

Supplementary Materials: Long-Term Discharge Estimation for the Lower Mississippi River Using Satellite Altimetry and Remote Sensing Images

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This supplementary material provides additional figures such as **estimated discharge time series**, **cross-sectional geometry**, **estimated bathymetry** and **hypsometry** for all 16 cross-sections (CS).

List of Cross-Sections by Study Areas

Vicksburg

- [CS 683.9](#)
- [CS 694.7](#)
- [CS 698.8](#)
- [CS 702.4](#)
- [CS 721.1](#)

Natchez

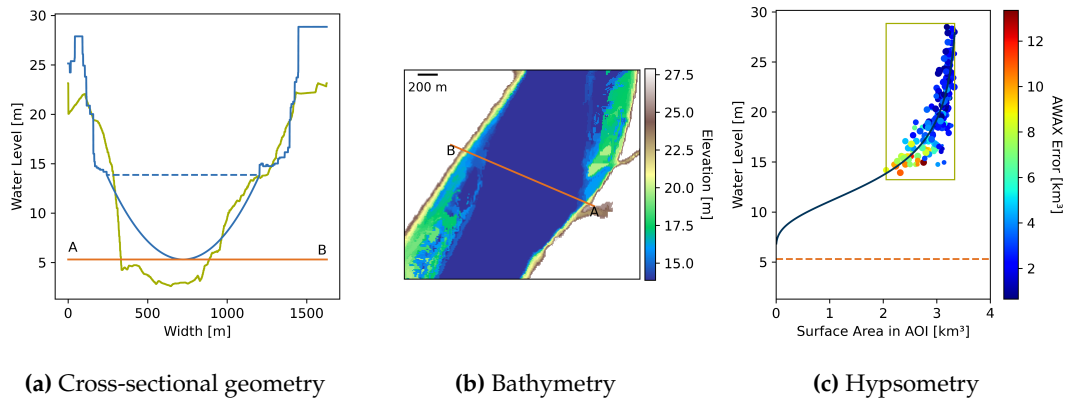
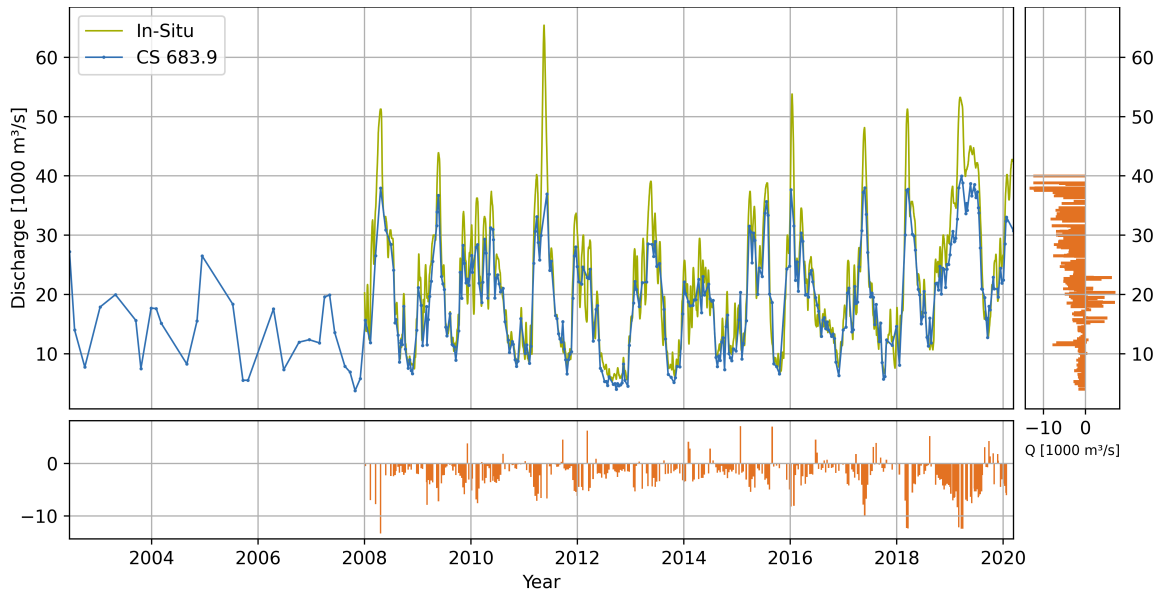
- [CS 564.8](#)
- [CS 576.0](#)
- [CS 580.9](#)
- [CS 591.1](#)
- [CS 599.4](#)

Tarbert Landing

- [CS 416.9](#)
- [CS 427.5](#)
- [CS 439.4](#)
- [CS 460.9](#)
- [CS 471.4](#)
- [CS 492.5](#)

Vicksburg

CS 683.9

**Figure S1.** Estimated geometry, bathymetry, and hypsometry at CS 683.9.**Figure S2.** Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 683.9.

CS 694.7

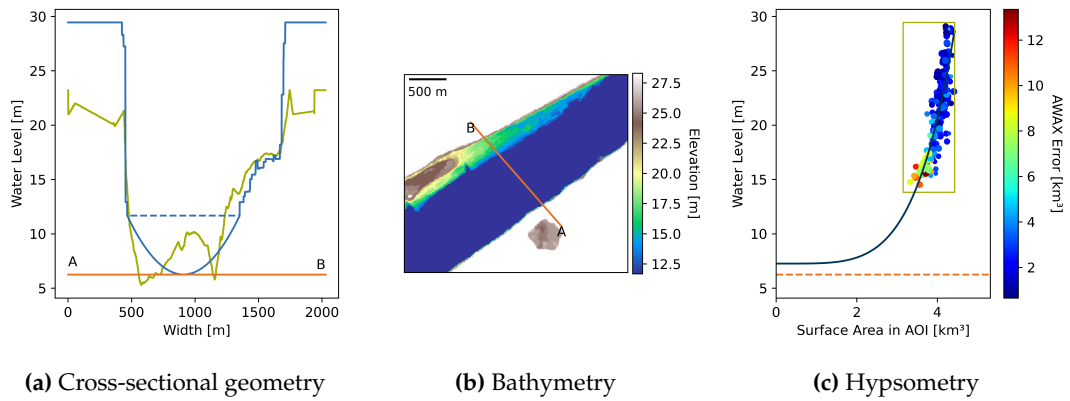


Figure S3. Estimated geometry, bathymetry, and hypsometry at CS 694.7.

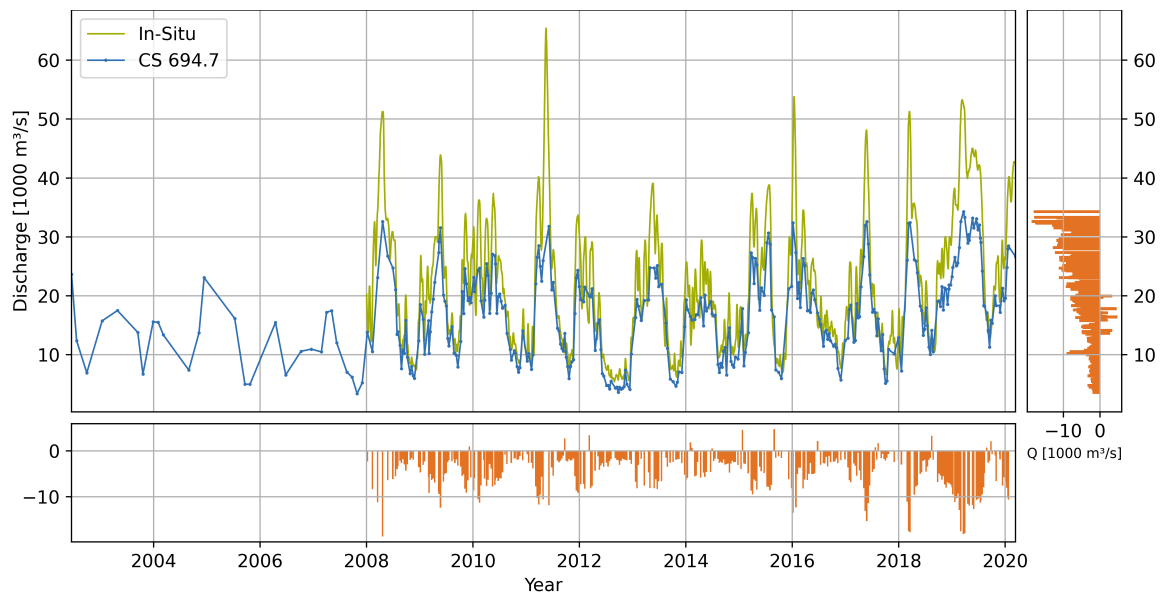


Figure S4. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 694.7.

