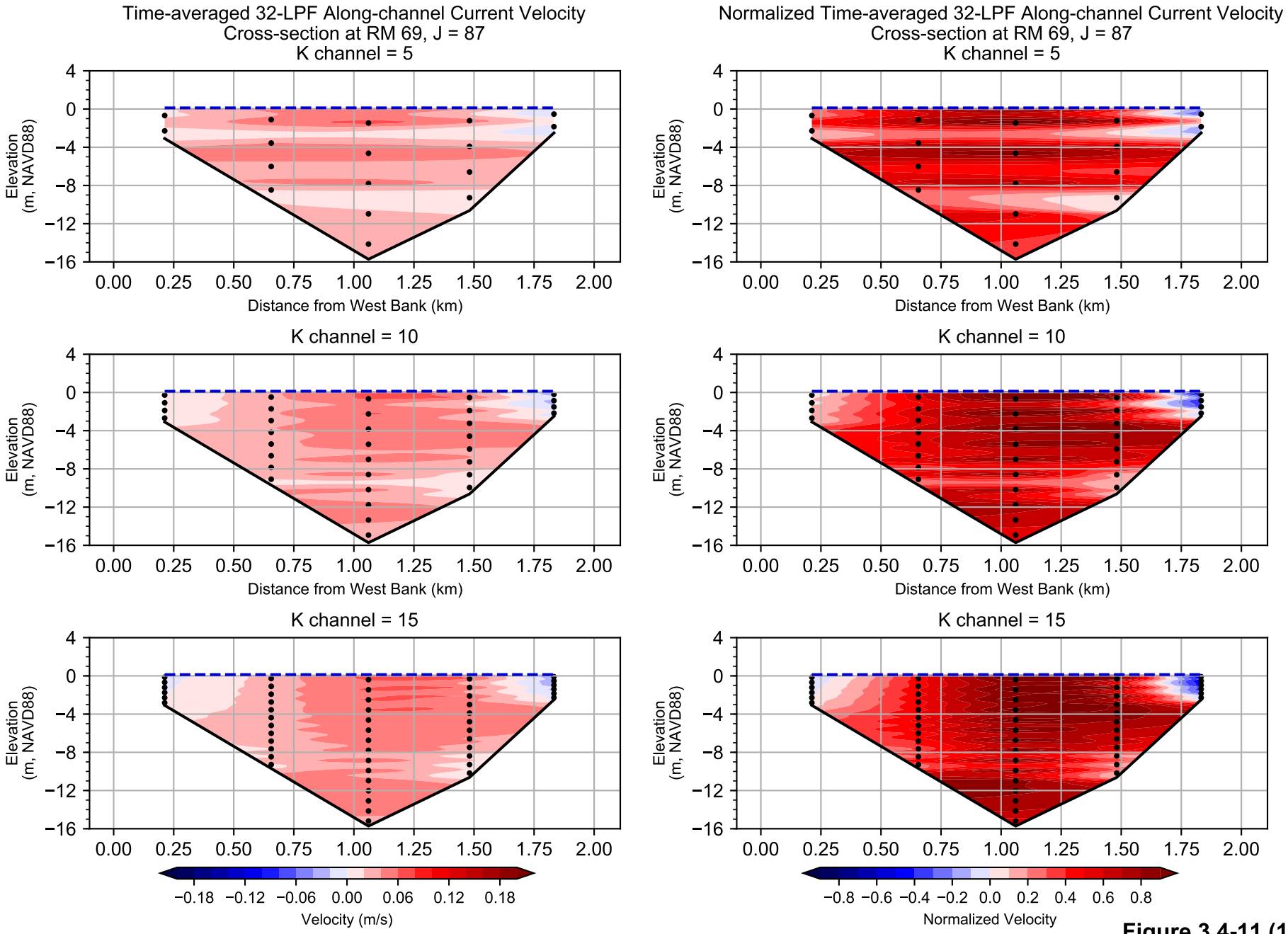

Figure 3.4-11 (1)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 69, J = 87 during 08-19-2012 to 08-21-2012 Period, Spring Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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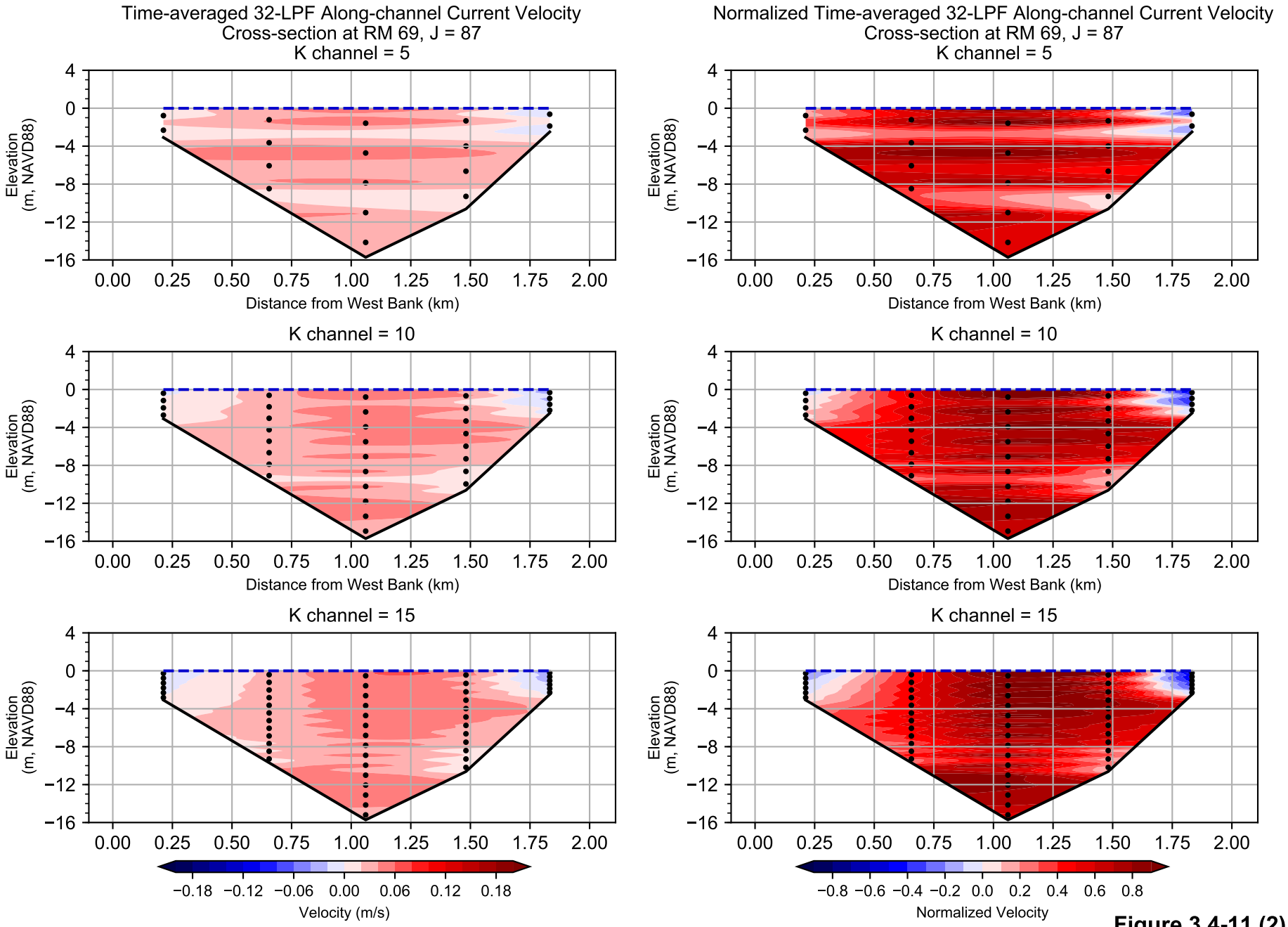

Figure 3.4-11 (2)

Vertical Slide of Normalized Time-averaged 32-LPF Along-channel Current Velocity at Cross-section at RM 69, J = 87 during 08-10-2012 to 08-12-2012 Period, Neap Tide

Notes: Positive is moving seaward. Velocity was normalized against the maximum velocity of the cross-section. GVC, Grid 7.1, CTE3=8. Grid vertical resolution test.

