Coastal Protection and Restoration Authority
150 Terrace Avenue, Baton Rouge, LA 70802 | coastal@la.gov | www.coastal.la.gov

## 2017 Coastal Master Plan

# Attachment C3-23.8: Model Performance – Total Kjeldahl Nitrogen

DRAFT

Report: Version I

Date: September 2016

Prepared By: Eric White and Yushi Wang (Water Institute of the Gulf)

# Coastal Protection and Restoration Authority

This document was prepared in support of the 2017 Coastal Master Plan being prepared by the Coastal Protection and Restoration Authority (CPRA). CPRA was established by the Louisiana Legislature in response to Hurricanes Katrina and Rita through Act 8 of the First Extraordinary Session of 2005. Act 8 of the First Extraordinary Session of 2005 expanded the membership, duties, and responsibilities of CPRA and charged the new authority to develop and implement a comprehensive coastal protection plan, consisting of a master plan (revised every five years) and annual plans. CPRA's mandate is to develop, implement, and enforce a comprehensive coastal protection and restoration master plan.

DRAFT

**Table1: Summary of Modeled and Observed Mean Daily Total Kjeldahl Nitrogen (mg/L) for Calibration Period, 2010-2013.**

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 23 | LDEQ3594 | 4 | 1.1 | 1.0 | 0.2 | 0.9 | 1.3 | 0.7 | 0.7 | 0.2 | 0.5 | 1.1 |
| 26 | LDEQ0032 | 7 | 0.7 | 0.6 | 0.2 | 0.6 | 1.2 | 0.7 | 0.7 | 0.2 | 0.4 | 0.9 |
| 28 | LDEQ1089 | 6 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 0.8 | 0.8 | 0.2 | 0.5 | 1.0 |
| 30 | LDEQ0105 | 28 | 0.8 | 0.7 | 0.2 | 0.4 | 1.4 | 1.0 | 0.7 | 1.5 | 0.2 | 8.4 |
| 31 | LDEQ1073 | 6 | 0.5 | 0.5 | 0.2 | 0.3 | 0.7 | 1.1 | 0.9 | 0.3 | 0.8 | 1.7 |
| 35 | LDEQ0035 | 3 | 0.5 | 0.5 | 0.2 | 0.3 | 0.7 | 0.8 | 0.9 | 0.3 | 0.5 | 1.1 |
| 36 | LDEQ1047 | 12 | 0.4 | 0.3 | 0.2 | 0.2 | 0.7 | 0.6 | 0.6 | 0.2 | 0.3 | 1.0 |
| 37 | LDEQ1043 | 4 | 0.4 | 0.3 | 0.2 | 0.3 | 0.6 | 1.0 | 1.0 | 0.4 | 0.6 | 1.5 |
| 39 | LDEQ1087 | 4 | 0.4 | 0.4 | 0.1 | 0.3 | 0.6 | 0.8 | 0.7 | 0.3 | 0.5 | 1.2 |
| 42 | LDEQ1086 | 9 | 0.3 | 0.3 | 0.1 | 0.3 | 0.6 | 1.2 | 1.2 | 0.4 | 0.7 | 2.1 |
| 45 | LDEQ0138 | 30 | 0.6 | 0.6 | 0.3 | 0.3 | 1.1 | 0.7 | 0.7 | 0.3 | 0.2 | 1.7 |
| 46 | LDEQ1062 | 12 | 0.6 | 0.6 | 0.2 | 0.3 | 0.9 | 0.7 | 0.7 | 0.2 | 0.4 | 1.2 |
| 48 | LDEQ0106 | 33 | 0.6 | 0.6 | 0.3 | 0.3 | 1.1 | 0.9 | 0.8 | 0.4 | 0.1 | 2.1 |
| 49 | LDEQ1084 | 3 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 0.9 | 0.9 | 0.1 | 0.7 | 1.0 |
| 52 | LDEQ1082 | 6 | 0.4 | 0.4 | 0.1 | 0.4 | 0.5 | 1.1 | 1.1 | 0.2 | 0.8 | 1.3 |
| 53 | LDEQ1063 | 12 | 0.6 | 0.6 | 0.2 | 0.3 | 0.9 | 0.8 | 0.7 | 0.3 | 0.4 | 1.2 |
| 55 | LDEQ1083 | 4 | 0.4 | 0.4 | 0.0 | 0.3 | 0.4 | 1.2 | 1.1 | 0.3 | 1.0 | 1.7 |
| 59 | LDEQ0638 | 6 | 0.5 | 0.4 | 0.2 | 0.3 | 0.8 | 1.3 | 1.1 | 0.5 | 0.7 | 2.2 |
| 65 | LDEQ1095 | 12 | 0.6 | 0.6 | 0.1 | 0.5 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 1.5 |
| 66 | LDEQ0307 | 12 | 0.7 | 0.6 | 0.2 | 0.3 | 1.0 | 0.9 | 0.8 | 0.2 | 0.4 | 1.2 |
| 66 | LDEQ0307 | 12 | 0.7 | 0.6 | 0.2 | 0.3 | 1.0 | 0.9 | 0.8 | 0.2 | 0.4 | 1.2 |
| 66 | LDEQ0307 | 12 | 0.7 | 0.6 | 0.2 | 0.3 | 1.0 | 0.9 | 0.8 | 0.2 | 0.4 | 1.2 |
| 81 | LDEQ1081 | 10 | 0.4 | 0.4 | 0.2 | 0.2 | 0.8 | 1.4 | 1.4 | 0.6 | 0.7 | 2.7 |
| 82 | LDEQ0006 | 7 | 0.5 | 0.5 | 0.2 | 0.3 | 0.8 | 1.2 | 1.1 | 0.4 | 0.7 | 2.0 |
| 97 | LDEQ0298 | 12 | 0.7 | 0.8 | 0.1 | 0.5 | 0.9 | 0.9 | 1.0 | 0.2 | 0.6 | 1.2 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 107 | LDEQ0007 | 6 | 0.5 | 0.4 | 0.2 | 0.3 | 0.7 | 1.5 | 1.5 | 0.4 | 0.8 | 2.0 |
| 129 | LDEQ1093 | 11 | 0.7 | 0.7 | 0.1 | 0.6 | 0.8 | 0.6 | 0.6 | 0.3 | 0.3 | 1.1 |
| 130 | LDEQ0905 | 6 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.8 | 0.8 | 0.3 | 0.3 | 1.0 |
| 136 | LDEQ0036 | 6 | 0.4 | 0.4 | 0.1 | 0.3 | 0.6 | 1.0 | 0.9 | 0.3 | 0.6 | 1.3 |
| 150 | LDEQ1102 | 15 | 0.5 | 0.5 | 0.2 | 0.3 | 0.8 | 0.8 | 0.7 | 0.5 | 0.2 | 2.0 |
| 155 | LDEQ1080 | 6 | 0.5 | 0.4 | 0.2 | 0.3 | 0.7 | 1.6 | 1.3 | 1.0 | 0.6 | 3.4 |
| 156 | LDEQ1092 | 10 | 0.6 | 0.6 | 0.1 | 0.5 | 0.7 | 0.6 | 0.5 | 0.3 | 0.3 | 1.0 |
| 199 | LDEQ0904 | 10 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.9 | 2.0 | 0.4 | 1.1 | 2.4 |
| 209 | LDEQ0304 | 11 | 0.4 | 0.3 | 0.2 | 0.2 | 0.8 | 1.2 | 1.0 | 0.5 | 0.6 | 2.3 |
| 213 | LDEQ3958 | 12 | 0.4 | 0.4 | 0.2 | 0.2 | 0.6 | 1.6 | 1.3 | 0.8 | 0.6 | 3.4 |
| 215 | LDEQ0228 | 9 | 0.8 | 0.8 | 0.1 | 0.6 | 1.0 | 1.0 | 1.0 | 0.3 | 0.7 | 1.5 |
| 226 | LDEQ0909 | 11 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 1.0 | 1.0 | 0.4 | 0.3 | 1.4 |
| 248 | LDEQ0901 | 4 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.4 | 0.2 | 0.5 | 0.2 | 1.1 |
| 251 | LDEQ0636 | 2 | 0.4 | 0.4 | 0.1 | 0.3 | 0.4 | 1.0 | 1.0 | 0.3 | 0.7 | 1.2 |
| 252 | LDEQ4345 | 12 | 0.4 | 0.4 | 0.0 | 0.3 | 0.5 | 1.0 | 1.1 | 0.4 | 0.4 | 1.8 |
| 253 | LDEQ0899 | 7 | 0.3 | 0.4 | 0.1 | 0.2 | 0.5 | 1.0 | 0.9 | 0.3 | 0.5 | 1.4 |
| 257 | LDEQ0908 | 11 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 1.1 | 1.1 | 0.4 | 0.1 | 1.7 |
| 258 | LDEQ0243 | 15 | 0.8 | 0.8 | 0.1 | 0.6 | 1.0 | 0.7 | 0.7 | 0.3 | 0.2 | 1.3 |
| 268 | LDEQ0292 | 10 | 0.4 | 0.3 | 0.1 | 0.2 | 0.5 | 1.4 | 1.4 | 0.6 | 0.7 | 3.0 |
| 277 | LDEQ0898 | 8 | 0.3 | 0.3 | 0.1 | 0.2 | 0.6 | 0.8 | 0.8 | 0.3 | 0.4 | 1.2 |
| 278 | LDEQ0907 | 12 | 0.3 | 0.3 | 0.0 | 0.2 | 0.4 | 0.9 | 0.9 | 0.5 | 0.1 | 1.9 |
| 287 | LDEQ0903 | 10 | 0.4 | 0.3 | 0.1 | 0.2 | 0.6 | 1.1 | 1.1 | 0.6 | 0.5 | 2.5 |
| 295 | LDEQ0897 | 8 | 0.4 | 0.4 | 0.1 | 0.2 | 0.5 | 0.9 | 0.9 | 0.2 | 0.6 | 1.2 |
| 297 | LDEQ0918 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.8 | 0.9 | 0.5 | 0.1 | 1.5 |
| 298 | LDEQ0084 | 9 | 0.3 | 0.3 | 0.0 | 0.2 | 0.3 | 1.0 | 1.1 | 0.2 | 0.6 | 1.3 |
| 307 | LDEQ0926 | 12 | 0.4 | 0.4 | 0.0 | 0.3 | 0.4 | 1.7 | 1.4 | 1.5 | 0.5 | 6.2 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 309 | LDEQ0336 | 9 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 0.9 | 0.9 | 0.4 | 0.4 | 1.6 |
| 309 | LDEQ0336 | 9 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 0.9 | 0.9 | 0.4 | 0.4 | 1.6 |
| 309 | LDEQ0336 | 9 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 0.9 | 0.9 | 0.4 | 0.4 | 1.6 |
| 312 | LDEQ0945 | 11 | 0.7 | 0.7 | 0.2 | 0.5 | 1.0 | 1.0 | 0.9 | 0.3 | 0.6 | 1.7 |
| 314 | LDEQ0922 | 12 | 0.6 | 0.6 | 0.1 | 0.5 | 0.7 | 0.7 | 0.6 | 0.5 | 0.2 | 2.1 |
| 316 | LDEQ2843 | 11 | 0.7 | 0.7 | 0.1 | 0.6 | 1.0 | 1.2 | 1.2 | 0.3 | 0.8 | 1.7 |
| 324 | LDEQ0341 | 7 | 0.5 | 0.4 | 0.0 | 0.4 | 0.5 | 1.3 | 1.2 | 0.5 | 0.6 | 2.1 |
| 325 | LDEQ2844 | 11 | 0.5 | 0.5 | 0.2 | 0.3 | 0.9 | 1.0 | 0.9 | 0.3 | 0.7 | 1.6 |
| 331 | LDEQ0925 | 12 | 0.3 | 0.3 | 0.0 | 0.2 | 0.3 | 1.3 | 1.4 | 0.4 | 0.6 | 1.9 |
| 342 | LDEQ0293 | 23 | 0.9 | 0.9 | 0.2 | 0.5 | 1.4 | 0.7 | 0.6 | 0.3 | 0.2 | 1.5 |
| 343 | LDEQ0080 | 8 | 0.3 | 0.3 | 0.2 | 0.0 | 0.7 | 0.7 | 0.6 | 0.3 | 0.3 | 1.2 |
| 348 | LDEQ0924 | 5 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.9 | 0.9 | 0.3 | 0.5 | 1.2 |
| 349 | LDEQ0340 | 7 | 0.7 | 0.6 | 0.2 | 0.5 | 1.0 | 0.7 | 0.7 | 0.2 | 0.5 | 1.1 |
| 361 | LDEQ0946 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.3 | 1.2 | 0.5 | 0.6 | 2.4 |
| 363 | LDEQ1198 | 10 | 0.1 | 0.0 | 0.1 | 0.0 | 0.3 | 0.8 | 0.9 | 0.3 | 0.2 | 1.3 |
| 366 | LDEQ0923 | 5 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 1.4 | 1.4 | 0.6 | 0.6 | 2.2 |
| 368 | LDEQ0349 | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 1.4 | 1.5 | 0.3 | 0.9 | 1.8 |
| 372 | LDEQ0347 | 9 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 1.1 | 1.0 | 0.3 | 0.7 | 1.4 |
| 372 | LDEQ0347 | 9 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 1.1 | 1.0 | 0.3 | 0.7 | 1.4 |
| 377 | LDEQ0953 | 12 | 0.4 | 0.5 | 0.0 | 0.4 | 0.5 | 1.2 | 1.2 | 0.5 | 0.3 | 2.0 |
| 381 | LDEQ3001 | 10 | 0.3 | 0.3 | 0.0 | 0.2 | 0.3 | 1.0 | 1.0 | 0.3 | 0.6 | 1.5 |
| 392 | LDEQ1196 | 8 | 1.2 | 1.3 | 0.1 | 1.1 | 1.4 | 0.6 | 0.7 | 0.3 | 0.2 | 1.0 |
| 393 | LDEQ0930 | 0 | -"" | -"" | -"" | -"" | -"" | -"" | -"" | -"" | -"" | -"" |
| 394 | LDEQ0110 | 9 | 0.7 | 0.7 | 0.2 | 0.5 | 1.1 | 1.0 | 1.1 | 0.5 | 0.5 | 2.1 |
| 399 | LDEQ0346 | 12 | 0.2 | 0.2 | 0.1 | 0.1 | 0.3 | 1.6 | 1.6 | 0.5 | 0.8 | 2.4 |
| 413 | LDEQ0144 | 11 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 1.0 | 0.7 | 0.8 | 0.3 | 2.8 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 419 | LDEQ0959 | 2 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 1.5 | 1.5 | 0.0 | 1.5 | 1.5 |
| 421 | LDEQ0940 | 11 | 0.7 | 0.8 | 0.2 | 0.3 | 0.9 | 1.1 | 1.1 | 0.4 | 0.4 | 1.9 |
| 425 | LDEQ0954 | 10 | 0.3 | 0.2 | 0.1 | 0.1 | 0.4 | 1.7 | 1.6 | 0.4 | 1.2 | 2.2 |
| 427 | LDEQ0337 | 8 | 0.2 | 0.2 | 0.2 | 0.0 | 0.5 | 0.8 | 0.8 | 0.5 | 0.2 | 1.6 |
| 432 | LDEQ0339 | 9 | 0.7 | 0.7 | 0.2 | 0.4 | 0.9 | 0.7 | 0.7 | 0.3 | 0.3 | 1.3 |
| 436 | LDEQ1199 | 9 | 0.3 | 0.3 | 0.2 | 0.0 | 0.6 | 0.5 | 0.5 | 0.2 | 0.2 | 0.9 |
| 438 | LDEQ0934 | 7 | 0.8 | 0.8 | 0.2 | 0.5 | 1.0 | 0.9 | 0.9 | 0.2 | 0.6 | 1.1 |
| 439 | LDEQ0960 | 2 | 0.4 | 0.4 | 0.1 | 0.3 | 0.4 | 1.3 | 1.3 | 0.6 | 0.9 | 1.8 |
| 454 | LDEQ0113 | 8 | 0.3 | 0.3 | 0.1 | 0.2 | 0.5 | 1.8 | 1.6 | 0.9 | 0.7 | 3.4 |
| 459 | LDEQ0936 | 6 | 0.7 | 0.7 | 0.2 | 0.5 | 1.0 | 0.8 | 0.8 | 0.3 | 0.3 | 1.3 |
| 460 | LDEQ0338 | 3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 0.9 | 0.3 | 0.5 | 1.0 |
| 475 | LDEQ0344 | 5 | 0.6 | 0.6 | 0.2 | 0.5 | 1.0 | 1.4 | 1.3 | 0.5 | 1.0 | 2.2 |
| 494 | LDEQ0952 | 8 | 0.5 | 0.5 | 0.1 | 0.4 | 0.7 | 1.4 | 1.7 | 0.7 | 0.5 | 2.3 |
| 498 | LDEQ0928 | 11 | 0.7 | 0.8 | 0.2 | 0.3 | 0.9 | 1.0 | 0.9 | 0.4 | 0.6 | 1.7 |
| 499 | LDEQ0941 | 12 | 0.4 | 0.4 | 0.1 | 0.2 | 0.5 | 0.6 | 0.5 | 0.4 | 0.2 | 1.4 |
| 510 | LDEQ0949 | 10 | 0.5 | 0.5 | 0.0 | 0.4 | 0.5 | 1.0 | 1.0 | 0.3 | 0.7 | 1.4 |
| 512 | LDEQ0937 | 6 | 0.6 | 0.5 | 0.2 | 0.4 | 0.9 | 1.2 | 1.1 | 0.8 | 0.6 | 2.7 |
| 518 | LDEQ0896 | 5 | 0.6 | 0.6 | 0.2 | 0.4 | 0.9 | 1.0 | 1.0 | 0.3 | 0.6 | 1.4 |
| 522 | LDEQ0039 | 45 | 1.2 | 1.2 | 0.1 | 0.9 | 1.3 | 0.6 | 0.6 | 0.4 | 0.1 | 1.9 |
| 533 | LDEQ0961 | 5 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.8 | 0.9 | 0.4 | 0.3 | 1.2 |
| 536 | LDEQ3586 | 4 | 0.7 | 0.6 | 0.2 | 0.5 | 0.9 | 0.8 | 0.8 | 0.1 | 0.7 | 1.0 |
| 538 | LDEQ1200 | 12 | 1.1 | 1.1 | 0.1 | 1.0 | 1.3 | 0.7 | 0.6 | 0.4 | 0.1 | 1.7 |
| 559 | LDEQ1201 | 12 | 1.2 | 1.2 | 0.1 | 0.9 | 1.3 | 0.6 | 0.5 | 0.4 | 0.1 | 1.6 |
| 561 | LDEQ0948 | 12 | 0.4 | 0.4 | 0.1 | 0.3 | 0.6 | 2.1 | 1.4 | 2.9 | 0.8 | 11.3 |
| 563 | LDEQ1203 | 12 | 1.2 | 1.2 | 0.1 | 1.0 | 1.3 | 0.8 | 0.5 | 0.6 | 0.1 | 2.1 |
| 569 | LDEQ0933 | 9 | 1.1 | 1.1 | 0.1 | 1.0 | 1.2 | 0.9 | 0.7 | 0.4 | 0.5 | 1.5 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 585 | LDEQ0950 | 12 | 0.5 | 0.5 | 0.1 | 0.4 | 0.6 | 1.1 | 1.1 | 0.4 | 0.5 | 1.8 |
| 586 | LDEQ0955 | 4 | 0.6 | 0.5 | 0.1 | 0.5 | 0.7 | 1.8 | 1.7 | 0.6 | 1.1 | 2.6 |
| 593 | LDEQ1202 | 11 | 1.2 | 1.2 | 0.1 | 1.0 | 1.4 | 0.7 | 0.5 | 0.5 | 0.1 | 1.9 |
| 598 | LDEQ0962 | 4 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.2 | 0.6 |
| 648 | LDEQ0692 | 6 | 0.9 | 0.9 | 0.2 | 0.6 | 1.3 | 0.4 | 0.5 | 0.2 | 0.1 | 0.6 |
| 649 | LDEQ0957 | 12 | 0.5 | 0.5 | 0.0 | 0.5 | 0.6 | 1.1 | 1.2 | 0.4 | 0.4 | 1.7 |
| 658 | LDEQ0685 | 12 | 1.1 | 1.2 | 0.1 | 0.8 | 1.3 | 0.5 | 0.4 | 0.3 | 0.1 | 1.0 |
| 678 | LDEQ0683 | 12 | 0.7 | 0.8 | 0.2 | 0.3 | 0.9 | 0.8 | 0.8 | 0.2 | 0.5 | 1.2 |
| 692 | LDEQ0691 | 6 | 0.9 | 0.9 | 0.1 | 0.8 | 1.1 | 0.5 | 0.4 | 0.3 | 0.2 | 1.0 |
| 718 | LDEQ0693 | 12 | 0.6 | 0.7 | 0.2 | 0.3 | 0.8 | 0.9 | 0.8 | 0.3 | 0.5 | 1.6 |
| 719 | LDEQ1204 | 6 | 0.9 | 0.8 | 0.2 | 0.6 | 1.1 | 0.9 | 0.9 | 0.5 | 0.2 | 1.8 |
| 724 | LDEQ0316 | 6 | 0.8 | 0.8 | 0.1 | 0.6 | 0.9 | 0.5 | 0.5 | 0.3 | 0.2 | 0.9 |
| 728 | LDEQ2116 | 15 | 0.6 | 0.6 | 0.1 | 0.4 | 0.7 | 0.7 | 0.7 | 0.3 | 0.2 | 1.3 |
| 729 | LDEQ0696 | 12 | 0.7 | 0.8 | 0.1 | 0.6 | 0.9 | 0.6 | 0.6 | 0.3 | 0.2 | 1.3 |
| 732 | LDEQ0679 | 7 | 0.6 | 0.6 | 0.1 | 0.4 | 0.7 | 0.7 | 0.8 | 0.4 | 0.2 | 1.3 |
| 747 | LDEQ0678 | 7 | 0.5 | 0.5 | 0.1 | 0.3 | 0.6 | 0.7 | 0.9 | 0.4 | 0.2 | 1.2 |
| 748 | LDEQ0003 | 44 | 1.5 | 1.6 | 0.4 | 0.4 | 2.4 | 0.8 | 0.8 | 0.3 | 0.2 | 1.4 |
| 750 | LDEQ0660 | 12 | 0.4 | 0.3 | 0.2 | 0.1 | 0.6 | 0.7 | 0.7 | 0.2 | 0.3 | 1.1 |
| 752 | LDEQ0697 | 12 | 0.5 | 0.5 | 0.0 | 0.4 | 0.5 | 0.5 | 0.5 | 0.3 | 0.2 | 1.1 |
| 773 | LDEQ0655 | 8 | 0.7 | 0.6 | 0.4 | 0.3 | 1.3 | 0.9 | 0.9 | 0.4 | 0.5 | 1.7 |
| 782 | LDEQ0695 | 12 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.1 | 0.9 | 1.0 | 0.4 | 3.9 |
| 784 | LDEQ0098 | 9 | 0.9 | 1.1 | 0.4 | 0.4 | 1.5 | 1.2 | 1.1 | 0.4 | 0.5 | 1.7 |
| 802 | LDEQ0822 | 12 | 1.5 | 1.6 | 0.2 | 1.2 | 1.8 | 0.8 | 0.7 | 0.3 | 0.4 | 1.3 |
| 815 | LDEQ0823 | 12 | 1.1 | 1.2 | 0.6 | 0.3 | 1.7 | 0.7 | 0.6 | 0.1 | 0.5 | 0.9 |
| 816 | LDEQ2115 | 7 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 1.1 | 1.3 | 0.4 | 0.7 | 1.6 |
| 826 | LDEQ0657 | 9 | 0.3 | 0.2 | 0.1 | 0.1 | 0.5 | 0.8 | 0.7 | 0.3 | 0.6 | 1.4 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 829 | LDEQ0851 | 12 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.8 | 0.7 | 0.4 | 0.4 | 1.7 |
| 833 | LDEQ0026 | 40 | 0.5 | 0.4 | 0.3 | 0.2 | 1.1 | 0.8 | 0.7 | 0.3 | 0.3 | 1.8 |
| 842 | LDEQ2752 | 12 | 0.6 | 0.6 | 0.2 | 0.3 | 0.8 | 0.7 | 0.7 | 0.3 | 0.4 | 1.3 |
| 846 | LDEQ0827 | 12 | 0.4 | 0.4 | 0.2 | 0.3 | 0.8 | 0.7 | 0.7 | 0.3 | 0.2 | 1.2 |
| 849 | LDEQ0828 | 12 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.9 | 0.7 | 0.9 | 0.3 | 3.6 |
| 850 | LDEQ0029 | 6 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.7 | 0.7 | 0.2 | 0.3 | 0.8 |
| 852 | LDEQ0826 | 12 | 0.4 | 0.3 | 0.1 | 0.2 | 0.6 | 0.6 | 0.6 | 0.2 | 0.3 | 0.8 |
| 855 | LDEQ2114 | 4 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.5 | 0.4 | 0.2 | 0.3 | 0.8 |
| 868 | LDEQ1168 | 11 | 0.9 | 0.9 | 0.3 | 0.5 | 1.4 | 0.9 | 0.8 | 0.2 | 0.7 | 1.4 |
| 869 | LDEQ1169 | 11 | 0.4 | 0.4 | 0.2 | 0.2 | 0.8 | 0.9 | 0.9 | 0.3 | 0.6 | 1.7 |
| 872 | LDEQ0091 | 9 | 1.2 | 1.2 | 0.3 | 0.7 | 1.6 | 0.9 | 0.9 | 0.5 | 0.4 | 1.9 |
| 899 | LDEQ1157 | 10 | 0.4 | 0.3 | 0.2 | 0.2 | 0.7 | 1.1 | 0.8 | 0.6 | 0.6 | 2.4 |
| 908 | LDEQ0852 | 12 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | 0.8 |
| 916 | LDEQ1158 | 4 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.7 | 0.6 | 0.3 | 0.4 | 1.2 |
| 926 | LDEQ1159 | 2 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 |
| 937 | LDEQ1170 | 5 | 0.4 | 0.4 | 0.0 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.3 | 1.2 |