CS 698.8

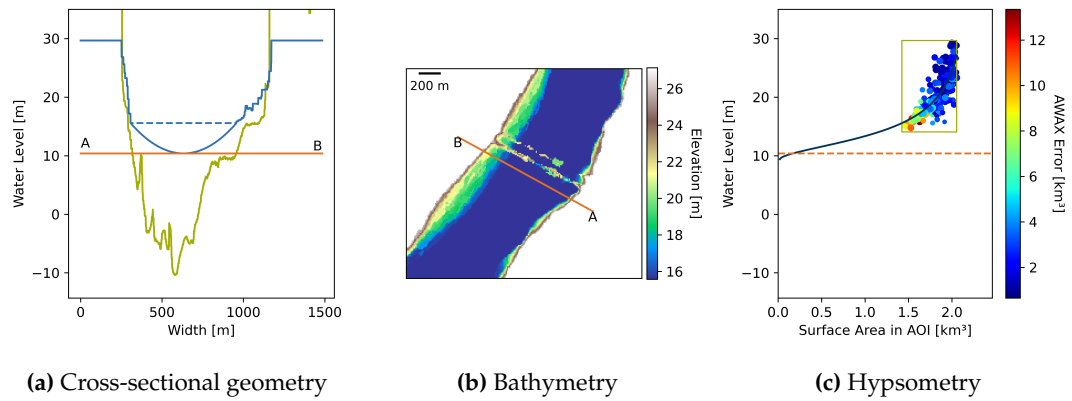


Figure S5. Estimated geometry, bathymetry, and hypsometry at CS 698.8.

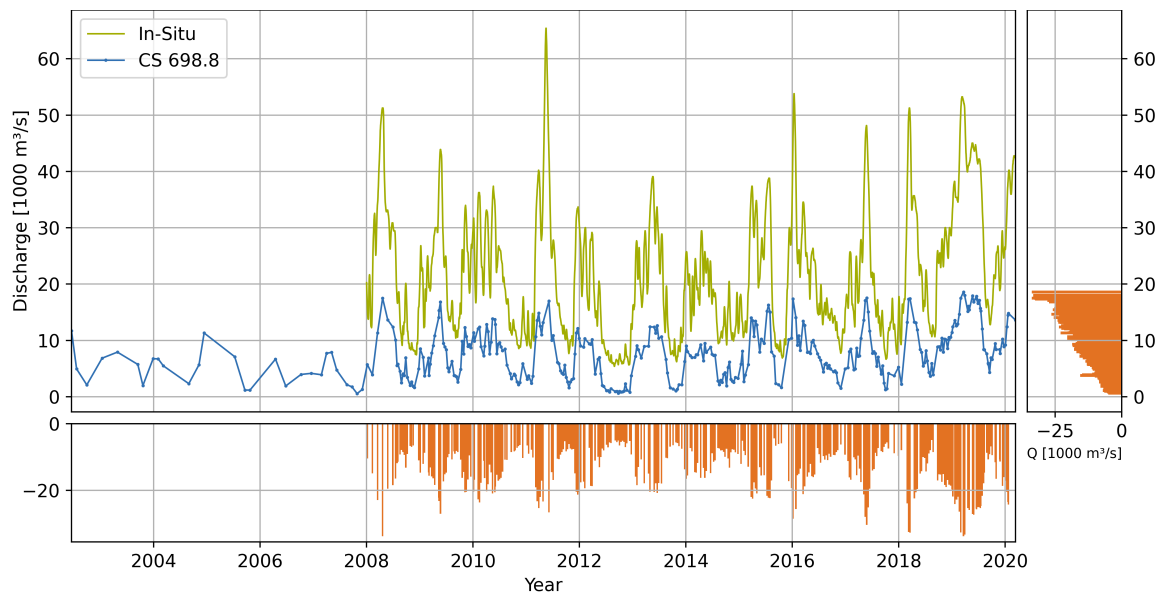


Figure S6. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 698.8.

CS 702.4

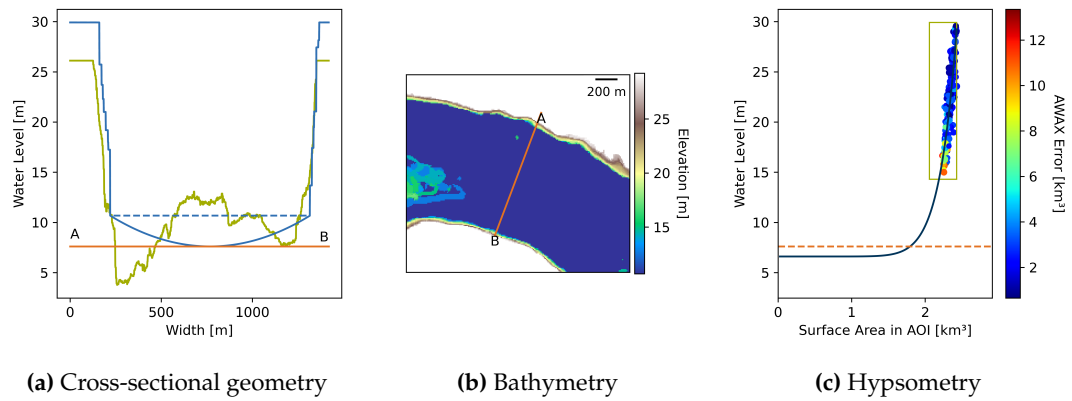


Figure S7. Estimated geometry, bathymetry, and hypsometry at CS 702.4.

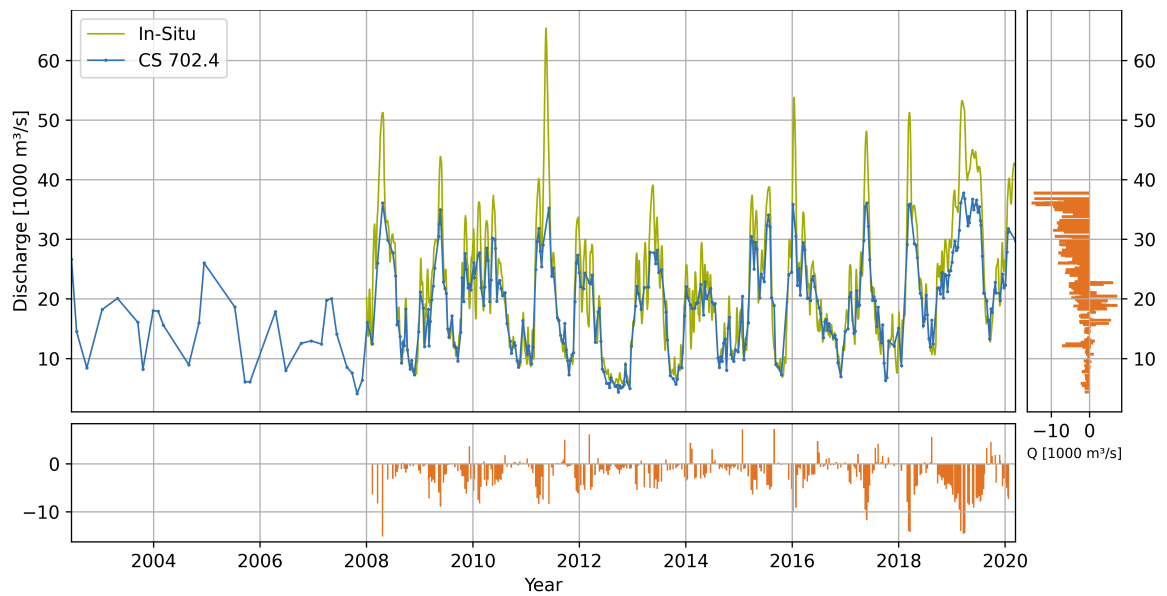


Figure S8. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 702.4.