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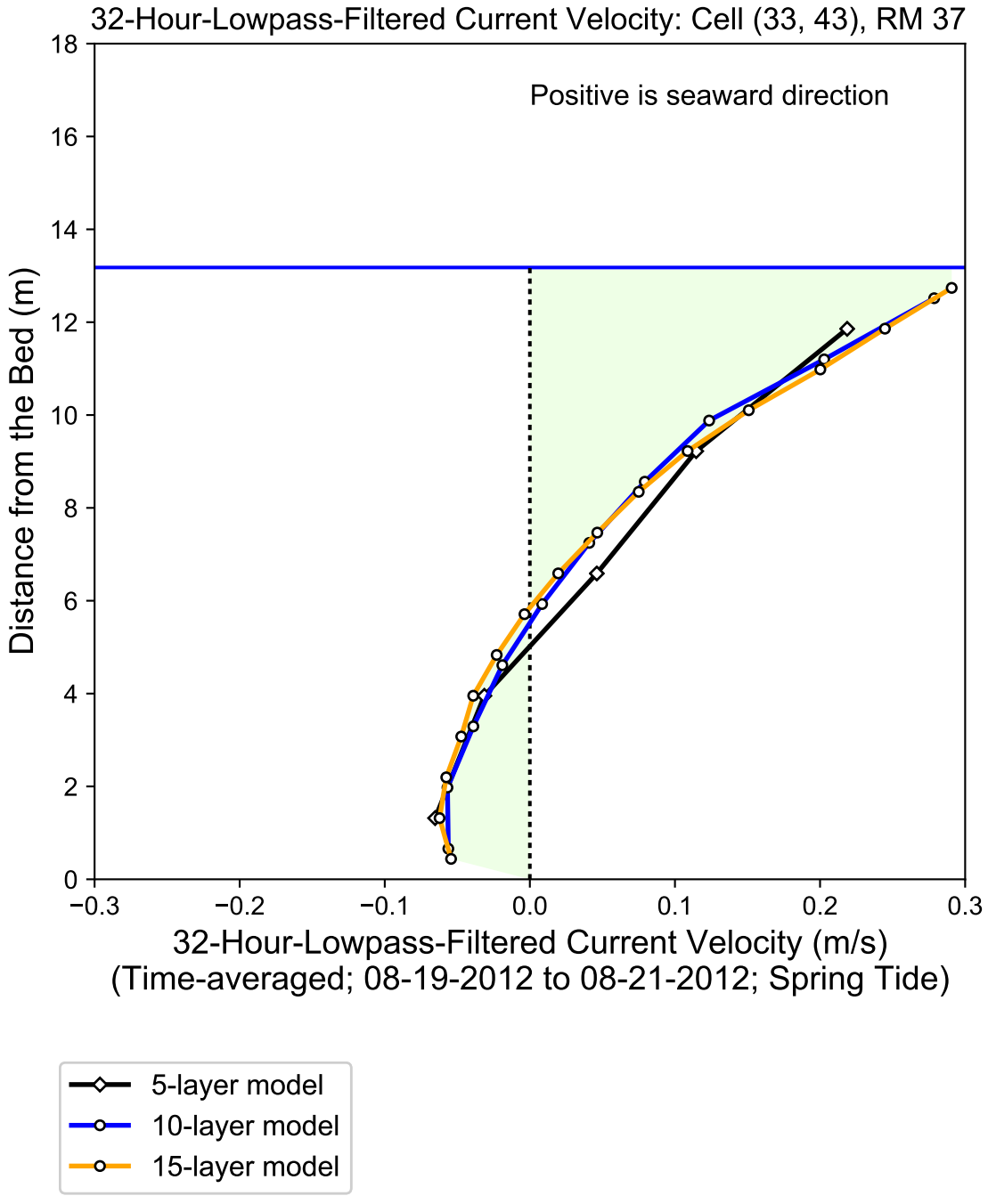

Figure 3.4-12 (1)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity during 08-19-2012 to 08-21-2012; Spring Tide at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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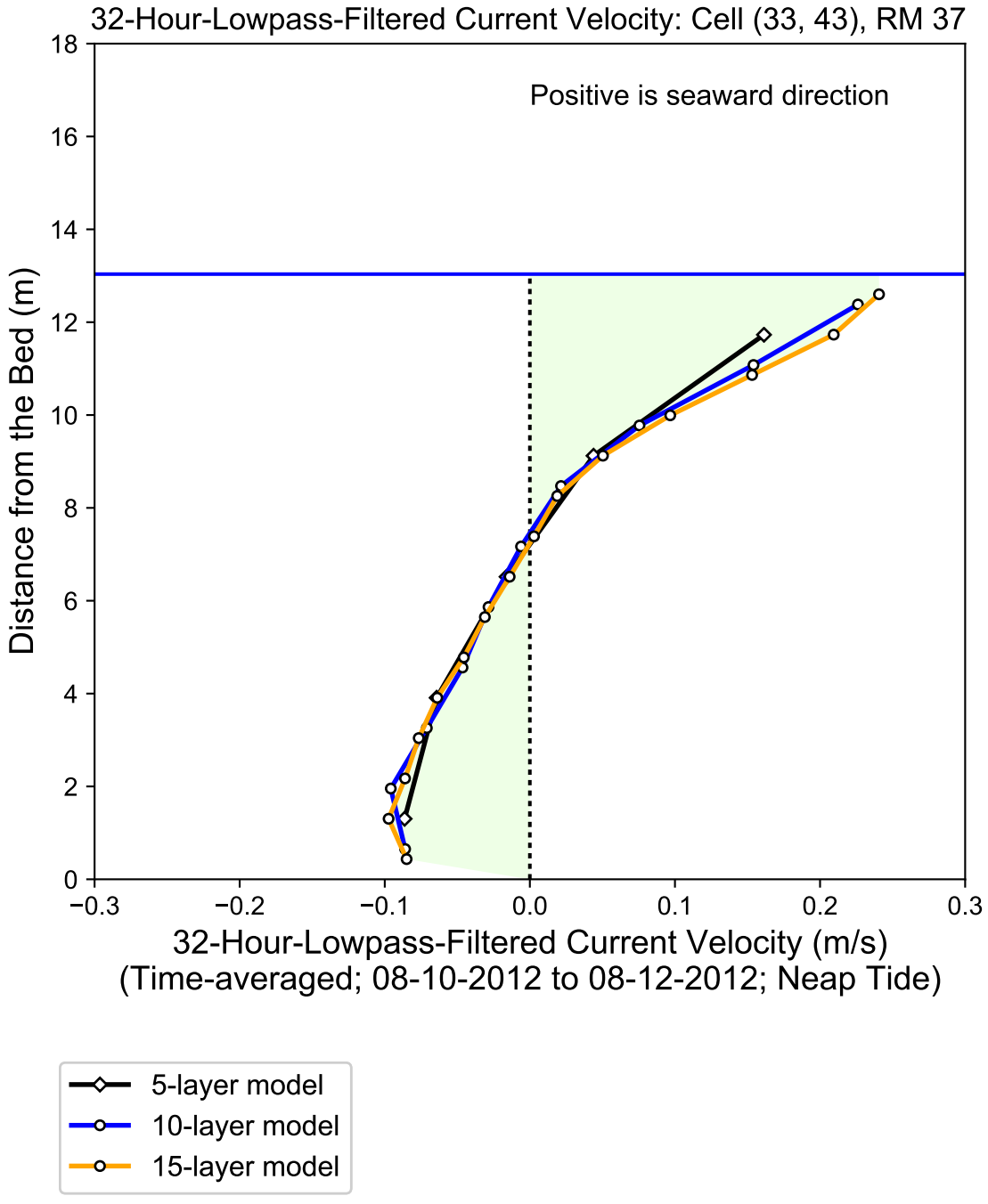

Figure 3.4-12 (2)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity during 08-10-2012 to 08-12-2012; Neap Tide at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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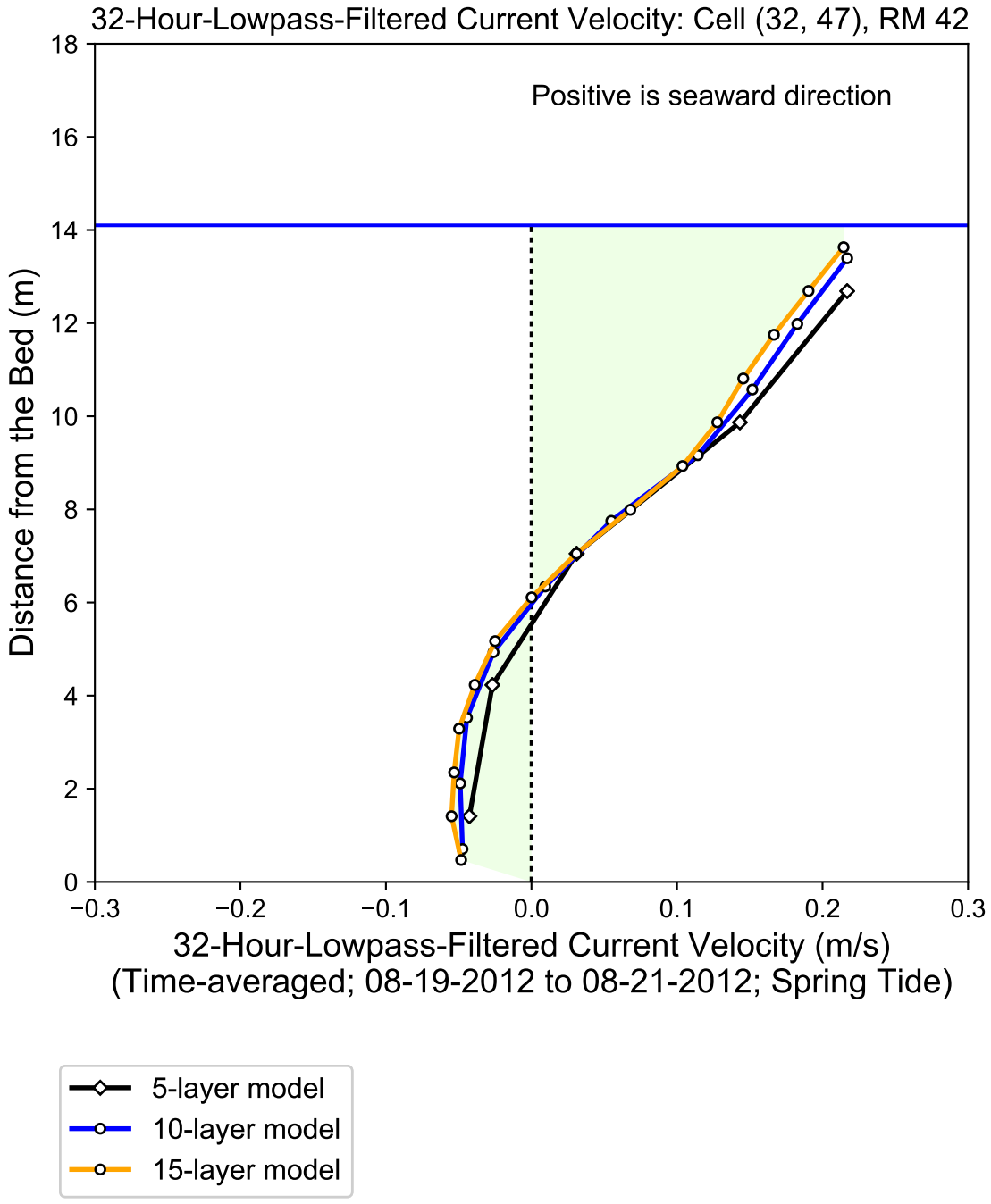

