

*Journal of Geophysical Research Biogeosciences*

Supporting Information for

**Effects of a storm on the transformation and export of phosphorus through a subtropical river-turbid estuary continuum revealed by continuous observation**

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Data supporting the conclusions (Data tables S1-S7 for Figs. 2-8, respectively)

# **Data Table S1.** Hydrological and tidal characteristics of the Jiulong River Estuary during 2019 (a and c) and during the June storm observation (b and d) (Data for Figure 2)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date | Daily discharge for JRE | Daily tidal range for JRE | Time | Hourly discharge for NJR | Hourly discharge for WJR | Hourly discharge for JRE | Baseflow for JRE | Hourly tidal range for JRE | Average tidal range for JRE | Sampling time | Hourly tidal range at sampling time |
| (m3 s-1) | (cm) | (m3 s-1) | (m3 s-1) | (m3 s-1) | (m3 s-1) | (cm) | (cm) | (cm) |
| 2019-1-1 | 113.3 | 279 | 2019-6-10 0:00 | 451 | 154 | 630.9 | 745 | 214 | 334 | 2019-6-10 17:00 | 374 |
| 2019-1-2 | 104.0 | 285 | 2019-6-10 1:00 | 543 | 148 | 719.1 | 745 | 192 | 334 | 2019-6-11 3:00 | 190 |
| 2019-1-3 | 99.6 | 298 | 2019-6-10 2:00 | 610 | 148 | 788.1 | 745 | 189 | 334 | 2019-6-11 13:00 | 247 |
| 2019-1-4 | 90.4 | 323 | 2019-6-10 3:00 | 543 | 148 | 719.1 | 745 | 234 | 334 | 2019-6-11 15:00 | 201 |
| 2019-1-5 | 200.2 | 340 | 2019-6-10 4:00 | 481 | 156 | 663.9 | 745 | 321 | 334 | 2019-6-11 16:00 | 221 |
| 2019-1-6 | 144.4 | 340 | 2019-6-10 5:00 | 456 | 145 | 626.3 | 745 | 412 | 334 | 2019-6-11 17:00 | 282 |
| 2019-1-7 | 153.2 | 329 | 2019-6-10 6:00 | 451 | 123 | 597.4 | 745 | 467 | 334 | 2019-6-11 19:00 | 415 |
| 2019-1-8 | 183.1 | 327 | 2019-6-10 7:00 | 505 | 126 | 656.2 | 745 | 468 | 334 | 2019-6-11 21:00 | 417 |
| 2019-1-9 | 164.8 | 315 | 2019-6-10 8:00 | 526 | 143 | 696.2 | 745 | 444 | 334 | 2019-6-11 23:00 | 345 |
| 2019-1-10 | 125.5 | 310 | 2019-6-10 9:00 | 510 | 143 | 679.7 | 745 | 401 | 334 | 2019-6-12 1:00 | 252 |
| 2019-1-11 | 93.5 | 303 | 2019-6-10 10:00 | 510 | 143 | 679.7 | 745 | 349 | 334 | 2019-6-12 3:00 | 194 |
| 2019-1-12 | 69.1 | 292 | 2019-6-10 11:00 | 510 | 154 | 691.6 | 745 | 294 | 334 | 2019-6-12 5:00 | 238 |
| 2019-1-13 | 62.3 | 281 | 2019-6-10 12:00 | 481 | 147 | 654.2 | 745 | 247 | 334 | 2019-6-12 7:00 | 402 |
| 2019-1-14 | 66.7 | 268 | 2019-6-10 13:00 | 510 | 152 | 689.5 | 745 | 216 | 334 | 2019-6-12 9:00 | 458 |
| 2019-1-15 | 114.3 | 254 | 2019-6-10 14:00 | 486 | 128 | 638.8 | 745 | 206 | 334 | 2019-6-12 11:00 | 401 |
| 2019-1-16 | 120.3 | 251 | 2019-6-10 15:00 | 422 | 128 | 572.9 | 745 | 234 | 334 | 2019-6-12 13:00 | 301 |
| 2019-1-17 | 122.7 | 268 | 2019-6-10 16:00 | 456 | 128 | 607.9 | 745 | 299 | 334 | 2019-6-12 15:00 | 218 |
| 2019-1-18 | 108.4 | 294 | 2019-6-10 17:00 | 490 | 168 | 686.1 | 745 | 374 | 334 | 2019-6-12 17:00 | 206 |
| 2019-1-19 | 104.5 | 331 | 2019-6-10 18:00 | 560 | 168 | 758.2 | 745 | 423 | 334 | 2019-6-12 19:00 | 340 |
| 2019-1-20 | 131.7 | 373 | 2019-6-10 19:00 | 464 | 148 | 637.8 | 745 | 429 | 334 | 2019-6-13 7:00 | 321 |
| 2019-1-21 | 117.6 | 406 | 2019-6-10 20:00 | 443 | 166 | 635.6 | 745 | 412 | 334 | 2019-6-13 9:00 | 453 |
| 2019-1-22 | 107.5 | 413 | 2019-6-10 21:00 | 520 | 149 | 696.5 | 745 | 380 | 334 | 2019-6-13 11:00 | 437 |
| 2019-1-23 | 106.0 | 419 | 2019-6-10 22:00 | 520 | 149 | 696.5 | 745 | 338 | 334 | 2019-6-13 13:00 | 353 |
| 2019-1-24 | 111.4 | 401 | 2019-6-10 23:00 | 532 | 149 | 708.9 | 745 | 291 | 334 | 2019-6-13 15:00 | 253 |
| 2019-1-25 | 118.6 | 377 | 2019-6-11 0:00 | 554 | 165 | 748.8 | 745 | 247 | 334 | 2019-6-13 17:00 | 193 |
| 2019-1-26 | 98.2 | 369 | 2019-6-11 1:00 | 543 | 159 | 731.0 | 745 | 212 | 334 | 2019-6-13 19:00 | 245 |
| 2019-1-27 | 99.4 | 338 | 2019-6-11 2:00 | 543 | 159 | 731.0 | 745 | 191 | 334 | 2019-6-14 7:00 | 245 |
| 2019-1-28 | 100.5 | 310 | 2019-6-11 3:00 | 543 | 166 | 738.6 | 745 | 190 | 334 | 2019-6-14 9:00 | 407 |
| 2019-1-29 | 99.0 | 281 | 2019-6-11 4:00 | 515 | 166 | 709.7 | 745 | 236 | 334 | 2019-6-14 11:00 | 458 |
| 2019-1-30 | 112.0 | 263 | 2019-6-11 5:00 | 532 | 166 | 727.2 | 745 | 321 | 334 | 2019-6-14 13:00 | 401 |
| 2019-1-31 | 89.0 | 258 | 2019-6-11 6:00 | 566 | 144 | 738.5 | 745 | 407 | 334 | 2019-6-14 15:00 | 303 |
| 2019-2-1 | 90.9 | 270 | 2019-6-11 7:00 | 691 | 126 | 847.8 | 745 | 459 | 334 | 2019-6-14 17:00 | 217 |
| 2019-2-2 | 95.6 | 304 | 2019-6-11 8:00 | 691 | 135 | 857.5 | 745 | 461 | 334 | 2019-6-14 19:00 | 192 |
| 2019-2-3 | 94.7 | 317 | 2019-6-11 9:00 | 712 | 135 | 879.2 | 745 | 439 | 334 | 2019-6-15 7:00 | 212 |
| 2019-2-4 | 88.7 | 330 | 2019-6-11 10:00 | 788 | 135 | 957.4 | 745 | 398 | 334 | 2019-6-15 9:00 | 335 |
| 2019-2-5 | 87.7 | 338 | 2019-6-11 11:00 | 1030 | 162 | 1235.9 | 745 | 347 | 334 | 2019-6-15 11:00 | 459 |
| 2019-2-6 | 76.1 | 322 | 2019-6-11 12:00 | 1170 | 156 | 1373.6 | 745 | 294 | 334 | 2019-6-15 13:00 | 436 |
| 2019-2-7 | 117.2 | 323 | 2019-6-11 13:00 | 1390 | 156 | 1600.2 | 745 | 247 | 334 | 2019-6-15 15:00 | 353 |
| 2019-2-8 | 174.5 | 313 | 2019-6-11 14:00 | 1440 | 205 | 1704.6 | 745 | 214 | 334 | 2019-6-15 17:00 | 257 |
| 2019-2-9 | 78.8 | 305 | 2019-6-11 15:00 | 1460 | 205 | 1725.2 | 745 | 201 | 334 | 2019-6-15 19:00 | 198 |
| 2019-2-10 | 79.5 | 303 | 2019-6-11 16:00 | 1410 | 205 | 1673.7 | 745 | 221 | 334 | 2019-6-16 7:00 | 227 |
| 2019-2-11 | 54.4 | 291 | 2019-6-11 17:00 | 1320 | 173 | 1546.4 | 745 | 282 | 334 | 2019-6-16 9:00 | 268 |
| 2019-2-12 | 46.3 | 279 | 2019-6-11 18:00 | 1340 | 162 | 1555.2 | 745 | 357 | 334 | 2019-6-16 11:00 | 423 |
| 2019-2-13 | 53.7 | 264 | 2019-6-11 19:00 | 1210 | 162 | 1421.3 | 745 | 415 | 334 | 2019-6-16 13:00 | 455 |
| 2019-2-14 | 46.0 | 254 | 2019-6-11 20:00 | 1220 | 162 | 1431.6 | 745 | 431 | 334 | 2019-6-16 15:00 | 396 |
| 2019-2-15 | 43.1 | 256 | 2019-6-11 21:00 | 1270 | 171 | 1492.8 | 745 | 417 | 334 | 2019-6-16 17:00 | 303 |
| 2019-2-16 | 51.2 | 280 | 2019-6-11 22:00 | 1290 | 218 | 1564.1 | 745 | 387 | 334 | 2019-6-16 19:00 | 225 |
| 2019-2-17 | 94.8 | 321 | 2019-6-11 23:00 | 1240 | 218 | 1512.6 | 745 | 345 | 334 | 2019-6-17 7:00 | 260 |
| 2019-2-18 | 82.7 | 366 | 2019-6-12 0:00 | 1010 | 210 | 1267.1 | 745 | 298 | 334 | 2019-6-17 9:00 | 236 |
| 2019-2-19 | 130.2 | 398 | 2019-6-12 1:00 | 1080 | 210 | 1339.2 | 745 | 252 | 334 | 2019-6-17 11:00 | 360 |
| 2019-2-20 | 98.1 | 408 | 2019-6-12 2:00 | 1050 | 210 | 1308.3 | 745 | 216 | 334 | 2019-6-17 13:00 | 458 |
| 2019-2-21 | 110.6 | 395 | 2019-6-12 3:00 | 1110 | 186 | 1344.2 | 745 | 194 | 334 | 2019-6-17 15:00 | 426 |
| 2019-2-22 | 212.0 | 383 | 2019-6-12 4:00 | 1230 | 205 | 1488.3 | 745 | 193 | 334 | 2019-6-17 17:00 | 346 |
| 2019-2-23 | 222.8 | 372 | 2019-6-12 5:00 | 1210 | 205 | 1467.7 | 745 | 238 | 334 | 2019-6-17 19:00 | 261 |
| 2019-2-24 | 371.8 | 345 | 2019-6-12 6:00 | 1150 | 177 | 1375.7 | 745 | 319 | 334 | 2019-6-18 10:00 | 256 |
| 2019-2-25 | 435.6 | 332 | 2019-6-12 7:00 | 1260 | 177 | 1489.0 | 745 | 402 | 334 | 2019-6-19 7:00 | 329 |
| 2019-2-26 | 218.4 | 298 | 2019-6-12 8:00 | 1240 | 160 | 1450.0 | 745 | 454 | 334 | 2019-6-19 9:00 | 259 |
| 2019-2-27 | 91.7 | 270 | 2019-6-12 9:00 | 1160 | 160 | 1367.6 | 745 | 458 | 334 | 2019-6-19 11:00 | 277 |
| 2019-2-28 | 114.7 | 244 | 2019-6-12 10:00 | 1140 | 196 | 1385.9 | 745 | 438 | 334 | 2019-6-19 13:00 | 403 |
| 2019-3-1 | 202.7 | 230 | 2019-6-12 11:00 | 1010 | 193 | 1248.7 | 745 | 401 | 334 | 2019-6-19 15:00 | 443 |
| 2019-3-2 | 163.2 | 245 | 2019-6-12 12:00 | 1090 | 180 | 1317.1 | 745 | 353 | 334 | 2019-6-19 17:00 | 396 |
| 2019-3-3 | 178.0 | 278 | 2019-6-12 13:00 | 1170 | 193 | 1413.5 | 745 | 301 | 334 | 2019-6-19 19:00 | 316 |
| 2019-3-4 | 215.5 | 312 | 2019-6-12 14:00 | 1090 | 193 | 1331.1 | 745 | 254 | 334 | 2019-6-21 7:00 | 374 |
| 2019-3-5 | 305.8 | 332 | 2019-6-12 15:00 | 971 | 193 | 1208.6 | 745 | 218 | 334 | 2019-6-21 9:00 | 284 |