CS 721.1

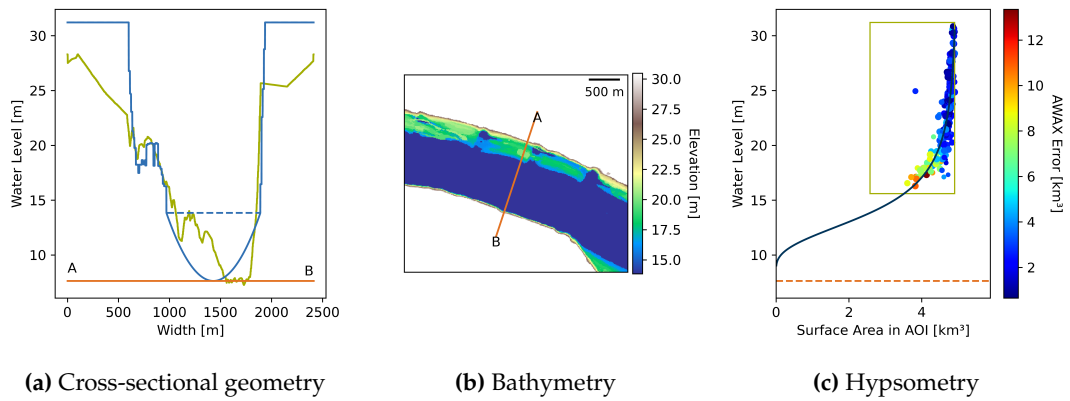


Figure S9. Estimated geometry, bathymetry, and hypsometry at CS 721.1.

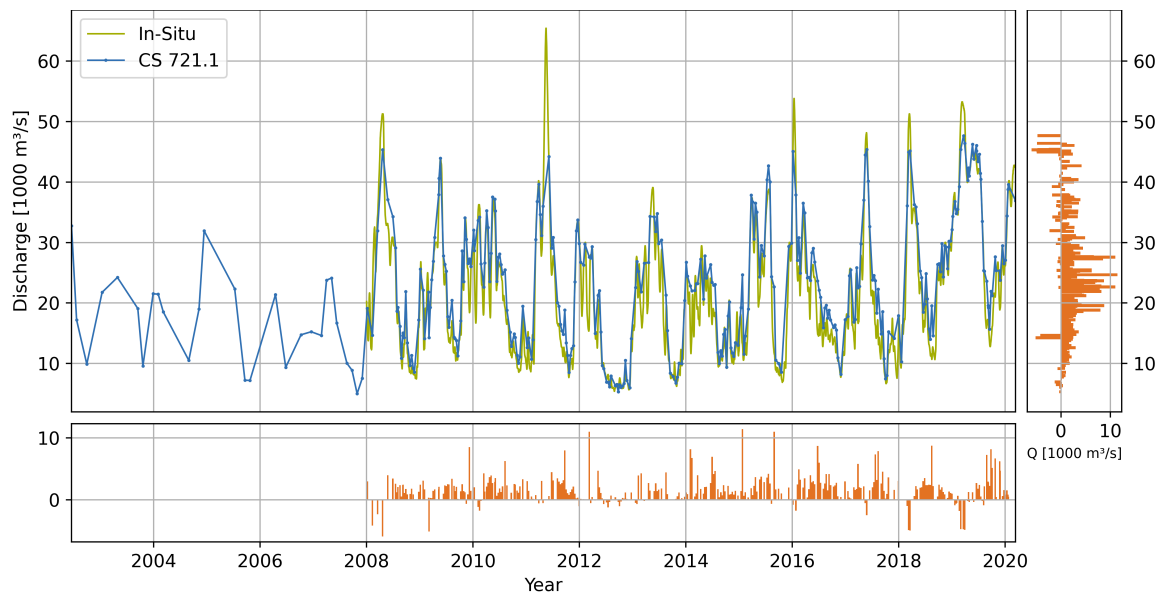


Figure S10. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 721.1.

Natchez

CS 564.8

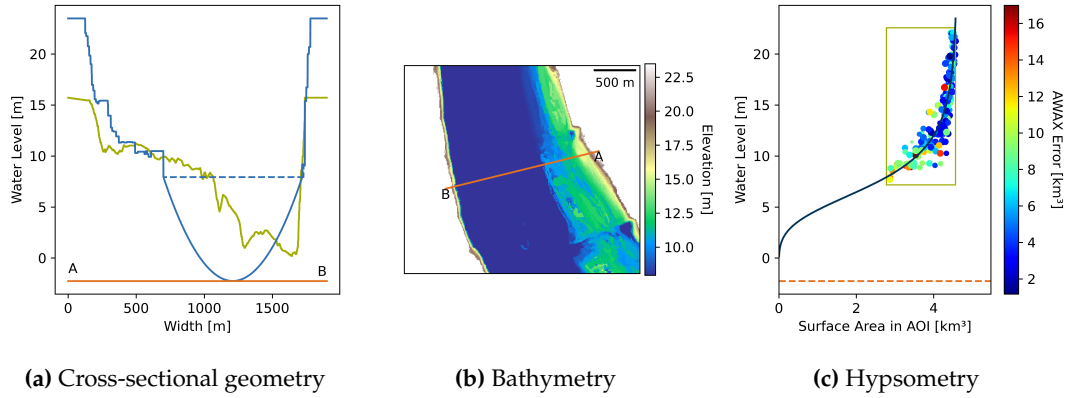


Figure S11. Estimated geometry, bathymetry, and hypsometry at CS 564.8.

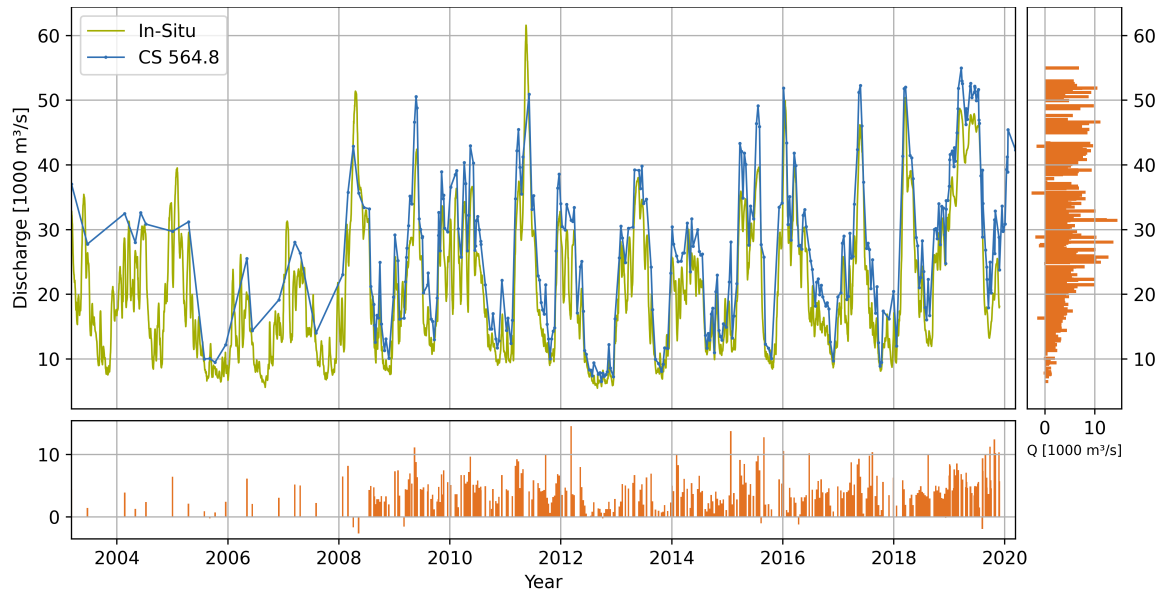


Figure S12. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 564.8.