Figure 3.4-13 (1)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity during 08-19-2012 to 08-21-2012; Spring Tide at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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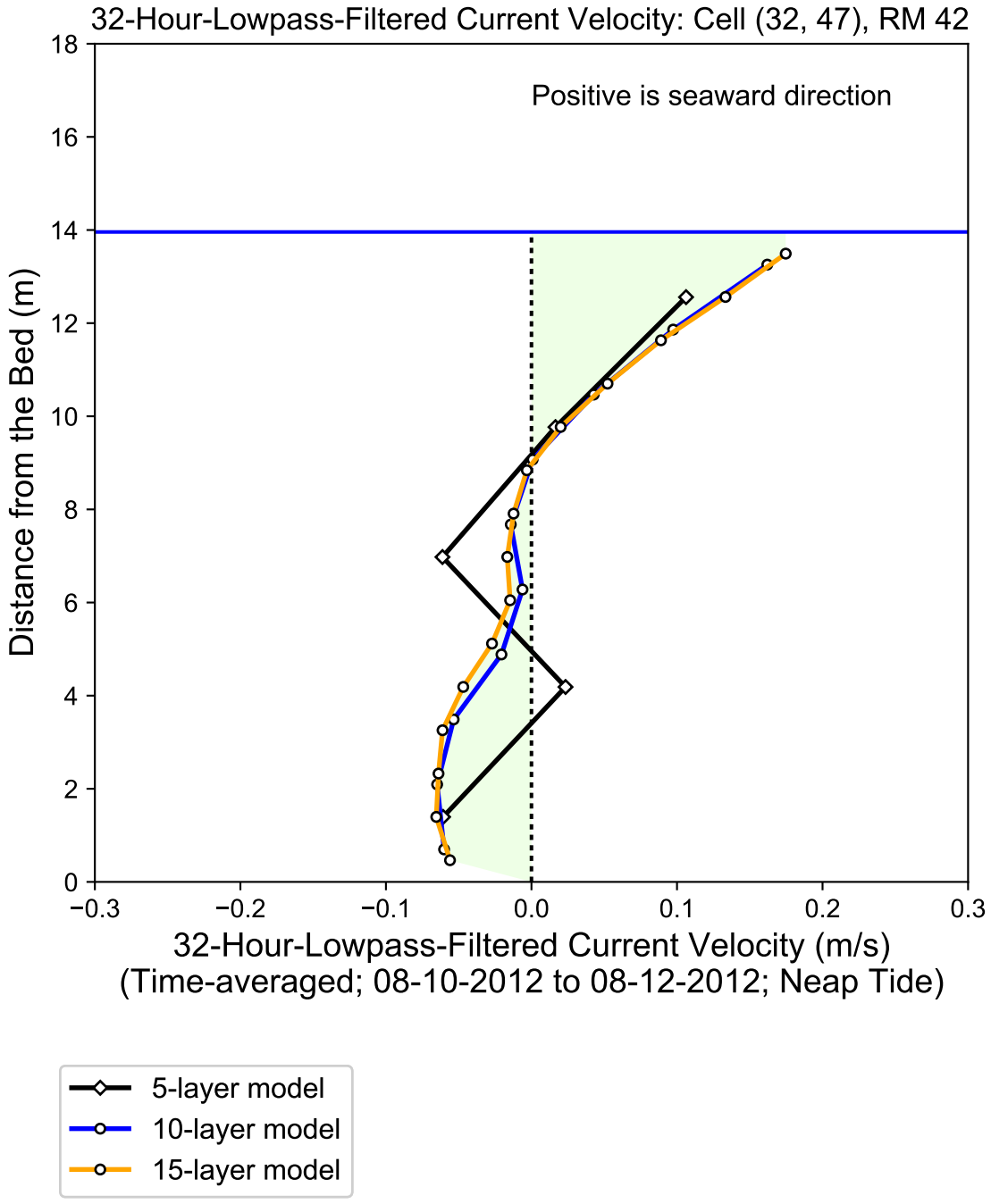

Figure 3.4-13 (2)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity during 08-10-2012 to 08-12-2012; Neap Tide at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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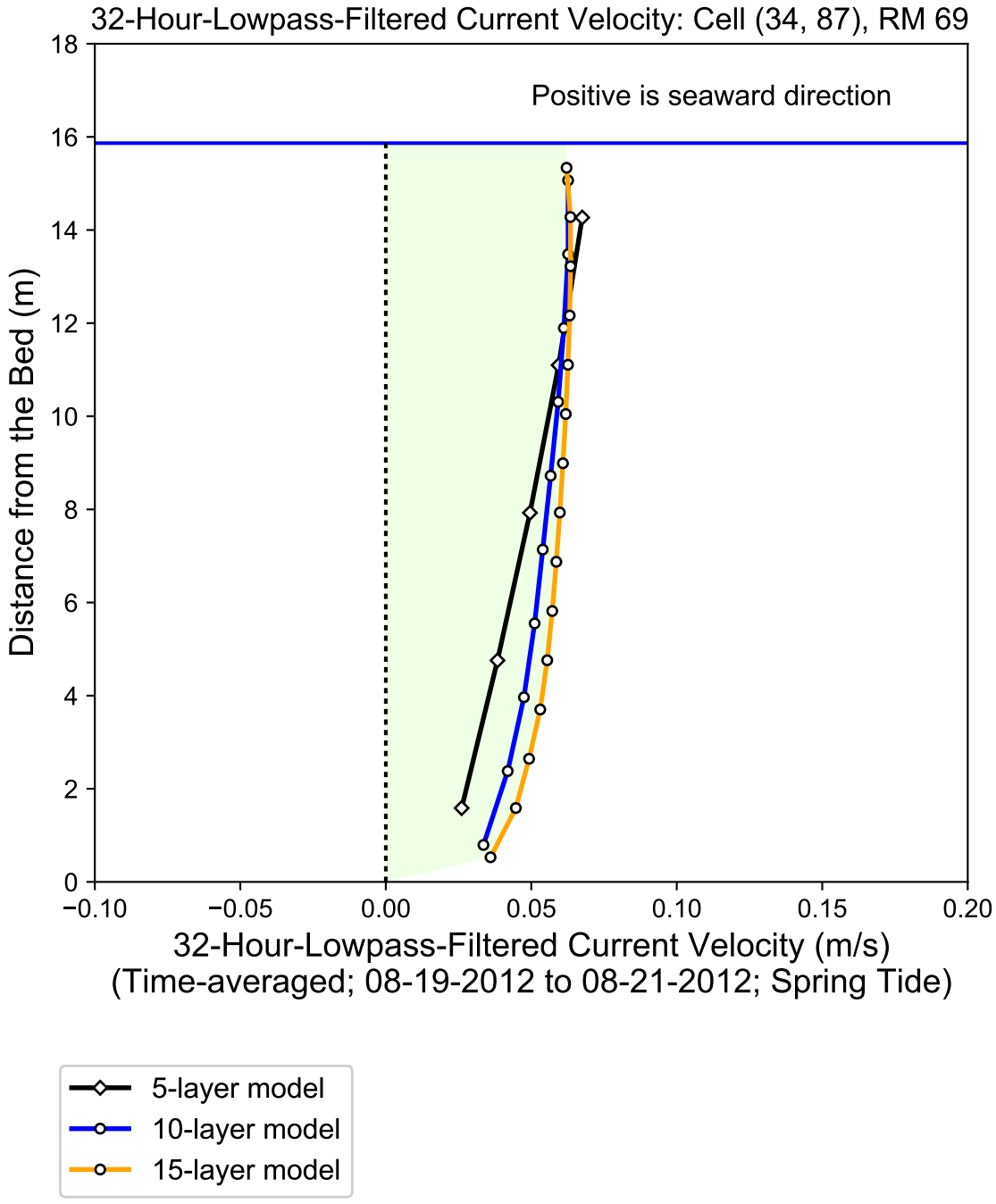

Figure 3.4-14 (1)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity
during 08-19-2012 to 08-21-2012; Spring Tide
at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

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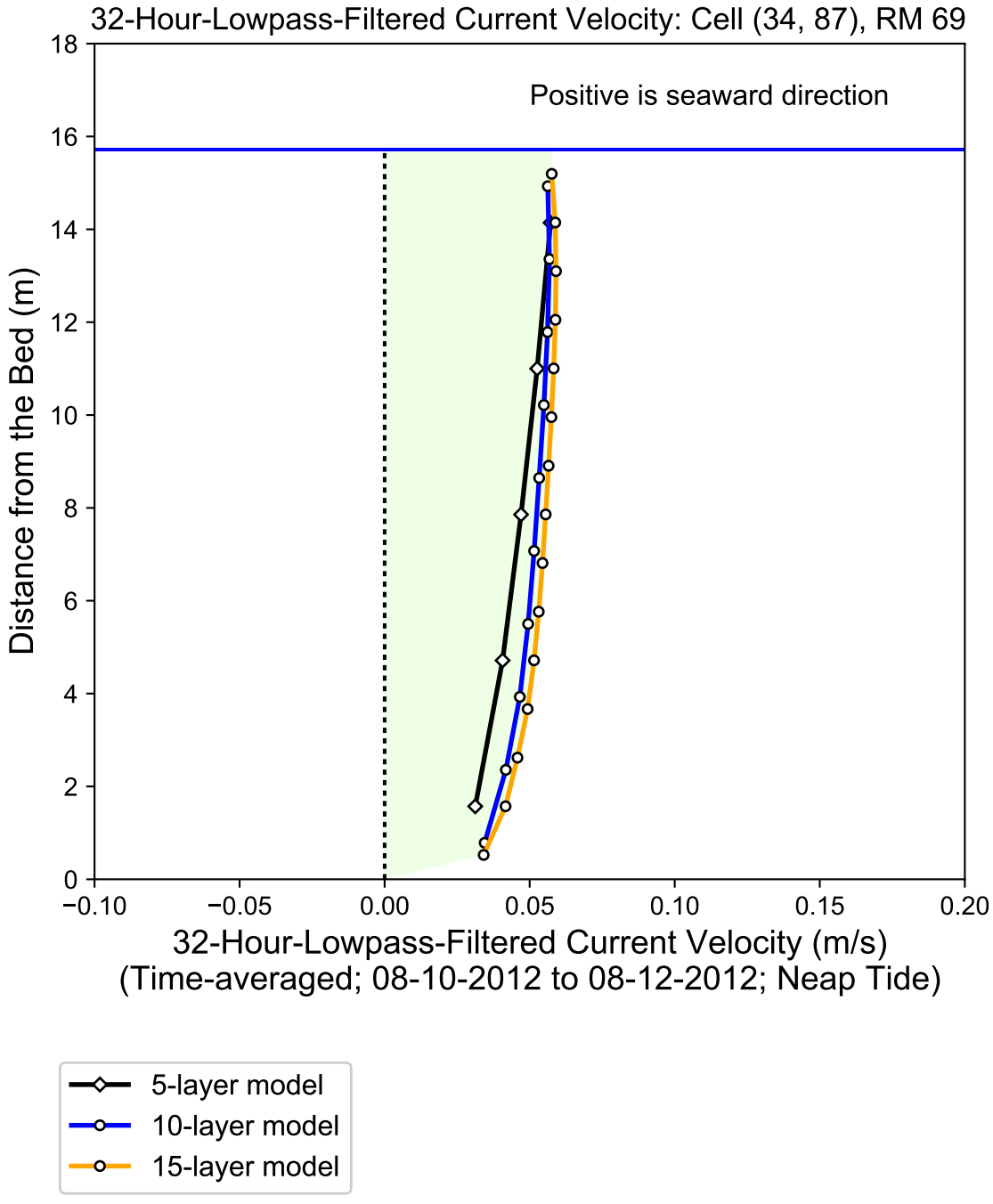