| 2019-3-6 | 658.1 | 325 | 2019-6-12 16:00 | 996 | 151 | 1189.0 | 745 | 199 | 334 | 2019-6-21 11:00 | 244 |
| 2019-3-7 | 578.7 | 330 | 2019-6-12 17:00 | 1080 | 165 | 1290.6 | 745 | 206 | 334 | 2019-6-21 13:00 | 318 |
| 2019-3-8 | 446.8 | 312 | 2019-6-12 18:00 | 1260 | 165 | 1476.0 | 745 | 260 | 334 | 2019-6-21 15:00 | 422 |
| 2019-3-9 | 2034.2 | 309 | 2019-6-12 19:00 | 1360 | 206 | 1623.3 | 745 | 340 | 334 | 2019-6-21 17:00 | 413 |
| 2019-3-10 | 1734.0 | 301 | 2019-6-12 20:00 | 1390 | 210 | 1658.5 | 745 | 411 | 334 | 2019-6-21 19:00 | 347 |
| 2019-3-11 | 802.9 | 300 | 2019-6-12 21:00 | 1220 | 206 | 1479.1 | 745 | 439 | 334 | 2019-6-23 7:00 | 400 |
| 2019-3-12 | 614.5 | 286 | 2019-6-12 22:00 | 1250 | 258 | 1566.1 | 745 | 429 | 334 | 2019-6-23 11:00 | 234 |
| 2019-3-13 | 490.6 | 275 | 2019-6-12 23:00 | 1230 | 266 | 1554.2 | 745 | 401 | 334 | 2019-6-23 13:00 | 234 |
| 2019-3-14 | 444.6 | 262 | 2019-6-13 0:00 | 1430 | 260 | 1753.7 | 745 | 358 | 334 | 2019-6-23 15:00 | 342 |
| 2019-3-15 | 468.3 | 246 | 2019-6-13 1:00 | 1390 | 260 | 1712.5 | 745 | 309 | 334 | 2019-6-23 17:00 | 402 |
| 2019-3-16 | 336.3 | 241 | 2019-6-13 2:00 | 1760 | 260 | 2093.6 | 745 | 261 | 334 | 2019-6-23 19:00 | 366 |
| 2019-3-17 | 429.4 | 262 | 2019-6-13 3:00 | 1740 | 361 | 2182.1 | 745 | 222 | 334 | — | — |
| 2019-3-18 | 298.5 | 305 | 2019-6-13 4:00 | 1610 | 366 | 2053.6 | 745 | 200 | 334 | — | — |
| 2019-3-19 | 373.0 | 349 | 2019-6-13 5:00 | 1900 | 444 | 2436.5 | 745 | 198 | 334 | — | — |
| 2019-3-20 | 297.3 | 365 | 2019-6-13 6:00 | 1860 | 404 | 2352.1 | 745 | 242 | 334 | — | — |
| 2019-3-21 | 268.5 | 356 | 2019-6-13 7:00 | 1650 | 449 | 2184.4 | 745 | 321 | 334 | — | — |
| 2019-3-22 | 253.0 | 359 | 2019-6-13 8:00 | 1420 | 428 | 1924.8 | 745 | 403 | 334 | — | — |
| 2019-3-23 | 300.8 | 357 | 2019-6-13 9:00 | 1060 | 497 | 1628.6 | 745 | 453 | 334 | — | — |
| 2019-3-24 | 372.8 | 359 | 2019-6-13 10:00 | 1290 | 497 | 1865.5 | 745 | 457 | 334 | — | — |
| 2019-3-25 | 539.0 | 339 | 2019-6-13 11:00 | 1420 | 401 | 1895.7 | 745 | 437 | 334 | — | — |
| 2019-3-26 | 569.0 | 314 | 2019-6-13 12:00 | 1570 | 405 | 2054.5 | 745 | 401 | 334 | — | — |
| 2019-3-27 | 431.7 | 299 | 2019-6-13 13:00 | 1110 | 405 | 1580.7 | 745 | 353 | 334 | — | — |
| 2019-3-28 | 320.3 | 271 | 2019-6-13 14:00 | 1150 | 405 | 1621.9 | 745 | 301 | 334 | — | — |
| 2019-3-29 | 395.1 | 236 | 2019-6-13 15:00 | 1250 | 343 | 1657.9 | 745 | 253 | 334 | — | — |
| 2019-3-30 | 548.0 | 215 | 2019-6-13 16:00 | 1160 | 370 | 1594.4 | 745 | 215 | 334 | — | — |
| 2019-3-31 | 431.2 | 222 | 2019-6-13 17:00 | 1280 | 327 | 1671.6 | 745 | 193 | 334 | — | — |
| 2019-4-1 | 337.1 | 253 | 2019-6-13 18:00 | 913 | 327 | 1293.6 | 745 | 194 | 334 | — | — |
| 2019-4-2 | 325.1 | 286 | 2019-6-13 19:00 | 1110 | 300 | 1467.3 | 745 | 245 | 334 | — | — |
| 2019-4-3 | 315.2 | 311 | 2019-6-13 20:00 | 1090 | 313 | 1460.7 | 745 | 332 | 334 | — | — |
| 2019-4-4 | 280.3 | 321 | 2019-6-13 21:00 | 1010 | 312 | 1377.3 | 745 | 414 | 334 | — | — |
| 2019-4-5 | 290.4 | 304 | 2019-6-13 22:00 | 1020 | 312 | 1387.6 | 745 | 453 | 334 | — | — |
| 2019-4-6 | 301.3 | 303 | 2019-6-13 23:00 | 1070 | 312 | 1439.1 | 745 | 446 | 334 | — | — |
| 2019-4-7 | 292.9 | 296 | 2019-6-14 0:00 | 997 | 343 | 1397.4 | 745 | 419 | 334 | — | — |
| 2019-4-8 | 262.4 | 300 | 2019-6-14 1:00 | 1130 | 342 | 1533.3 | 745 | 376 | 334 | — | — |
| 2019-4-9 | 274.4 | 305 | 2019-6-14 2:00 | 1460 | 342 | 1873.2 | 745 | 324 | 334 | — | — |
| 2019-4-10 | 284.3 | 282 | 2019-6-14 3:00 | 1490 | 415 | 1982.9 | 745 | 274 | 334 | — | — |
| 2019-4-11 | 229.3 | 281 | 2019-6-14 4:00 | 1600 | 383 | 2061.6 | 745 | 232 | 334 | — | — |
| 2019-4-12 | 299.9 | 268 | 2019-6-14 5:00 | 1540 | 383 | 1999.8 | 745 | 207 | 334 | — | — |
| 2019-4-13 | 343.9 | 253 | 2019-6-14 6:00 | 1610 | 383 | 2071.9 | 745 | 203 | 334 | — | — |
| 2019-4-14 | 376.8 | 245 | 2019-6-14 7:00 | 1430 | 393 | 1897.3 | 745 | 245 | 334 | — | — |
| 2019-4-15 | 389.9 | 255 | 2019-6-14 8:00 | 1410 | 364 | 1845.4 | 745 | 324 | 334 | — | — |
| 2019-4-16 | 400.1 | 282 | 2019-6-14 9:00 | 1510 | 386 | 1972.2 | 745 | 407 | 334 | — | — |
| 2019-4-17 | 374.2 | 307 | 2019-6-14 10:00 | 1390 | 308 | 1764.3 | 745 | 456 | 334 | — | — |
| 2019-4-18 | 306.6 | 319 | 2019-6-14 11:00 | 1350 | 385 | 1806.3 | 745 | 458 | 334 | — | — |
| 2019-4-19 | 687.4 | 319 | 2019-6-14 12:00 | 1370 | 397 | 1839.9 | 745 | 437 | 334 | — | — |
| 2019-4-20 | 664.3 | 326 | 2019-6-14 13:00 | 1330 | 345 | 1742.5 | 745 | 401 | 334 | — | — |
| 2019-4-21 | 526.7 | 335 | 2019-6-14 14:00 | 1360 | 363 | 1792.8 | 745 | 354 | 334 | — | — |
| 2019-4-22 | 470.9 | 322 | 2019-6-14 15:00 | 1340 | 384 | 1794.9 | 745 | 303 | 334 | — | — |
| 2019-4-23 | 477.9 | 319 | 2019-6-14 16:00 | 1370 | 339 | 1777.2 | 745 | 255 | 334 | — | — |
| 2019-4-24 | 359.4 | 284 | 2019-6-14 17:00 | 1370 | 316 | 1752.4 | 745 | 217 | 334 | — | — |
| 2019-4-25 | 391.6 | 282 | 2019-6-14 18:00 | 1550 | 349 | 1973.4 | 745 | 194 | 334 | — | — |
| 2019-4-26 | 328.1 | 250 | 2019-6-14 19:00 | 1460 | 349 | 1880.7 | 745 | 192 | 334 | — | — |
| 2019-4-27 | 329.3 | 224 | 2019-6-14 20:00 | 1250 | 314 | 1626.6 | 745 | 242 | 334 | — | — |
| 2019-4-28 | 331.5 | 206 | 2019-6-14 21:00 | 1500 | 314 | 1884.1 | 745 | 334 | 334 | — | — |
| 2019-4-29 | 309.0 | 208 | 2019-6-14 22:00 | 1380 | 370 | 1821.0 | 745 | 423 | 334 | — | — |
| 2019-4-30 | 357.1 | 232 | 2019-6-14 23:00 | 1260 | 302 | 1624.0 | 745 | 469 | 334 | — | — |
| 2019-5-1 | 462.8 | 260 | 2019-6-15 0:00 | 1640 | 422 | 2145.0 | 745 | 463 | 334 | — | — |
| 2019-5-2 | 332.8 | 280 | 2019-6-15 1:00 | 1550 | 422 | 2052.3 | 745 | 435 | 334 | — | — |
| 2019-5-3 | 306.3 | 287 | 2019-6-15 2:00 | 1800 | 486 | 2378.9 | 745 | 391 | 334 | — | — |
| 2019-5-4 | 310.6 | 283 | 2019-6-15 3:00 | 1830 | 486 | 2409.8 | 745 | 338 | 334 | — | — |
| 2019-5-5 | 313.0 | 287 | 2019-6-15 4:00 | 1740 | 496 | 2327.9 | 745 | 286 | 334 | — | — |
| 2019-5-6 | 570.6 | 286 | 2019-6-15 5:00 | 1830 | 496 | 2420.6 | 745 | 243 | 334 | — | — |
| 2019-5-7 | 691.0 | 290 | 2019-6-15 6:00 | 2060 | 582 | 2750.4 | 745 | 216 | 334 | — | — |
| 2019-5-8 | 502.2 | 295 | 2019-6-15 7:00 | 1700 | 582 | 2379.6 | 745 | 212 | 334 | — | — |
| 2019-5-9 | 509.1 | 257 | 2019-6-15 8:00 | 1760 | 546 | 2402.5 | 745 | 255 | 334 | — | — |
| 2019-5-10 | 483.6 | 278 | 2019-6-15 9:00 | 1650 | 546 | 2289.2 | 745 | 335 | 334 | — | — |
| 2019-5-11 | 389.6 | 272 | 2019-6-15 10:00 | 1620 | 497 | 2205.4 | 745 | 415 | 334 | — | — |
| 2019-5-12 | 378.4 | 259 | 2019-6-15 11:00 | 1520 | 483 | 2087.2 | 745 | 459 | 334 | — | — |
| 2019-5-13 | 343.8 | 253 | 2019-6-15 12:00 | 1560 | 487 | 2132.8 | 745 | 457 | 334 | — | — |
| 2019-5-14 | 345.8 | 257 | 2019-6-15 13:00 | 1410 | 487 | 1978.3 | 745 | 436 | 334 | — | — |
| 2019-5-15 | 350.5 | 269 | 2019-6-15 14:00 | 1510 | 422 | 2011.1 | 745 | 400 | 334 | — | — |
| 2019-5-16 | 396.2 | 285 | 2019-6-15 15:00 | 1370 | 456 | 1903.6 | 745 | 353 | 334 | — | — |
| 2019-5-17 | 1475.6 | 284 | 2019-6-15 16:00 | 1490 | 450 | 2020.7 | 745 | 303 | 334 | — | — |
| 2019-5-18 | 1069.6 | 296 | 2019-6-15 17:00 | 1290 | 383 | 1742.3 | 745 | 257 | 334 | — | — |
| 2019-5-19 | 740.1 | 301 | 2019-6-15 18:00 | 1460 | 383 | 1917.4 | 745 | 220 | 334 | — | — |
| 2019-5-20 | 552.2 | 291 | 2019-6-15 19:00 | 1180 | 415 | 1663.6 | 745 | 198 | 334 | — | — |
| 2019-5-21 | 726.3 | 284 | 2019-6-15 20:00 | 992 | 415 | 1470.0 | 745 | 196 | 334 | — | — |
| 2019-5-22 | 537.7 | 281 | 2019-6-15 21:00 | 1190 | 370 | 1625.3 | 745 | 248 | 334 | — | — |
| 2019-5-23 | 636.9 | 239 | 2019-6-15 22:00 | 1250 | 368 | 1684.9 | 745 | 345 | 334 | — | — |
| 2019-5-24 | 641.5 | 248 | 2019-6-15 23:00 | 1250 | 368 | 1684.9 | 745 | 438 | 334 | — | — |
| 2019-5-25 | 590.1 | 238 | 2019-6-16 0:00 | 1010 | 214 | 1271.4 | 745 | 483 | 334 | — | — |