DRAFT

**Table 2: Model Performance for Mean Daily Total Kjeldahl Nitrogen (mg/L) for Calibration Period, 2010-2013.**

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 23 | LDEQ3594 | 4 | 0.4 | 0.3 | 0.4 | 0.3 | 0.1 | 0.3 | 0.2 | 0.3 |
| 26 | LDEQ0032 | 7 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| 28 | LDEQ1089 | 6 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.4 | -0.4 |
| 30 | LDEQ0105 | 28 | 1.5 | -0.2 | 1.5 | -0.2 | 1.1 | -0.2 | 0.5 | -0.3 |
| 31 | LDEQ1073 | 6 | 0.7 | -0.6 | 0.7 | -0.6 | 0.2 | -0.6 | 0.4 | -0.6 |
| 35 | LDEQ0035 | 3 | 0.5 | -0.3 | 0.5 | -0.3 | 0.1 | -0.3 | 0.4 | -0.4 |
| 36 | LDEQ1047 | 12 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.1 | -0.3 |
| 37 | LDEQ1043 | 4 | 0.7 | -0.6 | 0.7 | -0.6 | 0.2 | -0.6 | 0.4 | -0.6 |
| 39 | LDEQ1087 | 4 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.5 | -0.5 |
| 42 | LDEQ1086 | 9 | 1.0 | -0.9 | 1.0 | -0.9 | 0.4 | -0.9 | 0.8 | -0.9 |
| 45 | LDEQ0138 | 30 | 0.5 | -0.1 | 0.4 | -0.1 | 0.4 | -0.1 | 0.3 | -0.1 |
| 46 | LDEQ1062 | 12 | 0.3 | 0.0 | 0.3 | 0.0 | 0.2 | 0.0 | 0.2 | -0.1 |
| 48 | LDEQ0106 | 33 | 0.6 | -0.2 | 0.6 | -0.3 | 0.5 | -0.2 | 0.3 | -0.3 |
| 49 | LDEQ1084 | 3 | 0.5 | -0.5 | 0.5 | -0.5 | 0.1 | -0.5 | 0.3 | -0.5 |
| 52 | LDEQ1082 | 6 | 0.7 | -0.7 | 0.7 | -0.7 | 0.2 | -0.7 | 0.6 | -0.7 |
| 53 | LDEQ1063 | 12 | 0.4 | -0.1 | 0.4 | -0.1 | 0.2 | -0.1 | 0.1 | -0.2 |
| 55 | LDEQ1083 | 4 | 0.9 | -0.8 | 0.9 | -0.8 | 0.3 | -0.8 | 0.8 | -0.9 |
| 59 | LDEQ0638 | 6 | 0.9 | -0.8 | 0.9 | -0.8 | 0.3 | -0.8 | 0.5 | -0.7 |
| 65 | LDEQ1095 | 12 | 0.4 | -0.1 | 0.4 | -0.1 | 0.2 | -0.1 | 0.2 | -0.2 |
| 66 | LDEQ0307 | 12 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.2 | -0.3 |
| 66 | LDEQ0307 | 12 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.2 | -0.3 |
| 66 | LDEQ0307 | 12 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.2 | -0.3 |
| 81 | LDEQ1081 | 10 | 1.2 | -1.0 | 1.2 | -1.0 | 0.5 | -1.0 | 0.8 | -1.0 |
| 82 | LDEQ0006 | 7 | 0.8 | -0.6 | 0.8 | -0.6 | 0.3 | -0.6 | 0.6 | -0.6 |
| 97 | LDEQ0298 | 12 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.1 | -0.2 |
| 107 | LDEQ0007 | 6 | 1.1 | -1.0 | 1.1 | -1.0 | 0.4 | -1.0 | 0.9 | -1.1 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 129 | LDEQ1093 | 11 | 0.3 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 130 | LDEQ0905 | 6 | 0.5 | -0.5 | 0.5 | -0.5 | 0.2 | -0.5 | 0.4 | -0.5 |
| 136 | LDEQ0036 | 6 | 0.6 | -0.5 | 0.6 | -0.5 | 0.2 | -0.5 | 0.4 | -0.5 |
| 150 | LDEQ1102 | 15 | 0.5 | -0.2 | 0.5 | -0.2 | 0.3 | -0.2 | 0.2 | -0.3 |
| 155 | LDEQ1080 | 6 | 1.5 | -1.1 | 1.5 | -1.1 | 0.5 | -1.1 | 1.0 | -1.1 |
| 156 | LDEQ1092 | 10 | 0.3 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| 199 | LDEQ0904 | 10 | 1.6 | -1.6 | 1.6 | -1.6 | 0.7 | -1.6 | 1.2 | -1.7 |
| 209 | LDEQ0304 | 11 | 1.0 | -0.8 | 1.0 | -0.8 | 0.5 | -0.8 | 0.6 | -0.8 |
| 213 | LDEQ3958 | 12 | 1.5 | -1.2 | 1.5 | -1.2 | 0.8 | -1.2 | 0.8 | -1.1 |
| 215 | LDEQ0228 | 9 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 |
| 226 | LDEQ0909 | 11 | 0.8 | -0.6 | 0.8 | -0.6 | 0.4 | -0.6 | 0.4 | -0.6 |
| 248 | LDEQ0901 | 4 | 0.4 | -0.2 | 0.4 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 |
| 251 | LDEQ0636 | 2 | 0.6 | -0.6 | 0.6 | -0.6 | 0.1 | -0.6 | 0.3 | -0.6 |
| 252 | LDEQ4345 | 12 | 0.8 | -0.6 | 0.8 | -0.6 | 0.4 | -0.6 | 0.5 | -0.7 |
| 253 | LDEQ0899 | 7 | 0.8 | -0.6 | 0.8 | -0.6 | 0.3 | -0.6 | 0.5 | -0.7 |
| 257 | LDEQ0908 | 11 | 0.8 | -0.7 | 0.8 | -0.7 | 0.4 | -0.7 | 0.5 | -0.8 |
| 258 | LDEQ0243 | 15 | 0.3 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| 268 | LDEQ0292 | 10 | 1.3 | -1.1 | 1.3 | -1.1 | 0.6 | -1.1 | 0.7 | -0.9 |
| 277 | LDEQ0898 | 8 | 0.5 | -0.5 | 0.5 | -0.5 | 0.2 | -0.5 | 0.4 | -0.5 |
| 278 | LDEQ0907 | 12 | 0.8 | -0.6 | 0.8 | -0.6 | 0.4 | -0.6 | 0.6 | -0.8 |
| 287 | LDEQ0903 | 10 | 1.0 | -0.8 | 1.0 | -0.8 | 0.4 | -0.8 | 0.5 | -0.7 |
| 295 | LDEQ0897 | 8 | 0.6 | -0.5 | 0.6 | -0.5 | 0.2 | -0.5 | 0.4 | -0.5 |
| 297 | LDEQ0918 | 11 | 0.7 | -0.5 | 0.7 | -0.5 | 0.3 | -0.5 | 0.4 | -0.5 |
| 298 | LDEQ0084 | 9 | 0.8 | -0.8 | 0.8 | -0.8 | 0.3 | -0.8 | 0.6 | -0.8 |
| 307 | LDEQ0926 | 12 | 1.9 | -1.3 | 1.9 | -1.3 | 1.0 | -1.3 | 1.5 | -1.9 |
| 309 | LDEQ0336 | 9 | 0.8 | -0.7 | 0.8 | -0.7 | 0.3 | -0.7 | 0.5 | -0.7 |
| 309 | LDEQ0336 | 9 | 0.8 | -0.7 | 0.8 | -0.7 | 0.3 | -0.7 | 0.5 | -0.7 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 309 | LDEQ0336 | 9 | 0.8 | -0.7 | 0.8 | -0.7 | 0.3 | -0.7 | 0.5 | -0.7 |
| 312 | LDEQ0945 | 11 | 0.5 | -0.3 | 0.5 | -0.3 | 0.2 | -0.3 | 0.2 | -0.3 |
| 314 | LDEQ0922 | 12 | 0.5 | -0.2 | 0.5 | -0.2 | 0.3 | -0.2 | 0.4 | -0.3 |
| 316 | LDEQ2843 | 11 | 0.5 | -0.4 | 0.5 | -0.4 | 0.3 | -0.4 | 0.3 | -0.5 |
| 324 | LDEQ0341 | 7 | 0.9 | -0.8 | 0.9 | -0.8 | 0.4 | -0.8 | 0.6 | -0.9 |
| 325 | LDEQ2844 | 11 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.4 | -0.5 |
| 331 | LDEQ0925 | 12 | 1.1 | -1.0 | 1.1 | -1.0 | 0.5 | -1.0 | 0.8 | -1.1 |
| 342 | LDEQ0293 | 23 | 0.5 | 0.2 | 0.5 | 0.2 | 0.3 | 0.2 | 0.3 | 0.1 |
| 343 | LDEQ0080 | 8 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.2 | -0.4 |
| 348 | LDEQ0924 | 5 | 0.4 | -0.4 | 0.4 | -0.4 | 0.1 | -0.4 | 0.2 | -0.4 |
| 349 | LDEQ0340 | 7 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 361 | LDEQ0946 | 11 | 1.2 | -1.1 | 1.2 | -1.1 | 0.6 | -1.1 | 0.9 | -1.2 |
| 363 | LDEQ1198 | 10 | 0.9 | -0.8 | 0.9 | -0.8 | 0.4 | -0.8 | 0.6 | -0.8 |
| 366 | LDEQ0923 | 5 | 1.3 | -1.2 | 1.3 | -1.2 | 0.4 | -1.2 | 0.7 | -0.9 |
| 368 | LDEQ0349 | 9 | 1.4 | -1.3 | 1.4 | -1.3 | 0.6 | -1.3 | 1.2 | -1.4 |
| 372 | LDEQ0347 | 9 | 1.0 | -1.0 | 1.0 | -1.0 | 0.4 | -1.0 | 0.8 | -1.0 |
| 372 | LDEQ0347 | 9 | 1.0 | -1.0 | 1.0 | -1.0 | 0.4 | -1.0 | 0.8 | -1.0 |
| 377 | LDEQ0953 | 12 | 0.9 | -0.7 | 0.9 | -0.7 | 0.4 | -0.7 | 0.6 | -0.8 |
| 381 | LDEQ3001 | 10 | 0.8 | -0.8 | 0.8 | -0.8 | 0.4 | -0.8 | 0.6 | -0.8 |
| 392 | LDEQ1196 | 8 | 0.7 | 0.7 | 0.7 | 0.7 | 0.3 | 0.7 | 0.4 | 0.6 |
| 393 | LDEQ0930 | 0 | -"" | -"" | -"" | -"" | -"" | -"" | -"" | -"" |
| 394 | LDEQ0110 | 9 | 0.6 | -0.3 | 0.6 | -0.3 | 0.3 | -0.3 | 0.3 | -0.4 |
| 399 | LDEQ0346 | 12 | 1.5 | -1.4 | 1.5 | -1.4 | 0.7 | -1.4 | 1.0 | -1.5 |
| 413 | LDEQ0144 | 11 | 1.0 | -0.8 | 1.0 | -0.8 | 0.5 | -0.8 | 0.5 | -0.7 |
| 419 | LDEQ0959 | 2 | 0.9 | -0.9 | 0.9 | -0.9 | 0.2 | -0.9 | 0.5 | -0.9 |
| 421 | LDEQ0940 | 11 | 0.6 | -0.4 | 0.6 | -0.4 | 0.3 | -0.4 | 0.4 | -0.5 |
| 425 | LDEQ0954 | 10 | 1.5 | -1.4 | 1.5 | -1.4 | 0.7 | -1.4 | 1.0 | -1.4 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 427 | LDEQ0337 | 8 | 0.7 | -0.5 | 0.7 | -0.5 | 0.3 | -0.5 | 0.5 | -0.7 |
| 432 | LDEQ0339 | 9 | 0.3 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.1 | -0.1 |
| 436 | LDEQ1199 | 9 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 |
| 438 | LDEQ0934 | 7 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.2 | -0.2 |
| 439 | LDEQ0960 | 2 | 1.1 | -1.0 | 1.1 | -1.0 | 0.2 | -1.0 | 0.5 | -1.0 |
| 454 | LDEQ0113 | 8 | 1.7 | -1.5 | 1.7 | -1.5 | 0.7 | -1.5 | 1.0 | -1.4 |
| 459 | LDEQ0936 | 6 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.2 | -0.2 |
| 460 | LDEQ0338 | 3 | 0.8 | -0.8 | 0.8 | -0.8 | 0.2 | -0.8 | 0.4 | -0.8 |
| 475 | LDEQ0344 | 5 | 0.9 | -0.8 | 0.9 | -0.8 | 0.3 | -0.8 | 0.5 | -0.6 |
| 494 | LDEQ0952 | 8 | 1.1 | -0.9 | 1.1 | -0.9 | 0.4 | -0.9 | 0.6 | -0.7 |
| 498 | LDEQ0928 | 11 | 0.5 | -0.3 | 0.5 | -0.3 | 0.2 | -0.3 | 0.2 | -0.2 |
| 499 | LDEQ0941 | 12 | 0.5 | -0.2 | 0.5 | -0.2 | 0.2 | -0.2 | 0.3 | -0.4 |
| 510 | LDEQ0949 | 10 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.4 | -0.6 |
| 512 | LDEQ0937 | 6 | 1.0 | -0.7 | 1.0 | -0.7 | 0.4 | -0.7 | 0.7 | -0.7 |
| 518 | LDEQ0896 | 5 | 0.6 | -0.4 | 0.6 | -0.4 | 0.2 | -0.4 | 0.4 | -0.5 |
| 522 | LDEQ0039 | 45 | 0.6 | 0.5 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 |
| 533 | LDEQ0961 | 5 | 0.4 | -0.3 | 0.4 | -0.3 | 0.1 | -0.3 | 0.1 | -0.3 |
| 536 | LDEQ3586 | 4 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 538 | LDEQ1200 | 12 | 0.6 | 0.5 | 0.6 | 0.5 | 0.3 | 0.5 | 0.4 | 0.5 |
| 559 | LDEQ1201 | 12 | 0.7 | 0.5 | 0.7 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 |
| 561 | LDEQ0948 | 12 | 3.3 | -1.7 | 3.3 | -1.7 | 1.6 | -1.7 | 2.3 | -2.6 |
| 563 | LDEQ1203 | 12 | 0.7 | 0.4 | 0.7 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 |
| 569 | LDEQ0933 | 9 | 0.4 | 0.3 | 0.4 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 |
| 585 | LDEQ0950 | 12 | 0.7 | -0.6 | 0.7 | -0.6 | 0.4 | -0.6 | 0.5 | -0.6 |
| 586 | LDEQ0955 | 4 | 1.3 | -1.2 | 1.3 | -1.2 | 0.4 | -1.2 | 1.0 | -1.1 |
| 593 | LDEQ1202 | 11 | 0.7 | 0.5 | 0.7 | 0.5 | 0.3 | 0.5 | 0.4 | 0.5 |
| 598 | LDEQ0962 | 4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 648 | LDEQ0692 | 6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.2 | 0.5 | 0.4 | 0.6 |
| 649 | LDEQ0957 | 12 | 0.7 | -0.6 | 0.7 | -0.6 | 0.4 | -0.6 | 0.4 | -0.6 |
| 658 | LDEQ0685 | 12 | 0.7 | 0.6 | 0.7 | 0.6 | 0.3 | 0.6 | 0.4 | 0.6 |
| 678 | LDEQ0683 | 12 | 0.4 | -0.1 | 0.4 | -0.1 | 0.2 | -0.1 | 0.3 | -0.3 |
| 692 | LDEQ0691 | 6 | 0.5 | 0.5 | 0.5 | 0.5 | 0.2 | 0.5 | 0.4 | 0.5 |
| 718 | LDEQ0693 | 12 | 0.5 | -0.3 | 0.5 | -0.3 | 0.2 | -0.3 | 0.3 | -0.4 |
| 719 | LDEQ1204 | 6 | 0.4 | 0.0 | 0.4 | 0.0 | 0.1 | 0.0 | 0.2 | 0.1 |
| 724 | LDEQ0316 | 6 | 0.4 | 0.2 | 0.4 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 |
| 728 | LDEQ2116 | 15 | 0.4 | -0.1 | 0.4 | -0.1 | 0.2 | -0.1 | 0.2 | -0.2 |
| 729 | LDEQ0696 | 12 | 0.4 | 0.1 | 0.4 | 0.1 | 0.2 | 0.1 | 0.2 | 0.0 |
| 732 | LDEQ0679 | 7 | 0.4 | -0.1 | 0.4 | -0.1 | 0.2 | -0.1 | 0.5 | -0.2 |
| 747 | LDEQ0678 | 7 | 0.5 | -0.3 | 0.5 | -0.3 | 0.2 | -0.3 | 0.4 | -0.3 |
| 748 | LDEQ0003 | 44 | 0.9 | 0.7 | 0.9 | 0.7 | 0.9 | 0.7 | 0.7 | 0.7 |
| 750 | LDEQ0660 | 12 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.3 | -0.4 |
| 752 | LDEQ0697 | 12 | 0.3 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 | 0.1 | -0.1 |
| 773 | LDEQ0655 | 8 | 0.6 | -0.2 | 0.6 | -0.2 | 0.2 | -0.2 | 0.2 | -0.2 |
| 782 | LDEQ0695 | 12 | 1.2 | -0.8 | 1.2 | -0.8 | 0.6 | -0.8 | 0.8 | -1.0 |
| 784 | LDEQ0098 | 9 | 0.6 | -0.2 | 0.6 | -0.2 | 0.2 | -0.2 | 0.4 | -0.4 |
| 802 | LDEQ0822 | 12 | 0.8 | 0.8 | 0.8 | 0.8 | 0.4 | 0.8 | 0.5 | 0.7 |
| 815 | LDEQ0823 | 12 | 0.7 | 0.4 | 0.7 | 0.4 | 0.4 | 0.4 | 0.4 | 0.1 |
| 816 | LDEQ2115 | 7 | 1.1 | -1.1 | 1.1 | -1.1 | 0.4 | -1.0 | 0.9 | -1.2 |
| 826 | LDEQ0657 | 9 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.4 | -0.5 |
| 829 | LDEQ0851 | 12 | 0.7 | -0.5 | 0.7 | -0.5 | 0.4 | -0.5 | 0.6 | -0.7 |
| 833 | LDEQ0026 | 40 | 0.5 | -0.3 | 0.5 | -0.3 | 0.5 | -0.3 | 0.3 | -0.3 |
| 842 | LDEQ2752 | 12 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.2 | -0.2 |
| 846 | LDEQ0827 | 12 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.3 | -0.4 |
| 849 | LDEQ0828 | 12 | 1.1 | -0.7 | 1.1 | -0.7 | 0.6 | -0.7 | 0.8 | -1.0 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 850 | LDEQ0029 | 6 | 0.4 | -0.4 | 0.4 | -0.4 | 0.1 | -0.3 | 0.2 | -0.4 |
| 852 | LDEQ0826 | 12 | 0.3 | -0.2 | 0.3 | -0.2 | 0.2 | -0.2 | 0.3 | -0.3 |
| 855 | LDEQ2114 | 4 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 868 | LDEQ1168 | 11 | 0.3 | 0.0 | 0.3 | 0.0 | 0.2 | 0.0 | 0.2 | -0.1 |
| 869 | LDEQ1169 | 11 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.5 | -0.6 |
| 872 | LDEQ0091 | 9 | 0.5 | 0.3 | 0.5 | 0.3 | 0.2 | 0.3 | 0.3 | 0.1 |
| 899 | LDEQ1157 | 10 | 0.9 | -0.7 | 0.9 | -0.7 | 0.4 | -0.7 | 0.6 | -0.8 |
| 908 | LDEQ0852 | 12 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 916 | LDEQ1158 | 4 | 0.5 | -0.4 | 0.5 | -0.4 | 0.1 | -0.4 | 0.3 | -0.4 |
| 926 | LDEQ1159 | 2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 937 | LDEQ1170 | 5 | 0.4 | -0.1 | 0.4 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |

DRAFT

**Table3: Summary of Modeled and Observed Mean Daily Total Kjeldahl Nitrogen (mg/L) for Validation Period, 2006-2009.**

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 23 | LDEQ3594 | 10 | 1.0 | 1.0 | 0.1 | 0.9 | 1.3 | 0.6 | 0.6 | 0.3 | 0.2 | 1.2 |
| 26 | LDEQ0032 | 21 | 0.7 | 0.6 | 0.3 | 0.4 | 1.2 | 0.6 | 0.6 | 0.2 | 0.1 | 0.8 |
| 28 | LDEQ1089 | 11 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 0.5 | 0.5 | 0.2 | 0.2 | 0.9 |
| 30 | LDEQ0105 | 39 | 0.7 | 0.6 | 0.3 | 0.4 | 1.2 | 0.6 | 0.6 | 0.2 | 0.3 | 1.0 |
| 31 | LDEQ1073 | 9 | 0.4 | 0.4 | 0.2 | 0.1 | 0.6 | 0.4 | 0.3 | 0.3 | 0.2 | 0.9 |
| 35 | LDEQ0035 | 9 | 0.4 | 0.4 | 0.2 | 0.1 | 0.7 | 0.3 | 0.4 | 0.1 | 0.2 | 0.5 |
| 36 | LDEQ1047 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.6 | 0.9 | 0.8 | 0.4 | 0.4 | 1.8 |
| 37 | LDEQ1043 | 11 | 0.4 | 0.4 | 0.1 | 0.3 | 0.7 | 0.3 | 0.4 | 0.2 | 0.1 | 0.6 |
| 39 | LDEQ1087 | 9 | 0.4 | 0.4 | 0.1 | 0.2 | 0.5 | 0.4 | 0.4 | 0.1 | 0.3 | 0.7 |
| 42 | LDEQ1086 | 9 | 0.4 | 0.4 | 0.1 | 0.2 | 0.5 | 0.5 | 0.5 | 0.2 | 0.2 | 0.8 |
| 45 | LDEQ0138 | 37 | 0.4 | 0.4 | 0.1 | 0.2 | 0.8 | 0.4 | 0.4 | 0.1 | 0.1 | 0.8 |
| 46 | LDEQ1062 | 14 | 0.4 | 0.4 | 0.2 | 0.0 | 0.7 | 0.5 | 0.5 | 0.2 | 0.1 | 0.9 |
| 48 | LDEQ0106 | 40 | 0.5 | 0.4 | 0.2 | 0.3 | 0.9 | 0.6 | 0.5 | 0.2 | 0.1 | 1.1 |
| 49 | LDEQ1084 | 10 | 0.4 | 0.4 | 0.1 | 0.2 | 0.5 | 0.5 | 0.5 | 0.2 | 0.3 | 0.9 |
| 52 | LDEQ1082 | 11 | 0.5 | 0.4 | 0.1 | 0.4 | 0.6 | 0.8 | 0.6 | 0.3 | 0.5 | 1.5 |
| 53 | LDEQ1063 | 14 | 0.4 | 0.4 | 0.2 | 0.0 | 0.7 | 0.7 | 0.6 | 0.4 | 0.2 | 1.5 |
| 55 | LDEQ1083 | 10 | 0.4 | 0.4 | 0.1 | 0.3 | 0.5 | 0.6 | 0.6 | 0.2 | 0.3 | 1.0 |
| 59 | LDEQ0638 | 12 | 0.5 | 0.4 | 0.2 | 0.2 | 0.7 | 0.6 | 0.5 | 0.2 | 0.2 | 1.0 |
| 65 | LDEQ1095 | 8 | 0.7 | 0.7 | 0.1 | 0.5 | 0.8 | 0.5 | 0.5 | 0.2 | 0.3 | 1.0 |
| 66 | LDEQ0307 | 15 | 0.4 | 0.4 | 0.2 | 0.1 | 0.8 | 0.8 | 0.6 | 0.6 | 0.2 | 2.8 |
| 66 | LDEQ0307 | 15 | 0.4 | 0.4 | 0.2 | 0.1 | 0.8 | 0.8 | 0.6 | 0.6 | 0.2 | 2.8 |
| 66 | LDEQ0307 | 15 | 0.4 | 0.4 | 0.2 | 0.1 | 0.8 | 0.8 | 0.6 | 0.6 | 0.2 | 2.8 |
| 81 | LDEQ1081 | 12 | 0.5 | 0.5 | 0.1 | 0.2 | 0.6 | 1.0 | 0.9 | 0.2 | 0.7 | 1.5 |
| 82 | LDEQ0006 | 11 | 0.5 | 0.4 | 0.1 | 0.3 | 0.6 | 0.7 | 0.7 | 0.3 | 0.2 | 1.5 |
| 97 | LDEQ0298 | 13 | 0.6 | 0.6 | 0.1 | 0.2 | 0.8 | 1.0 | 0.9 | 0.4 | 0.5 | 1.9 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 107 | LDEQ0007 | 12 | 0.5 | 0.5 | 0.1 | 0.2 | 0.6 | 0.8 | 0.8 | 0.3 | 0.5 | 1.6 |
| 129 | LDEQ1093 | 7 | 0.8 | 0.8 | 0.1 | 0.7 | 0.9 | 0.6 | 0.6 | 0.3 | 0.2 | 1.2 |
| 130 | LDEQ0905 | 11 | 0.3 | 0.3 | 0.0 | 0.2 | 0.3 | 0.8 | 0.8 | 0.2 | 0.3 | 1.0 |
| 136 | LDEQ0036 | 11 | 0.5 | 0.5 | 0.2 | 0.3 | 0.8 | 0.4 | 0.4 | 0.2 | 0.1 | 0.6 |
| 150 | LDEQ1102 | 11 | 0.4 | 0.4 | 0.1 | 0.0 | 0.5 | 0.7 | 0.7 | 0.2 | 0.4 | 1.2 |
| 155 | LDEQ1080 | 12 | 0.4 | 0.5 | 0.1 | 0.3 | 0.6 | 1.2 | 1.1 | 0.3 | 0.8 | 1.9 |
| 156 | LDEQ1092 | 6 | 0.7 | 0.7 | 0.1 | 0.6 | 0.7 | 0.5 | 0.5 | 0.2 | 0.2 | 0.8 |
| 199 | LDEQ0904 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.6 | 1.6 | 0.4 | 0.8 | 2.2 |
| 209 | LDEQ0304 | 14 | 0.2 | 0.2 | 0.1 | 0.2 | 0.4 | 1.2 | 1.1 | 0.4 | 0.5 | 1.9 |
| 213 | LDEQ3958 | 3 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 1.2 | 0.9 | 0.9 | 0.5 | 2.2 |
| 215 | LDEQ0228 | 13 | 0.7 | 0.6 | 0.1 | 0.5 | 0.9 | 0.8 | 0.7 | 0.6 | 0.3 | 2.8 |
| 226 | LDEQ0909 | 9 | 0.4 | 0.4 | 0.1 | 0.3 | 0.4 | 0.7 | 0.7 | 0.2 | 0.5 | 1.1 |
| 248 | LDEQ0901 | 11 | 0.3 | 0.4 | 0.1 | 0.2 | 0.4 | 0.9 | 0.8 | 0.3 | 0.5 | 1.4 |
| 251 | LDEQ0636 | 11 | 0.5 | 0.5 | 0.1 | 0.2 | 0.5 | 0.8 | 0.8 | 0.3 | 0.6 | 1.5 |
| 252 | LDEQ4345 | 0 | - | - | - | - | - | - | - | - | - | - |
| 253 | LDEQ0899 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.8 | 0.8 | 0.3 | 0.3 | 1.3 |
| 257 | LDEQ0908 | 9 | 0.4 | 0.4 | 0.0 | 0.3 | 0.5 | 0.8 | 0.8 | 0.2 | 0.5 | 1.2 |
| 258 | LDEQ0243 | 11 | 0.7 | 0.6 | 0.1 | 0.5 | 1.0 | 0.8 | 0.7 | 0.3 | 0.4 | 1.1 |
| 268 | LDEQ0292 | 11 | 0.3 | 0.4 | 0.1 | 0.2 | 0.4 | 1.6 | 1.5 | 0.5 | 0.8 | 2.5 |
| 277 | LDEQ0898 | 11 | 0.3 | 0.4 | 0.1 | 0.2 | 0.4 | 1.0 | 1.0 | 0.2 | 0.8 | 1.5 |
| 278 | LDEQ0907 | 8 | 0.4 | 0.4 | 0.1 | 0.3 | 0.5 | 0.8 | 0.9 | 0.2 | 0.5 | 1.0 |
| 287 | LDEQ0903 | 11 | 0.3 | 0.4 | 0.1 | 0.2 | 0.4 | 1.2 | 1.1 | 0.4 | 0.7 | 2.0 |
| 295 | LDEQ0897 | 11 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.1 | 1.0 | 0.4 | 0.6 | 1.8 |
| 297 | LDEQ0918 | 10 | 0.3 | 0.3 | 0.0 | 0.3 | 0.4 | 0.9 | 1.0 | 0.2 | 0.5 | 1.1 |
| 298 | LDEQ0084 | 12 | 0.2 | 0.2 | 0.1 | 0.0 | 0.3 | 1.5 | 1.5 | 0.2 | 1.2 | 1.8 |
| 307 | LDEQ0926 | 8 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.7 | 0.6 | 0.2 | 0.4 | 1.1 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 309 | LDEQ0336 | 11 | 0.4 | 0.2 | 0.3 | 0.0 | 0.9 | 1.2 | 1.1 | 0.4 | 0.6 | 1.8 |
| 309 | LDEQ0336 | 11 | 0.4 | 0.2 | 0.3 | 0.0 | 0.9 | 1.2 | 1.1 | 0.4 | 0.6 | 1.8 |
| 309 | LDEQ0336 | 11 | 0.4 | 0.2 | 0.3 | 0.0 | 0.9 | 1.2 | 1.1 | 0.4 | 0.6 | 1.8 |
| 312 | LDEQ0945 | 13 | 0.6 | 0.6 | 0.2 | 0.0 | 0.9 | 1.0 | 1.0 | 0.2 | 0.6 | 1.4 |
| 314 | LDEQ0922 | 8 | 0.6 | 0.7 | 0.1 | 0.5 | 0.7 | 0.7 | 0.7 | 0.2 | 0.5 | 0.9 |
| 316 | LDEQ2843 | 13 | 0.7 | 0.7 | 0.2 | 0.0 | 0.9 | 1.2 | 1.2 | 0.3 | 0.8 | 1.6 |
| 324 | LDEQ0341 | 12 | 0.4 | 0.4 | 0.0 | 0.3 | 0.4 | 1.4 | 1.4 | 0.2 | 1.1 | 1.7 |
| 325 | LDEQ2844 | 13 | 0.5 | 0.5 | 0.2 | 0.0 | 0.7 | 1.2 | 1.1 | 0.4 | 0.6 | 1.8 |
| 331 | LDEQ0925 | 10 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 0.6 | 0.5 | 0.2 | 0.4 | 0.9 |
| 342 | LDEQ0293 | 43 | 0.9 | 1.0 | 0.2 | 0.1 | 1.2 | 0.6 | 0.5 | 0.3 | 0.2 | 1.5 |
| 343 | LDEQ0080 | 11 | 0.5 | 0.3 | 0.4 | 0.1 | 1.0 | 0.9 | 0.8 | 0.5 | 0.2 | 2.3 |
| 348 | LDEQ0924 | 10 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.6 | 0.5 | 0.2 | 0.4 | 0.9 |
| 349 | LDEQ0340 | 11 | 0.8 | 0.9 | 0.1 | 0.6 | 1.1 | 1.1 | 1.1 | 0.4 | 0.7 | 1.9 |
| 361 | LDEQ0946 | 14 | 0.3 | 0.3 | 0.1 | 0.0 | 0.3 | 1.3 | 1.3 | 0.5 | 0.5 | 2.0 |
| 363 | LDEQ1198 | 12 | 0.2 | 0.1 | 0.4 | 0.0 | 1.1 | 0.9 | 0.8 | 0.3 | 0.5 | 1.4 |
| 366 | LDEQ0923 | 11 | 0.2 | 0.2 | 0.0 | 0.2 | 0.3 | 0.6 | 0.5 | 0.2 | 0.2 | 0.9 |
| 368 | LDEQ0349 | 11 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 1.0 | 0.9 | 0.3 | 0.5 | 1.5 |
| 372 | LDEQ0347 | 11 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 1.2 | 1.2 | 0.4 | 0.6 | 2.1 |
| 372 | LDEQ0347 | 11 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 1.2 | 1.2 | 0.4 | 0.6 | 2.1 |
| 377 | LDEQ0953 | 9 | 0.5 | 0.5 | 0.0 | 0.4 | 0.5 | 0.8 | 0.7 | 0.2 | 0.6 | 1.2 |
| 381 | LDEQ3001 | 11 | 0.3 | 0.3 | 0.0 | 0.2 | 0.4 | 0.8 | 0.9 | 0.3 | 0.2 | 1.1 |
| 392 | LDEQ1196 | 12 | 1.2 | 1.3 | 0.1 | 1.2 | 1.4 | 0.8 | 0.7 | 0.2 | 0.4 | 1.2 |
| 393 | LDEQ0930 | 10 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 1.5 | 1.1 | 0.7 | 0.8 | 2.8 |
| 394 | LDEQ0110 | 11 | 0.9 | 0.9 | 0.2 | 0.6 | 1.1 | 1.1 | 1.0 | 0.3 | 0.7 | 1.5 |
| 399 | LDEQ0346 | 12 | 0.2 | 0.2 | 0.1 | 0.1 | 0.3 | 1.3 | 1.2 | 0.5 | 0.8 | 2.3 |
| 413 | LDEQ0144 | 11 | 0.3 | 0.2 | 0.1 | 0.1 | 0.5 | 0.9 | 0.8 | 0.3 | 0.5 | 1.4 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 419 | LDEQ0959 | 11 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.8 | 0.8 | 0.3 | 0.4 | 1.2 |
| 421 | LDEQ0940 | 12 | 0.9 | 0.9 | 0.1 | 0.7 | 1.0 | 1.3 | 1.3 | 0.5 | 0.6 | 2.0 |
| 425 | LDEQ0954 | 12 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 1.1 | 1.1 | 0.2 | 0.7 | 1.5 |
| 427 | LDEQ0337 | 10 | 0.6 | 0.6 | 0.4 | 0.1 | 1.2 | 0.9 | 0.9 | 0.3 | 0.5 | 1.5 |
| 432 | LDEQ0339 | 11 | 0.8 | 0.8 | 0.2 | 0.5 | 1.1 | 0.8 | 0.8 | 0.3 | 0.4 | 1.6 |
| 436 | LDEQ1199 | 11 | 0.5 | 0.5 | 0.2 | 0.1 | 0.8 | 1.2 | 0.7 | 1.4 | 0.5 | 5.3 |
| 438 | LDEQ0934 | 11 | 0.9 | 0.9 | 0.2 | 0.6 | 1.1 | 0.9 | 0.8 | 0.3 | 0.4 | 1.3 |
| 439 | LDEQ0960 | 11 | 0.4 | 0.4 | 0.0 | 0.3 | 0.5 | 0.6 | 0.6 | 0.2 | 0.2 | 0.9 |
| 454 | LDEQ0113 | 12 | 0.3 | 0.3 | 0.1 | 0.1 | 0.5 | 1.2 | 1.2 | 0.6 | 0.5 | 2.6 |
| 459 | LDEQ0936 | 0 | - | - | - | - | - | - | - | - | - | - |
| 460 | LDEQ0338 | 10 | 0.1 | 0.1 | 0.1 | 0.0 | 0.2 | 1.3 | 1.3 | 0.3 | 0.9 | 2.0 |
| 475 | LDEQ0344 | 12 | 0.7 | 0.7 | 0.1 | 0.5 | 0.9 | 0.8 | 0.8 | 0.2 | 0.6 | 1.1 |
| 494 | LDEQ0952 | 12 | 0.6 | 0.6 | 0.1 | 0.4 | 0.8 | 0.7 | 0.6 | 0.2 | 0.4 | 1.0 |
| 498 | LDEQ0928 | 11 | 0.8 | 0.8 | 0.2 | 0.4 | 1.1 | 1.0 | 1.1 | 0.4 | 0.5 | 2.0 |
| 499 | LDEQ0941 | 7 | 0.4 | 0.4 | 0.1 | 0.4 | 0.6 | 0.8 | 0.8 | 0.1 | 0.6 | 1.0 |
| 510 | LDEQ0949 | 11 | 0.5 | 0.5 | 0.0 | 0.4 | 0.5 | 0.6 | 0.6 | 0.3 | 0.1 | 1.2 |
| 512 | LDEQ0937 | 10 | 0.5 | 0.5 | 0.2 | 0.0 | 0.7 | 0.9 | 0.8 | 0.2 | 0.7 | 1.5 |
| 518 | LDEQ0896 | 11 | 0.7 | 0.7 | 0.2 | 0.4 | 1.0 | 0.8 | 0.8 | 0.1 | 0.5 | 0.9 |
| 522 | LDEQ0039 | 47 | 1.2 | 1.2 | 0.1 | 1.1 | 1.3 | 0.8 | 0.7 | 0.3 | 0.2 | 1.6 |
| 533 | LDEQ0961 | 10 | 0.5 | 0.5 | 0.0 | 0.5 | 0.5 | 0.6 | 0.6 | 0.3 | 0.2 | 1.1 |
| 536 | LDEQ3586 | 11 | 0.7 | 0.7 | 0.2 | 0.5 | 1.0 | 0.8 | 0.8 | 0.1 | 0.6 | 1.2 |
| 538 | LDEQ1200 | 11 | 1.2 | 1.2 | 0.1 | 1.0 | 1.3 | 0.7 | 0.7 | 0.2 | 0.3 | 1.2 |
| 559 | LDEQ1201 | 10 | 1.2 | 1.2 | 0.0 | 1.2 | 1.3 | 0.8 | 0.9 | 0.3 | 0.3 | 1.3 |
| 561 | LDEQ0948 | 8 | 0.5 | 0.4 | 0.1 | 0.4 | 0.6 | 0.7 | 0.7 | 0.2 | 0.5 | 1.0 |
| 563 | LDEQ1203 | 10 | 1.2 | 1.2 | 0.0 | 1.2 | 1.3 | 0.8 | 0.8 | 0.2 | 0.5 | 1.0 |
| 569 | LDEQ0933 | 11 | 1.1 | 1.2 | 0.1 | 1.0 | 1.2 | 0.9 | 0.8 | 0.4 | 0.3 | 1.8 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 585 | LDEQ0950 | 9 | 0.5 | 0.5 | 0.1 | 0.4 | 0.6 | 0.7 | 0.7 | 0.2 | 0.4 | 0.9 |
| 586 | LDEQ0955 | 10 | 0.6 | 0.6 | 0.2 | 0.1 | 0.8 | 1.1 | 1.0 | 0.4 | 0.6 | 2.0 |
| 593 | LDEQ1202 | 10 | 1.2 | 1.2 | 0.0 | 1.2 | 1.4 | 0.8 | 0.9 | 0.3 | 0.4 | 1.4 |
| 598 | LDEQ0962 | 9 | 0.5 | 0.5 | 0.0 | 0.5 | 0.6 | 0.5 | 0.6 | 0.2 | 0.1 | 0.7 |
| 648 | LDEQ0692 | 11 | 0.9 | 1.0 | 0.2 | 0.5 | 1.1 | 0.9 | 0.8 | 0.2 | 0.7 | 1.2 |
| 649 | LDEQ0957 | 8 | 0.5 | 0.5 | 0.0 | 0.5 | 0.6 | 0.7 | 0.6 | 0.2 | 0.4 | 1.1 |
| 658 | LDEQ0685 | 14 | 1.0 | 1.1 | 0.1 | 0.7 | 1.2 | 0.9 | 0.9 | 0.2 | 0.7 | 1.4 |
| 678 | LDEQ0683 | 12 | 0.8 | 0.8 | 0.2 | 0.5 | 1.1 | 1.1 | 0.9 | 0.5 | 0.6 | 2.4 |
| 692 | LDEQ0691 | 11 | 0.7 | 0.8 | 0.2 | 0.2 | 0.9 | 1.0 | 1.0 | 0.3 | 0.6 | 1.6 |
| 718 | LDEQ0693 | 10 | 0.7 | 0.7 | 0.2 | 0.4 | 1.0 | 0.9 | 0.9 | 0.2 | 0.6 | 1.3 |
| 719 | LDEQ1204 | 0 | - | - | - | - | - | - | - | - | - | - |
| 724 | LDEQ0316 | 11 | 0.8 | 0.8 | 0.2 | 0.6 | 1.1 | 0.7 | 0.7 | 0.2 | 0.4 | 0.9 |
| 728 | LDEQ2116 | 12 | 0.6 | 0.7 | 0.2 | 0.3 | 0.9 | 1.2 | 1.3 | 0.3 | 0.8 | 1.7 |
| 729 | LDEQ0696 | 11 | 0.8 | 0.8 | 0.2 | 0.6 | 1.0 | 0.8 | 0.9 | 0.2 | 0.4 | 1.1 |
| 732 | LDEQ0679 | 12 | 0.6 | 0.6 | 0.1 | 0.3 | 0.7 | 1.1 | 1.1 | 0.3 | 0.6 | 1.9 |
| 747 | LDEQ0678 | 12 | 0.5 | 0.6 | 0.1 | 0.3 | 0.6 | 1.1 | 1.1 | 0.3 | 0.6 | 1.7 |
| 748 | LDEQ0003 | 47 | 1.5 | 1.6 | 0.4 | 0.5 | 2.3 | 1.2 | 1.1 | 0.6 | 0.5 | 3.9 |
| 750 | LDEQ0660 | 12 | 0.5 | 0.5 | 0.2 | 0.2 | 0.9 | 1.3 | 1.2 | 0.4 | 0.7 | 2.0 |
| 752 | LDEQ0697 | 0 | - | - | - | - | - | - | - | - | - | - |
| 773 | LDEQ0655 | 12 | 1.6 | 1.6 | 0.2 | 1.1 | 1.8 | 1.1 | 1.1 | 0.2 | 0.8 | 1.3 |
| 782 | LDEQ0695 | 12 | 0.3 | 0.3 | 0.1 | 0.2 | 0.4 | 2.4 | 1.4 | 2.3 | 0.9 | 8.3 |
| 784 | LDEQ0098 | 12 | 1.6 | 1.6 | 0.2 | 1.2 | 1.8 | 2.2 | 1.8 | 1.9 | 1.0 | 7.9 |
| 802 | LDEQ0822 | 8 | 1.6 | 1.6 | 0.2 | 1.3 | 1.8 | 0.7 | 0.6 | 0.3 | 0.3 | 1.3 |
| 815 | LDEQ0823 | 11 | 1.5 | 1.5 | 0.1 | 1.3 | 1.6 | 0.6 | 0.7 | 0.3 | 0.1 | 1.0 |
| 816 | LDEQ2115 | 12 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 1.5 | 1.5 | 0.4 | 0.9 | 2.1 |
| 826 | LDEQ0657 | 12 | 0.7 | 0.7 | 0.2 | 0.4 | 1.1 | 1.4 | 1.3 | 0.5 | 0.8 | 2.6 |