Figure 3.4-14 (2)

Simulated 32-Hour-Lowpass-Filtered Along-channel Current Velocity during 08-10-2012 to 08-12-2012; Neap Tide at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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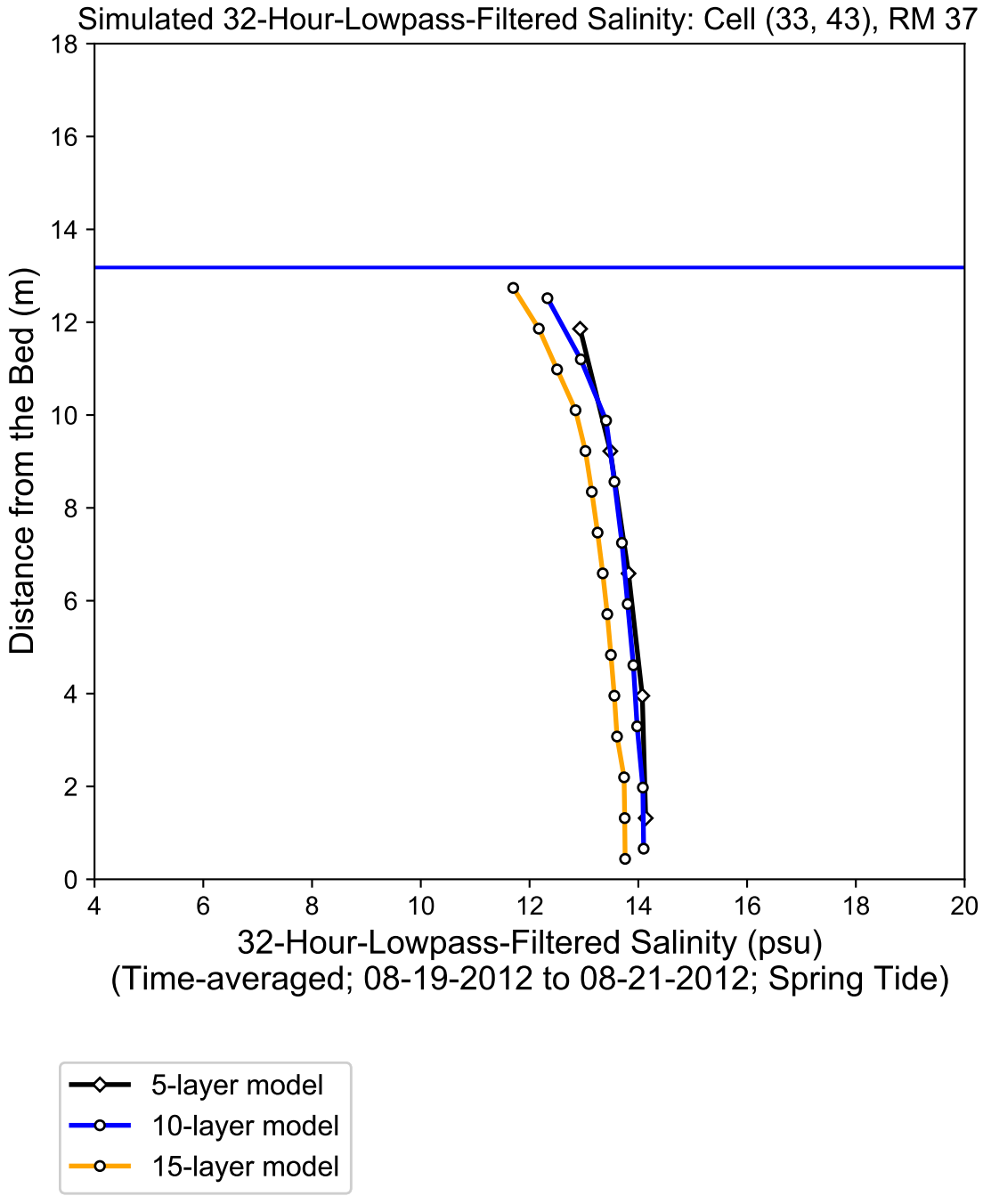

Figure 3.4-15 (1)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-19-2012 to 08-21-2012; Spring Tide at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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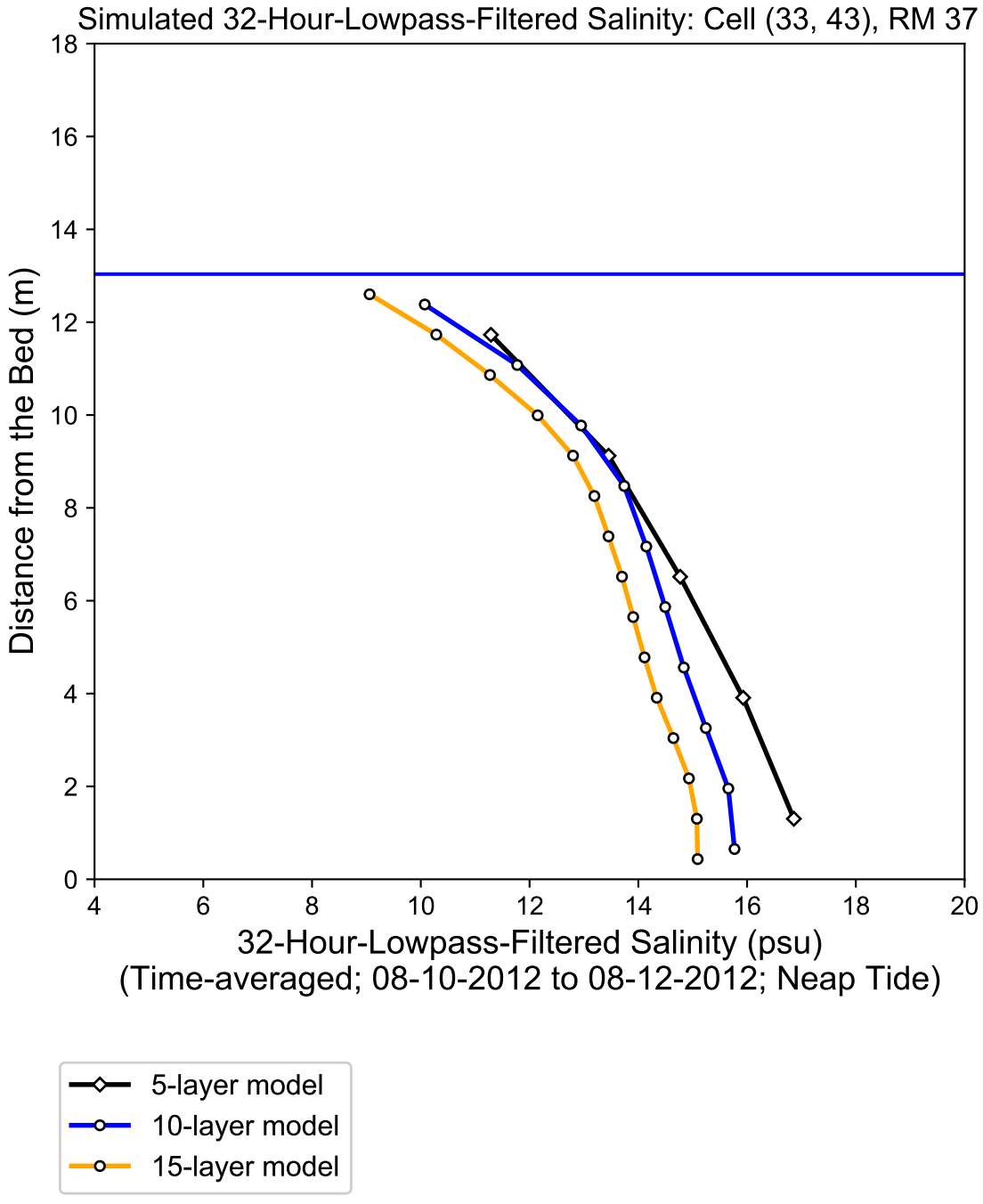