CS 576.0

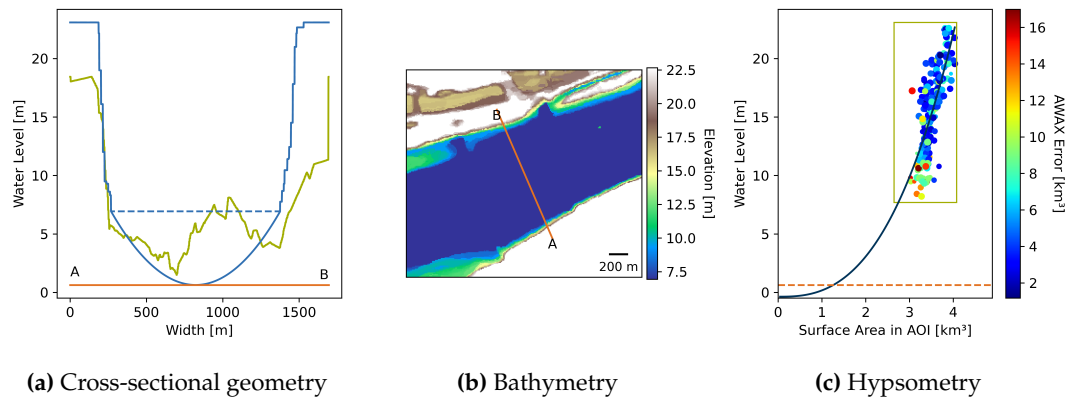


Figure S13. Estimated geometry, bathymetry, and hypsometry at CS 576.0.

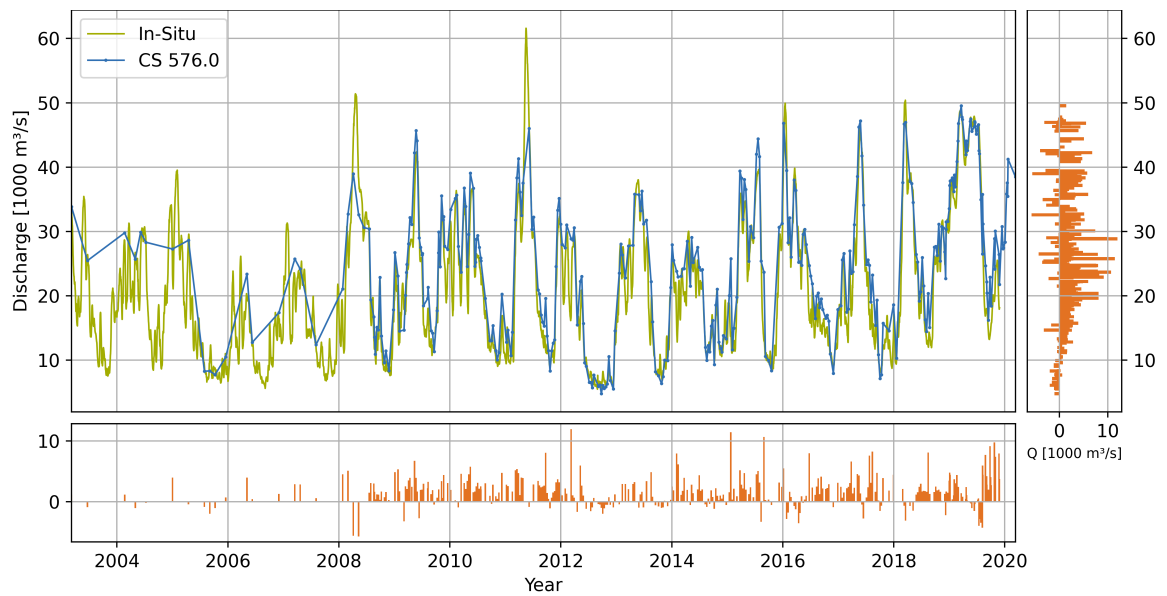


Figure S14. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 576.0.

CS 580.9

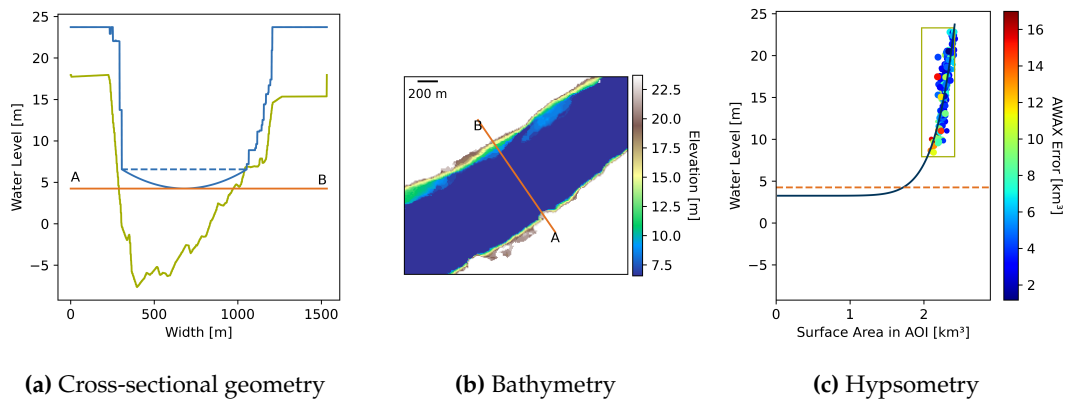


Figure S15. Estimated geometry, bathymetry, and hypsometry at CS 580.9.

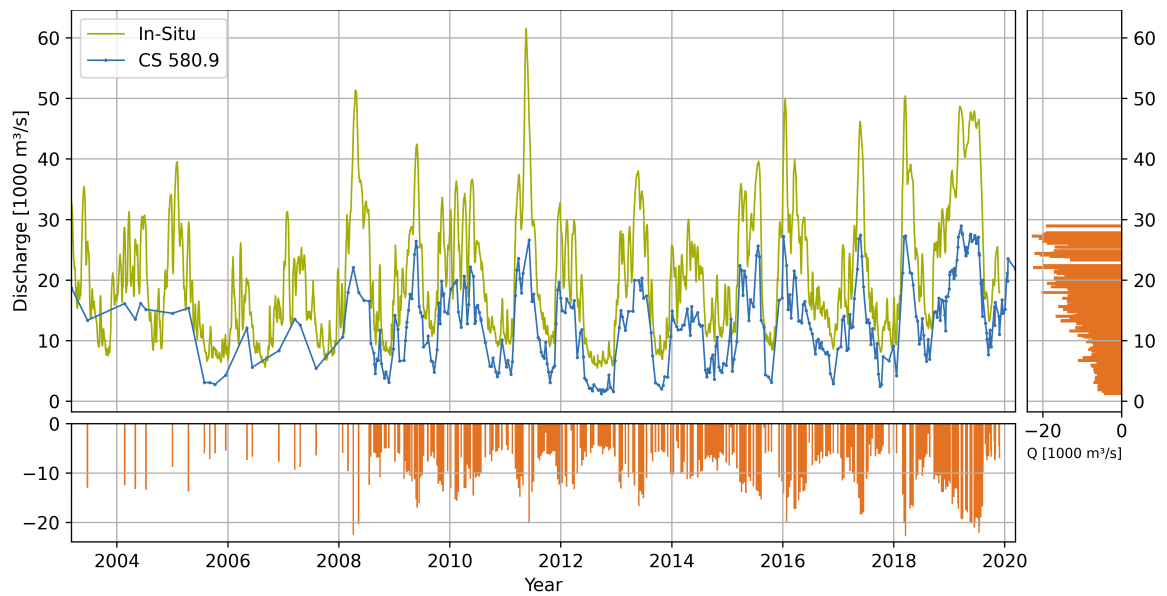


Figure S16. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 580.9.