| 2019-5-26 | 601.3 | 218 | 2019-6-16 1:00 | 1180 | 387 | 1633.4 | 745 | 476 | 334 | — | — |
| 2019-5-27 | 692.2 | 208 | 2019-6-16 2:00 | 1270 | 387 | 1726.1 | 745 | 447 | 334 | — | — |
| 2019-5-28 | 806.7 | 208 | 2019-6-16 3:00 | 1030 | 387 | 1478.9 | 745 | 402 | 334 | — | — |
| 2019-5-29 | 1573.5 | 219 | 2019-6-16 4:00 | 915 | 341 | 1310.7 | 745 | 348 | 334 | — | — |
| 2019-5-30 | 902.3 | 239 | 2019-6-16 5:00 | 1090 | 341 | 1491.0 | 745 | 296 | 334 | — | — |
| 2019-5-31 | 781.8 | 254 | 2019-6-16 6:00 | 1160 | 356 | 1579.3 | 745 | 253 | 334 | — | — |
| 2019-6-1 | 808.5 | 260 | 2019-6-16 7:00 | 1110 | 356 | 1527.8 | 745 | 227 | 334 | — | — |
| 2019-6-2 | 1588.7 | 270 | 2019-6-16 8:00 | 1090 | 301 | 1447.8 | 745 | 224 | 334 | — | — |
| 2019-6-3 | 2145.2 | 276 | 2019-6-16 9:00 | 1030 | 301 | 1386.0 | 745 | 268 | 334 | — | — |
| 2019-6-4 | 1383.0 | 280 | 2019-6-16 10:00 | 931 | 326 | 1311.0 | 745 | 347 | 334 | — | — |
| 2019-6-5 | 882.1 | 291 | 2019-6-16 11:00 | 845 | 307 | 1201.9 | 745 | 423 | 334 | — | — |
| 2019-6-6 | 805.1 | 299 | 2019-6-16 12:00 | 947 | 231 | 1224.9 | 745 | 460 | 334 | — | — |
| 2019-6-7 | 713.8 | 264 | 2019-6-16 13:00 | 963 | 322 | 1339.7 | 745 | 455 | 334 | — | — |
| 2019-6-8 | 705.9 | 289 | 2019-6-16 14:00 | 845 | 322 | 1218.1 | 745 | 432 | 334 | — | — |
| 2019-6-9 | 754.8 | 291 | 2019-6-16 15:00 | 774 | 322 | 1145.0 | 745 | 396 | 334 | — | — |
| 2019-6-10 | 1302.3 | 285 | 2019-6-16 16:00 | 781 | 313 | 1142.5 | 745 | 351 | 334 | — | — |
| 2019-6-11 | 1526.1 | 278 | 2019-6-16 17:00 | 808 | 326 | 1184.3 | 745 | 303 | 334 | — | — |
| 2019-6-12 | 1908.4 | 271 | 2019-6-16 18:00 | 939 | 326 | 1319.3 | 745 | 259 | 334 | — | — |
| 2019-6-13 | 1981.8 | 271 | 2019-6-16 19:00 | 915 | 272 | 1236.2 | 745 | 225 | 334 | — | — |
| 2019-6-14 | 2191.9 | 281 | 2019-6-16 20:00 | 837 | 272 | 1155.9 | 745 | 205 | 334 | — | — |
| 2019-6-15 | 1418.4 | 269 | 2019-6-16 21:00 | 753 | 301 | 1100.7 | 745 | 205 | 334 | — | — |
| 2019-6-16 | 1116.3 | 283 | 2019-6-16 22:00 | 718 | 301 | 1064.6 | 745 | 263 | 334 | — | — |
| 2019-6-17 | 945.6 | 280 | 2019-6-16 23:00 | 860 | 292 | 1201.2 | 745 | 362 | 334 | — | — |
| 2019-6-18 | 870.8 | 269 | 2019-6-17 0:00 | 955 | 263 | 1267.7 | 745 | 453 | 334 | — | — |
| 2019-6-19 | 839.7 | 264 | 2019-6-17 1:00 | 923 | 274 | 1246.6 | 745 | 491 | 334 | — | — |
| 2019-6-20 | 808.5 | 257 | 2019-6-17 2:00 | 732 | 392 | 1177.3 | 745 | 481 | 334 | — | — |
| 2019-6-21 | 737.2 | 254 | 2019-6-17 3:00 | 698 | 287 | 1028.9 | 745 | 450 | 334 | — | — |
| 2019-6-22 | 652.5 | 226 | 2019-6-17 4:00 | 788 | 287 | 1121.6 | 745 | 405 | 334 | — | — |
| 2019-6-23 | 1295.3 | 236 | 2019-6-17 5:00 | 808 | 287 | 1142.2 | 745 | 352 | 334 | — | — |
| 2019-6-24 | 1811.6 | 233 | 2019-6-17 6:00 | 845 | 299 | 1193.3 | 745 | 301 | 334 | — | — |
| 2019-6-25 | 2366.1 | 232 | 2019-6-17 7:00 | 876 | 299 | 1225.2 | 745 | 260 | 334 | — | — |
| 2019-6-26 | 1461.5 | 225 | 2019-6-17 8:00 | 845 | 266 | 1157.6 | 745 | 236 | 334 | — | — |
| 2019-6-27 | 1217.9 | 225 | 2019-6-17 9:00 | 815 | 245 | 1104.1 | 745 | 236 | 334 | — | — |
| 2019-6-28 | 1159.5 | 231 | 2019-6-17 10:00 | 767 | 248 | 1057.9 | 745 | 283 | 334 | — | — |
| 2019-6-29 | 938.9 | 242 | 2019-6-17 11:00 | 643 | 252 | 934.5 | 745 | 360 | 334 | — | — |
| 2019-6-30 | 899.8 | 267 | 2019-6-17 12:00 | 616 | 252 | 906.6 | 745 | 430 | 334 | — | — |
| 2019-7-1 | 832.9 | 257 | 2019-6-17 13:00 | 643 | 170 | 845.9 | 745 | 458 | 334 | — | — |
| 2019-7-2 | 786.1 | 282 | 2019-6-17 14:00 | 543 | 306 | 889.8 | 745 | 450 | 334 | — | — |
| 2019-7-3 | 1650.9 | 304 | 2019-6-17 15:00 | 478 | 306 | 822.8 | 745 | 426 | 334 | — | — |
| 2019-7-4 | 1069.2 | 323 | 2019-6-17 16:00 | 597 | 306 | 945.4 | 745 | 390 | 334 | — | — |
| 2019-7-5 | 928.9 | 335 | 2019-6-17 17:00 | 684 | 220 | 942.1 | 745 | 346 | 334 | — | — |
| 2019-7-6 | 830.9 | 303 | 2019-6-17 18:00 | 767 | 220 | 1027.6 | 745 | 301 | 334 | — | — |
| 2019-7-7 | 836.2 | 330 | 2019-6-17 19:00 | 767 | 251 | 1061.1 | 745 | 261 | 334 | — | — |
| 2019-7-8 | 770.5 | 333 | 2019-6-17 20:00 | 691 | 246 | 977.4 | 745 | 230 | 334 | — | — |
| 2019-7-9 | 700.3 | 327 | 2019-6-17 21:00 | 698 | 246 | 984.6 | 745 | 213 | 334 | — | — |
| 2019-7-10 | 1176.5 | 307 | 2019-6-17 22:00 | 767 | 239 | 1048.1 | 745 | 220 | 334 | — | — |
| 2019-7-11 | 1374.7 | 292 | 2019-6-17 23:00 | 630 | 239 | 907.0 | 745 | 285 | 334 | — | — |
| 2019-7-12 | 1145.5 | 277 | 2019-6-18 0:00 | 650 | 262 | 952.5 | 745 | 384 | 334 | — | — |
| 2019-7-13 | 920.7 | 271 | 2019-6-18 1:00 | 636 | 262 | 938.0 | 745 | 466 | 334 | — | — |
| 2019-7-14 | 821.6 | 279 | 2019-6-18 2:00 | 657 | 262 | 959.7 | 745 | 491 | 334 | — | — |
| 2019-7-15 | 791.3 | 248 | 2019-6-18 3:00 | 788 | 316 | 1152.9 | 745 | 477 | 334 | — | — |
| 2019-7-16 | 731.2 | 274 | 2019-6-18 4:00 | 794 | 232 | 1068.4 | 745 | 445 | 334 | — | — |
| 2019-7-17 | 664.4 | 274 | 2019-6-18 5:00 | 636 | 232 | 905.6 | 745 | 400 | 334 | — | — |
| 2019-7-18 | 625.5 | 275 | 2019-6-18 6:00 | 591 | 248 | 876.6 | 745 | 350 | 334 | — | — |
| 2019-7-19 | 639.9 | 269 | 2019-6-18 7:00 | 657 | 248 | 944.6 | 745 | 303 | 334 | — | — |
| 2019-7-20 | 651.1 | 269 | 2019-6-18 8:00 | 684 | 228 | 950.8 | 745 | 267 | 334 | — | — |
| 2019-7-21 | 669.1 | 269 | 2019-6-18 9:00 | 698 | 228 | 965.2 | 745 | 249 | 334 | — | — |
| 2019-7-22 | 742.8 | 256 | 2019-6-18 10:00 | 616 | 228 | 880.7 | 745 | 256 | 334 | — | — |
| 2019-7-23 | 1034.6 | 263 | 2019-6-18 11:00 | 566 | 196 | 794.7 | 745 | 307 | 334 | — | — |
| 2019-7-24 | 787.4 | 260 | 2019-6-18 12:00 | 548 | 202 | 782.6 | 745 | 380 | 334 | — | — |
| 2019-7-25 | 652.5 | 255 | 2019-6-18 13:00 | 636 | 131 | 796.6 | 745 | 438 | 334 | — | — |
| 2019-7-26 | 504.3 | 244 | 2019-6-18 14:00 | 584 | 159 | 773.2 | 745 | 453 | 334 | — | — |
| 2019-7-27 | 589.9 | 236 | 2019-6-18 15:00 | 486 | 238 | 757.6 | 745 | 441 | 334 | — | — |
| 2019-7-28 | 827.2 | 246 | 2019-6-18 16:00 | 486 | 221 | 739.3 | 745 | 414 | 334 | — | — |
| 2019-7-29 | 658.0 | 283 | 2019-6-18 17:00 | 543 | 225 | 802.3 | 745 | 377 | 334 | — | — |
| 2019-7-30 | 493.0 | 274 | 2019-6-18 18:00 | 560 | 225 | 819.8 | 745 | 333 | 334 | — | — |
| 2019-7-31 | 518.0 | 318 | 2019-6-18 19:00 | 510 | 190 | 730.5 | 745 | 291 | 334 | — | — |
| 2019-8-1 | 527.3 | 351 | 2019-6-18 20:00 | 572 | 190 | 794.4 | 745 | 255 | 334 | — | — |
| 2019-8-2 | 569.0 | 371 | 2019-6-18 21:00 | 664 | 190 | 889.1 | 745 | 231 | 334 | — | — |
| 2019-8-3 | 652.8 | 373 | 2019-6-18 22:00 | 610 | 199 | 843.2 | 745 | 222 | 334 | — | — |
| 2019-8-4 | 504.4 | 375 | 2019-6-18 23:00 | 616 | 196 | 846.2 | 745 | 251 | 334 | — | — |
| 2019-8-5 | 475.1 | 366 | 2019-6-19 0:00 | 537 | 215 | 785.3 | 745 | 329 | 334 | — | — |
| 2019-8-6 | 426.2 | 366 | 2019-6-19 1:00 | 500 | 211 | 742.9 | 745 | 419 | 334 | — | — |
| 2019-8-7 | 419.5 | 345 | 2019-6-19 2:00 | 548 | 211 | 792.3 | 745 | 478 | 334 | — | — |
| 2019-8-8 | 405.3 | 326 | 2019-6-19 3:00 | 610 | 102 | 738.5 | 745 | 483 | 334 | — | — |
| 2019-8-9 | 392.1 | 301 | 2019-6-19 4:00 | 643 | 294 | 979.8 | 745 | 463 | 334 | — | — |
| 2019-8-10 | 375.6 | 278 | 2019-6-19 5:00 | 643 | 219 | 898.8 | 745 | 426 | 334 | — | — |
| 2019-8-11 | 366.4 | 266 | 2019-6-19 6:00 | 643 | 220 | 899.9 | 745 | 378 | 334 | — | — |
| 2019-8-12 | 378.1 | 277 | 2019-6-19 7:00 | 604 | 220 | 859.7 | 745 | 329 | 334 | — | — |
| 2019-8-13 | 405.1 | 248 | 2019-6-19 8:00 | 500 | 194 | 724.5 | 745 | 287 | 334 | — | — |
| 2019-8-14 | 376.0 | 289 | 2019-6-19 9:00 | 478 | 203 | 711.6 | 745 | 259 | 334 | — | — |
| 2019-8-15 | 444.2 | 301 | 2019-6-19 10:00 | 610 | 184 | 827.0 | 745 | 250 | 334 | — | — |
| 2019-8-16 | 483.3 | 298 | 2019-6-19 11:00 | 610 | 184 | 827.0 | 745 | 277 | 334 | — | — |
| 2019-8-17 | 513.2 | 299 | 2019-6-19 12:00 | 537 | 184 | 751.8 | 745 | 337 | 334 | — | — |
| 2019-8-18 | 573.7 | 295 | 2019-6-19 13:00 | 554 | 196 | 782.3 | 745 | 403 | 334 | — | — |