Figure 3.4-15 (2)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-10-2012 to 08-12-2012; Neap Tide at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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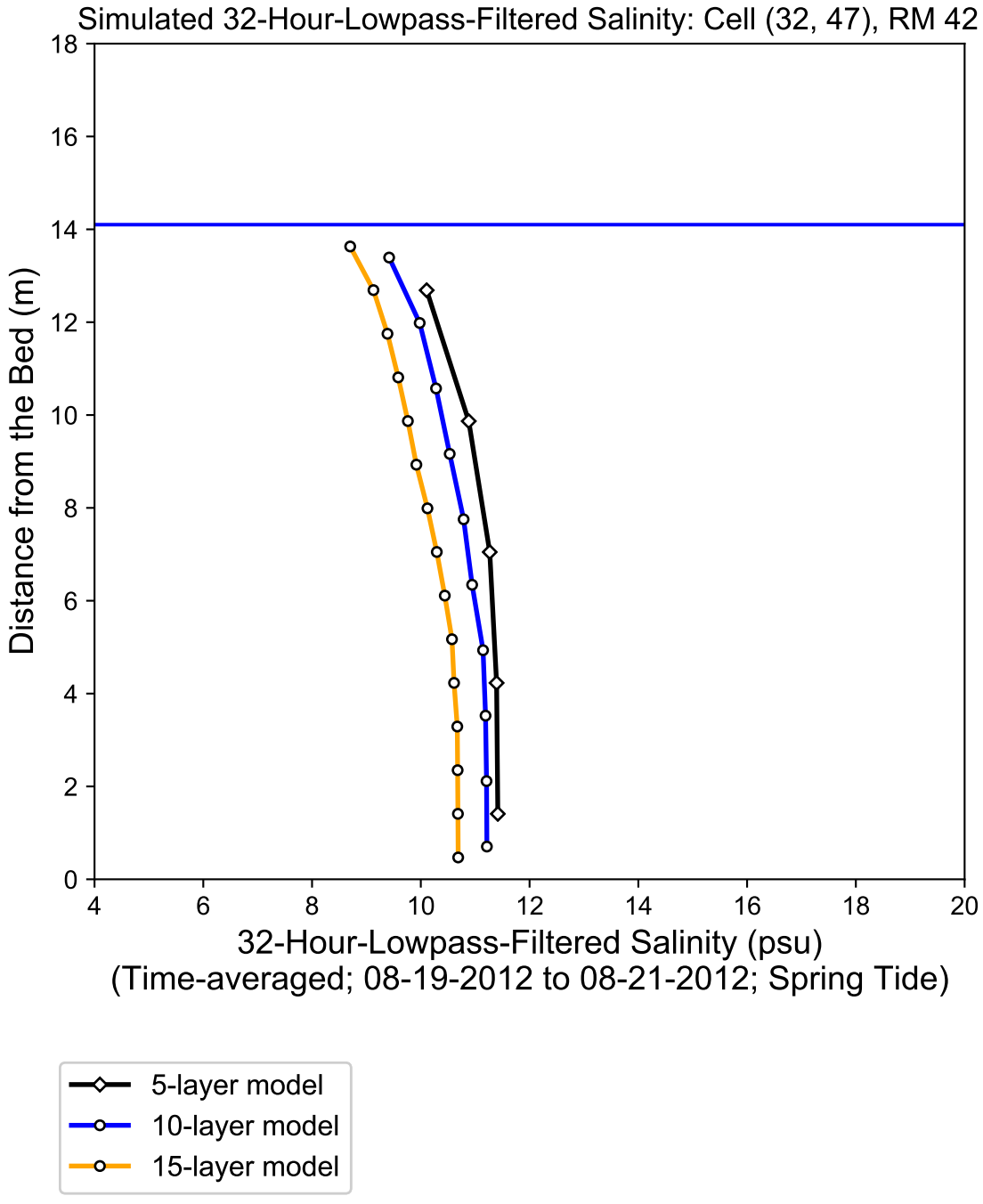

Figure 3.4-16 (1)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-19-2012 to 08-21-2012; Spring Tide at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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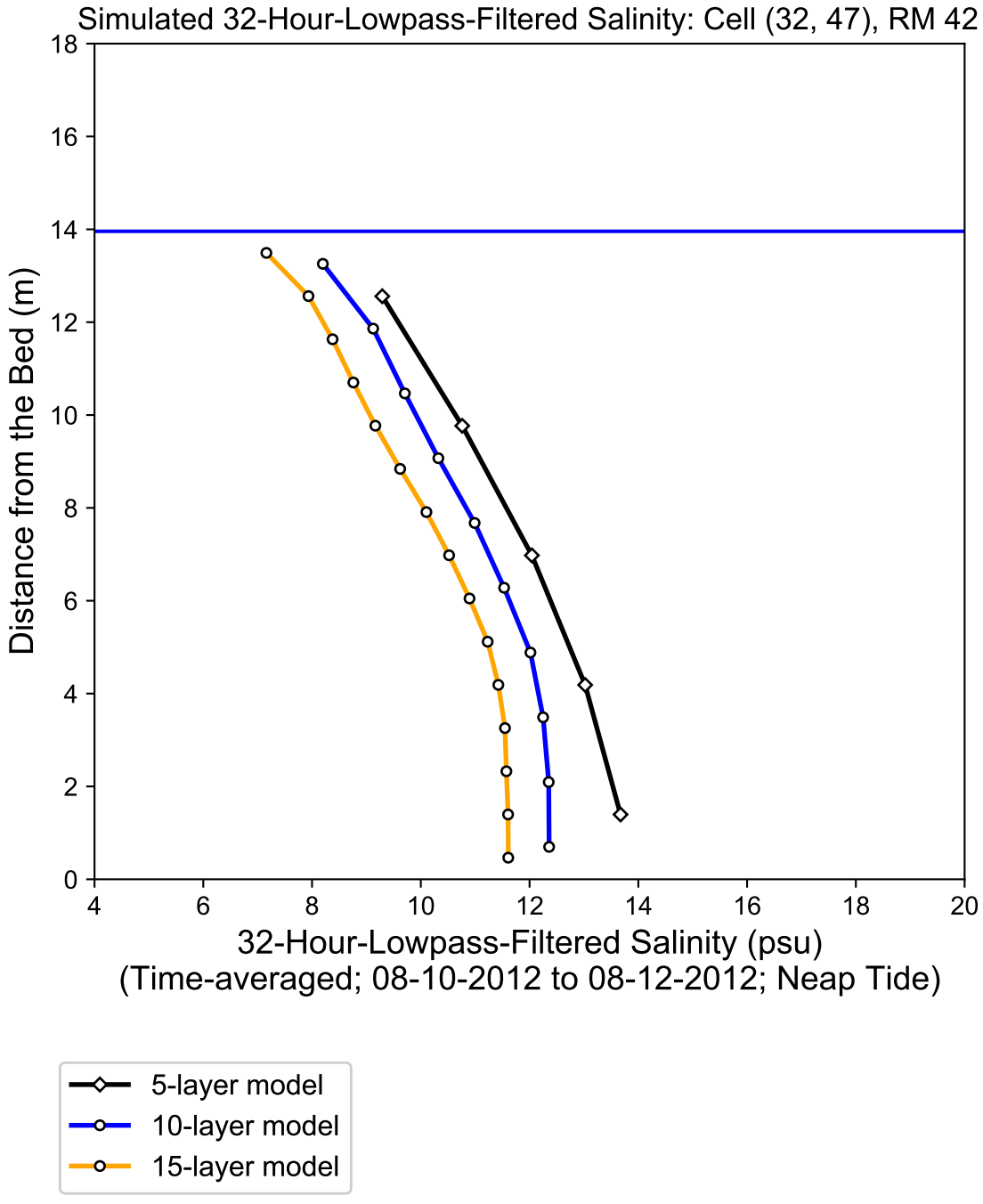

Figure 3.4-16 (2)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-10-2012 to 08-12-2012; Neap Tide at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