DRAFT

| ICM Compartment | Station | # Observations | Predicted | | | | | Observed | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Mean | Median | StDev | Min | Max | Mean | Median | StDev | Min | Max |
| 829 | LDEQ0851 | 10 | 0.2 | 0.2 | 0.1 | 0.1 | 0.5 | 1.4 | 1.1 | 1.1 | 0.7 | 4.5 |
| 833 | LDEQ0026 | 40 | 0.6 | 0.6 | 0.3 | 0.0 | 1.2 | 0.6 | 0.5 | 0.3 | 0.1 | 2.0 |
| 842 | LDEQ2752 | 7 | 0.6 | 0.5 | 0.3 | 0.4 | 1.2 | 9.1 | 0.7 | 21.9 | 0.6 | 58.8 |
| 846 | LDEQ0827 | 8 | 0.5 | 0.4 | 0.2 | 0.3 | 0.8 | 0.9 | 0.6 | 0.7 | 0.4 | 2.5 |
| 849 | LDEQ0828 | 6 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 0.7 | 0.7 | 0.3 | 0.4 | 1.1 |
| 850 | LDEQ0029 | 12 | 0.5 | 0.5 | 0.2 | 0.4 | 0.9 | 1.4 | 0.9 | 1.7 | 0.2 | 6.7 |
| 852 | LDEQ0826 | 6 | 0.3 | 0.4 | 0.0 | 0.3 | 0.4 | 0.6 | 0.5 | 0.4 | 0.3 | 1.4 |
| 855 | LDEQ2114 | 12 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.7 | 0.6 | 0.6 | 0.2 | 2.5 |
| 868 | LDEQ1168 | 12 | 0.7 | 0.8 | 0.3 | 0.0 | 1.0 | 1.0 | 0.9 | 0.3 | 0.6 | 1.6 |
| 869 | LDEQ1169 | 13 | 0.3 | 0.3 | 0.2 | 0.0 | 0.6 | 0.8 | 0.7 | 0.3 | 0.5 | 1.4 |
| 872 | LDEQ0091 | 11 | 1.0 | 1.0 | 0.3 | 0.3 | 1.4 | 0.6 | 0.6 | 0.1 | 0.4 | 0.8 |
| 899 | LDEQ1157 | 13 | 0.2 | 0.2 | 0.1 | 0.0 | 0.4 | 0.6 | 0.7 | 0.3 | 0.3 | 1.2 |
| 908 | LDEQ0852 | 9 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.5 | 0.5 | 0.1 | 0.3 | 0.7 |
| 916 | LDEQ1158 | 12 | 0.9 | 0.9 | 0.2 | 0.6 | 1.1 | 0.4 | 0.3 | 0.2 | 0.1 | 0.7 |
| 926 | LDEQ1159 | 12 | 0.6 | 0.6 | 0.1 | 0.5 | 0.8 | 0.3 | 0.3 | 0.2 | 0.1 | 0.7 |
| 937 | LDEQ1170 | 12 | 0.4 | 0.4 | 0.0 | 0.4 | 0.5 | 0.4 | 0.4 | 0.2 | 0.2 | 0.7 |

DRAFT

**Table 4: Model Performance for Mean Daily Total Kjeldahl Nitrogen (mg/L) for Validation Period, 2006-2009.**

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 23 | LDEQ3594 | 10 | 0.5 | 0.4 | 0.5 | 0.4 | 0.2 | 0.4 | 0.4 | 0.5 |
| 26 | LDEQ0032 | 21 | 0.3 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| 28 | LDEQ1089 | 11 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.1 | 0.1 | -0.2 |
| 30 | LDEQ0105 | 39 | 0.3 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 |
| 31 | LDEQ1073 | 9 | 0.4 | 0.0 | 0.4 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 |
| 35 | LDEQ0035 | 9 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| 36 | LDEQ1047 | 11 | 0.7 | -0.6 | 0.7 | -0.6 | 0.3 | -0.6 | 0.3 | -0.6 |
| 37 | LDEQ1043 | 11 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 39 | LDEQ1087 | 9 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 42 | LDEQ1086 | 9 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 45 | LDEQ0138 | 37 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| 46 | LDEQ1062 | 14 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 48 | LDEQ0106 | 40 | 0.2 | -0.1 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 |
| 49 | LDEQ1084 | 10 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 52 | LDEQ1082 | 11 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.1 | -0.3 |
| 53 | LDEQ1063 | 14 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.3 | -0.3 |
| 55 | LDEQ1083 | 10 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 |
| 59 | LDEQ0638 | 12 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 65 | LDEQ1095 | 8 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| 66 | LDEQ0307 | 15 | 0.7 | -0.4 | 0.7 | -0.4 | 0.4 | -0.4 | 0.4 | -0.4 |
| 66 | LDEQ0307 | 15 | 0.7 | -0.4 | 0.7 | -0.4 | 0.4 | -0.4 | 0.4 | -0.4 |
| 66 | LDEQ0307 | 15 | 0.7 | -0.4 | 0.7 | -0.4 | 0.4 | -0.4 | 0.4 | -0.4 |
| 81 | LDEQ1081 | 12 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.3 | -0.5 |
| 82 | LDEQ0006 | 11 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.1 | -0.3 |
| 97 | LDEQ0298 | 13 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.3 | -0.4 |
| 107 | LDEQ0007 | 12 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.2 | -0.4 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 129 | LDEQ1093 | 7 | 0.4 | 0.2 | 0.4 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| 130 | LDEQ0905 | 11 | 0.5 | -0.5 | 0.5 | -0.5 | 0.2 | -0.5 | 0.3 | -0.5 |
| 136 | LDEQ0036 | 11 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| 150 | LDEQ1102 | 11 | 0.4 | -0.4 | 0.4 | -0.4 | 0.2 | -0.4 | 0.2 | -0.4 |
| 155 | LDEQ1080 | 12 | 0.9 | -0.8 | 0.9 | -0.8 | 0.4 | -0.8 | 0.4 | -0.8 |
| 156 | LDEQ1092 | 6 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 |
| 199 | LDEQ0904 | 11 | 1.4 | -1.3 | 1.4 | -1.3 | 0.7 | -1.3 | 0.9 | -1.3 |
| 209 | LDEQ0304 | 14 | 1.0 | -0.9 | 1.0 | -0.9 | 0.5 | -0.9 | 0.7 | -1.0 |
| 213 | LDEQ3958 | 3 | 1.2 | -1.0 | 1.2 | -1.0 | 0.3 | -1.0 | 0.5 | -1.0 |
| 215 | LDEQ0228 | 13 | 0.6 | -0.1 | 0.6 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 |
| 226 | LDEQ0909 | 9 | 0.4 | -0.4 | 0.4 | -0.4 | 0.2 | -0.4 | 0.3 | -0.4 |
| 248 | LDEQ0901 | 11 | 0.6 | -0.6 | 0.6 | -0.6 | 0.3 | -0.6 | 0.5 | -0.6 |
| 251 | LDEQ0636 | 11 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.3 | -0.5 |
| 252 | LDEQ4345 | 0 | - | - | - | - | - | - | - | - |
| 253 | LDEQ0899 | 11 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.3 | -0.5 |
| 257 | LDEQ0908 | 9 | 0.4 | -0.4 | 0.4 | -0.4 | 0.2 | -0.4 | 0.3 | -0.4 |
| 258 | LDEQ0243 | 11 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.0 | -0.1 |
| 268 | LDEQ0292 | 11 | 1.4 | -1.3 | 1.4 | -1.3 | 0.7 | -1.3 | 0.9 | -1.2 |
| 277 | LDEQ0898 | 11 | 0.7 | -0.7 | 0.7 | -0.7 | 0.3 | -0.7 | 0.5 | -0.7 |
| 278 | LDEQ0907 | 8 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.3 | -0.4 |
| 287 | LDEQ0903 | 11 | 0.9 | -0.9 | 0.9 | -0.9 | 0.4 | -0.9 | 0.6 | -0.9 |
| 295 | LDEQ0897 | 11 | 0.8 | -0.7 | 0.8 | -0.7 | 0.4 | -0.7 | 0.5 | -0.7 |
| 297 | LDEQ0918 | 10 | 0.6 | -0.6 | 0.6 | -0.6 | 0.3 | -0.6 | 0.4 | -0.6 |
| 298 | LDEQ0084 | 12 | 1.3 | -1.3 | 1.3 | -1.3 | 0.6 | -1.3 | 0.9 | -1.3 |
| 307 | LDEQ0926 | 8 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.2 | -0.2 |
| 309 | LDEQ0336 | 11 | 1.0 | -0.8 | 1.0 | -0.8 | 0.5 | -0.8 | 0.6 | -0.9 |
| 309 | LDEQ0336 | 11 | 1.0 | -0.8 | 1.0 | -0.8 | 0.5 | -0.8 | 0.6 | -0.9 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 309 | LDEQ0336 | 11 | 1.0 | -0.8 | 1.0 | -0.8 | 0.5 | -0.8 | 0.6 | -0.9 |
| 312 | LDEQ0945 | 13 | 0.5 | -0.4 | 0.5 | -0.4 | 0.3 | -0.4 | 0.2 | -0.3 |
| 314 | LDEQ0922 | 8 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 316 | LDEQ2843 | 13 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.6 | 0.4 | -0.6 |
| 324 | LDEQ0341 | 12 | 1.0 | -1.0 | 1.0 | -1.0 | 0.4 | -1.0 | 0.5 | -1.0 |
| 325 | LDEQ2844 | 13 | 0.8 | -0.7 | 0.8 | -0.7 | 0.4 | -0.7 | 0.4 | -0.5 |
| 331 | LDEQ0925 | 10 | 0.3 | -0.3 | 0.3 | -0.3 | 0.1 | -0.3 | 0.2 | -0.2 |
| 342 | LDEQ0293 | 43 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 |
| 343 | LDEQ0080 | 11 | 0.8 | -0.4 | 0.8 | -0.4 | 0.4 | -0.4 | 0.3 | -0.4 |
| 348 | LDEQ0924 | 10 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 349 | LDEQ0340 | 11 | 0.5 | -0.3 | 0.5 | -0.3 | 0.3 | -0.3 | 0.3 | -0.4 |
| 361 | LDEQ0946 | 14 | 1.1 | -1.0 | 1.1 | -1.0 | 0.6 | -1.0 | 0.7 | -0.9 |
| 363 | LDEQ1198 | 12 | 0.8 | -0.7 | 0.8 | -0.7 | 0.4 | -0.7 | 0.6 | -0.8 |
| 366 | LDEQ0923 | 11 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.2 | -0.3 |
| 368 | LDEQ0349 | 11 | 1.0 | -0.9 | 1.0 | -0.9 | 0.4 | -0.9 | 0.5 | -0.9 |
| 372 | LDEQ0347 | 11 | 1.2 | -1.2 | 1.2 | -1.2 | 0.5 | -1.1 | 0.6 | -1.2 |
| 372 | LDEQ0347 | 11 | 1.2 | -1.2 | 1.2 | -1.2 | 0.5 | -1.1 | 0.6 | -1.2 |
| 377 | LDEQ0953 | 9 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.2 | -0.3 |
| 381 | LDEQ3001 | 11 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.4 | -0.6 |
| 392 | LDEQ1196 | 12 | 0.5 | 0.5 | 0.5 | 0.5 | 0.3 | 0.5 | 0.4 | 0.6 |
| 393 | LDEQ0930 | 10 | 1.5 | -1.3 | 1.5 | -1.3 | 0.6 | -1.3 | 0.6 | -1.3 |
| 394 | LDEQ0110 | 11 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.1 | -0.2 |
| 399 | LDEQ0346 | 12 | 1.2 | -1.1 | 1.2 | -1.1 | 0.5 | -1.0 | 0.5 | -1.1 |
| 413 | LDEQ0144 | 11 | 0.8 | -0.7 | 0.8 | -0.7 | 0.4 | -0.7 | 0.5 | -0.7 |
| 419 | LDEQ0959 | 11 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.1 | -0.3 |
| 421 | LDEQ0940 | 12 | 0.6 | -0.4 | 0.6 | -0.4 | 0.3 | -0.4 | 0.4 | -0.5 |
| 425 | LDEQ0954 | 12 | 0.9 | -0.8 | 0.9 | -0.8 | 0.4 | -0.9 | 0.4 | -0.8 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 427 | LDEQ0337 | 10 | 0.7 | -0.3 | 0.7 | -0.3 | 0.3 | -0.2 | 0.2 | -0.2 |
| 432 | LDEQ0339 | 11 | 0.4 | 0.0 | 0.4 | 0.0 | 0.2 | 0.0 | 0.2 | -0.1 |
| 436 | LDEQ1199 | 11 | 1.5 | -0.7 | 1.5 | -0.7 | 0.7 | -0.7 | 0.5 | -0.6 |
| 438 | LDEQ0934 | 11 | 0.3 | 0.0 | 0.3 | 0.0 | 0.2 | 0.0 | 0.1 | -0.1 |
| 439 | LDEQ0960 | 11 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.1 | -0.2 |
| 454 | LDEQ0113 | 12 | 1.1 | -0.9 | 1.1 | -0.9 | 0.5 | -0.9 | 0.4 | -0.9 |
| 459 | LDEQ0936 | 0 | - | - | - | - | - | - | - | - |
| 460 | LDEQ0338 | 10 | 1.2 | -1.2 | 1.2 | -1.2 | 0.5 | -1.2 | 0.6 | -1.2 |
| 475 | LDEQ0344 | 12 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 |
| 494 | LDEQ0952 | 12 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 498 | LDEQ0928 | 11 | 0.5 | -0.3 | 0.5 | -0.3 | 0.2 | -0.3 | 0.2 | -0.3 |
| 499 | LDEQ0941 | 7 | 0.4 | -0.4 | 0.4 | -0.4 | 0.1 | -0.4 | 0.3 | -0.4 |
| 510 | LDEQ0949 | 11 | 0.3 | -0.2 | 0.3 | -0.2 | 0.2 | -0.2 | 0.2 | -0.2 |
| 512 | LDEQ0937 | 10 | 0.5 | -0.4 | 0.5 | -0.4 | 0.2 | -0.4 | 0.2 | -0.4 |
| 518 | LDEQ0896 | 11 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 522 | LDEQ0039 | 47 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 |
| 533 | LDEQ0961 | 10 | 0.3 | -0.1 | 0.3 | -0.1 | 0.2 | -0.1 | 0.2 | -0.2 |
| 536 | LDEQ3586 | 11 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.2 | -0.2 |
| 538 | LDEQ1200 | 11 | 0.5 | 0.5 | 0.5 | 0.5 | 0.2 | 0.5 | 0.3 | 0.4 |
| 559 | LDEQ1201 | 10 | 0.5 | 0.4 | 0.5 | 0.4 | 0.2 | 0.4 | 0.4 | 0.5 |
| 561 | LDEQ0948 | 8 | 0.3 | -0.2 | 0.3 | -0.2 | 0.1 | -0.2 | 0.2 | -0.2 |
| 563 | LDEQ1203 | 10 | 0.5 | 0.5 | 0.5 | 0.5 | 0.2 | 0.5 | 0.3 | 0.5 |
| 569 | LDEQ0933 | 11 | 0.5 | 0.3 | 0.5 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 |
| 585 | LDEQ0950 | 9 | 0.2 | -0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 586 | LDEQ0955 | 10 | 0.7 | -0.5 | 0.7 | -0.5 | 0.2 | -0.4 | 0.2 | -0.5 |
| 593 | LDEQ1202 | 10 | 0.5 | 0.4 | 0.5 | 0.4 | 0.2 | 0.4 | 0.3 | 0.5 |
| 598 | LDEQ0962 | 9 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 648 | LDEQ0692 | 11 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| 649 | LDEQ0957 | 8 | 0.3 | -0.1 | 0.3 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 658 | LDEQ0685 | 14 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 |
| 678 | LDEQ0683 | 12 | 0.6 | -0.3 | 0.6 | -0.3 | 0.3 | -0.3 | 0.2 | -0.3 |
| 692 | LDEQ0691 | 11 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.1 | -0.3 |
| 718 | LDEQ0693 | 10 | 0.4 | -0.2 | 0.4 | -0.2 | 0.2 | -0.2 | 0.3 | -0.3 |
| 719 | LDEQ1204 | 0 | - | - | - | - | - | - | - | - |
| 724 | LDEQ0316 | 11 | 0.3 | 0.1 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 728 | LDEQ2116 | 12 | 0.6 | -0.6 | 0.6 | -0.6 | 0.3 | -0.6 | 0.3 | -0.6 |
| 729 | LDEQ0696 | 11 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| 732 | LDEQ0679 | 12 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.6 | 0.3 | -0.5 |
| 747 | LDEQ0678 | 12 | 0.6 | -0.6 | 0.6 | -0.6 | 0.3 | -0.6 | 0.3 | -0.6 |
| 748 | LDEQ0003 | 47 | 0.6 | 0.3 | 0.6 | 0.3 | 0.6 | 0.3 | 0.3 | 0.3 |
| 750 | LDEQ0660 | 12 | 0.9 | -0.8 | 0.9 | -0.8 | 0.4 | -0.8 | 0.4 | -0.8 |
| 752 | LDEQ0697 | 0 | - | - | - | - | - | - | - | - |
| 773 | LDEQ0655 | 12 | 0.6 | 0.5 | 0.6 | 0.5 | 0.3 | 0.5 | 0.2 | 0.5 |
| 782 | LDEQ0695 | 12 | 3.0 | -2.1 | 3.0 | -2.1 | 1.3 | -2.1 | 1.0 | -2.1 |
| 784 | LDEQ0098 | 12 | 1.9 | -0.6 | 1.9 | -0.6 | 0.5 | -0.4 | 0.3 | -0.6 |
| 802 | LDEQ0822 | 8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.4 | 0.9 | 0.7 | 0.9 |
| 815 | LDEQ0823 | 11 | 0.9 | 0.8 | 0.9 | 0.8 | 0.4 | 0.8 | 0.7 | 1.0 |
| 816 | LDEQ2115 | 12 | 1.4 | -1.3 | 1.4 | -1.3 | 0.6 | -1.3 | 0.7 | -1.3 |
| 826 | LDEQ0657 | 12 | 0.9 | -0.7 | 0.9 | -0.7 | 0.4 | -0.7 | 0.4 | -0.7 |
| 829 | LDEQ0851 | 10 | 1.6 | -1.2 | 1.6 | -1.2 | 0.7 | -1.2 | 0.8 | -1.1 |
| 833 | LDEQ0026 | 40 | 0.3 | 0.0 | 0.3 | 0.0 | 0.3 | 0.0 | 0.1 | 0.0 |
| 842 | LDEQ2752 | 7 | 22.0 | -8.5 | 22.0 | -8.5 | 8.4 | -8.5 | 5.9 | -6.1 |
| 846 | LDEQ0827 | 8 | 0.8 | -0.5 | 0.8 | -0.5 | 0.3 | -0.5 | 0.3 | -0.4 |
| 849 | LDEQ0828 | 6 | 0.6 | -0.5 | 0.6 | -0.5 | 0.2 | -0.5 | 0.4 | -0.5 |