| 2019-8-19 | 431.8 | 292 | 2019-6-19 14:00 | 604 | 196 | 833.8 | 745 | 442 | 334 | — | — |
| 2019-8-20 | 396.1 | 296 | 2019-6-19 15:00 | 616 | 209 | 860.2 | 745 | 443 | 334 | — | — |
| 2019-8-21 | 381.6 | 291 | 2019-6-19 16:00 | 548 | 209 | 790.2 | 745 | 426 | 334 | — | — |
| 2019-8-22 | 361.4 | 291 | 2019-6-19 17:00 | 604 | 174 | 810.0 | 745 | 396 | 334 | — | — |
| 2019-8-23 | 360.0 | 278 | 2019-6-19 18:00 | 712 | 174 | 921.3 | 745 | 358 | 334 | — | — |
| 2019-8-24 | 364.8 | 265 | 2019-6-19 19:00 | 616 | 183 | 832.1 | 745 | 316 | 334 | — | — |
| 2019-8-25 | 652.7 | 247 | 2019-6-19 20:00 | 520 | 182 | 732.2 | 745 | 276 | 334 | — | — |
| 2019-8-26 | 893.9 | 260 | 2019-6-19 21:00 | 451 | 182 | 661.1 | 745 | 245 | 334 | — | — |
| 2019-8-27 | 561.5 | 297 | 2019-6-19 22:00 | 451 | 181 | 660.0 | 745 | 226 | 334 | — | — |
| 2019-8-28 | 436.3 | 349 | 2019-6-19 23:00 | 560 | 191 | 783.1 | 745 | 224 | 334 | — | — |
| 2019-8-29 | 396.1 | 324 | 2019-6-20 0:00 | 616 | 191 | 840.8 | 745 | 271 | 334 | — | — |
| 2019-8-30 | 408.3 | 377 | 2019-6-20 1:00 | 623 | 191 | 848.0 | 745 | 357 | 334 | — | — |
| 2019-8-31 | 803.2 | 378 | 2019-6-20 2:00 | 548 | 191 | 770.7 | 745 | 440 | 334 | — | — |
| 2019-9-1 | 560.0 | 398 | 2019-6-20 3:00 | 572 | 133 | 732.8 | 745 | 479 | 334 | — | — |
| 2019-9-2 | 639.7 | 397 | 2019-6-20 4:00 | 636 | 164 | 832.2 | 745 | 472 | 334 | — | — |
| 2019-9-3 | 617.0 | 377 | 2019-6-20 5:00 | 554 | 164 | 747.7 | 745 | 446 | 334 | — | — |
| 2019-9-4 | 540.9 | 360 | 2019-6-20 6:00 | 490 | 201 | 721.8 | 745 | 405 | 334 | — | — |
| 2019-9-5 | 518.8 | 355 | 2019-6-20 7:00 | 560 | 201 | 793.9 | 745 | 357 | 334 | — | — |
| 2019-9-6 | 458.7 | 327 | 2019-6-20 8:00 | 597 | 187 | 816.9 | 745 | 311 | 334 | — | — |
| 2019-9-7 | 436.2 | 297 | 2019-6-20 9:00 | 510 | 191 | 731.6 | 745 | 273 | 334 | — | — |
| 2019-9-8 | 405.3 | 260 | 2019-6-20 10:00 | 543 | 191 | 765.6 | 745 | 251 | 334 | — | — |
| 2019-9-9 | 380.7 | 253 | 2019-6-20 11:00 | 532 | 194 | 757.5 | 745 | 251 | 334 | — | — |
| 2019-9-10 | 357.2 | 272 | 2019-6-20 12:00 | 456 | 194 | 679.2 | 745 | 291 | 334 | — | — |
| 2019-9-11 | 329.3 | 244 | 2019-6-20 13:00 | 426 | 194 | 648.3 | 745 | 357 | 334 | — | — |
| 2019-9-12 | 326.6 | 298 | 2019-6-20 14:00 | 505 | 181 | 715.6 | 745 | 416 | 334 | — | — |
| 2019-9-13 | 286.2 | 313 | 2019-6-20 15:00 | 584 | 169 | 784.0 | 745 | 440 | 334 | — | — |
| 2019-9-14 | 278.4 | 327 | 2019-6-20 16:00 | 578 | 177 | 786.5 | 745 | 432 | 334 | — | — |
| 2019-9-15 | 276.8 | 321 | 2019-6-20 17:00 | 526 | 164 | 718.9 | 745 | 410 | 334 | — | — |
| 2019-9-16 | 292.2 | 319 | 2019-6-20 18:00 | 526 | 164 | 718.9 | 745 | 376 | 334 | — | — |
| 2019-9-17 | 260.8 | 322 | 2019-6-20 19:00 | 630 | 182 | 845.5 | 745 | 336 | 334 | — | — |
| 2019-9-18 | 256.0 | 313 | 2019-6-20 20:00 | 572 | 208 | 813.8 | 745 | 295 | 334 | — | — |
| 2019-9-19 | 227.2 | 321 | 2019-6-20 21:00 | 478 | 208 | 717.0 | 745 | 260 | 334 | — | — |
| 2019-9-20 | 204.7 | 304 | 2019-6-20 22:00 | 447 | 208 | 685.1 | 745 | 235 | 334 | — | — |
| 2019-9-21 | 244.9 | 297 | 2019-6-20 23:00 | 478 | 201 | 709.4 | 745 | 223 | 334 | — | — |
| 2019-9-22 | 233.7 | 281 | 2019-6-21 0:00 | 495 | 207 | 733.4 | 745 | 241 | 334 | — | — |
| 2019-9-23 | 221.8 | 267 | 2019-6-21 1:00 | 500 | 207 | 738.6 | 745 | 305 | 334 | — | — |
| 2019-9-24 | 208.5 | 274 | 2019-6-21 2:00 | 505 | 194 | 729.7 | 745 | 389 | 334 | — | — |
| 2019-9-25 | 206.8 | 310 | 2019-6-21 3:00 | 554 | 194 | 780.1 | 745 | 451 | 334 | — | — |
| 2019-9-26 | 191.6 | 349 | 2019-6-21 4:00 | 526 | 138 | 690.8 | 745 | 466 | 334 | — | — |
| 2019-9-27 | 183.1 | 316 | 2019-6-21 5:00 | 520 | 192 | 743.0 | 745 | 451 | 334 | — | — |
| 2019-9-28 | 198.1 | 375 | 2019-6-21 6:00 | 548 | 177 | 755.6 | 745 | 418 | 334 | — | — |
| 2019-9-29 | 188.5 | 393 | 2019-6-21 7:00 | 554 | 189 | 774.7 | 745 | 374 | 334 | — | — |
| 2019-9-30 | 185.0 | 399 | 2019-6-21 8:00 | 505 | 181 | 715.6 | 745 | 326 | 334 | — | — |
| 2019-10-1 | 199.4 | 400 | 2019-6-21 9:00 | 560 | 187 | 778.8 | 745 | 284 | 334 | — | — |
| 2019-10-2 | 161.4 | 388 | 2019-6-21 10:00 | 560 | 187 | 778.8 | 745 | 255 | 334 | — | — |
| 2019-10-3 | 169.8 | 380 | 2019-6-21 11:00 | 464 | 170 | 661.5 | 745 | 244 | 334 | — | — |
| 2019-10-4 | 194.4 | 364 | 2019-6-21 12:00 | 500 | 182 | 711.6 | 745 | 264 | 334 | — | — |
| 2019-10-5 | 198.3 | 331 | 2019-6-21 13:00 | 543 | 181 | 754.8 | 745 | 318 | 334 | — | — |
| 2019-10-6 | 189.2 | 284 | 2019-6-21 14:00 | 505 | 181 | 715.6 | 745 | 380 | 334 | — | — |
| 2019-10-7 | 173.4 | 252 | 2019-6-21 15:00 | 478 | 170 | 675.9 | 745 | 422 | 334 | — | — |
| 2019-10-8 | 205.4 | 239 | 2019-6-21 16:00 | 505 | 170 | 703.8 | 745 | 427 | 334 | — | — |
| 2019-10-9 | 167.8 | 259 | 2019-6-21 17:00 | 578 | 174 | 783.3 | 745 | 413 | 334 | — | — |
| 2019-10-10 | 172.8 | 297 | 2019-6-21 18:00 | 505 | 172 | 705.9 | 745 | 385 | 334 | — | — |
| 2019-10-11 | 185.7 | 277 | 2019-6-21 19:00 | 554 | 177 | 761.8 | 745 | 347 | 334 | — | — |
| 2019-10-12 | 182.5 | 322 | 2019-6-21 20:00 | 548 | 157 | 734.0 | 745 | 306 | 334 | — | — |
| 2019-10-13 | 233.5 | 334 | 2019-6-21 21:00 | 490 | 157 | 674.3 | 745 | 267 | 334 | — | — |
| 2019-10-14 | 292.2 | 333 | 2019-6-21 22:00 | 469 | 181 | 678.6 | 745 | 236 | 334 | — | — |
| 2019-10-15 | 229.4 | 346 | 2019-6-21 23:00 | 460 | 181 | 669.3 | 745 | 217 | 334 | — | — |
| 2019-10-16 | 168.8 | 342 | 2019-6-22 0:00 | 469 | 172 | 668.8 | 745 | 215 | 334 | — | — |
| 2019-10-17 | 130.4 | 346 | 2019-6-22 1:00 | 532 | 172 | 733.7 | 745 | 257 | 334 | — | — |
| 2019-10-18 | 172.1 | 342 | 2019-6-22 2:00 | 486 | 172 | 686.3 | 745 | 335 | 334 | — | — |
| 2019-10-19 | 152.3 | 332 | 2019-6-22 3:00 | 418 | 177 | 621.7 | 745 | 413 | 334 | — | — |
| 2019-10-20 | 152.5 | 325 | 2019-6-22 4:00 | 376 | 177 | 578.4 | 745 | 454 | 334 | — | — |
| 2019-10-21 | 161.5 | 304 | 2019-6-22 5:00 | 372 | 148 | 543.0 | 745 | 450 | 334 | — | — |
| 2019-10-22 | 150.6 | 280 | 2019-6-22 6:00 | 469 | 183 | 680.7 | 745 | 426 | 334 | — | — |
| 2019-10-23 | 150.7 | 280 | 2019-6-22 7:00 | 554 | 177 | 761.8 | 745 | 387 | 334 | — | — |
| 2019-10-24 | 129.9 | 304 | 2019-6-22 8:00 | 532 | 182 | 744.5 | 745 | 340 | 334 | — | — |
| 2019-10-25 | 249.1 | 343 | 2019-6-22 9:00 | 495 | 182 | 706.4 | 745 | 294 | 334 | — | — |
| 2019-10-26 | 211.8 | 366 | 2019-6-22 10:00 | 490 | 181 | 700.2 | 745 | 256 | 334 | — | — |
| 2019-10-27 | 102.6 | 362 | 2019-6-22 11:00 | 456 | 181 | 665.2 | 745 | 234 | 334 | — | — |
| 2019-10-28 | 102.6 | 389 | 2019-6-22 12:00 | 460 | 181 | 669.3 | 745 | 233 | 334 | — | — |
| 2019-10-29 | 89.3 | 400 | 2019-6-22 13:00 | 490 | 164 | 681.8 | 745 | 270 | 334 | — | — |
| 2019-10-30 | 117.1 | 398 | 2019-6-22 14:00 | 515 | 176 | 720.5 | 745 | 332 | 334 | — | — |
| 2019-10-31 | 102.8 | 391 | 2019-6-22 15:00 | 439 | 176 | 642.3 | 745 | 391 | 334 | — | — |
| 2019-11-1 | 134.5 | 384 | 2019-6-22 16:00 | 430 | 147 | 601.7 | 745 | 418 | 334 | — | — |
| 2019-11-2 | 107.7 | 352 | 2019-6-22 17:00 | 443 | 166 | 635.6 | 745 | 412 | 334 | — | — |
| 2019-11-3 | 128.5 | 317 | 2019-6-22 18:00 | 443 | 166 | 635.6 | 745 | 391 | 334 | — | — |
| 2019-11-4 | 114.3 | 282 | 2019-6-22 19:00 | 443 | 166 | 635.6 | 745 | 359 | 334 | — | — |
| 2019-11-5 | 100.9 | 245 | 2019-6-22 20:00 | 443 | 166 | 635.6 | 745 | 320 | 334 | — | — |
| 2019-11-6 | 113.9 | 229 | 2019-6-22 21:00 | 526 | 166 | 721.1 | 745 | 280 | 334 | — | — |
| 2019-11-7 | 115.3 | 246 | 2019-6-22 22:00 | 510 | 166 | 704.6 | 745 | 244 | 334 | — | — |
| 2019-11-8 | 116.9 | 277 | 2019-6-22 23:00 | 443 | 166 | 635.6 | 745 | 219 | 334 | — | — |
| 2019-11-9 | 105.4 | 307 | 2019-6-23 0:00 | 406 | 149 | 579.1 | 745 | 207 | 334 | — | — |
| 2019-11-10 | 113.8 | 302 | 2019-6-23 1:00 | 430 | 167 | 623.3 | 745 | 222 | 334 | — | — |
| 2019-11-11 | 102.2 | 322 | 2019-6-23 2:00 | 486 | 167 | 680.9 | 745 | 281 | 334 | — | — |