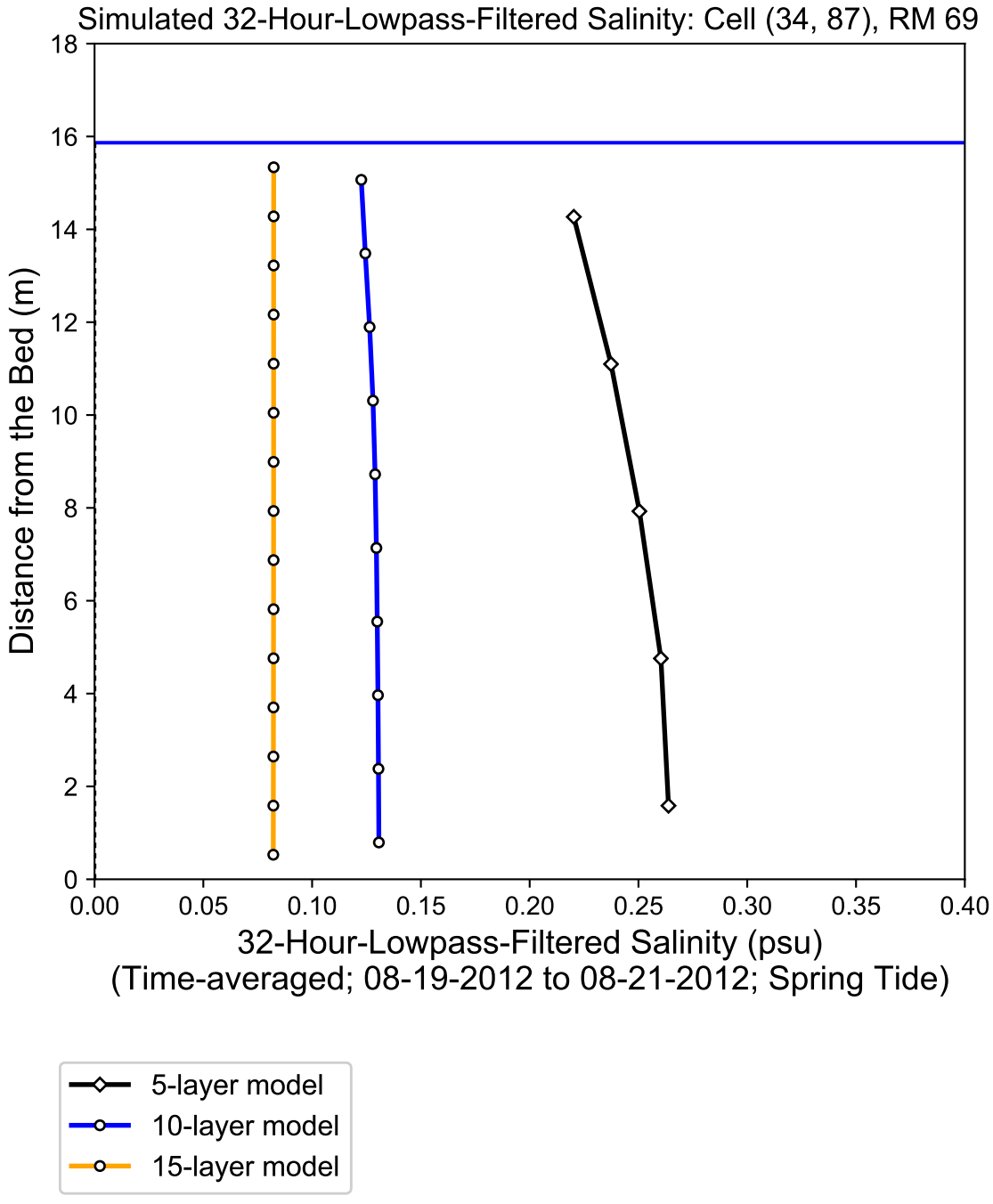

Figure 3.4-17 (1)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-19-2012 to 08-21-2012; Spring Tide at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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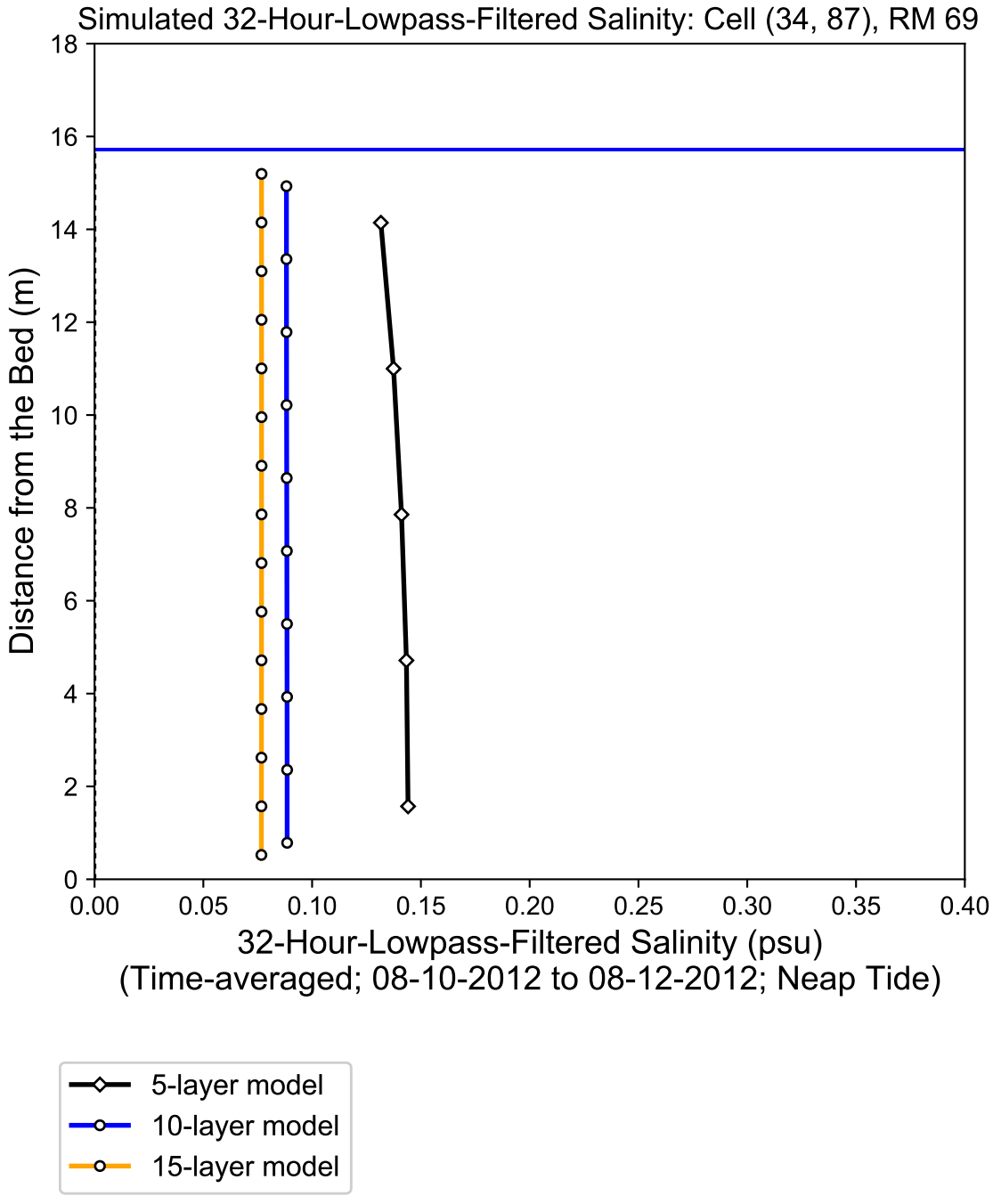

Figure 3.4-17 (2)

Simulated 32-Hour-Lowpass-Filtered Salinity during 08-10-2012 to 08-12-2012; Neap Tide at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure. Shaded area represents the profile of the 15-layer model.

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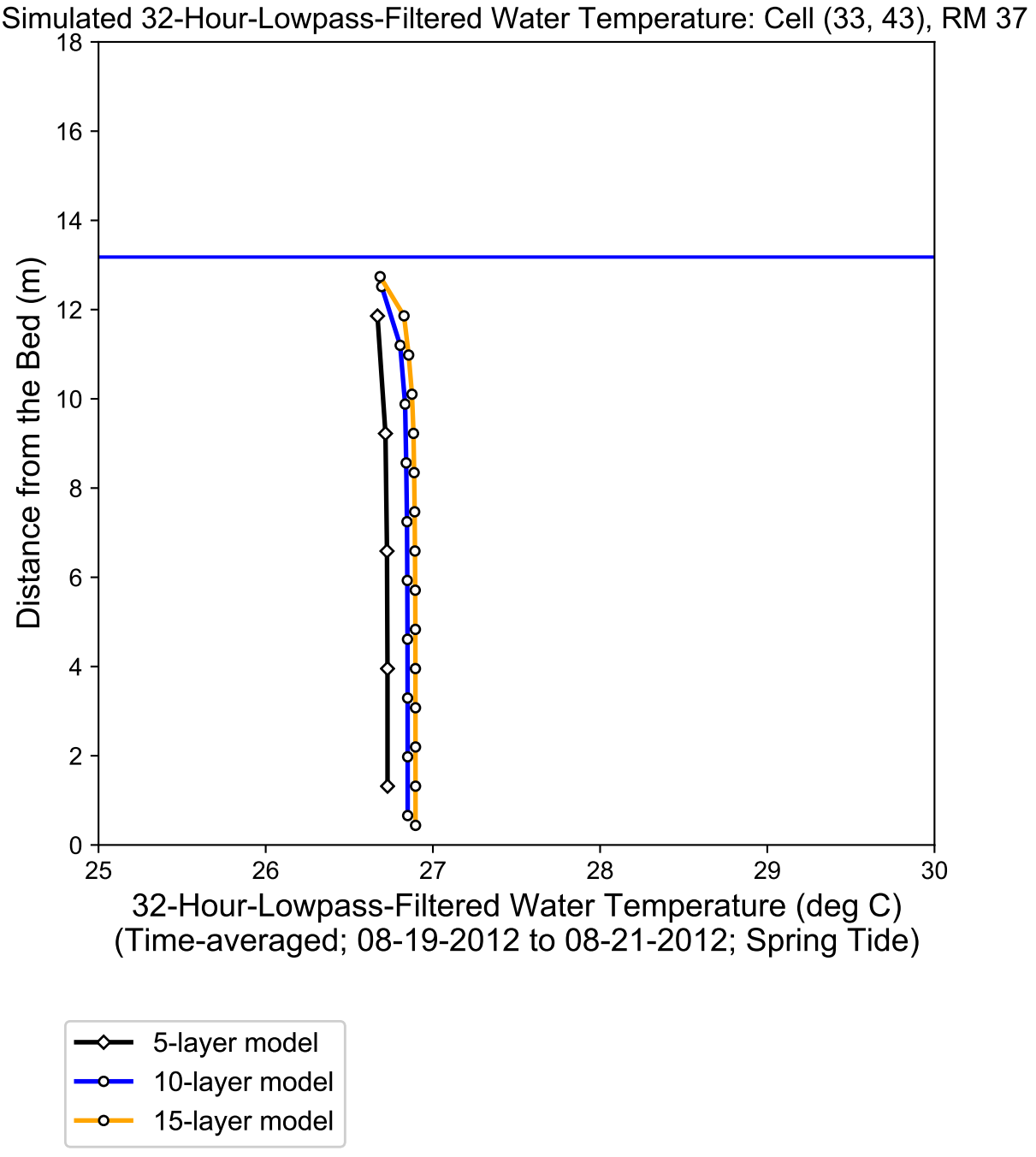

Figure 3.4-18 (1)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-19-2012 to 08-21-2012; Spring Tide
at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