DRAFT

| ICM Compartment | Station | # Observations | Daily RMSE | Daily Bias | Two-week RMSE | Two-week Bias | Monthly RMSE | Monthly Bias | Annual RMSE | Annual Bias |
|---|---|---|---|---|---|---|---|---|---|---|
| 850 | LDEQ0029 | 12 | 1.9 | -0.9 | 1.9 | -0.9 | 0.9 | -1.0 | 0.4 | -0.9 |
| 852 | LDEQ0826 | 6 | 0.4 | -0.3 | 0.4 | -0.3 | 0.2 | -0.3 | 0.2 | -0.2 |
| 855 | LDEQ2114 | 12 | 0.7 | -0.3 | 0.7 | -0.3 | 0.3 | -0.3 | 0.1 | -0.3 |
| 868 | LDEQ1168 | 12 | 0.5 | -0.2 | 0.5 | -0.2 | 0.3 | -0.2 | 0.3 | -0.4 |
| 869 | LDEQ1169 | 13 | 0.6 | -0.5 | 0.6 | -0.5 | 0.3 | -0.5 | 0.4 | -0.6 |
| 872 | LDEQ0091 | 11 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 |
| 899 | LDEQ1157 | 13 | 0.5 | -0.4 | 0.5 | -0.4 | 0.3 | -0.4 | 0.4 | -0.5 |
| 908 | LDEQ0852 | 9 | 0.1 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 | 0.1 | -0.1 |
| 916 | LDEQ1158 | 12 | 0.6 | 0.5 | 0.6 | 0.5 | 0.2 | 0.5 | 0.3 | 0.5 |
| 926 | LDEQ1159 | 12 | 0.4 | 0.3 | 0.4 | 0.3 | 0.2 | 0.3 | 0.2 | 0.3 |
| 937 | LDEQ1170 | 12 | 0.2 | 0.0 | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |

DRAFT

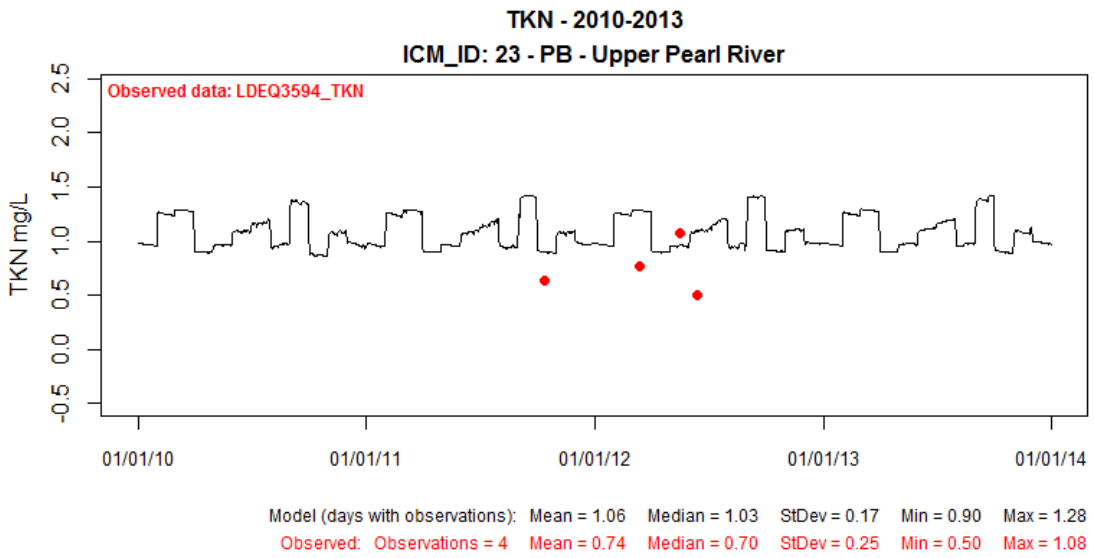


**Figure 1: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 23 (solid black line) Compared to Observed Data at LDEQ3594 for Calibration Period, 2010-2013.**

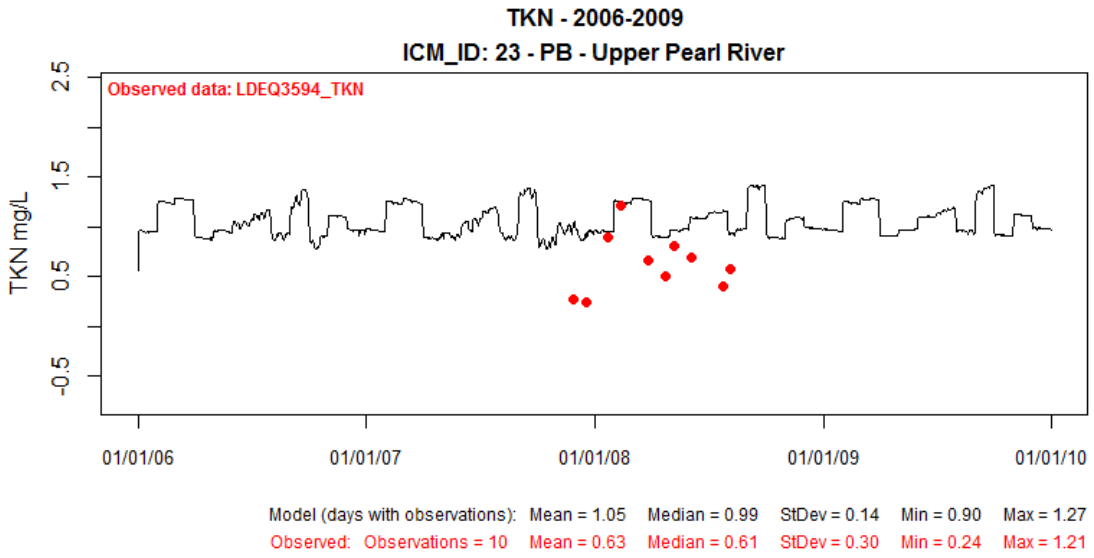


**Figure 2: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 23 (solid black line) Compared to Observed Data at LDEQ3594 for Validation Period, 2006-2009.**

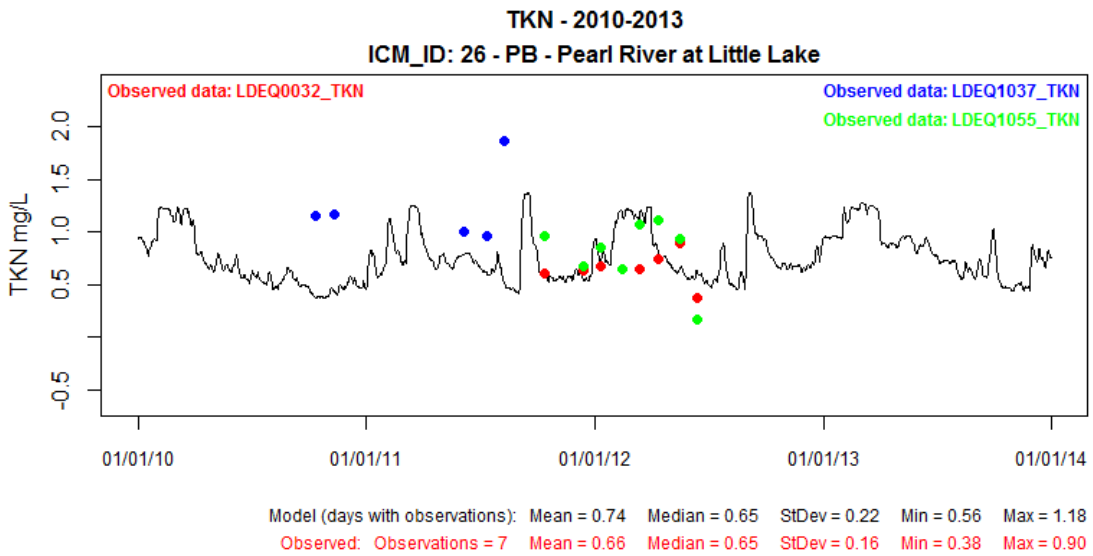


**Figure 3: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 26 (solid black line) Compared to Observed Data at LDEQ0032 for Calibration Period, 2010-2013.**

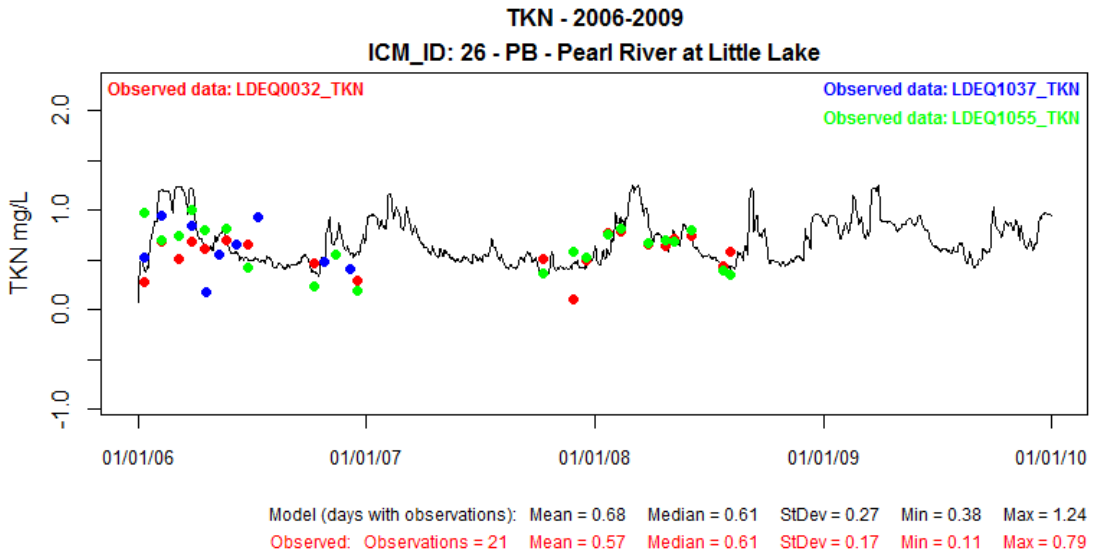


**Figure 4: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 26 (solid black line) Compared to Observed Data at LDEQ0032 for Validation Period, 2006-2009.**

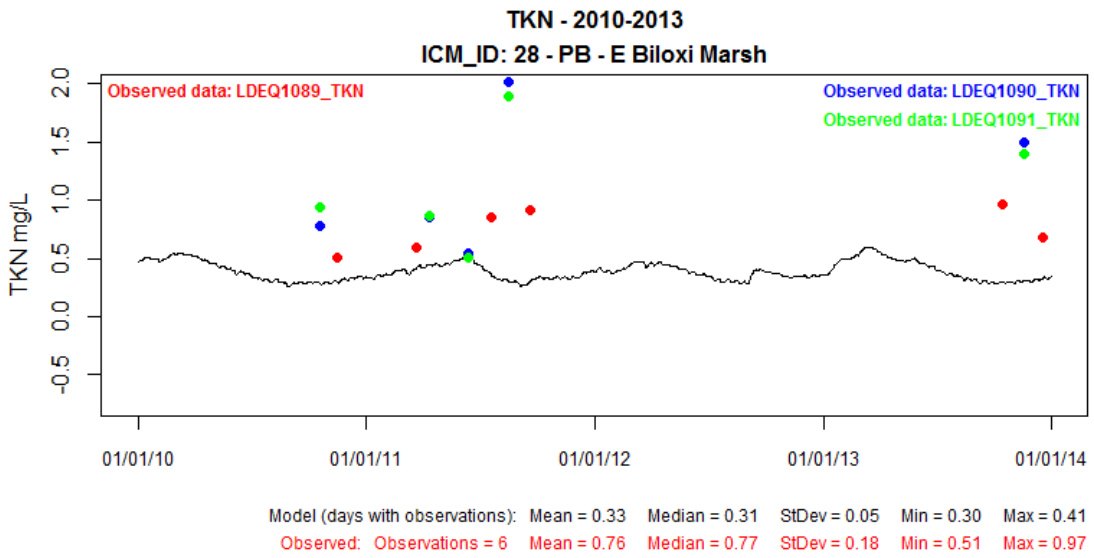


**Figure 5: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 28 (solid black line) Compared to Observed Data at LDEQ1089 for Calibration Period, 2010-2013.**

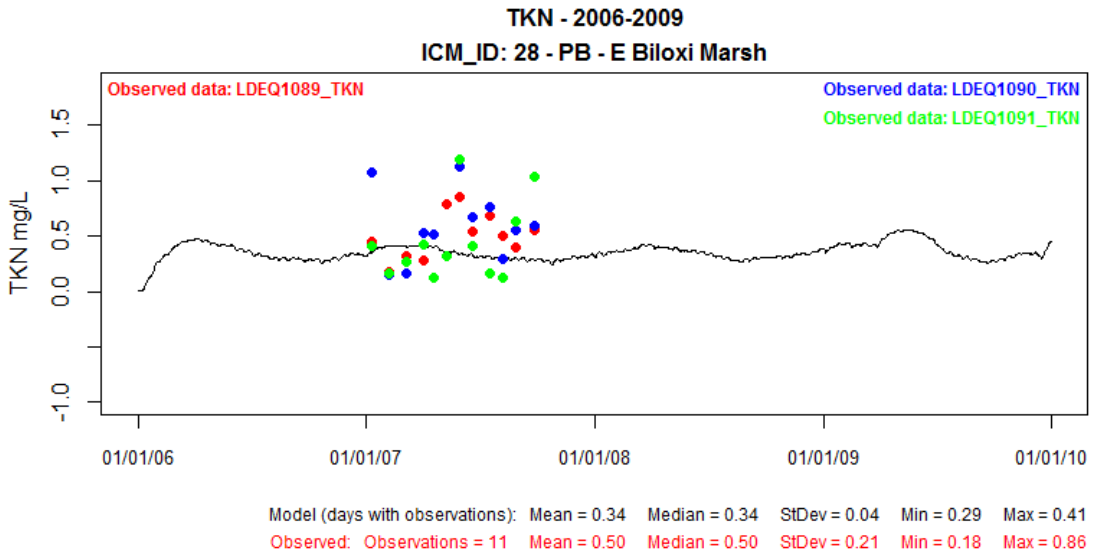


**Figure 6: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 28 (solid black line) Compared to Observed Data at LDEQ1089 for Validation Period, 2006-2009.**