CS 591.1

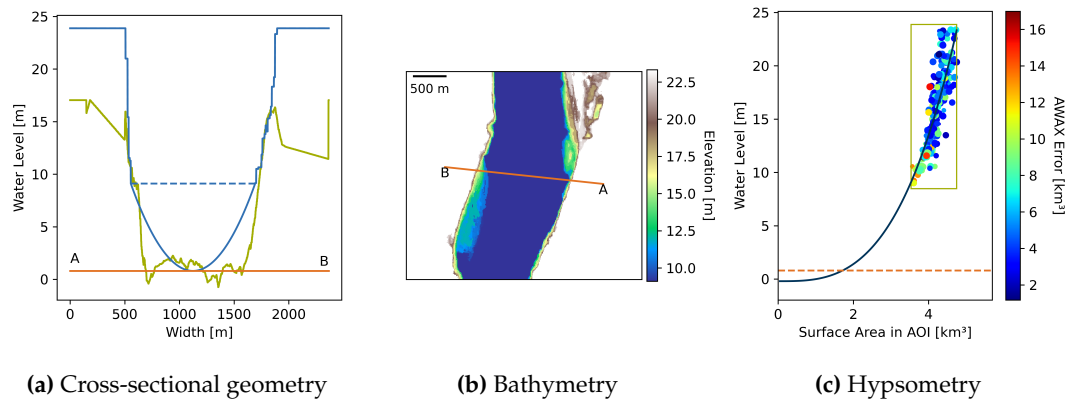


Figure S17. Estimated geometry, bathymetry, and hypsometry at CS 591.1.

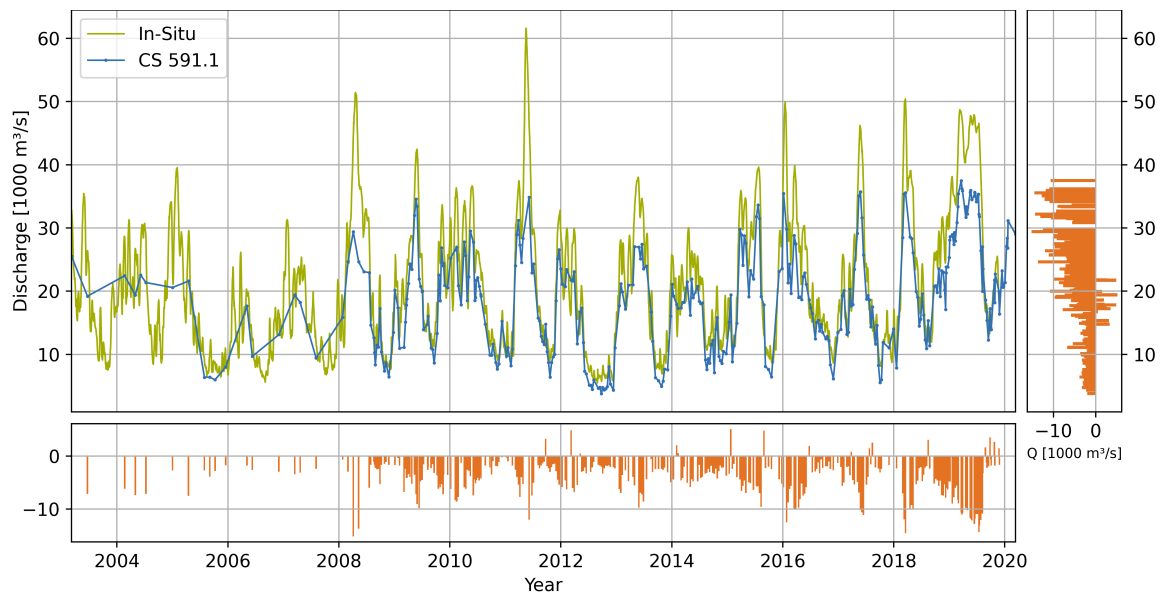


Figure S18. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 591.1.

CS 599.4

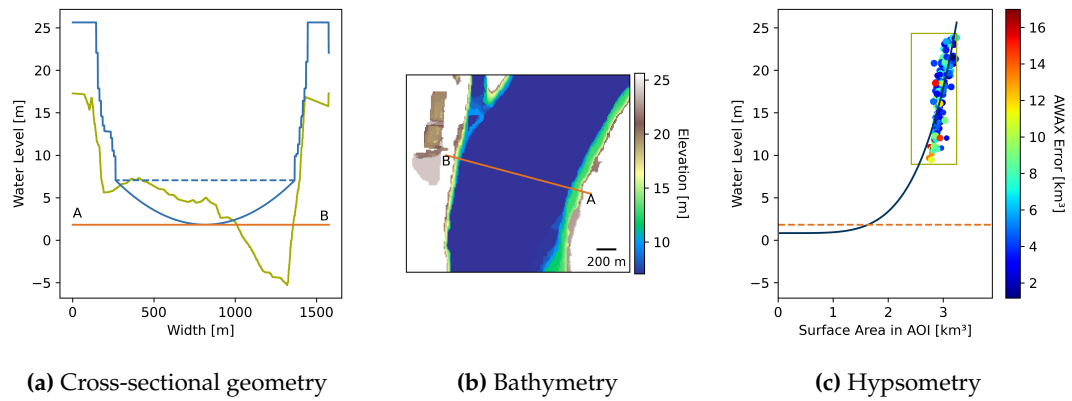


Figure S19. Estimated geometry, bathymetry, and hypsometry at CS 599.4.

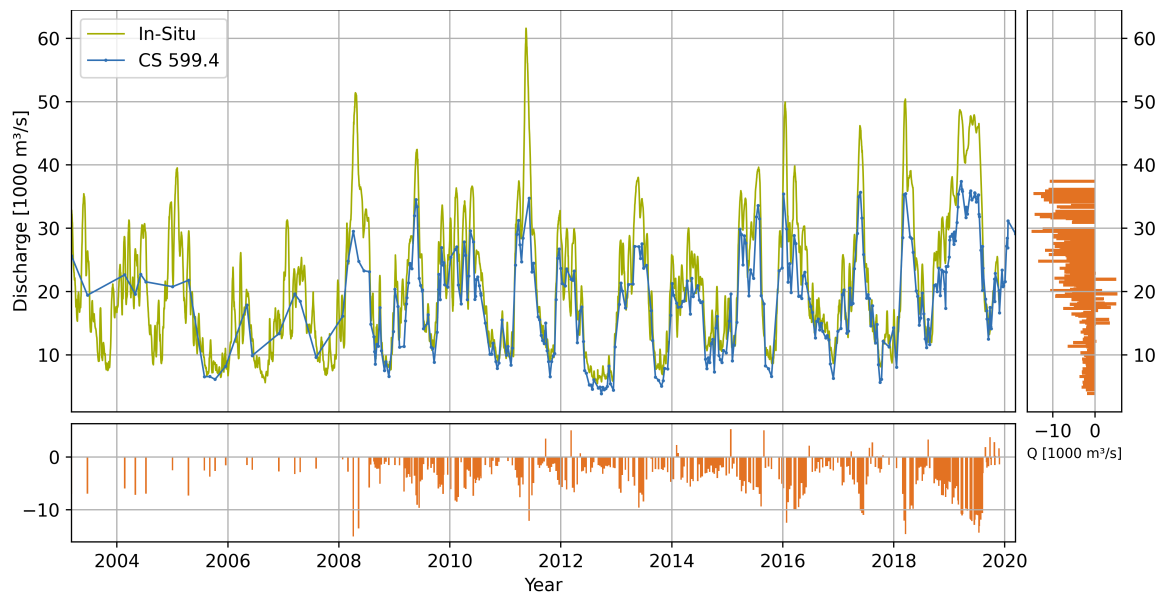


Figure S20. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 599.4.