| 2019-11-12 | 102.2 | 347 | 2019-6-23 3:00 | 510 | 148 | 685.1 | 745 | 359 | 334 | — | — |
| 2019-11-13 | 109.6 | 356 | 2019-6-23 4:00 | 520 | 161 | 709.5 | 745 | 422 | 334 | — | — |
| 2019-11-14 | 125.5 | 350 | 2019-6-23 5:00 | 495 | 141 | 662.1 | 745 | 443 | 334 | — | — |
| 2019-11-15 | 112.5 | 358 | 2019-6-23 6:00 | 422 | 175 | 623.7 | 745 | 430 | 334 | — | — |
| 2019-11-16 | 93.1 | 353 | 2019-6-23 7:00 | 380 | 175 | 580.4 | 745 | 400 | 334 | — | — |
| 2019-11-17 | 102.6 | 347 | 2019-6-23 8:00 | 361 | 160 | 544.6 | 745 | 357 | 334 | — | — |
| 2019-11-18 | 96.8 | 337 | 2019-6-23 9:00 | 368 | 172 | 564.8 | 745 | 309 | 334 | — | — |
| 2019-11-19 | 83.9 | 311 | 2019-6-23 10:00 | 391 | 172 | 588.5 | 745 | 266 | 334 | — | — |
| 2019-11-20 | 126.5 | 295 | 2019-6-23 11:00 | 402 | 165 | 592.3 | 745 | 234 | 334 | — | — |
| 2019-11-21 | 145.2 | 287 | 2019-6-23 12:00 | 447 | 176 | 650.5 | 745 | 220 | 334 | — | — |
| 2019-11-22 | 77.9 | 295 | 2019-6-23 13:00 | 447 | 176 | 650.5 | 745 | 234 | 334 | — | — |
| 2019-11-23 | 61.0 | 311 | 2019-6-23 14:00 | 410 | 176 | 612.4 | 745 | 281 | 334 | — | — |
| 2019-11-24 | 84.6 | 333 | 2019-6-23 15:00 | 365 | 155 | 543.4 | 745 | 342 | 334 | — | — |
| 2019-11-25 | 127.6 | 353 | 2019-6-23 16:00 | 395 | 155 | 574.3 | 745 | 389 | 334 | — | — |
| 2019-11-26 | 123.9 | 377 | 2019-6-23 17:00 | 414 | 140 | 577.6 | 745 | 402 | 334 | — | — |
| 2019-11-27 | 114.8 | 382 | 2019-6-23 18:00 | 414 | 141 | 578.7 | 745 | 391 | 334 | — | — |
| 2019-11-28 | 102.5 | 377 | 2019-6-23 19:00 | 372 | 141 | 535.4 | 745 | 366 | 334 | — | — |
| 2019-11-29 | 150.6 | 377 | 2019-6-23 20:00 | 347 | 140 | 508.6 | 745 | 330 | 334 | — | — |
| 2019-11-30 | 110.4 | 356 | 2019-6-23 21:00 | 330 | 140 | 491.1 | 745 | 290 | 334 | — | — |
| 2019-12-1 | 79.1 | 333 | 2019-6-23 22:00 | 323 | 161 | 506.6 | 745 | 251 | 334 | — | — |
| 2019-12-2 | 65.8 | 311 | 2019-6-23 23:00 | 354 | 161 | 538.5 | 745 | 219 | 334 | — | — |
| 2019-12-3 | 61.9 | 276 | — | — | — | — | — | — | — | — | — |
| 2019-12-4 | 72.1 | 253 | — | — | — | — | — | — | — | — | — |
| 2019-12-5 | 71.7 | 240 | — | — | — | — | — | — | — | — | — |
| 2019-12-6 | 71.6 | 240 | — | — | — | — | — | — | — | — | — |
| 2019-12-7 | 107.4 | 255 | — | — | — | — | — | — | — | — | — |
| 2019-12-8 | 97.5 | 279 | — | — | — | — | — | — | — | — | — |
| 2019-12-9 | 90.3 | 304 | — | — | — | — | — | — | — | — | — |
| 2019-12-10 | 95.5 | 320 | — | — | — | — | — | — | — | — | — |
| 2019-12-11 | 120.7 | 345 | — | — | — | — | — | — | — | — | — |
| 2019-12-12 | 121.7 | 356 | — | — | — | — | — | — | — | — | — |
| 2019-12-13 | 90.8 | 365 | — | — | — | — | — | — | — | — | — |
| 2019-12-14 | 101.5 | 368 | — | — | — | — | — | — | — | — | — |
| 2019-12-15 | 177.3 | 358 | — | — | — | — | — | — | — | — | — |
| 2019-12-16 | 81.9 | 364 | — | — | — | — | — | — | — | — | — |
| 2019-12-17 | 95.8 | 353 | — | — | — | — | — | — | — | — | — |
| 2019-12-18 | 113.1 | 327 | — | — | — | — | — | — | — | — | — |
| 2019-12-19 | 80.8 | 313 | — | — | — | — | — | — | — | — | — |
| 2019-12-20 | 73.5 | 301 | — | — | — | — | — | — | — | — | — |
| 2019-12-21 | 87.4 | 291 | — | — | — | — | — | — | — | — | — |
| 2019-12-22 | 121.5 | 294 | — | — | — | — | — | — | — | — | — |
| 2019-12-23 | 157.7 | 304 | — | — | — | — | — | — | — | — | — |
| 2019-12-24 | 114.0 | 329 | — | — | — | — | — | — | — | — | — |
| 2019-12-25 | 148.4 | 350 | — | — | — | — | — | — | — | — | — |
| 2019-12-26 | 93.5 | 354 | — | — | — | — | — | — | — | — | — |
| 2019-12-27 | 95.3 | 361 | — | — | — | — | — | — | — | — | — |
| 2019-12-28 | 126.1 | 350 | — | — | — | — | — | — | — | — | — |
| 2019-12-29 | 75.1 | 331 | — | — | — | — | — | — | — | — | — |
| 2019-12-30 | 76.5 | 323 | — | — | — | — | — | — | — | — | — |
| 2019-12-31 | 67.9 | 303 | — | — | — | — | — | — | — | — | — |

Note: “—” means no data needed.

# **Data Table S2.** Comparison of (a) surface and bottom salinity, (b) surface SPM (mg L-1) and (c) bottom turbidity (NTU) during the storm observation at Station E of the Jiulong River Estuary (Data for Figure 3)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Time | Bottom salinity | Surface salinity | Surface SPM concentration | Bottom turbidity |
| (‰) | (‰) | (mg L-1) | (NTU) |
| 2019-6-10 0:00 | 0.00 | N.A. | N.A. | 26.9 |
| 2019-6-10 1:00 | 0.11 | N.A. | N.A. | 47.0 |
| 2019-6-10 2:00 | 0.16 | N.A. | N.A. | 70.4 |
| 2019-6-10 3:00 | 0.25 | N.A. | N.A. | 84.8 |
| 2019-6-10 4:00 | 0.93 | N.A. | N.A. | 66.4 |
| 2019-6-10 5:00 | 2.67 | N.A. | N.A. | 17.5 |
| 2019-6-10 6:00 | 3.37 | N.A. | N.A. | 72.4 |
| 2019-6-10 7:00 | 1.65 | N.A. | N.A. | 71.2 |
| 2019-6-10 8:00 | 0.70 | N.A. | N.A. | 85.4 |
| 2019-6-10 9:00 | 0.26 | N.A. | N.A. | 89.2 |
| 2019-6-10 10:00 | 0.14 | N.A. | N.A. | 76.5 |
| 2019-6-10 11:00 | 0.11 | N.A. | N.A. | 100.0 |
| 2019-6-10 12:00 | 0.10 | N.A. | N.A. | 36.2 |
| 2019-6-10 13:00 | 0.09 | N.A. | N.A. | 88.9 |
| 2019-6-10 14:00 | 0.12 | N.A. | N.A. | 63.4 |
| 2019-6-10 15:00 | 0.13 | N.A. | N.A. | 22.4 |
| 2019-6-10 16:00 | 0.15 | N.A. | N.A. | 7.1 |
| 2019-6-10 17:00 | 0.26 | 0.10 | 87.5 | 10.5 |
| 2019-6-10 18:00 | 0.21 | N.A. | N.A. | 22.0 |
| 2019-6-10 19:00 | 0.09 | N.A. | N.A. | 55.3 |
| 2019-6-10 20:00 | 0.08 | N.A. | N.A. | 69.9 |
| 2019-6-10 21:00 | 0.08 | N.A. | N.A. | 79.4 |
| 2019-6-10 22:00 | 0.08 | N.A. | N.A. | 52.8 |
| 2019-6-10 23:00 | 0.08 | N.A. | N.A. | 38.4 |
| 2019-6-11 0:00 | 0.04 | N.A. | N.A. | 36.6 |
| 2019-6-11 1:00 | 0.01 | N.A. | N.A. | 19.6 |
| 2019-6-11 2:00 | 0.09 | N.A. | N.A. | 20.3 |
| 2019-6-11 3:00 | 0.11 | 0.00 | 171.4 | 31.8 |
| 2019-6-11 4:00 | 0.10 | N.A. | N.A. | 40.9 |
| 2019-6-11 5:00 | 0.16 | N.A. | N.A. | 51.0 |
| 2019-6-11 6:00 | 0.21 | N.A. | N.A. | 37.9 |
| 2019-6-11 7:00 | 0.21 | N.A. | N.A. | 34.5 |
| 2019-6-11 8:00 | 0.14 | N.A. | N.A. | 47.5 |
| 2019-6-11 9:00 | 0.10 | N.A. | N.A. | 56.4 |
| 2019-6-11 10:00 | 0.08 | 0.00 | 154.5 | 119.7 |
| 2019-6-11 11:00 | 0.08 | N.A. | N.A. | 147.8 |
| 2019-6-11 12:00 | 0.08 | N.A. | N.A. | 102.7 |
| 2019-6-11 13:00 | 0.08 | 0.00 | 137.5 | 47.6 |
| 2019-6-11 14:00 | 0.08 | N.A. | N.A. | 32.8 |
| 2019-6-11 15:00 | 0.08 | 0.00 | 84.4 | 55.3 |
| 2019-6-11 16:00 | 0.10 | 0.00 | 130.5 | 18.5 |
| 2019-6-11 17:00 | 0.10 | 0.00 | 110.0 | 12.4 |
| 2019-6-11 18:00 | 0.11 | N.A. | N.A. | 14.4 |
| 2019-6-11 19:00 | 0.12 | 0.00 | 81.0 | 10.1 |
| 2019-6-11 20:00 | 0.09 | N.A. | N.A. | 48.2 |
| 2019-6-11 21:00 | 0.08 | 0.00 | 70.5 | 46.1 |
| 2019-6-11 22:00 | 0.10 | N.A. | N.A. | 39.9 |
| 2019-6-11 23:00 | 0.11 | 0.00 | 200.6 | 34.4 |
| 2019-6-12 0:00 | 0.13 | N.A. | N.A. | 34.2 |
| 2019-6-12 1:00 | 0.13 | 0.00 | 130.9 | 64.5 |
| 2019-6-12 2:00 | 0.13 | N.A. | N.A. | 55.0 |
| 2019-6-12 3:00 | 0.12 | 0.00 | 220.0 | 157.3 |
| 2019-6-12 4:00 | 0.12 | N.A. | N.A. | 58.8 |
| 2019-6-12 5:00 | 0.10 | 0.00 | 129.7 | 83.8 |
| 2019-6-12 6:00 | 0.07 | N.A. | N.A. | 68.5 |
| 2019-6-12 7:00 | 0.08 | 0.00 | 138.0 | 70.0 |
| 2019-6-12 8:00 | 0.08 | N.A. | N.A. | 81.5 |
| 2019-6-12 9:00 | 0.08 | 0.00 | 105.1 | 159.5 |
| 2019-6-12 10:00 | 0.07 | N.A. | N.A. | 365.6 |
| 2019-6-12 11:00 | 0.08 | 0.00 | 245.3 | 200.0 |
| 2019-6-12 12:00 | 0.09 | N.A. | N.A. | 130.2 |
| 2019-6-12 13:00 | 0.11 | 0.00 | 232.6 | 128.0 |
| 2019-6-12 14:00 | 0.11 | N.A. | N.A. | 125.0 |
| 2019-6-12 15:00 | 0.11 | 0.00 | 342.0 | 108.5 |
| 2019-6-12 16:00 | 0.10 | N.A. | N.A. | 102.4 |
| 2019-6-12 17:00 | 0.10 | 0.00 | 134.5 | 522.3 |
| 2019-6-12 18:00 | 0.09 | N.A. | N.A. | 224.3 |
| 2019-6-12 19:00 | 0.08 | 0.00 | 142.0 | 30.5 |
| 2019-6-12 20:00 | 0.09 | N.A. | N.A. | 36.2 |
| 2019-6-12 21:00 | 0.10 | N.A. | N.A. | 124.5 |
| 2019-6-12 22:00 | 0.08 | N.A. | N.A. | 118.7 |
| 2019-6-12 23:00 | 0.07 | N.A. | N.A. | 151.3 |
| 2019-6-13 0:00 | 0.08 | N.A. | N.A. | 109.5 |
| 2019-6-13 1:00 | 0.08 | N.A. | N.A. | 102.7 |
| 2019-6-13 2:00 | 0.09 | N.A. | N.A. | 75.0 |
| 2019-6-13 3:00 | 0.09 | N.A. | N.A. | 26.4 |