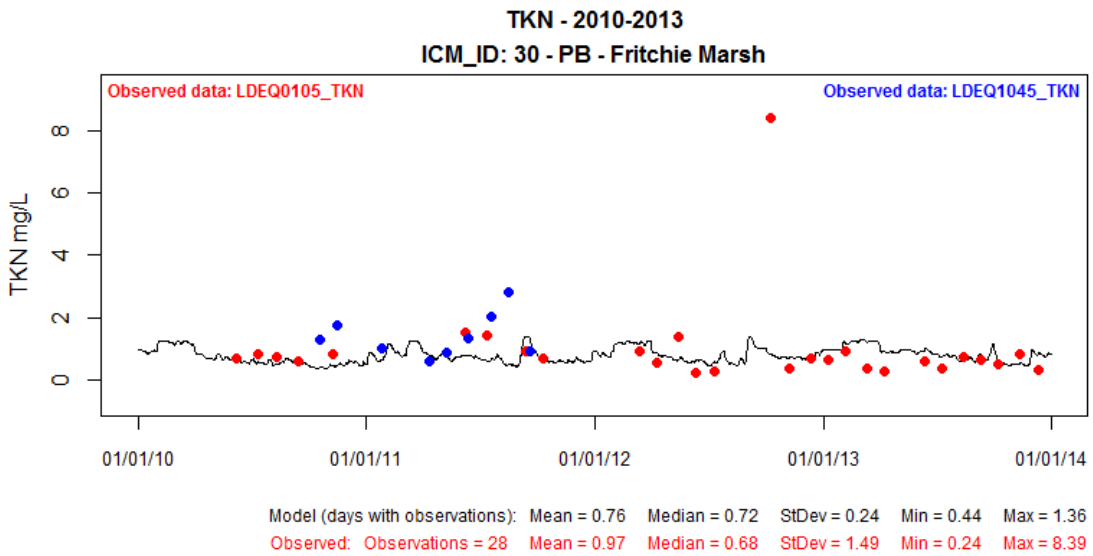


**Figure 7: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 30 (solid black line) Compared to Observed Data at LDEQ0105 for Calibration Period, 2010-2013.**

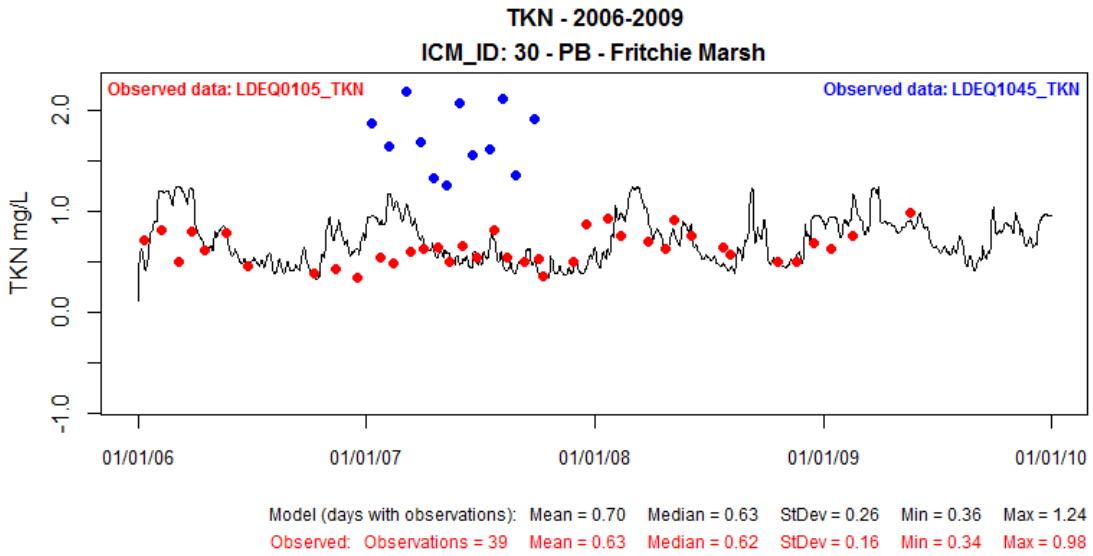


**Figure 8: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 30 (solid black line) Compared to Observed Data at LDEQ0105 for Validation Period, 2006-2009.**

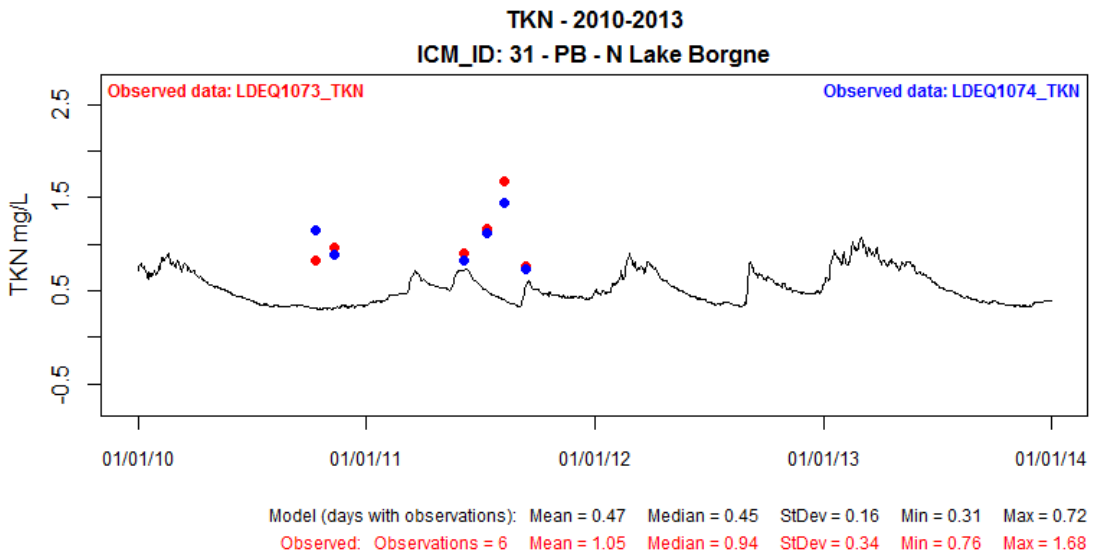


**Figure 9: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 31 (solid black line) Compared to Observed Data at LDEQ1073 for Calibration Period, 2010-2013.**

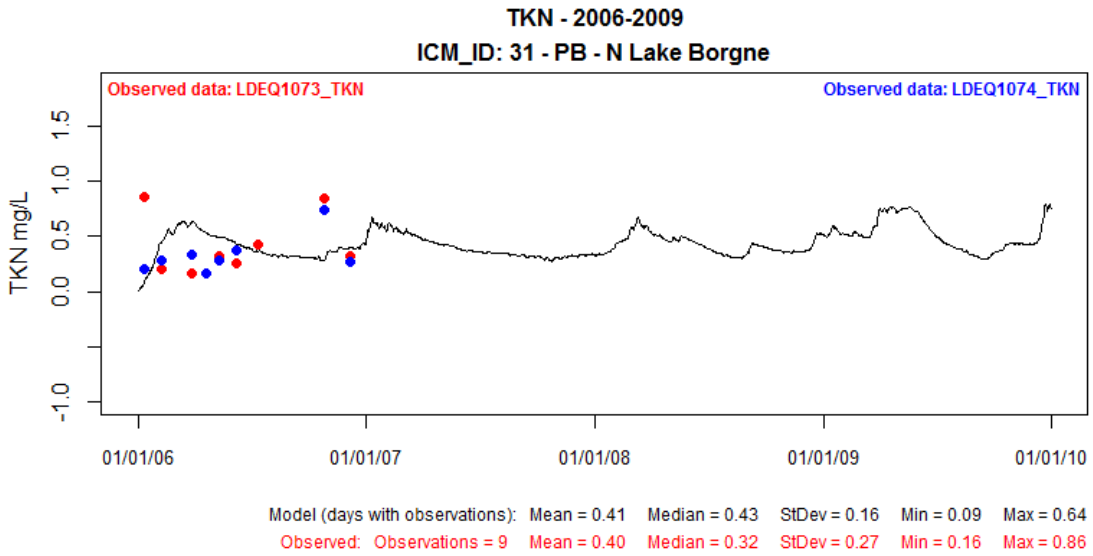


**Figure 10: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 31 (solid black line) Compared to Observed Data at LDEQ1073 for Validation Period, 2006-2009.**

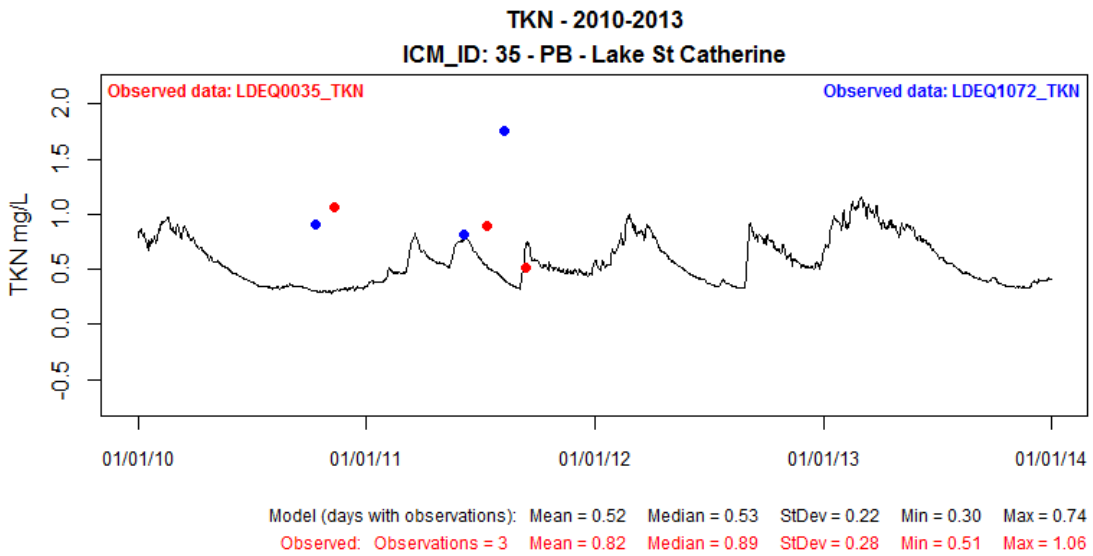


**Figure 11: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 35 (solid black line) Compared to Observed Data at LDEQ0035 for Calibration Period, 2010-2013.**

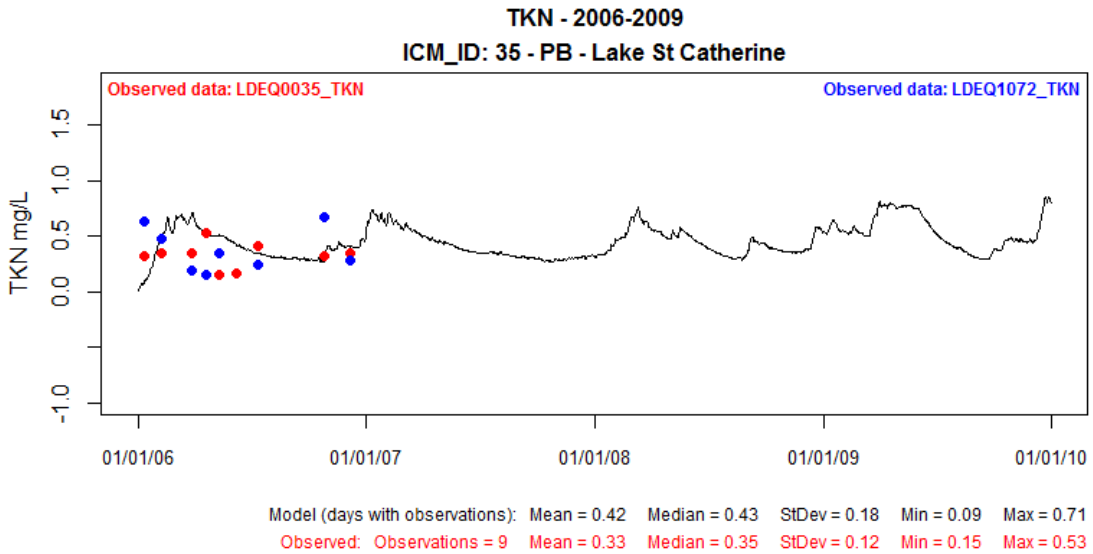


**Figure 12: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 35 (solid black line) Compared to Observed Data at LDEQ0035 for Validation Period, 2006-2009.**

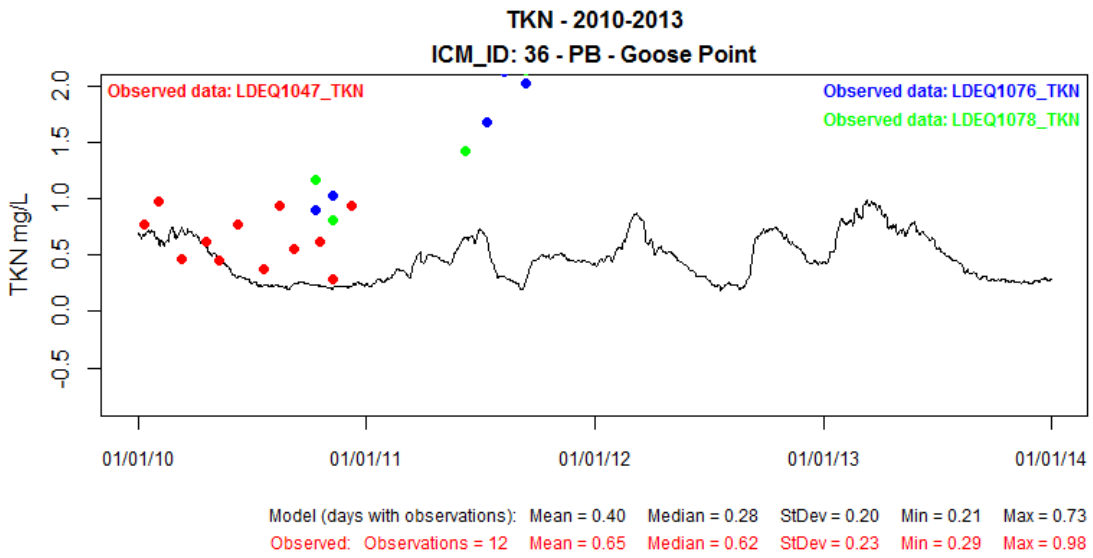


**Figure 13: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 36 (solid black line) Compared to Observed Data at LDEQ1047 for Calibration Period, 2010-2013.**

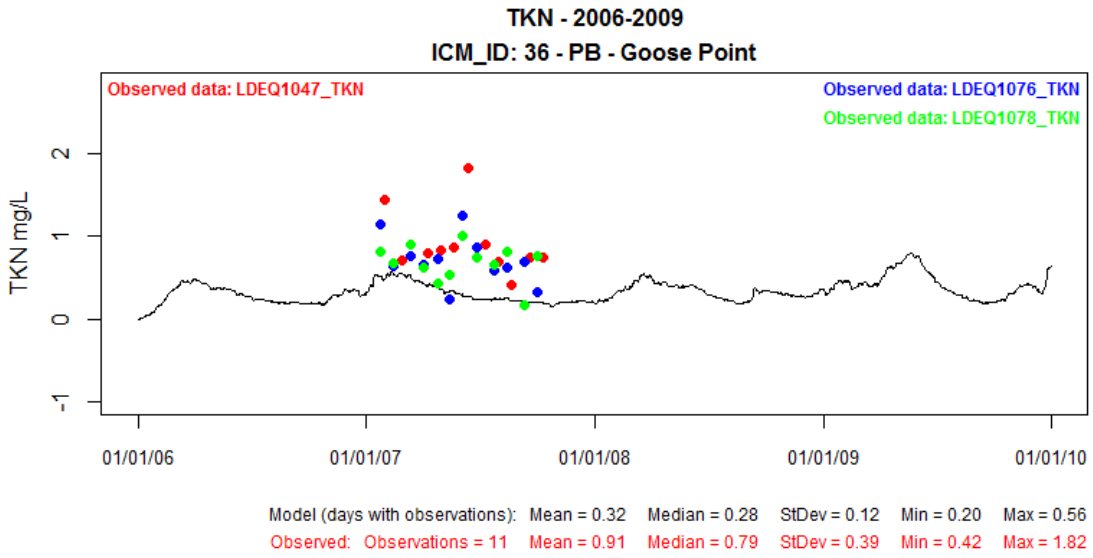


**Figure 14: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 36 (solid black line) Compared to Observed Data at LDEQ1047 for Validation Period, 2006-2009.**

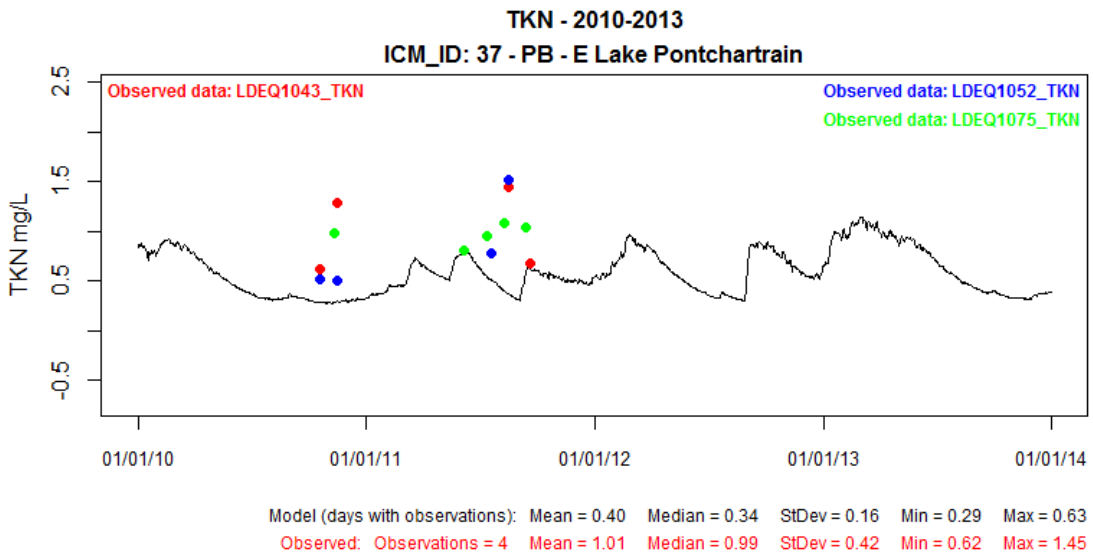


**Figure 15: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 37 (solid black line) Compared to Observed Data at LDEQ1043 for Calibration Period, 2010-2013.**

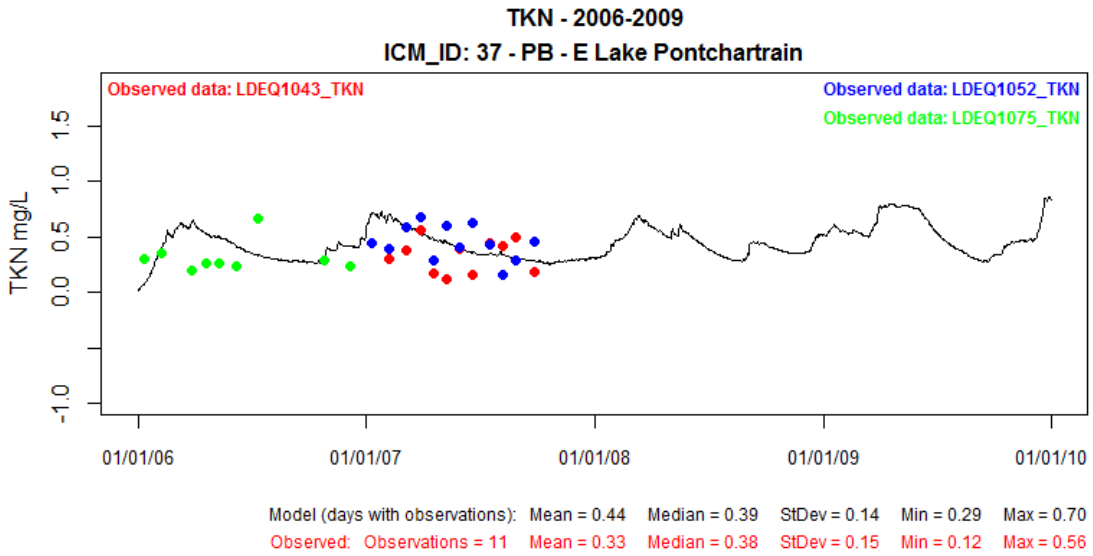


**Figure 16: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 37 (solid black line) Compared to Observed Data at LDEQ1043 for Validation Period, 2006-2009.**