Tarbert Landing

CS 416.9

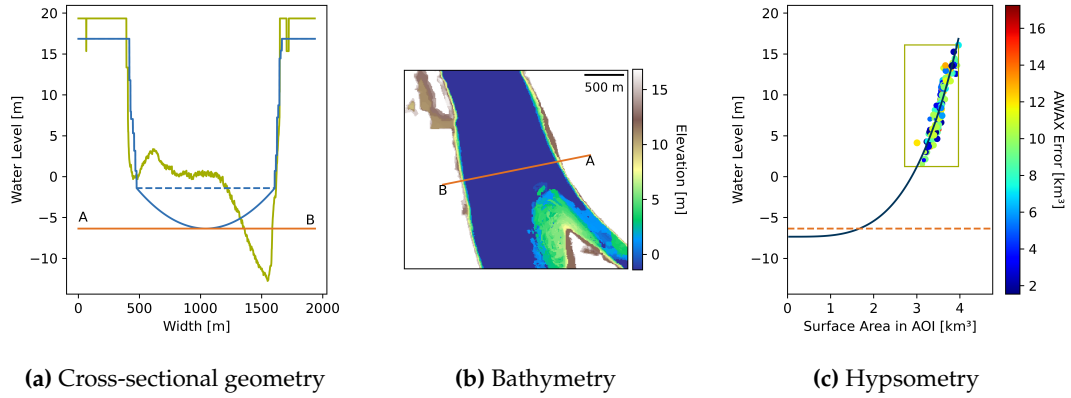


Figure S21. Estimated geometry, bathymetry, and hypsometry at CS 416.9.

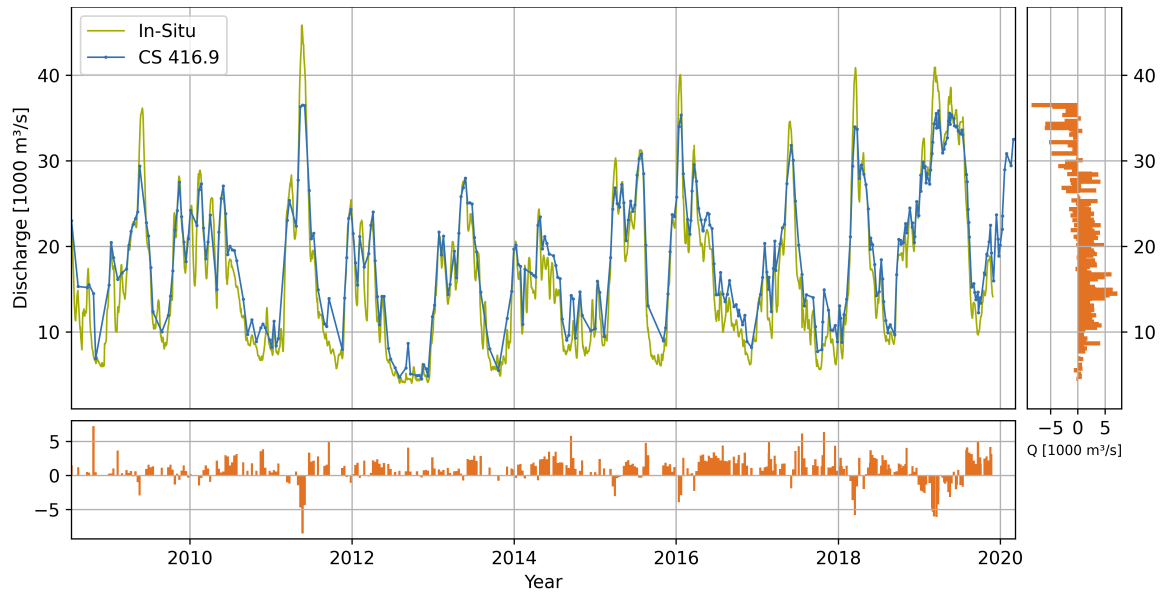


Figure S22. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 416.9.

CS 427.5

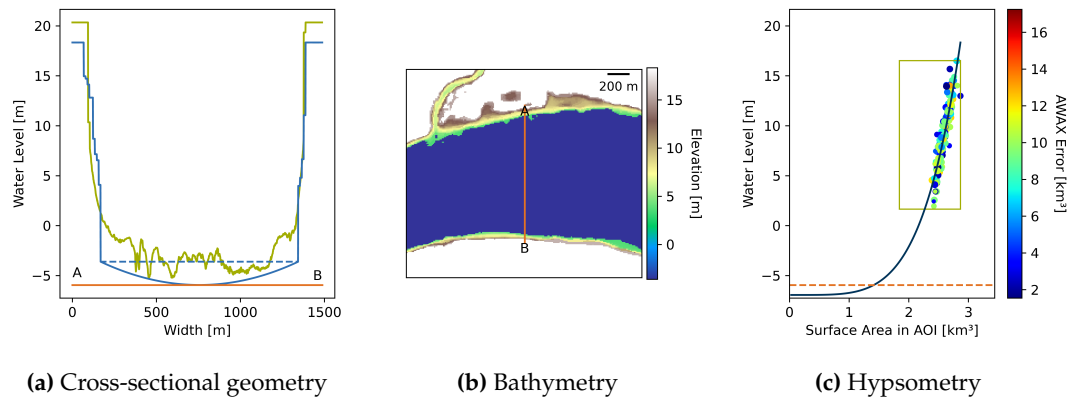


Figure S23. Estimated geometry, bathymetry, and hypsometry at CS 427.5.

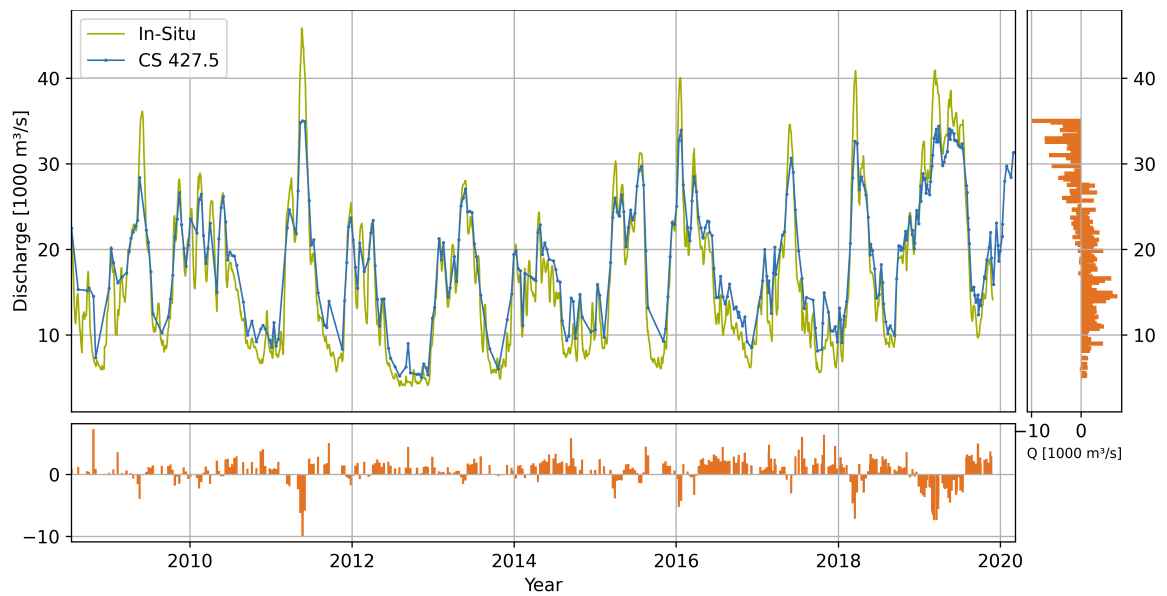


Figure S24. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 427.5.