| 2019-6-13 4:00 | 0.09 | N.A. | N.A. | 29.9 |
| 2019-6-13 5:00 | 0.09 | N.A. | N.A. | 18.3 |
| 2019-6-13 6:00 | 0.09 | N.A. | N.A. | 20.1 |
| 2019-6-13 7:00 | 0.08 | 0.00 | 78.0 | 22.6 |
| 2019-6-13 8:00 | 0.09 | N.A. | N.A. | 11.3 |
| 2019-6-13 9:00 | 0.08 | 0.00 | 97.0 | 25.8 |
| 2019-6-13 10:00 | 0.08 | N.A. | N.A. | 108.8 |
| 2019-6-13 11:00 | 0.07 | 0.00 | 84.5 | 170.0 |
| 2019-6-13 12:00 | 0.07 | N.A. | N.A. | 185.2 |
| 2019-6-13 13:00 | 0.07 | 0.00 | 229.3 | 350.7 |
| 2019-6-13 14:00 | 0.08 | N.A. | N.A. | 307.3 |
| 2019-6-13 15:00 | 0.10 | 0.00 | 550.0 | 197.3 |
| 2019-6-13 16:00 | 0.10 | N.A. | N.A. | 129.3 |
| 2019-6-13 17:00 | 0.09 | 0.00 | 272.0 | 79.8 |
| 2019-6-13 18:00 | 0.09 | N.A. | N.A. | 35.9 |
| 2019-6-13 19:00 | 0.10 | 0.00 | 118.0 | 38.2 |
| 2019-6-13 20:00 | 0.08 | N.A. | N.A. | 38.2 |
| 2019-6-13 21:00 | 0.07 | N.A. | N.A. | 124.9 |
| 2019-6-13 22:00 | 0.07 | N.A. | N.A. | 137.4 |
| 2019-6-13 23:00 | 0.07 | N.A. | N.A. | 148.3 |
| 2019-6-14 0:00 | 0.07 | N.A. | N.A. | 192.5 |
| 2019-6-14 1:00 | 0.07 | N.A. | N.A. | 243.0 |
| 2019-6-14 2:00 | 0.07 | N.A. | N.A. | 196.4 |
| 2019-6-14 3:00 | 0.08 | N.A. | N.A. | 253.2 |
| 2019-6-14 4:00 | 0.09 | N.A. | N.A. | 149.0 |
| 2019-6-14 5:00 | 0.09 | N.A. | N.A. | 126.8 |
| 2019-6-14 6:00 | 0.08 | N.A. | N.A. | 110.3 |
| 2019-6-14 7:00 | 0.08 | 0.00 | 132.0 | 98.8 |
| 2019-6-14 8:00 | 0.06 | N.A. | N.A. | 126.6 |
| 2019-6-14 9:00 | 0.06 | 0.00 | 144.0 | 126.6 |
| 2019-6-14 10:00 | 0.06 | N.A. | N.A. | 141.1 |
| 2019-6-14 11:00 | 0.06 | 0.00 | 192.0 | 247.3 |
| 2019-6-14 12:00 | 0.06 | N.A. | N.A. | 295.8 |
| 2019-6-14 13:00 | 0.06 | 0.00 | 203.1 | 323.4 |
| 2019-6-14 14:00 | 0.07 | N.A. | N.A. | 412.9 |
| 2019-6-14 15:00 | 0.09 | 0.00 | 294.6 | 285.1 |
| 2019-6-14 16:00 | 0.09 | N.A. | N.A. | 248.4 |
| 2019-6-14 17:00 | 0.09 | 0.00 | 497.5 | 234.0 |
| 2019-6-14 18:00 | 0.09 | N.A. | N.A. | 105.8 |
| 2019-6-14 19:00 | 0.10 | 0.00 | 238.0 | 80.0 |
| 2019-6-14 20:00 | 0.10 | N.A. | N.A. | 75.8 |
| 2019-6-14 21:00 | 0.08 | N.A. | N.A. | 86.6 |
| 2019-6-14 22:00 | 0.09 | N.A. | N.A. | 122.5 |
| 2019-6-14 23:00 | 0.09 | N.A. | N.A. | 192.0 |
| 2019-6-15 0:00 | 0.07 | N.A. | N.A. | 190.0 |
| 2019-6-15 1:00 | 0.06 | N.A. | N.A. | 203.7 |
| 2019-6-15 2:00 | 0.06 | N.A. | N.A. | 204.0 |
| 2019-6-15 3:00 | 0.07 | N.A. | N.A. | 213.3 |
| 2019-6-15 4:00 | 0.07 | N.A. | N.A. | 165.8 |
| 2019-6-15 5:00 | 0.08 | N.A. | N.A. | 123.8 |
| 2019-6-15 6:00 | 0.08 | N.A. | N.A. | 63.7 |
| 2019-6-15 7:00 | 0.10 | 0.00 | 234.0 | 69.7 |
| 2019-6-15 8:00 | 0.10 | N.A. | N.A. | 60.2 |
| 2019-6-15 9:00 | 0.09 | 0.00 | 128.2 | 73.8 |
| 2019-6-15 10:00 | 0.07 | N.A. | N.A. | 102.7 |
| 2019-6-15 11:00 | 0.07 | 0.00 | 161.9 | 133.6 |
| 2019-6-15 12:00 | 0.07 | N.A. | N.A. | 149.8 |
| 2019-6-15 13:00 | 0.07 | 0.00 | 206.4 | 182.8 |
| 2019-6-15 14:00 | 0.07 | N.A. | N.A. | 324.4 |
| 2019-6-15 15:00 | 0.07 | 0.00 | 263.6 | 224.9 |
| 2019-6-15 16:00 | 0.07 | N.A. | N.A. | 119.8 |
| 2019-6-15 17:00 | 0.03 | 0.00 | 176.0 | 108.3 |
| 2019-6-15 18:00 | 0.01 | N.A. | N.A. | 120.9 |
| 2019-6-15 19:00 | 0.09 | 0.00 | 162.7 | 103.9 |
| 2019-6-15 20:00 | 0.10 | N.A. | N.A. | 102.9 |
| 2019-6-15 21:00 | 0.10 | N.A. | N.A. | 157.1 |
| 2019-6-15 22:00 | 0.10 | N.A. | N.A. | 162.7 |
| 2019-6-15 23:00 | 0.24 | N.A. | N.A. | 111.2 |
| 2019-6-16 0:00 | 0.24 | N.A. | N.A. | 137.3 |
| 2019-6-16 1:00 | 0.16 | N.A. | N.A. | 218.8 |
| 2019-6-16 2:00 | 0.09 | N.A. | N.A. | 217.0 |
| 2019-6-16 3:00 | 0.08 | N.A. | N.A. | 224.4 |
| 2019-6-16 4:00 | 0.08 | N.A. | N.A. | 131.8 |
| 2019-6-16 5:00 | 0.08 | N.A. | N.A. | 197.6 |
| 2019-6-16 6:00 | 0.07 | N.A. | N.A. | 124.7 |
| 2019-6-16 7:00 | 0.08 | 0.00 | 168.0 | 128.5 |
| 2019-6-16 8:00 | 0.08 | N.A. | N.A. | 103.8 |
| 2019-6-16 9:00 | 0.09 | 0.00 | 154.2 | 79.7 |
| 2019-6-16 10:00 | 0.07 | N.A. | N.A. | 76.4 |
| 2019-6-16 11:00 | 0.09 | 0.00 | 146.1 | 82.1 |
| 2019-6-16 12:00 | 0.10 | N.A. | N.A. | 88.8 |
| 2019-6-16 13:00 | 0.08 | 0.00 | 138.0 | 128.7 |
| 2019-6-16 14:00 | 0.08 | N.A. | N.A. | 112.2 |
| 2019-6-16 15:00 | 0.08 | 0.00 | 90.5 | 143.0 |
| 2019-6-16 16:00 | 0.08 | N.A. | N.A. | 168.4 |
| 2019-6-16 17:00 | 0.05 | 0.00 | 126.5 | 122.9 |
| 2019-6-16 18:00 | 0.00 | N.A. | N.A. | 41.6 |
| 2019-6-16 19:00 | 0.01 | 0.00 | 87.5 | 57.1 |
| 2019-6-16 20:00 | 0.12 | N.A. | N.A. | 111.7 |
| 2019-6-16 21:00 | 0.13 | N.A. | N.A. | 161.4 |
| 2019-6-16 22:00 | 0.11 | N.A. | N.A. | 153.5 |
| 2019-6-16 23:00 | 0.27 | N.A. | N.A. | 144.4 |
| 2019-6-17 0:00 | 0.40 | N.A. | N.A. | 112.7 |
| 2019-6-17 1:00 | 0.39 | N.A. | N.A. | 130.9 |
| 2019-6-17 2:00 | 0.32 | N.A. | N.A. | 148.0 |
| 2019-6-17 3:00 | 0.16 | N.A. | N.A. | 166.3 |
| 2019-6-17 4:00 | 0.12 | N.A. | N.A. | 136.2 |
| 2019-6-17 5:00 | 0.10 | N.A. | N.A. | 146.4 |
| 2019-6-17 6:00 | 0.08 | N.A. | N.A. | 153.6 |
| 2019-6-17 7:00 | 0.08 | 0.00 | 282.7 | 111.3 |
| 2019-6-17 8:00 | 0.08 | N.A. | N.A. | 126.3 |
| 2019-6-17 9:00 | 0.10 | 0.00 | 187.7 | 83.9 |
| 2019-6-17 10:00 | 0.10 | N.A. | N.A. | 66.3 |
| 2019-6-17 11:00 | 0.09 | 0.00 | 242.9 | 57.7 |
| 2019-6-17 12:00 | 0.17 | N.A. | N.A. | 55.2 |
| 2019-6-17 13:00 | 0.19 | 0.00 | 120.0 | 89.3 |
| 2019-6-17 14:00 | 0.11 | N.A. | N.A. | 145.8 |
| 2019-6-17 15:00 | 0.09 | 0.00 | 174.2 | 114.8 |
| 2019-6-17 16:00 | 0.09 | N.A. | N.A. | 101.2 |
| 2019-6-17 17:00 | 0.11 | 0.00 | 111.4 | 107.3 |
| 2019-6-17 18:00 | 0.02 | N.A. | N.A. | 43.8 |
| 2019-6-17 19:00 | 0.00 | 0.10 | 276.4 | 34.5 |
| 2019-6-17 20:00 | 0.06 | N.A. | N.A. | 34.4 |
| 2019-6-17 21:00 | 0.17 | N.A. | N.A. | 93.3 |
| 2019-6-17 22:00 | 0.15 | N.A. | N.A. | 160.5 |
| 2019-6-17 23:00 | 0.18 | N.A. | N.A. | 131.4 |
| 2019-6-18 0:00 | 0.61 | N.A. | N.A. | 59.0 |
| 2019-6-18 1:00 | 1.08 | N.A. | N.A. | 47.4 |
| 2019-6-18 2:00 | 0.94 | N.A. | N.A. | 115.3 |
| 2019-6-18 3:00 | 0.99 | N.A. | N.A. | 120.8 |
| 2019-6-18 4:00 | 0.33 | N.A. | N.A. | 95.0 |
| 2019-6-18 5:00 | 0.18 | N.A. | N.A. | 112.3 |
| 2019-6-18 6:00 | 0.13 | N.A. | N.A. | 79.2 |
| 2019-6-18 7:00 | 0.12 | N.A. | N.A. | 79.0 |
| 2019-6-18 8:00 | 0.10 | N.A. | N.A. | 163.4 |
| 2019-6-18 9:00 | 0.14 | N.A. | N.A. | 157.7 |
| 2019-6-18 10:00 | 0.16 | 0.00 | 202.0 | 103.4 |
| 2019-6-18 11:00 | 0.15 | N.A. | N.A. | 82.8 |
| 2019-6-18 12:00 | 0.34 | N.A. | N.A. | 35.0 |
| 2019-6-18 13:00 | 0.89 | N.A. | N.A. | 72.7 |
| 2019-6-18 14:00 | 0.40 | N.A. | N.A. | 136.0 |
| 2019-6-18 15:00 | 0.18 | N.A. | N.A. | 145.7 |
| 2019-6-18 16:00 | 0.12 | N.A. | N.A. | 137.4 |
| 2019-6-18 17:00 | 0.13 | N.A. | N.A. | 96.3 |
| 2019-6-18 18:00 | 0.09 | N.A. | N.A. | 44.4 |
| 2019-6-18 19:00 | 0.00 | N.A. | N.A. | 43.1 |
| 2019-6-18 20:00 | 0.00 | N.A. | N.A. | 32.3 |
| 2019-6-18 21:00 | 0.14 | N.A. | N.A. | 32.1 |
| 2019-6-18 22:00 | 0.23 | N.A. | N.A. | 101.2 |
| 2019-6-18 23:00 | 0.20 | N.A. | N.A. | 170.6 |
| 2019-6-19 0:00 | 0.45 | N.A. | N.A. | 108.3 |
| 2019-6-19 1:00 | 0.97 | N.A. | N.A. | 18.6 |
| 2019-6-19 2:00 | 1.02 | N.A. | N.A. | 48.1 |
| 2019-6-19 3:00 | 0.71 | N.A. | N.A. | 75.3 |
| 2019-6-19 4:00 | 0.44 | N.A. | N.A. | 67.2 |
| 2019-6-19 5:00 | 0.21 | N.A. | N.A. | 110.0 |
| 2019-6-19 6:00 | 0.13 | N.A. | N.A. | 91.1 |
| 2019-6-19 7:00 | 0.10 | 0.00 | 262.3 | 115.7 |
| 2019-6-19 8:00 | 0.09 | N.A. | N.A. | 54.8 |
| 2019-6-19 9:00 | 0.09 | 0.00 | 228.9 | 41.8 |
| 2019-6-19 10:00 | 0.14 | N.A. | N.A. | 69.8 |
| 2019-6-19 11:00 | 0.17 | 0.10 | 126.1 | 43.6 |
| 2019-6-19 12:00 | 0.20 | N.A. | N.A. | 28.7 |
| 2019-6-19 13:00 | 0.23 | 0.10 | 96.2 | 32.8 |
| 2019-6-19 14:00 | 0.26 | N.A. | N.A. | 42.0 |
| 2019-6-19 15:00 | 0.14 | 0.00 | 109.0 | 39.6 |
| 2019-6-19 16:00 | 0.10 | N.A. | N.A. | 95.8 |
| 2019-6-19 17:00 | 0.10 | 0.00 | 240.0 | 64.3 |
| 2019-6-19 18:00 | 0.10 | N.A. | N.A. | 56.0 |
| 2019-6-19 19:00 | 0.02 | 0.00 | 130.5 | 40.7 |
| 2019-6-19 20:00 | 0.00 | N.A. | N.A. | 39.5 |