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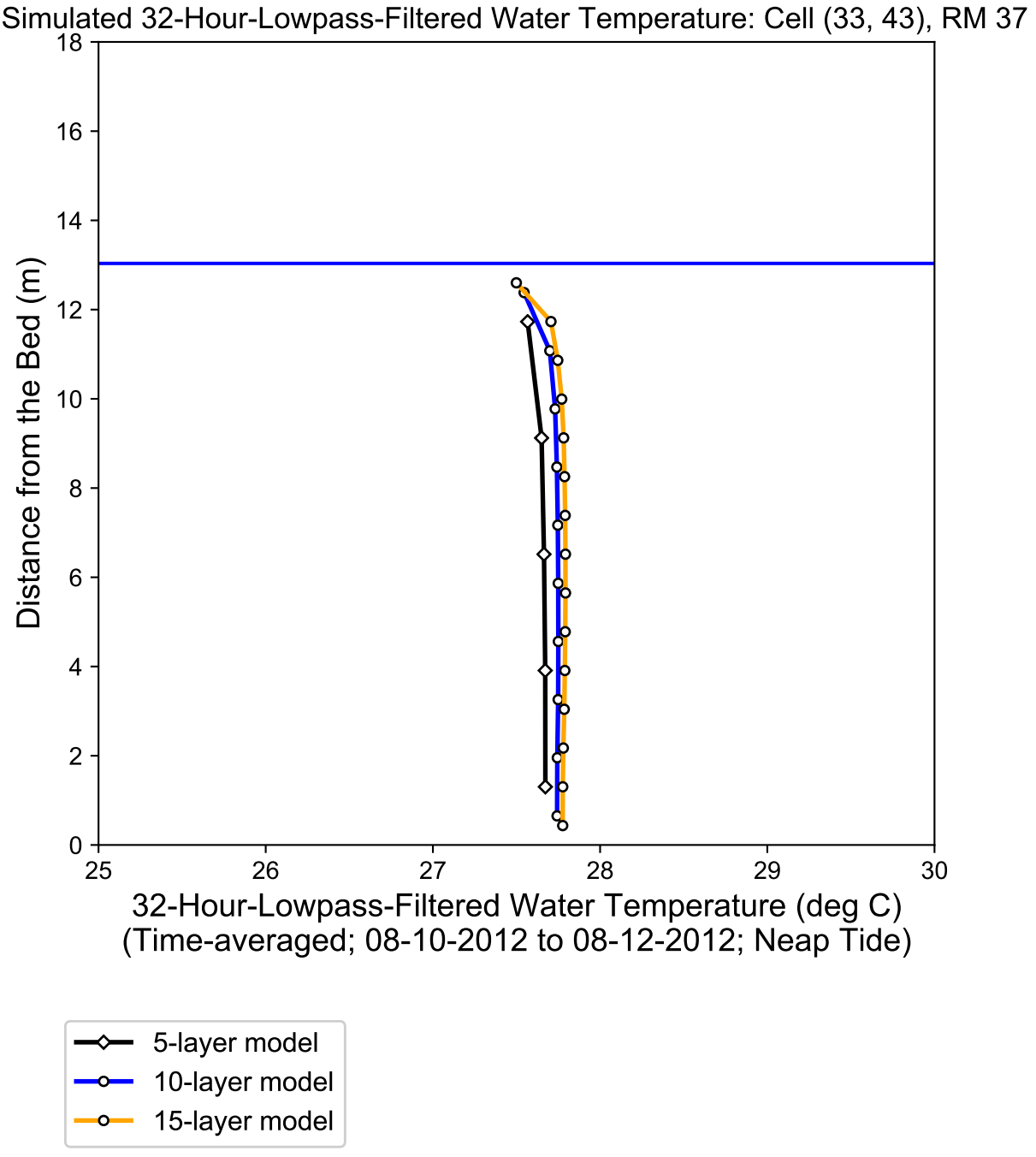

Figure 3.4-18 (2)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-10-2012 to 08-12-2012; Neap Tide
at Station S1 at Cell (33, 43), RM 37

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

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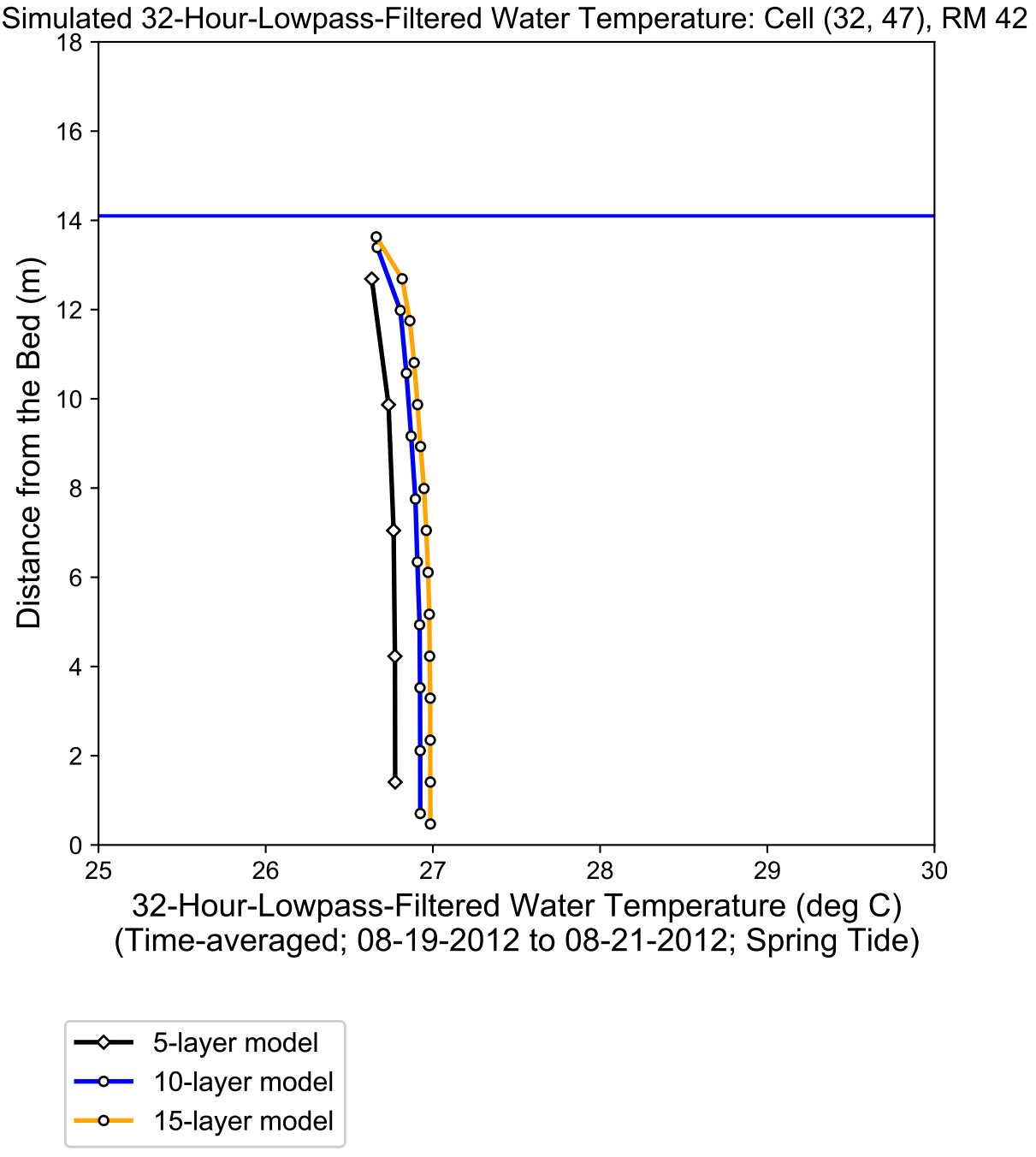

Figure 3.4-19 (1)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-19-2012 to 08-21-2012; Spring Tide
at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