CS 439.4

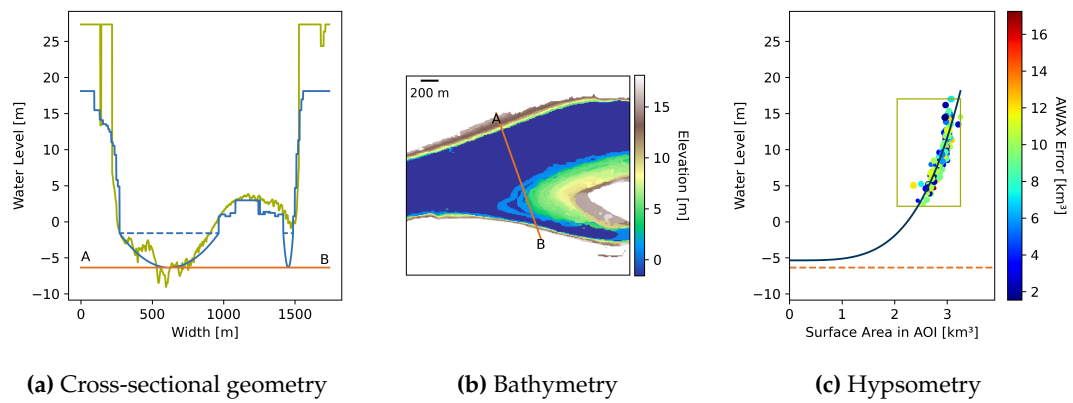


Figure S25. Estimated geometry, bathymetry, and hypsometry at CS 439.4.

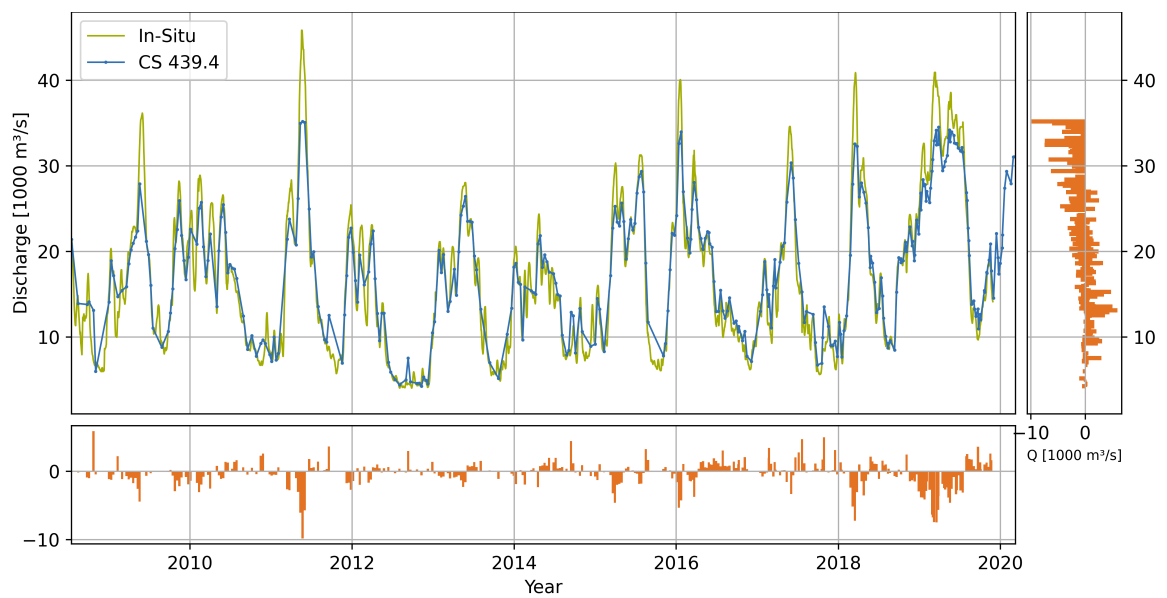


Figure S26. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 439.4.

CS 460.9

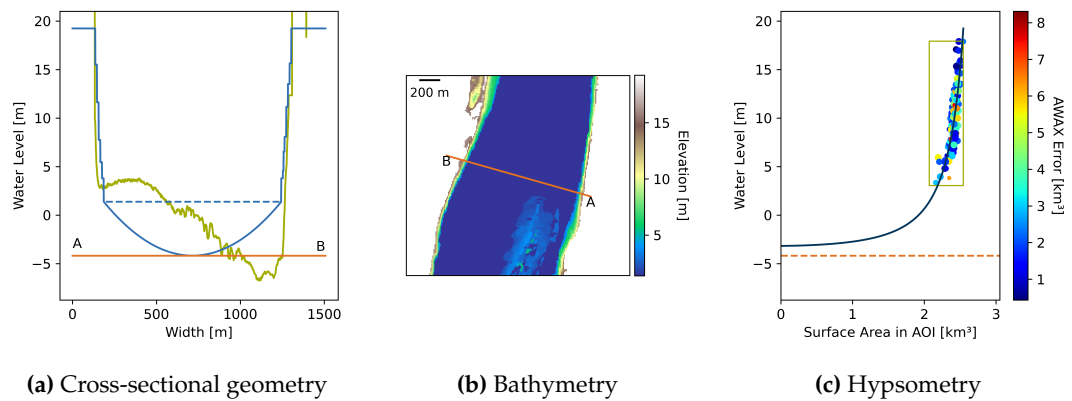


Figure S27. Estimated geometry, bathymetry, and hypsometry at CS 460.9.

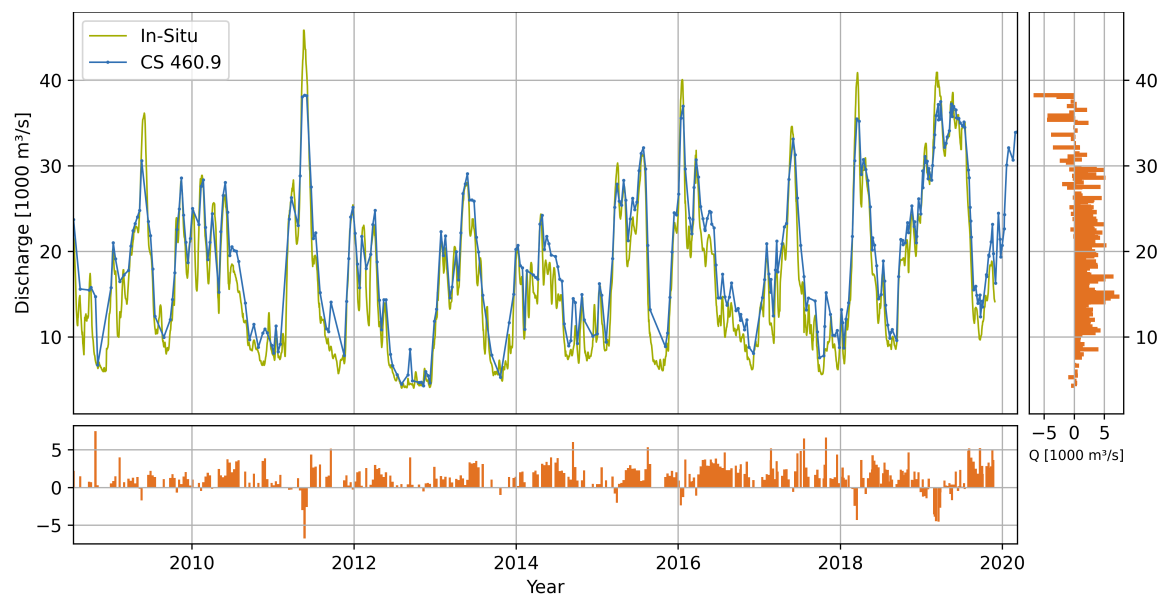


Figure S28. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 460.9.