| 2019-6-19 21:00 | 0.00 | N.A. | N.A. | 23.4 |
| 2019-6-19 22:00 | 0.12 | N.A. | N.A. | 55.4 |
| 2019-6-19 23:00 | 0.15 | N.A. | N.A. | 93.4 |
| 2019-6-20 0:00 | 0.15 | N.A. | N.A. | 39.1 |
| 2019-6-20 1:00 | 0.59 | N.A. | N.A. | 37.0 |
| 2019-6-20 2:00 | 1.09 | N.A. | N.A. | 15.7 |
| 2019-6-20 3:00 | 1.21 | N.A. | N.A. | 59.9 |
| 2019-6-20 4:00 | 0.62 | N.A. | N.A. | 74.8 |
| 2019-6-20 5:00 | 0.25 | N.A. | N.A. | 86.7 |
| 2019-6-20 6:00 | 0.13 | N.A. | N.A. | 67.2 |
| 2019-6-20 7:00 | 0.12 | N.A. | N.A. | 94.7 |
| 2019-6-20 8:00 | 0.10 | N.A. | N.A. | 61.6 |
| 2019-6-20 9:00 | 0.08 | N.A. | N.A. | 57.4 |
| 2019-6-20 10:00 | 0.10 | N.A. | N.A. | 100.0 |
| 2019-6-20 11:00 | 0.12 | N.A. | N.A. | 64.2 |
| 2019-6-20 12:00 | 0.16 | N.A. | N.A. | 24.9 |
| 2019-6-20 13:00 | 0.20 | N.A. | N.A. | 9.3 |
| 2019-6-20 14:00 | 0.54 | N.A. | N.A. | 19.7 |
| 2019-6-20 15:00 | 0.29 | N.A. | N.A. | 59.7 |
| 2019-6-20 16:00 | 0.12 | N.A. | N.A. | 82.9 |
| 2019-6-20 17:00 | 0.09 | N.A. | N.A. | 59.8 |
| 2019-6-20 18:00 | 0.09 | N.A. | N.A. | 40.6 |
| 2019-6-20 19:00 | 0.07 | N.A. | N.A. | 47.7 |
| 2019-6-20 20:00 | 0.00 | N.A. | N.A. | 45.1 |
| 2019-6-20 21:00 | 0.00 | N.A. | N.A. | 30.9 |
| 2019-6-20 22:00 | 0.04 | N.A. | N.A. | 41.8 |
| 2019-6-20 23:00 | 0.14 | N.A. | N.A. | 72.7 |
| 2019-6-21 0:00 | 0.15 | N.A. | N.A. | 45.8 |
| 2019-6-21 1:00 | 0.24 | N.A. | N.A. | 56.1 |
| 2019-6-21 2:00 | 0.97 | N.A. | N.A. | 6.2 |
| 2019-6-21 3:00 | 1.74 | N.A. | N.A. | 25.2 |
| 2019-6-21 4:00 | 1.12 | N.A. | N.A. | 47.0 |
| 2019-6-21 5:00 | 0.55 | N.A. | N.A. | 66.8 |
| 2019-6-21 6:00 | 0.18 | N.A. | N.A. | 44.4 |
| 2019-6-21 7:00 | 0.12 | 0.00 | 142.2 | 105.3 |
| 2019-6-21 8:00 | 0.10 | N.A. | N.A. | 65.6 |
| 2019-6-21 9:00 | 0.08 | 0.00 | 123.8 | 30.1 |
| 2019-6-21 10:00 | 0.08 | N.A. | N.A. | 87.6 |
| 2019-6-21 11:00 | 0.09 | 0.00 | 165.6 | 66.4 |
| 2019-6-21 12:00 | 0.11 | N.A. | N.A. | 17.8 |
| 2019-6-21 13:00 | 0.23 | 0.00 | 110.6 | 5.9 |
| 2019-6-21 14:00 | 0.36 | N.A. | N.A. | 13.3 |
| 2019-6-21 15:00 | 0.76 | 0.00 | 126.0 | 17.4 |
| 2019-6-21 16:00 | 0.22 | N.A. | N.A. | 39.1 |
| 2019-6-21 17:00 | 0.15 | 0.00 | 108.8 | 62.8 |
| 2019-6-21 18:00 | 0.11 | N.A. | N.A. | 41.3 |
| 2019-6-21 19:00 | 0.09 | 0.00 | 107.5 | 39.3 |
| 2019-6-21 20:00 | 0.05 | N.A. | N.A. | 47.7 |
| 2019-6-21 21:00 | 0.00 | N.A. | N.A. | 46.3 |
| 2019-6-21 22:00 | 0.00 | N.A. | N.A. | 12.8 |
| 2019-6-21 23:00 | 0.11 | N.A. | N.A. | 49.9 |
| 2019-6-22 0:00 | 0.15 | N.A. | N.A. | 71.9 |
| 2019-6-22 1:00 | 0.17 | N.A. | N.A. | 93.9 |
| 2019-6-22 2:00 | 0.61 | N.A. | N.A. | 18.7 |
| 2019-6-22 3:00 | 1.74 | N.A. | N.A. | 6.4 |
| 2019-6-22 4:00 | 2.30 | N.A. | N.A. | 23.9 |
| 2019-6-22 5:00 | 0.88 | N.A. | N.A. | 62.1 |
| 2019-6-22 6:00 | 0.34 | N.A. | N.A. | 67.6 |
| 2019-6-22 7:00 | 0.18 | N.A. | N.A. | 47.9 |
| 2019-6-22 8:00 | 0.13 | N.A. | N.A. | 55.9 |
| 2019-6-22 9:00 | 0.10 | N.A. | N.A. | 34.3 |
| 2019-6-22 10:00 | 0.09 | N.A. | N.A. | 52.7 |
| 2019-6-22 11:00 | 0.09 | N.A. | N.A. | 87.3 |
| 2019-6-22 12:00 | 0.10 | N.A. | N.A. | 53.2 |
| 2019-6-22 13:00 | 0.22 | N.A. | N.A. | 9.7 |
| 2019-6-22 14:00 | 0.82 | N.A. | N.A. | 24.1 |
| 2019-6-22 15:00 | 1.43 | N.A. | N.A. | 25.9 |
| 2019-6-22 16:00 | 1.65 | N.A. | N.A. | 15.1 |
| 2019-6-22 17:00 | 0.47 | N.A. | N.A. | 48.0 |
| 2019-6-22 18:00 | 0.23 | N.A. | N.A. | 24.1 |
| 2019-6-22 19:00 | 0.13 | N.A. | N.A. | 5.1 |
| 2019-6-22 20:00 | 0.10 | N.A. | N.A. | 27.3 |
| 2019-6-22 21:00 | 0.05 | N.A. | N.A. | 49.5 |
| 2019-6-22 22:00 | 0.00 | N.A. | N.A. | 17.3 |
| 2019-6-22 23:00 | 0.06 | N.A. | N.A. | 26.7 |
| 2019-6-23 0:00 | 0.13 | N.A. | N.A. | 80.1 |
| 2019-6-23 1:00 | 0.14 | N.A. | N.A. | 65.1 |
| 2019-6-23 2:00 | 0.27 | N.A. | N.A. | 32.2 |
| 2019-6-23 3:00 | 1.17 | N.A. | N.A. | 16.4 |
| 2019-6-23 4:00 | 2.52 | N.A. | N.A. | 15.6 |
| 2019-6-23 5:00 | 2.17 | N.A. | N.A. | 48.4 |
| 2019-6-23 6:00 | 0.43 | N.A. | N.A. | 38.3 |
| 2019-6-23 7:00 | 0.27 | 0.10 | 141.5 | 35.6 |
| 2019-6-23 8:00 | 0.12 | N.A. | N.A. | 28.9 |
| 2019-6-23 9:00 | 0.10 | 0.00 | 135.8 | 25.9 |
| 2019-6-23 10:00 | 0.09 | N.A. | N.A. | 33.0 |
| 2019-6-23 11:00 | 0.08 | 0.00 | 130.0 | 32.5 |
| 2019-6-23 12:00 | 0.09 | N.A. | N.A. | 28.7 |
| 2019-6-23 13:00 | 0.10 | 0.10 | 115.2 | 9.2 |
| 2019-6-23 14:00 | 0.10 | N.A. | N.A. | 25.6 |
| 2019-6-23 15:00 | 0.37 | 0.00 | 116.4 | 24.1 |
| 2019-6-23 16:00 | 0.69 | N.A. | N.A. | 13.4 |
| 2019-6-23 17:00 | 0.28 | 0.10 | 69.2 | 9.4 |
| 2019-6-23 18:00 | 0.08 | N.A. | N.A. | 43.5 |
| 2019-6-23 19:00 | 0.08 | 0.10 | 92.4 | 67.9 |
| 2019-6-23 20:00 | 0.09 | N.A. | N.A. | 65.4 |
| 2019-6-23 21:00 | 0.09 | N.A. | N.A. | 83.9 |
| 2019-6-23 22:00 | 0.09 | N.A. | N.A. | 70.2 |
| 2019-6-23 23:00 | 0.08 | N.A. | N.A. | 33.8 |

Note: “—” means no data.

# **Data Table S3.** Daily concentration and flux of SPM in the outlets of the Jiulong River (ZS for WJR, JD for NJR) and comparison between the value of Station E (JRE) and river sum (JLR) during the storm observation (Data for Figure 4)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Time | Daily SPM concentration for NJR | Daily SPM concentration for WJR | Daily SPM concentration for JLR | Daily SPM concentration for JRE | Daily SPM Δconcentration for JRE | Daily SPM flux for NJR | Daily SPM flux for WJR | Daily SPM flux for JLR | Daily SPM flux for JRE | Daily SPM Δflux for JRE |
| (mg L-1) | (mg L-1) | (mg L-1) | (mg L-1) | (mg L-1) | (t d-1) | (t d-1) | (t d-1) | (t d-1) | (t d-1) |
| 2019-6-10 | 31.0 | 11.6 | 28.2 | 87.5 | 59.3 | 2561 | 190 | 2751 | 6046 | 3295 |
| 2019-6-11 | 32.0 | 22.4 | 30.6 | 123.2 | 92.6 | 5456 | 447 | 5903 | 11970 | 6067 |
| 2019-6-12 | 54.0 | 30.0 | 48.9 | 182.0 | 133.1 | 9347 | 1443 | 10790 | 29257 | 18467 |
| 2019-6-13 | 105.7 | 60.0 | 96.5 | 204.1 | 107.6 | 12480 | 1815 | 14295 | 44033 | 29738 |
| 2019-6-14 | 112.3 | 46.8 | 97.6 | 243.0 | 145.5 | 14776 | 2135 | 16911 | 45239 | 28328 |
| 2019-6-15 | 88.3 | 72.0 | 84.3 | 190.4 | 106.1 | 9008 | 1929 | 10937 | 37391 | 26454 |
| 2019-6-16 | 89.3 | 50.8 | 79.5 | 130.1 | 50.6 | 6231 | 1490 | 7721 | 19748 | 12027 |
| 2019-6-17 | 49.3 | 45.2 | 48.3 | 199.3 | 151.0 | 4484 | 988 | 5472 | 24520 | 19048 |
| 2019-6-18 | 67.0 | 32.8 | 59.1 | 202.0 | 142.9 | 3377 | 677 | 4054 | 16814 | 12760 |
| 2019-6-19 | 37.4 | 38.0 | 37.6 | 170.4 | 132.9 | 2494 | 676 | 3170 | 13224 | 10054 |
| 2019-6-20 | 26.4 | 32.0 | 27.7 | 148.4 | 120.6 | 1881 | 605 | 2486 | 10286 | 7800 |
| 2019-6-21 | 32.6 | 36.0 | 33.4 | 126.3 | 92.9 | 1358 | 540 | 1898 | 8055 | 6157 |
| 2019-6-22 | 24.2 | 29.6 | 25.7 | 118.6 | 92.9 | 961 | 525 | 1486 | 7170 | 5684 |
| 2019-6-23 | 18.8 | 33.2 | 20.5 | 110.8 | 90.3 | 2167 | 465 | 2632 | 6680 | 4048 |

# **Data Table S4.** Daily concentration of (a) TPP, (b) DIP, and (c) DOP at the outlets of the Jiulong River (ZS for WJR, JD for NJR) and concentration comparison between Station E (JRE) and river sum (JLR) during the storm observation (Data for Figure 5)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | P species | Daily P concentration for NJR | Daily P concentration for WJR | Daily P concentration for JLR | Daily P concentration for JRE | Daily P Δconcentration for JRE |
| (μg L-1) | (μg L-1) | (μg L-1) | (μg L-1) | (μg L-1) |
| 2019-6-10 | TPP | 37.1 | 30.2 | 36.1 | 87.7 | 51.6 |
| 2019-6-11 | TPP | 40.6 | 58.4 | 43.1 | 116.1 | 72.9 |
| 2019-6-12 | TPP | 69.3 | 65.0 | 68.4 | 189.3 | 120.9 |
| 2019-6-13 | TPP | 87.2 | 100.1 | 89.8 | 213.6 | 123.9 |
| 2019-6-14 | TPP | 101.1 | 81.0 | 96.6 | 222.3 | 125.8 |
| 2019-6-15 | TPP | 78.8 | 85.0 | 80.3 | 183.4 | 103.1 |
| 2019-6-16 | TPP | 83.4 | 80.8 | 82.7 | 128.8 | 46.1 |
| 2019-6-17 | TPP | 56.5 | 66.1 | 58.8 | 205.8 | 146.9 |
| 2019-6-18 | TPP | 64.0 | 59.3 | 62.9 | 186.9 | 124.0 |
| 2019-6-19 | TPP | 44.3 | 66.6 | 49.8 | 181.0 | 131.2 |
| 2019-6-20 | TPP | 35.5 | 56.9 | 40.8 | 158.9 | 118.1 |