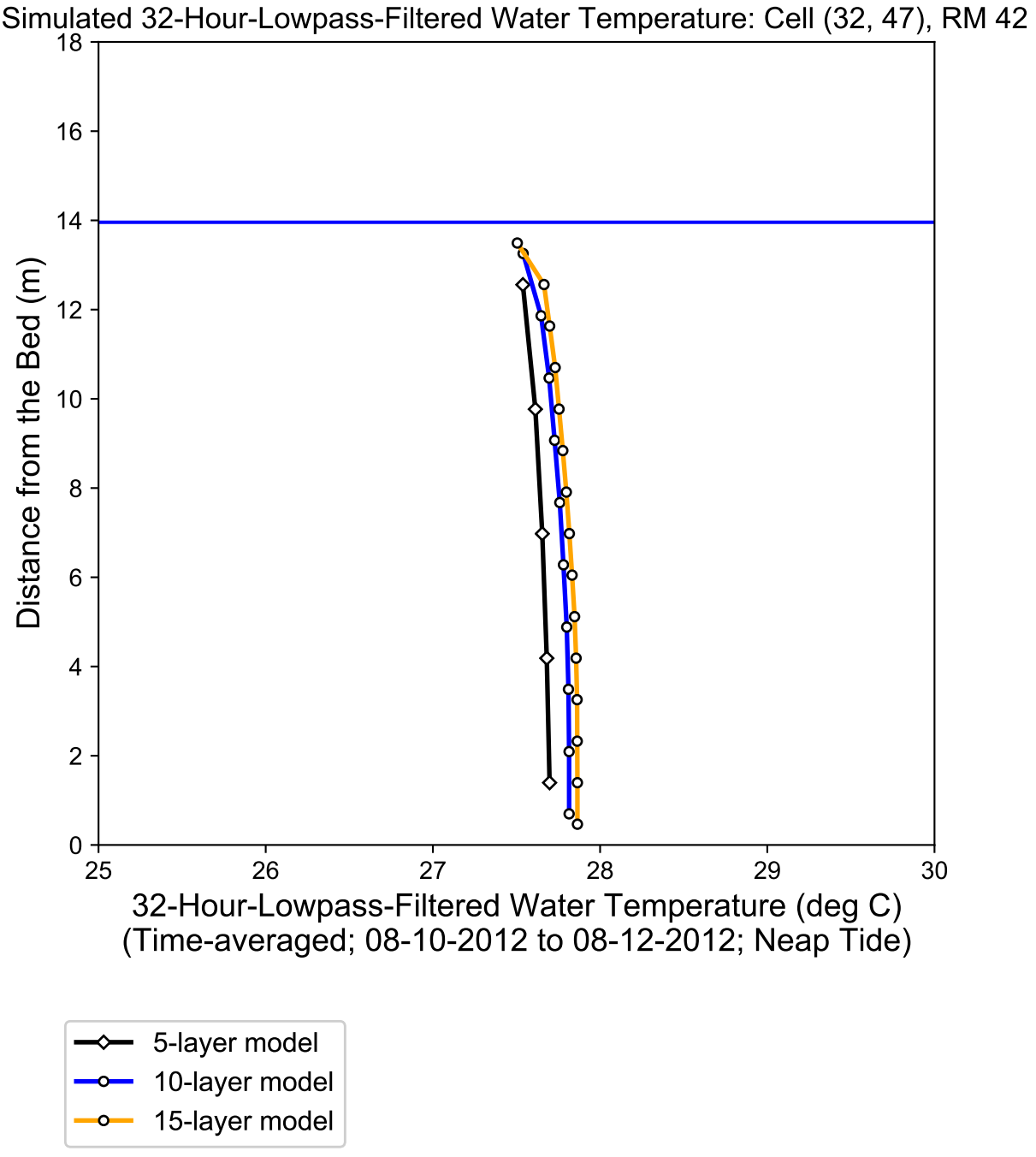

Figure 3.4-19 (2)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-10-2012 to 08-12-2012; Neap Tide
at Station S2 at Cell (32, 47), RM 42

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

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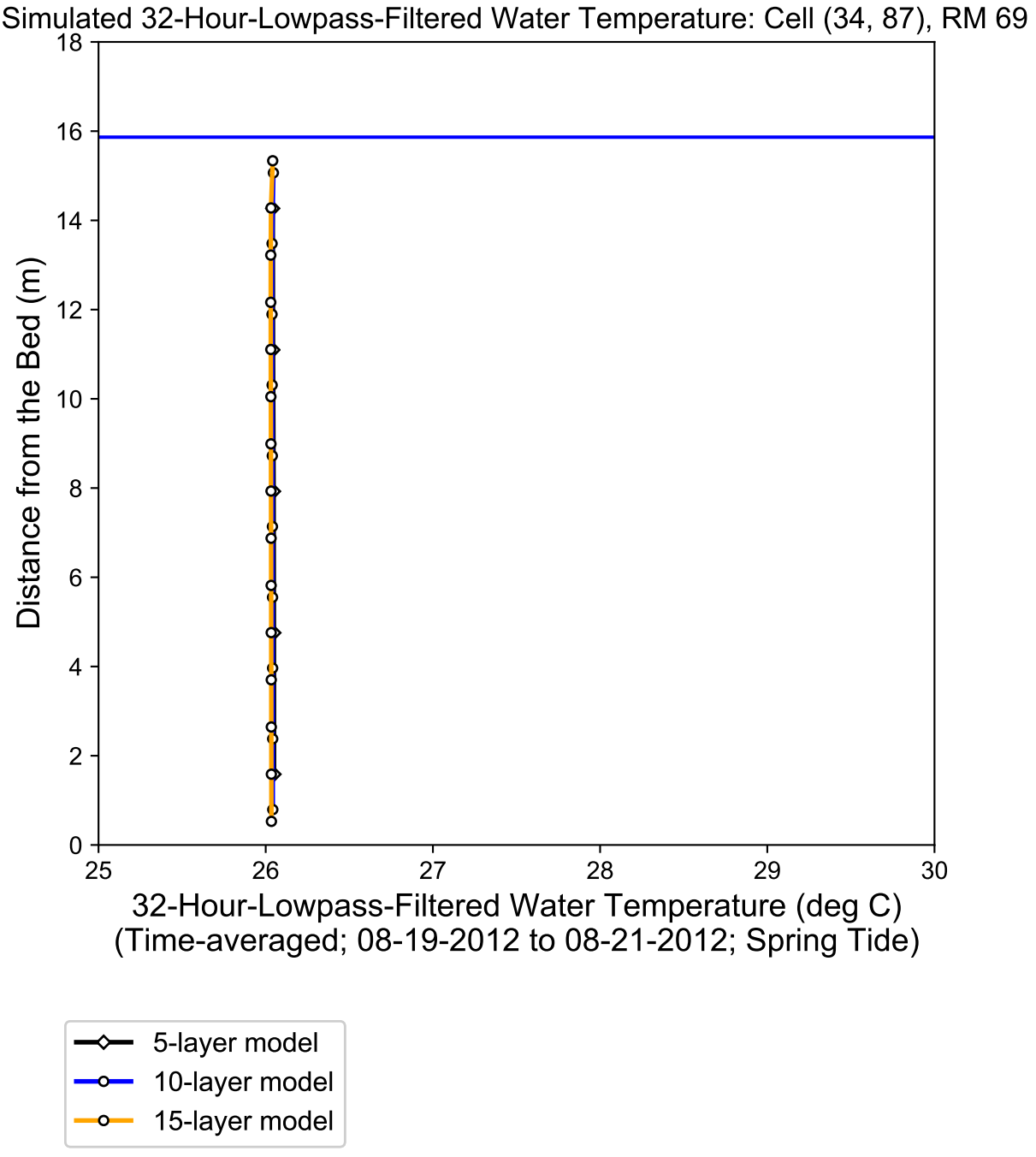

Figure 3.4-20 (1)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-19-2012 to 08-21-2012; Spring Tide
at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.

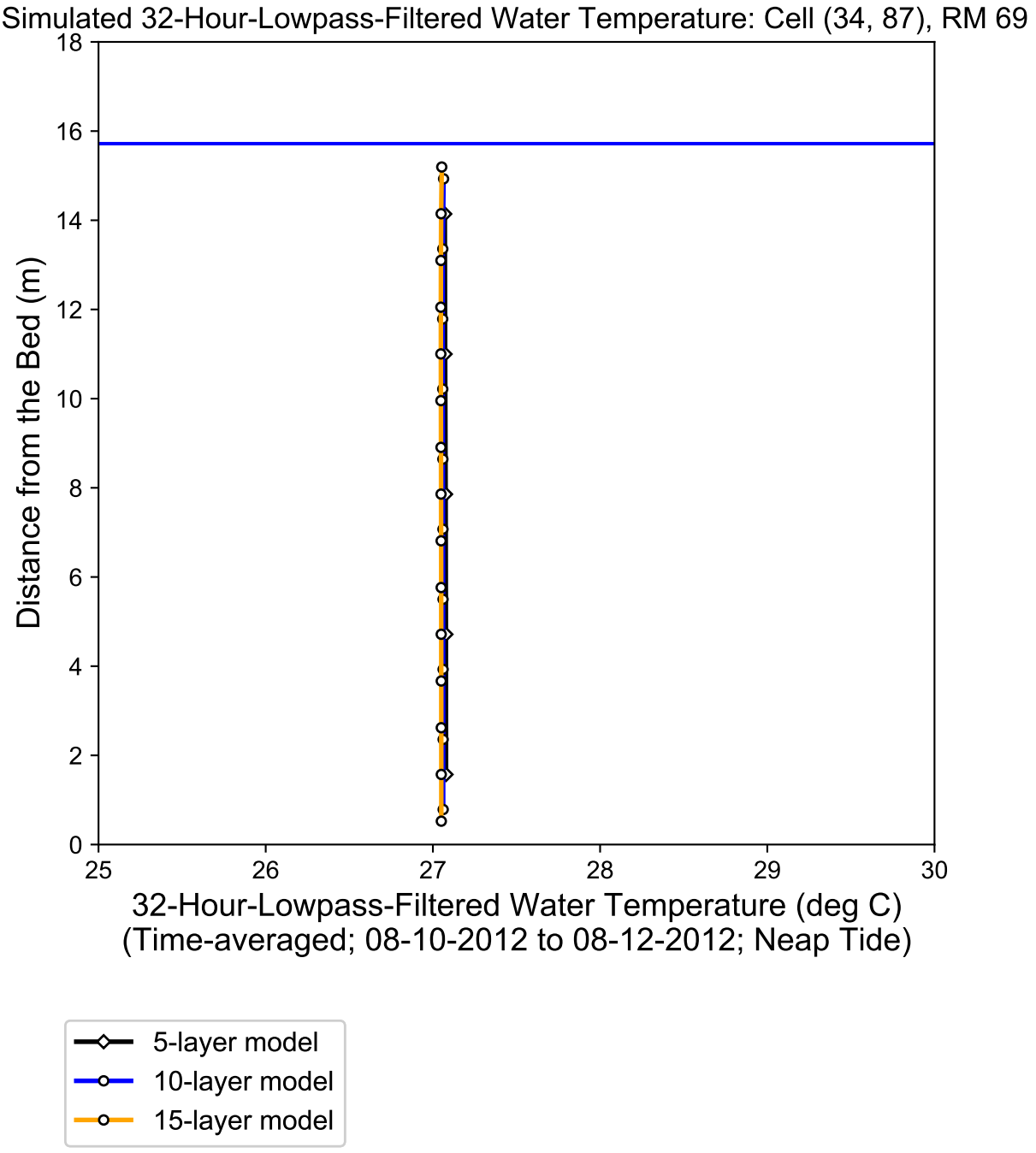

Figure 3.4-20 (2)

Simulated 32-Hour-Lowpass-Filtered Water Temperature
during 08-10-2012 to 08-12-2012; Neap Tide
at Station S3 at Cell (34, 87), RM 69

Notes: LPFed results were calculated first, and then averaged over the time period to represent the mean vertical structure.
Shaded area represents the profile of the 15-layer model.