CS 471.4

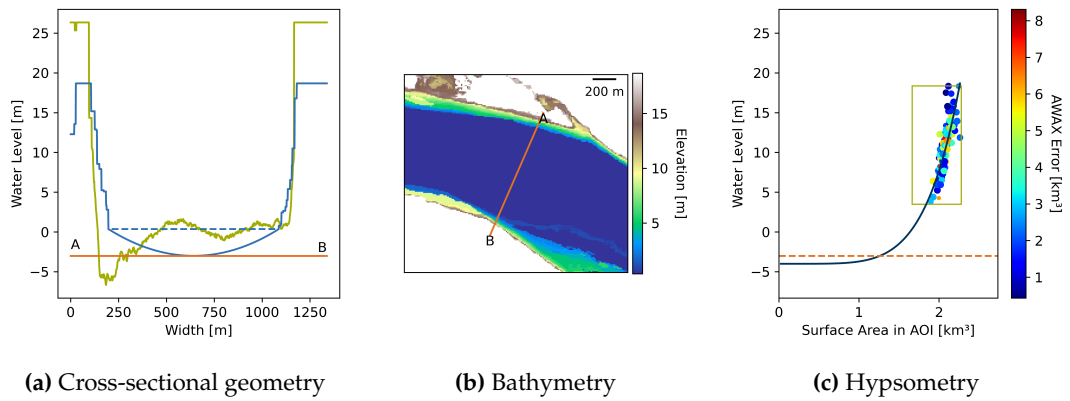


Figure S29. Estimated geometry, bathymetry, and hypsometry at CS 471.4.

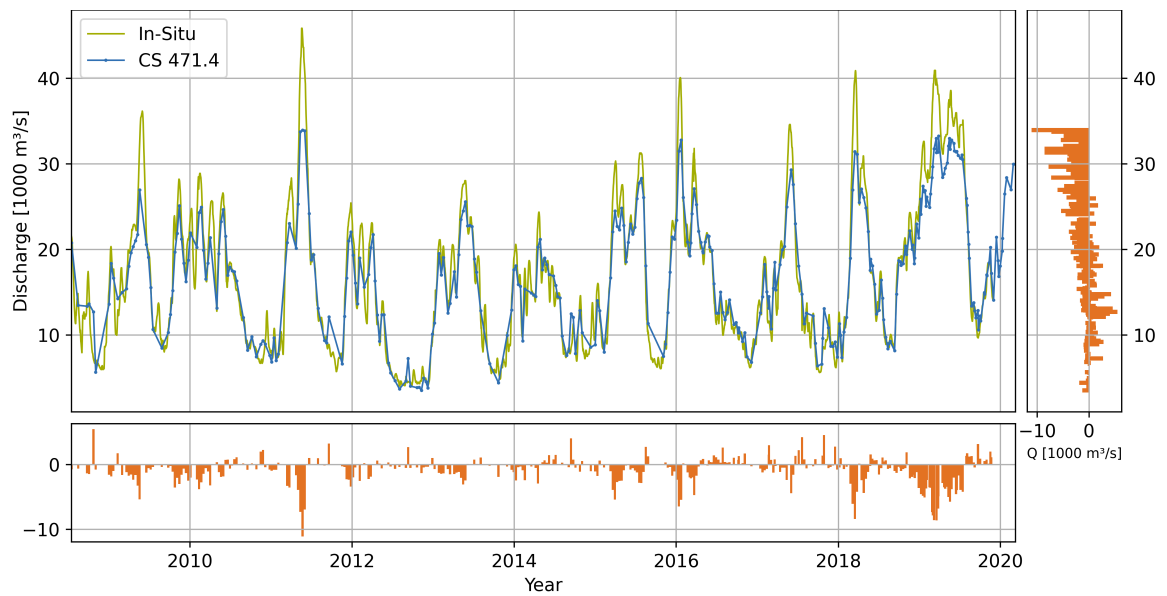


Figure S30. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 471.4.

CS 492.5

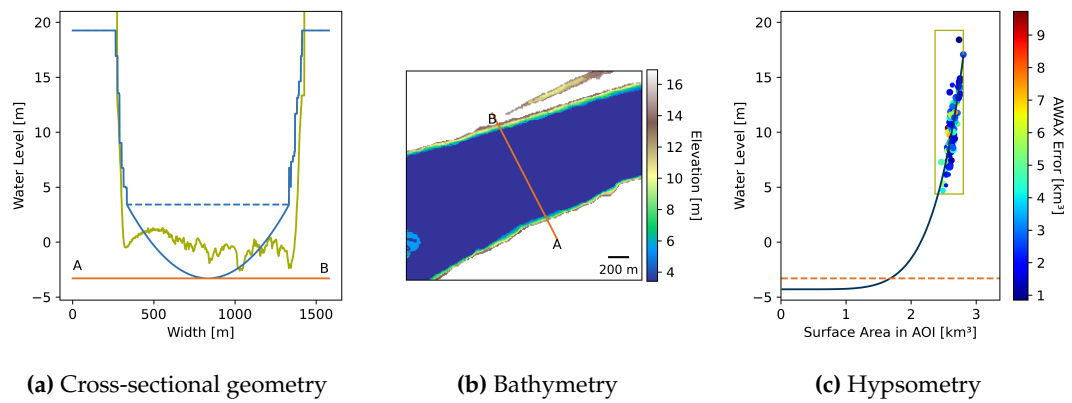


Figure S31. Estimated geometry, bathymetry, and hypsometry at CS 492.5.

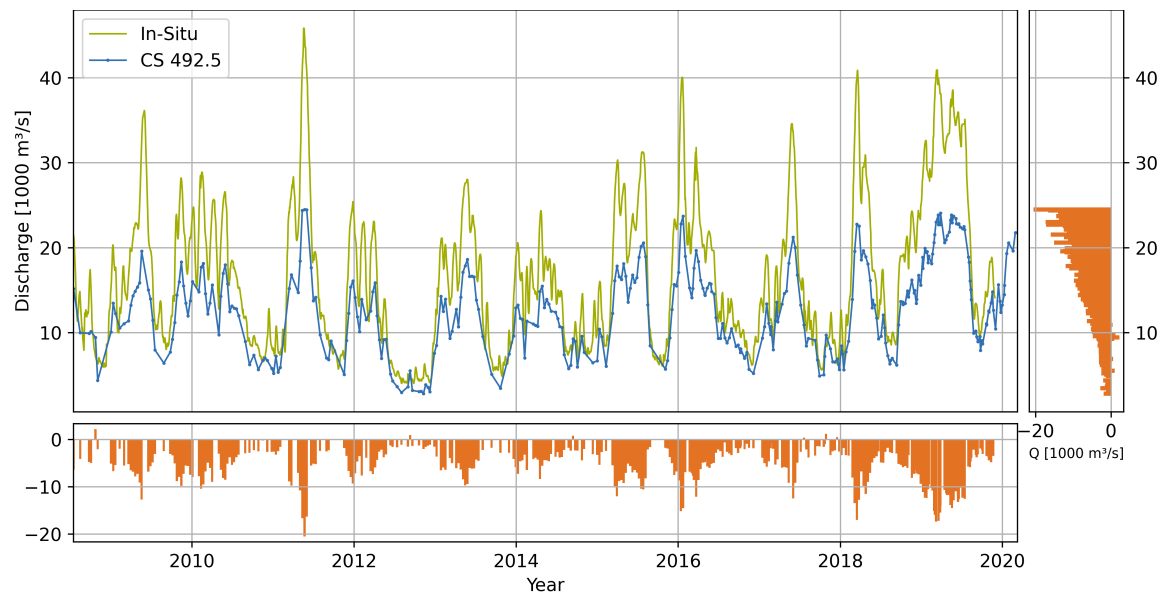


Figure S32. Estimated (blue) and in-situ (green) discharge time series with residuals (orange) per time (horizontal) and discharge (vertical) at CS 492.5.