| 2019-6-21 | TPP | 35.2 | 54.0 | 39.9 | 136.8 | 96.8 |
| 2019-6-22 | TPP | 32.1 | 52.3 | 37.6 | 130.9 | 93.3 |
| 2019-6-23 | TPP | 31.7 | 47.1 | 33.5 | 125.0 | 91.5 |
| 2019-6-10 | DIP | 33.4 | 51.0 | 35.9 | 51.3 | 15.4 |
| 2019-6-11 | DIP | 35.4 | 78.9 | 41.5 | 55.5 | 14.0 |
| 2019-6-12 | DIP | 41.2 | 83.4 | 50.1 | 51.2 | 1.1 |
| 2019-6-13 | DIP | 43.7 | 102.6 | 55.5 | 80.5 | 24.9 |
| 2019-6-14 | DIP | 41.0 | 90.3 | 52.1 | 58.3 | 6.2 |
| 2019-6-15 | DIP | 42.4 | 78.9 | 51.4 | 62.8 | 11.5 |
| 2019-6-16 | DIP | 39.4 | 57.9 | 44.1 | 50.1 | 6.0 |
| 2019-6-17 | DIP | 38.3 | 64.8 | 44.8 | 48.2 | 3.4 |
| 2019-6-18 | DIP | 43.5 | 54.0 | 45.9 | 50.1 | 4.2 |
| 2019-6-19 | DIP | 28.8 | 59.1 | 36.2 | 48.5 | 12.3 |
| 2019-6-20 | DIP | 26.7 | 67.8 | 36.8 | 46.0 | 9.2 |
| 2019-6-21 | DIP | 22.6 | 69.6 | 34.5 | 43.5 | 9.0 |
| 2019-6-22 | DIP | 26.0 | 57.6 | 34.5 | 42.5 | 8.0 |
| 2019-6-23 | DIP | 20.2 | 66.3 | 25.7 | 41.6 | 15.9 |
| 2019-6-10 | DOP | 16.4 | 122.3 | 31.7 | 4.3 | -27.4 |
| 2019-6-11 | DOP | 26.4 | 124.1 | 40.2 | 5.8 | -34.4 |
| 2019-6-12 | DOP | 23.9 | 70.3 | 33.7 | 28.4 | -5.2 |
| 2019-6-13 | DOP | 21.4 | 154.7 | 48.2 | 12.0 | -36.2 |
| 2019-6-14 | DOP | 33.6 | 110.0 | 50.8 | 10.6 | -40.3 |
| 2019-6-15 | DOP | 31.2 | 165.4 | 64.1 | 15.6 | -48.5 |
| 2019-6-16 | DOP | 11.4 | 130.1 | 41.6 | 9.6 | -32.0 |
| 2019-6-17 | DOP | 9.7 | 100.5 | 31.9 | 9.8 | -22.1 |
| 2019-6-18 | DOP | 8.4 | 85.0 | 26.1 | 10.3 | -15.8 |
| 2019-6-19 | DOP | 9.5 | 77.2 | 26.1 | 2.7 | -23.4 |
| 2019-6-20 | DOP | 10.5 | 99.5 | 32.3 | 2.9 | -29.5 |
| 2019-6-21 | DOP | 0.8 | 80.1 | 20.9 | 3.1 | -17.7 |
| 2019-6-22 | DOP | 4.1 | 52.7 | 17.2 | 3.0 | -14.2 |
| 2019-6-23 | DOP | 0.8 | 56.0 | 7.4 | 2.9 | -4.5 |

# **Data Table S5.** Daily flux of (a) TPP, (b) DIP, (c) DOP at the outlets of the Jiulong River (ZS for WJR, JD for NJR) and flux comparison between Station E (JRE) and river sum (JLR) during the storm observation (Data for Figure 6)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | P species | Daily P flux for NJR | Daily P flux for WJR | Daily P flux for JLR | Daily P flux for JRE | Daily P Δflux for JRE |
| (kg d-1) | (kg d-1) | (kg d-1) | (kg d-1) | (kg d-1) |
| 2019-6-10 | TPP | 3262 | 465 | 3727 | 5356 | 1629 |
| 2019-6-11 | TPP | 5101 | 1033 | 6134 | 9909 | 3775 |
| 2019-6-12 | TPP | 8142 | 2520 | 10662 | 27133 | 16471 |
| 2019-6-13 | TPP | 11050 | 2898 | 13948 | 40864 | 26916 |
| 2019-6-14 | TPP | 14748 | 3299 | 18047 | 40877 | 22830 |
| 2019-6-15 | TPP | 7092 | 2463 | 9555 | 31472 | 21917 |
| 2019-6-16 | TPP | 5135 | 1864 | 6999 | 17450 | 10451 |
| 2019-6-17 | TPP | 4025 | 1361 | 5386 | 20725 | 15339 |
| 2019-6-18 | TPP | 3203 | 1059 | 4262 | 15834 | 11572 |
| 2019-6-19 | TPP | 2450 | 1021 | 3471 | 12836 | 9365 |
| 2019-6-20 | TPP | 1886 | 940 | 2826 | 10174 | 7348 |
| 2019-6-21 | TPP | 1479 | 853 | 2332 | 8005 | 5673 |
| 2019-6-22 | TPP | 1298 | 767 | 2065 | 7292 | 5227 |
| 2019-6-23 | TPP | 3038 | 604 | 3642 | 6852 | 3210 |
| 2019-6-10 | DIP | 2986 | 789 | 3775 | 3082 | -693 |
| 2019-6-11 | DIP | 4121 | 1405 | 5526 | 5982 | 456 |
| 2019-6-12 | DIP | 5140 | 3085 | 8225 | 7740 | -485 |
| 2019-6-13 | DIP | 5605 | 3111 | 8716 | 9713 | 997 |
| 2019-6-14 | DIP | 5848 | 3737 | 9585 | 9686 | 101 |
| 2019-6-15 | DIP | 3865 | 2125 | 5990 | 9885 | 3895 |
| 2019-6-16 | DIP | 2901 | 1519 | 4420 | 6325 | 1905 |
| 2019-6-17 | DIP | 2300 | 1162 | 3462 | 4635 | 1173 |
| 2019-6-18 | DIP | 1928 | 1003 | 2931 | 3534 | 603 |
| 2019-6-19 | DIP | 1621 | 1014 | 2635 | 2912 | 277 |
| 2019-6-20 | DIP | 1396 | 1018 | 2414 | 2522 | 108 |
| 2019-6-21 | DIP | 1169 | 1014 | 2183 | 2300 | 117 |
| 2019-6-22 | DIP | 974 | 969 | 1943 | 2149 | 206 |
| 2019-6-23 | DIP | 1883 | 812 | 2695 | 2101 | -594 |
| 2019-6-10 | DOP | 1919 | 1794 | 3713 | 260 | -3453 |
| 2019-6-11 | DOP | 2807 | 2184 | 4991 | 769 | -4222 |
| 2019-6-12 | DOP | 3578 | 3917 | 7495 | 1729 | -5766 |
| 2019-6-13 | DOP | 3826 | 3987 | 7813 | 2250 | -5563 |
| 2019-6-14 | DOP | 3854 | 4784 | 8638 | 2319 | -6319 |
| 2019-6-15 | DOP | 2186 | 3492 | 5678 | 1587 | -4091 |
| 2019-6-16 | DOP | 1411 | 2811 | 4222 | 1390 | -2832 |
| 2019-6-17 | DOP | 952 | 2203 | 3155 | 880 | -2275 |
| 2019-6-18 | DOP | 668 | 1790 | 2458 | 504 | -1954 |
| 2019-6-19 | DOP | 444 | 1651 | 2095 | 278 | -1817 |
| 2019-6-20 | DOP | 283 | 1406 | 1689 | 167 | -1522 |
| 2019-6-21 | DOP | 157 | 1146 | 1303 | 122 | -1181 |
| 2019-6-22 | DOP | 76 | 913 | 989 | 123 | -866 |
| 2019-6-23 | DOP | 100 | 670 | 770 | 180 | -590 |

# **Data Table S6.** Daily concentration of particulate phosphorus species (AP, PIP, and POP) and their ratios to SPM at Station E (JRE) during the storm period (June 10th - June 23rd, 2019) (Data for Figure 7)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Time | Daily AP concentration | Daily PIP concentration | Daily POP concentration | AP:SPM | PIP:SPM | POP:SPM |
| (μg L-1) | (μg L-1) | (μg L-1) | (μg mg-1) | (μg mg-1) | (μg mg-1) |
| 2019-6-10 | 29.0 | 36.6 | 22.1 | 0.33 | 0.42 | 0.25 |
| 2019-6-11 | 42.1 | 52.7 | 21.2 | 0.36 | 0.43 | 0.14 |
| 2019-6-12 | 62.5 | 93.5 | 33.3 | 0.35 | 0.50 | 0.20 |
| 2019-6-13 | 69.7 | 104.1 | 39.8 | 0.38 | 0.46 | 0.27 |
| 2019-6-14 | 88.0 | 109.1 | 25.2 | 0.39 | 0.43 | 0.10 |
| 2019-6-15 | 76.5 | 79.2 | 27.7 | 0.41 | 0.41 | 0.15 |
| 2019-6-16 | 46.3 | 54.9 | 27.5 | 0.37 | 0.42 | 0.22 |
| 2019-6-17 | 70.8 | 82.6 | 39.5 | 0.37 | 0.41 | 0.20 |
| 2019-6-18 | 65.2 | 84.7 | 37.1 | 0.32 | 0.42 | 0.18 |
| 2019-6-19 | 59.6 | 86.7 | 34.6 | 0.35 | 0.48 | 0.22 |
| 2019-6-20 | 53.4 | 67.8 | 37.6 | 0.37 | 0.43 | 0.27 |
| 2019-6-21 | 47.3 | 48.9 | 40.6 | 0.38 | 0.38 | 0.32 |
| 2019-6-22 | 44.7 | 49.9 | 37.0 | 0.38 | 0.42 | 0.31 |
| 2019-6-23 | 42.1 | 50.9 | 33.4 | 0.38 | 0.46 | 0.30 |

# **Data Table S7.** Relationship between daily phosphorus species (TPP, DIP and DOP) and the discharge at the river outlets in the West River (WJR) and the North River (NJR) during the storm observation period (June 10th - June 23rd, 2019) (Data for Figure 8)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Periods | Date | River | Daily discharge | Daily TPP concentration | Daily DIP concentration | Daily DOP concentration |
| (m3 s-1) | (μg L-1) | (μg L-1) | (μg L-1) |
| Initial | 2019-6-10 | NJR | 1075 | 37.1 | 33.4 | 16.4 |
| Initial | 2019-6-11 | NJR | 1264 | 40.6 | 35.4 | 26.4 |
| Rising | 2019-6-12 | NJR | 1447 | 69.3 | 41.2 | 23.9 |
| Rising | 2019-6-13 | NJR | 1523 | 87.2 | 43.7 | 21.4 |
| Rising | 2019-6-14 | NJR | 1631 | 101.1 | 41.0 | 33.6 |
| Rising | 2019-6-15 | NJR | 1027 | 78.8 | 42.4 | 31.2 |
| Falling | 2019-6-16 | NJR | 798 | 83.4 | 39.4 | 11.4 |
| Falling | 2019-6-17 | NJR | 686 | 56.5 | 38.3 | 9.7 |
| Falling | 2019-6-18 | NJR | 644 | 64.0 | 43.5 | 8.4 |
| Ending | 2019-6-19 | NJR | 608 | 44.3 | 28.8 | 9.5 |
| Ending | 2019-6-20 | NJR | 585 | 35.5 | 26.7 | 10.5 |
| Ending | 2019-6-21 | NJR | 528 | 35.2 | 22.6 | 0.8 |
| Ending | 2019-6-22 | NJR | 457 | 32.1 | 26.0 | 4.1 |
| Ending | 2019-6-23 | NJR | 1102 | 31.7 | 20.2 | 0.8 |
| Initial | 2019-6-10 | WJR | 181 | 30.2 | 51.0 | 122.3 |
| Initial | 2019-6-11 | WJR | 208 | 58.4 | 78.9 | 124.1 |
| Rising | 2019-6-12 | WJR | 387 | 65.0 | 83.4 | 70.3 |
| Rising | 2019-6-13 | WJR | 383 | 100.1 | 102.6 | 154.7 |
| Rising | 2019-6-14 | WJR | 474 | 81.0 | 90.3 | 110.0 |
| Rising | 2019-6-15 | WJR | 334 | 85.0 | 78.9 | 165.4 |
| Falling | 2019-6-16 | WJR | 272 | 80.8 | 57.9 | 130.1 |
| Falling | 2019-6-17 | WJR | 222 | 66.1 | 64.8 | 100.5 |
| Falling | 2019-6-18 | WJR | 192 | 59.3 | 54.0 | 85.0 |
| Ending | 2019-6-19 | WJR | 198 | 66.6 | 59.1 | 77.2 |
| Ending | 2019-6-20 | WJR | 190 | 56.9 | 67.8 | 99.5 |
| Ending | 2019-6-21 | WJR | 179 | 54.0 | 69.6 | 80.1 |
| Ending | 2019-6-22 | WJR | 168 | 52.3 | 57.6 | 52.7 |
| Ending | 2019-6-23 | WJR | 149 | 47.1 | 66.3 | 56.0 |