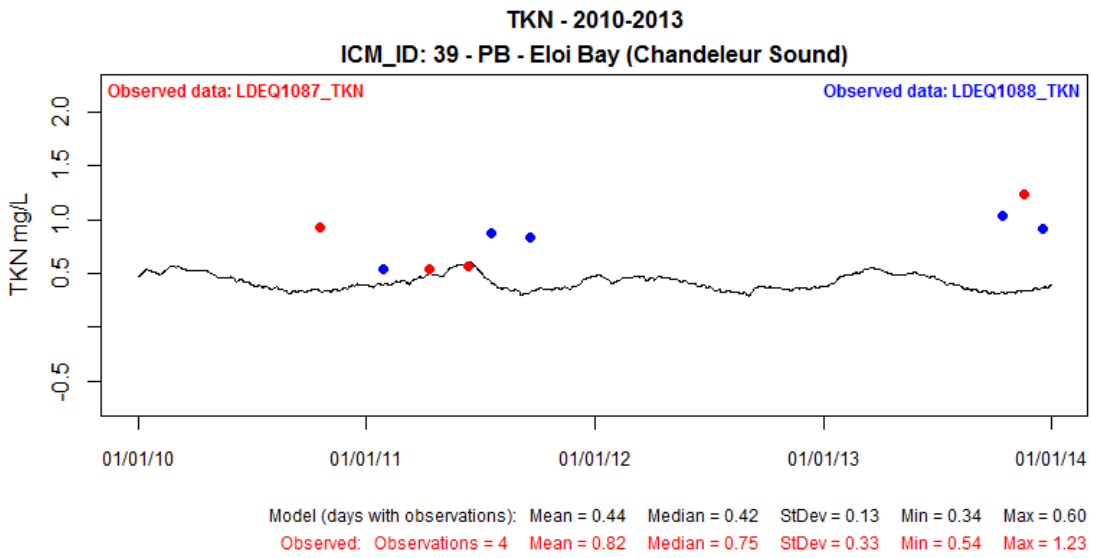


**Figure 17: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 39 (solid black line) Compared to Observed Data at LDEQ1087 for Calibration Period, 2010-2013.**

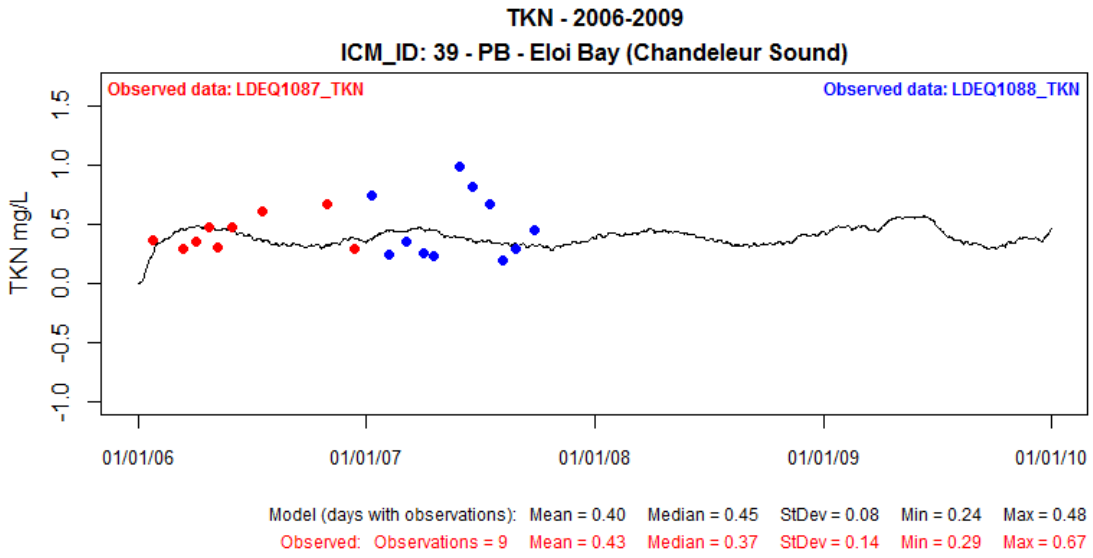


**Figure 18: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 39 (solid black line) Compared to Observed Data at LDEQ1087 for Validation Period, 2006-2009.**

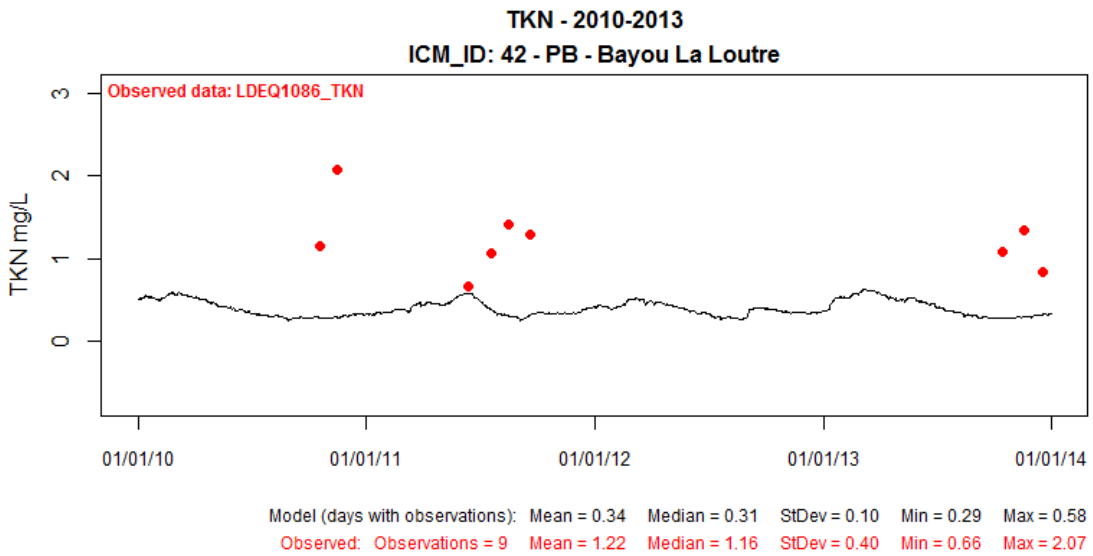


**Figure 19: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 42 (solid black line) Compared to Observed Data at LDEQ1086 for Calibration Period, 2010-2013.**

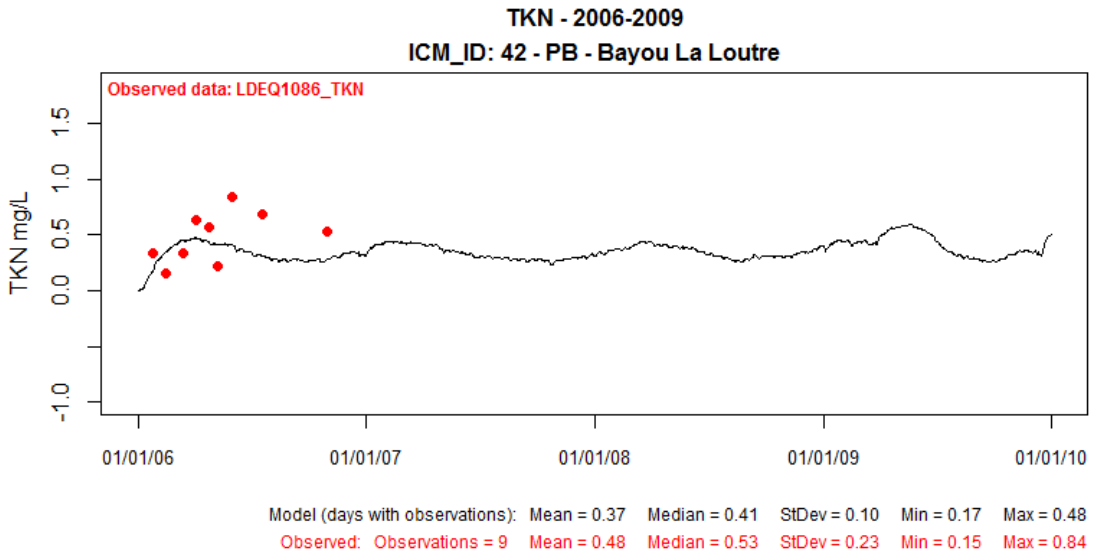


**Figure 20: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 42 (solid black line) Compared to Observed Data at LDEQ1086 for Validation Period, 2006-2009.**

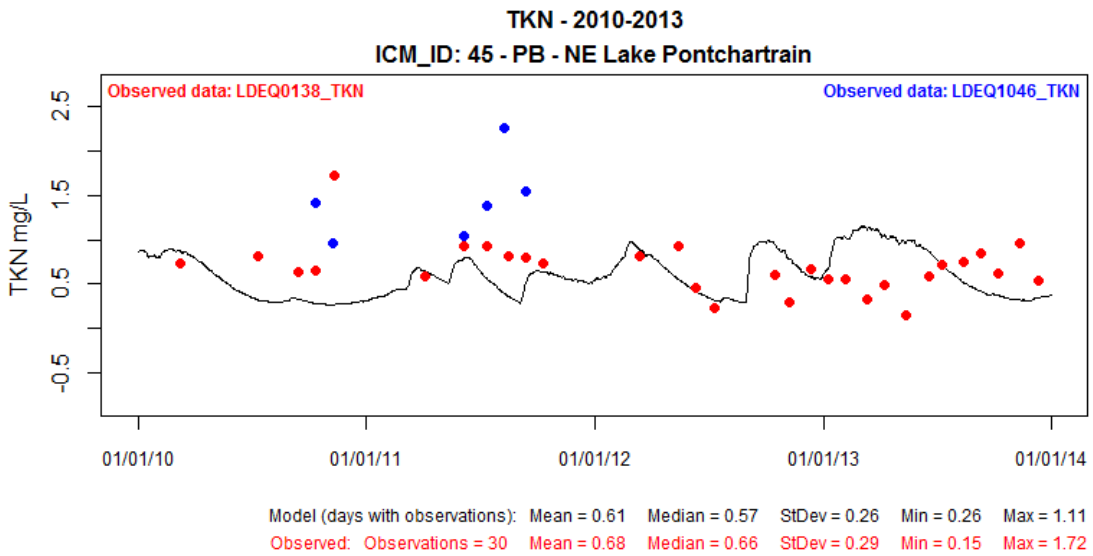


**Figure 21: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 45 (solid black line) Compared to Observed Data at LDEQ0138 for Calibration Period, 2010-2013.**

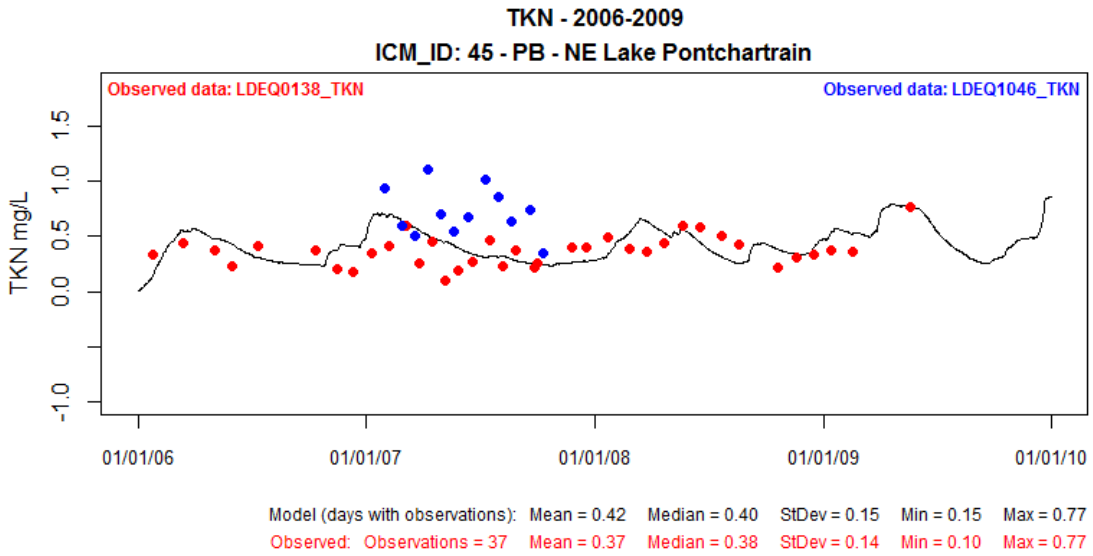


**Figure 22: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 45 (solid black line) Compared to Observed Data at LDEQ0138 for Validation Period, 2006-2009.**

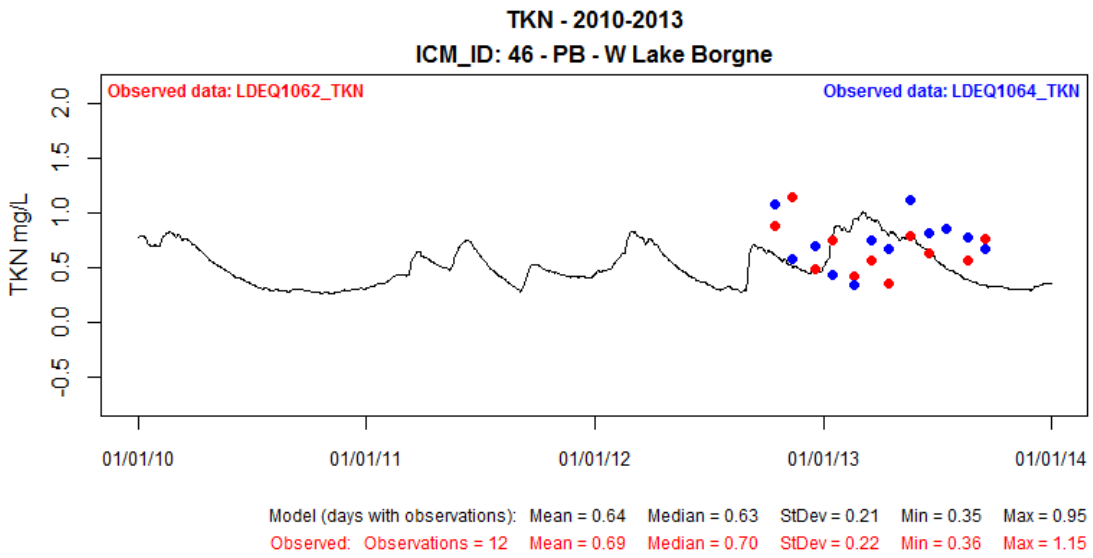


**Figure 23: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 46 (solid black line) Compared to Observed Data at LDEQ1062 for Calibration Period, 2010-2013.**

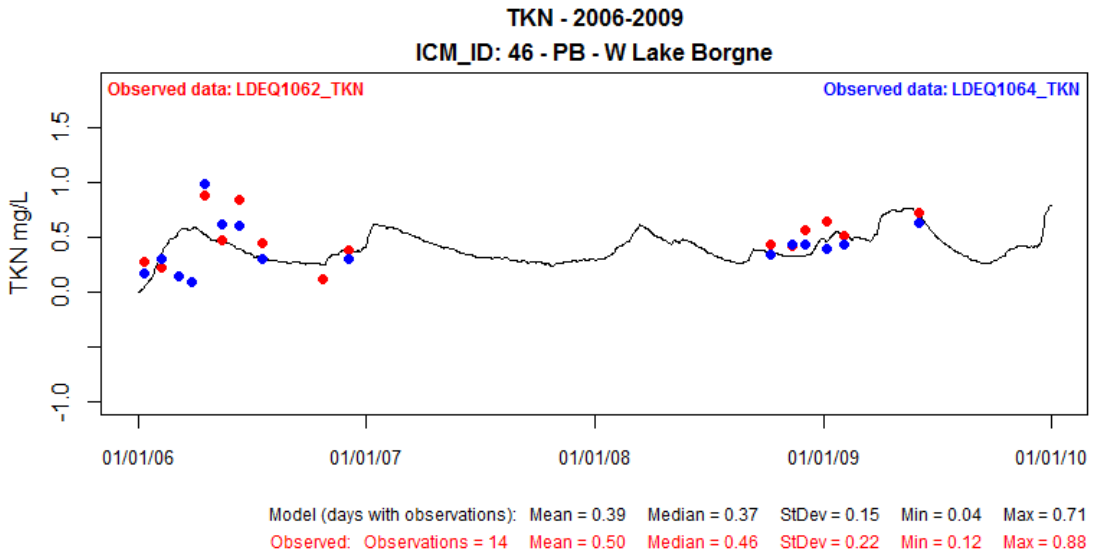


**Figure 24: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 46 (solid black line) Compared to Observed Data at LDEQ1062 for Validation Period, 2006-2009.**

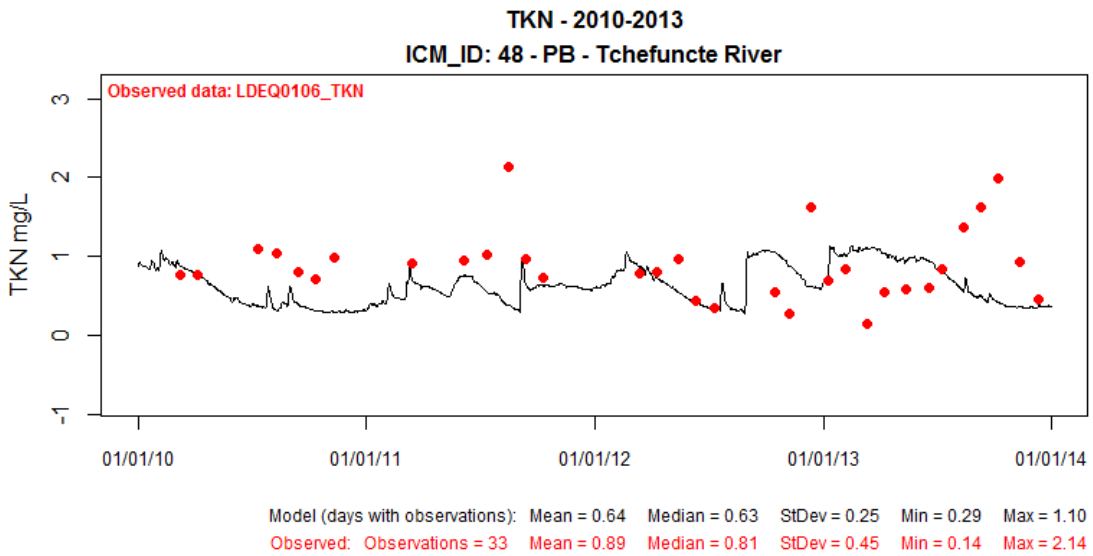


**Figure 25: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 48 (solid black line) Compared to Observed Data at LDEQ0106 for Calibration Period, 2010-2013.**

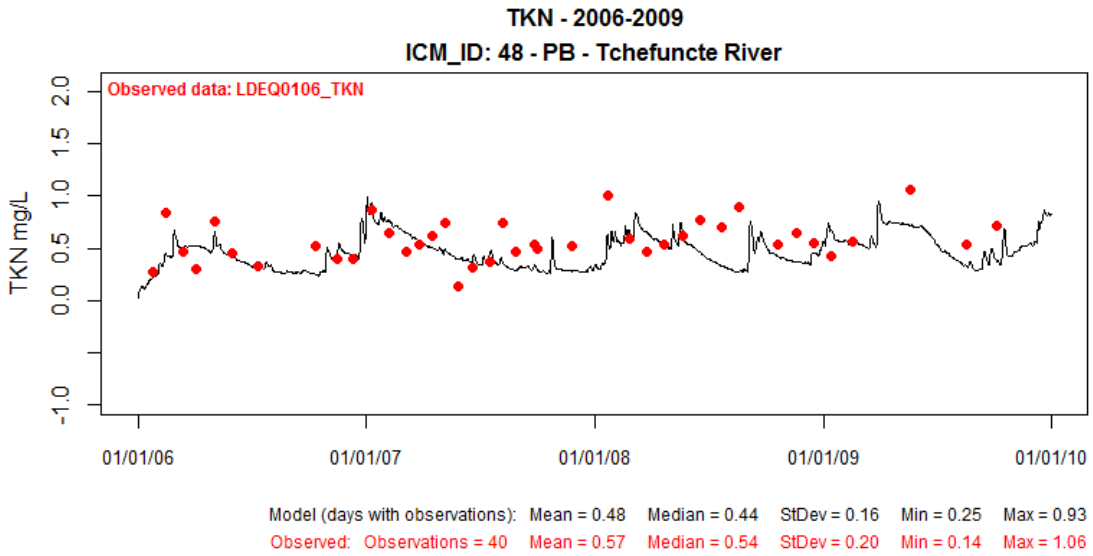


**Figure 26: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 48 (solid black line) Compared to Observed Data at LDEQ0106 for Validation Period, 2006-2009.**

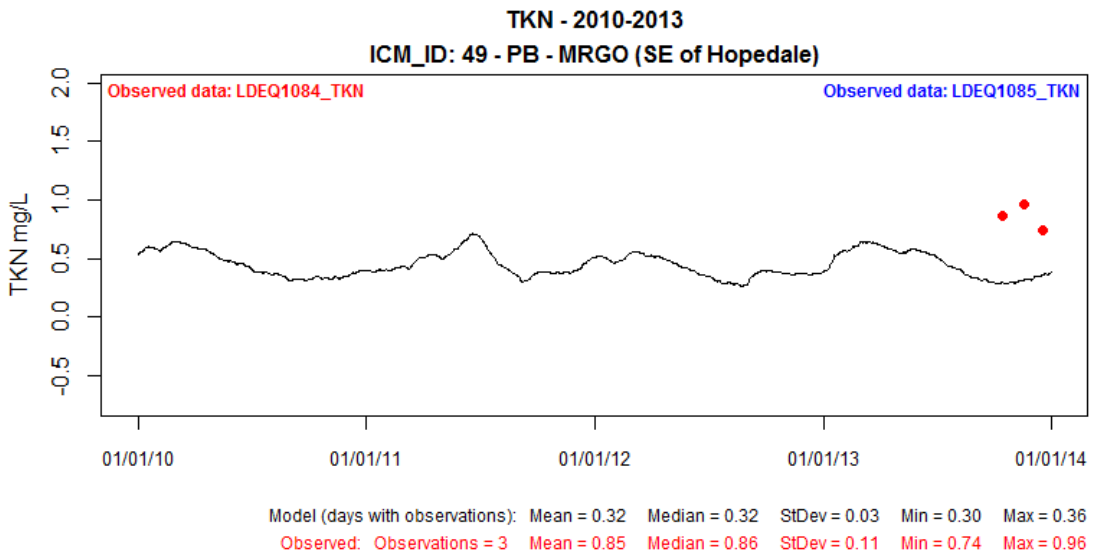


**Figure 27: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 49 (solid black line) Compared to Observed Data at LDEQ1084 for Calibration Period, 2010-2013.**

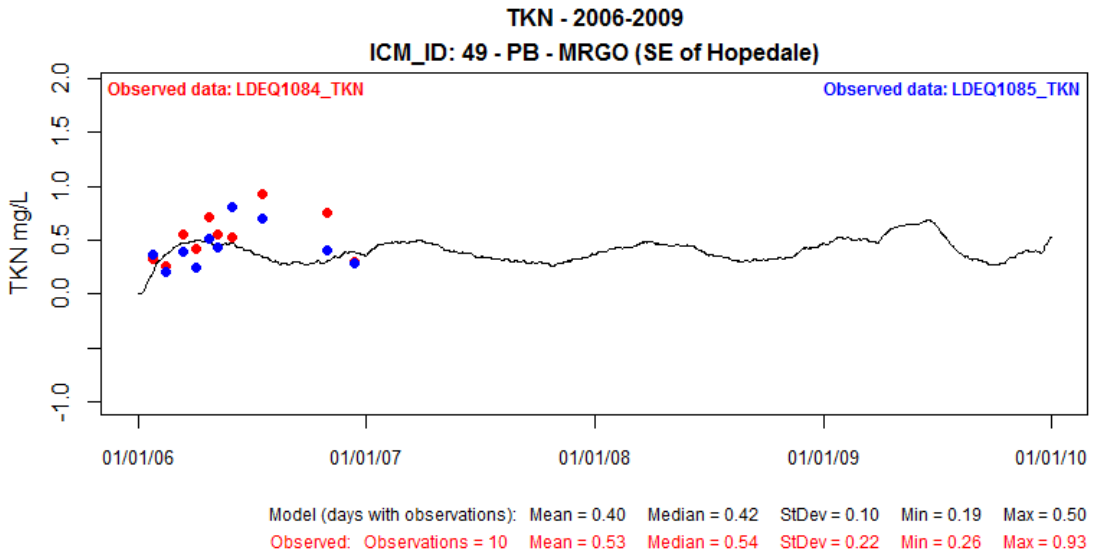


**Figure 28: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 49 (solid black line) Compared to Observed Data at LDEQ1084 for Validation Period, 2006-2009.**

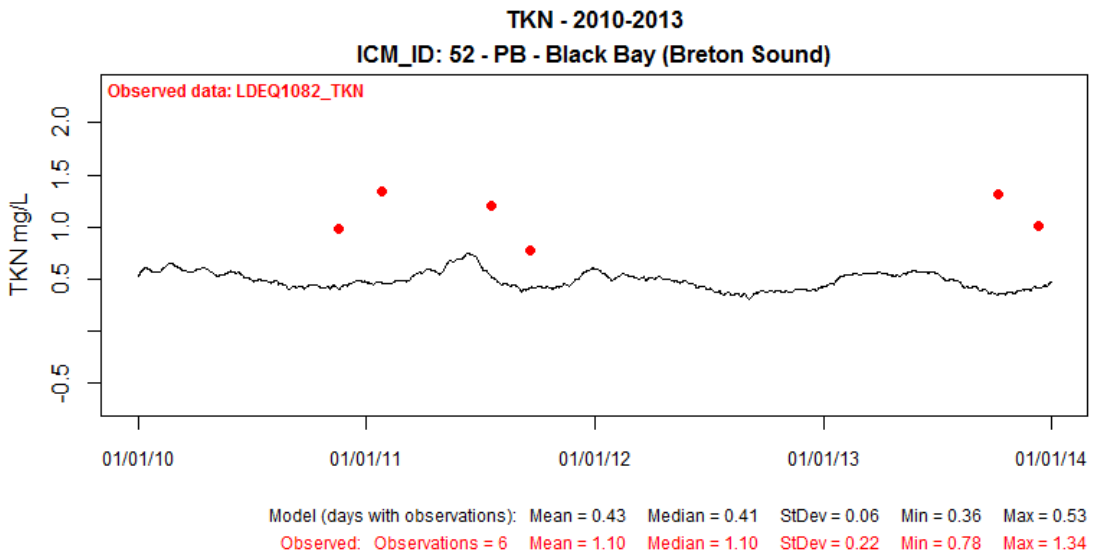


**Figure 29: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 52 (solid black line) Compared to Observed Data at LDEQ1082 for Calibration Period, 2010-2013.**

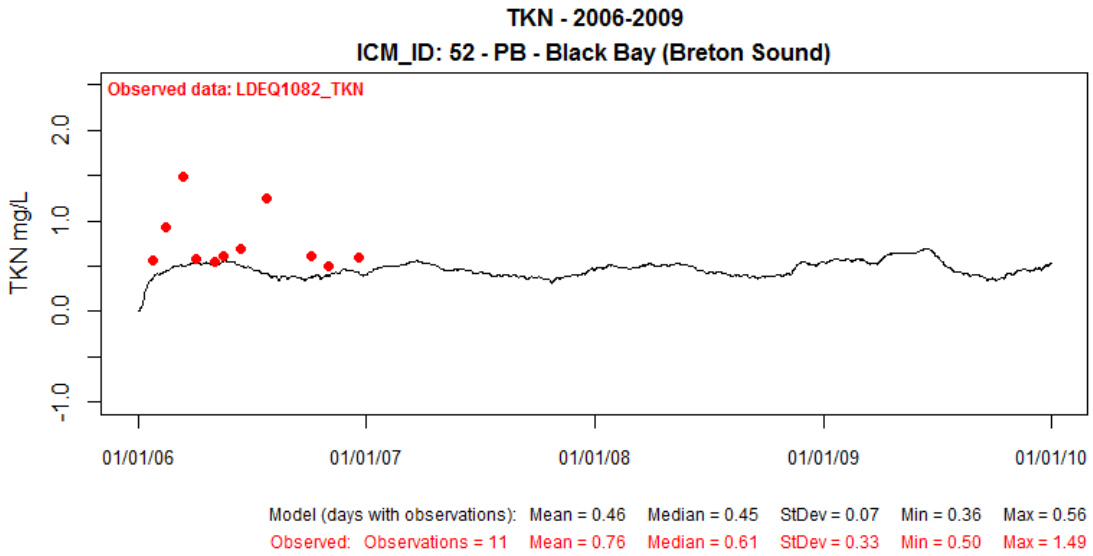


**Figure 30: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 52 (solid black line) Compared to Observed Data at LDEQ1082 for Validation Period, 2006-2009.**

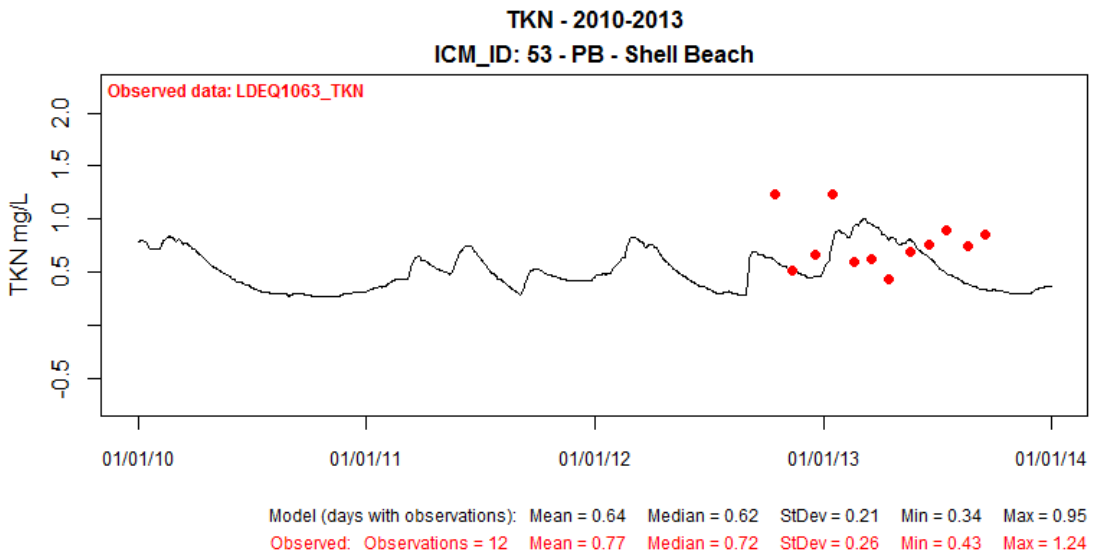


**Figure 31: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 53 (solid black line) Compared to Observed Data at LDEQ1063 for Calibration Period, 2010-2013.**

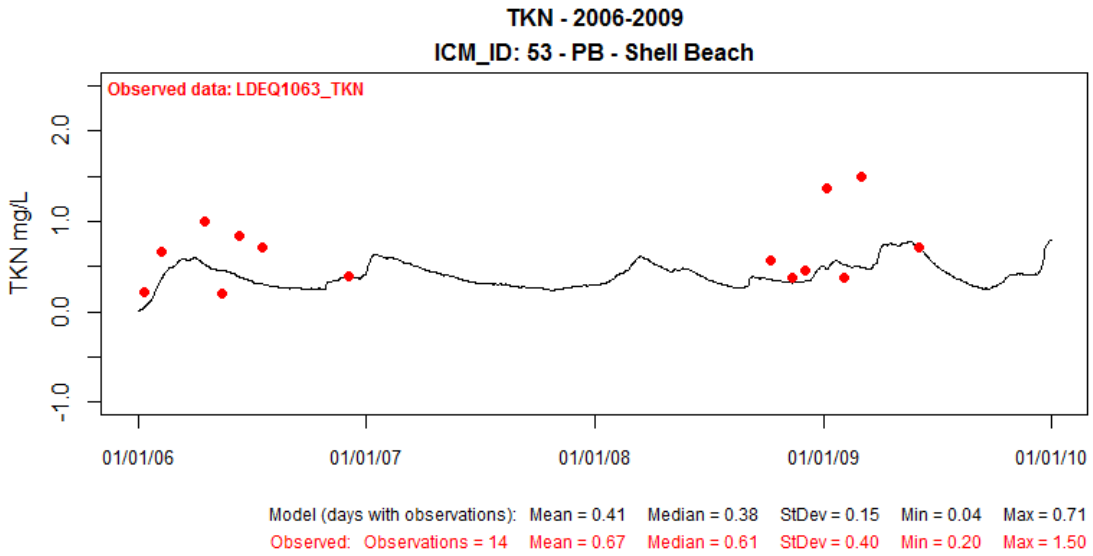


**Figure 32: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 53 (solid black line) Compared to Observed Data at LDEQ1063 for Validation Period, 2006-2009.**

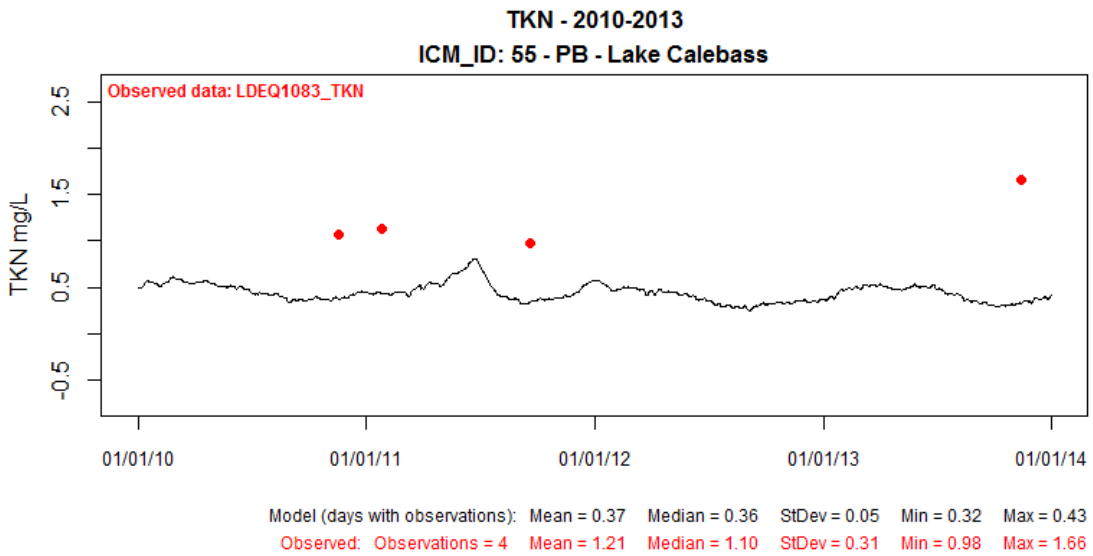


**Figure 33: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 55 (solid black line) Compared to Observed Data at LDEQ1083 for Calibration Period, 2010-2013.**

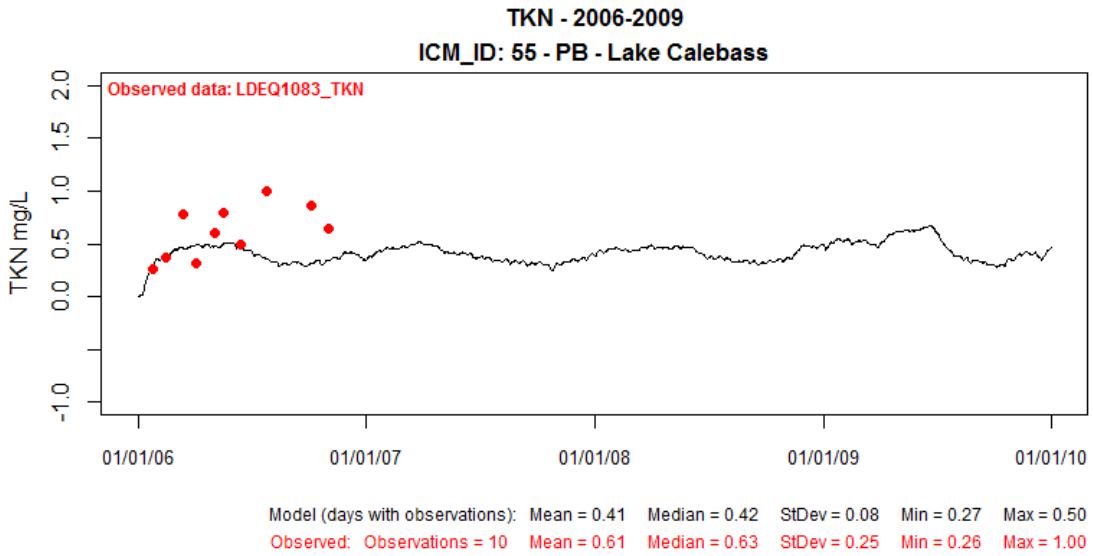


**Figure 34: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 55 (solid black line) Compared to Observed Data at LDEQ1083 for Validation Period, 2006-2009.**

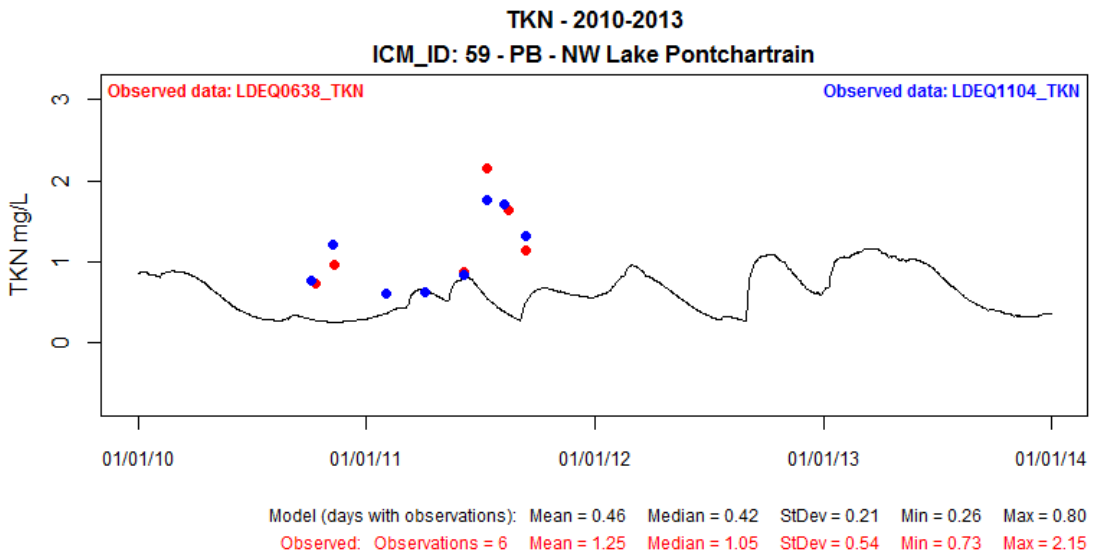


**Figure 35: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 59 (solid black line) Compared to Observed Data at LDEQ0638 for Calibration Period, 2010-2013.**

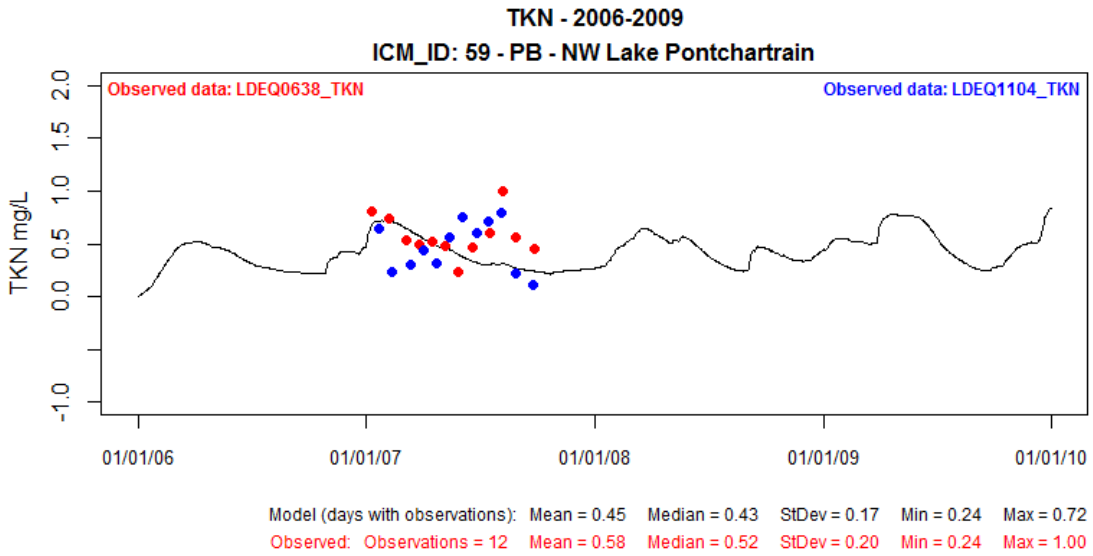


**Figure 36: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 59 (solid black line) Compared to Observed Data at LDEQ0638 for Validation Period, 2006-2009.**

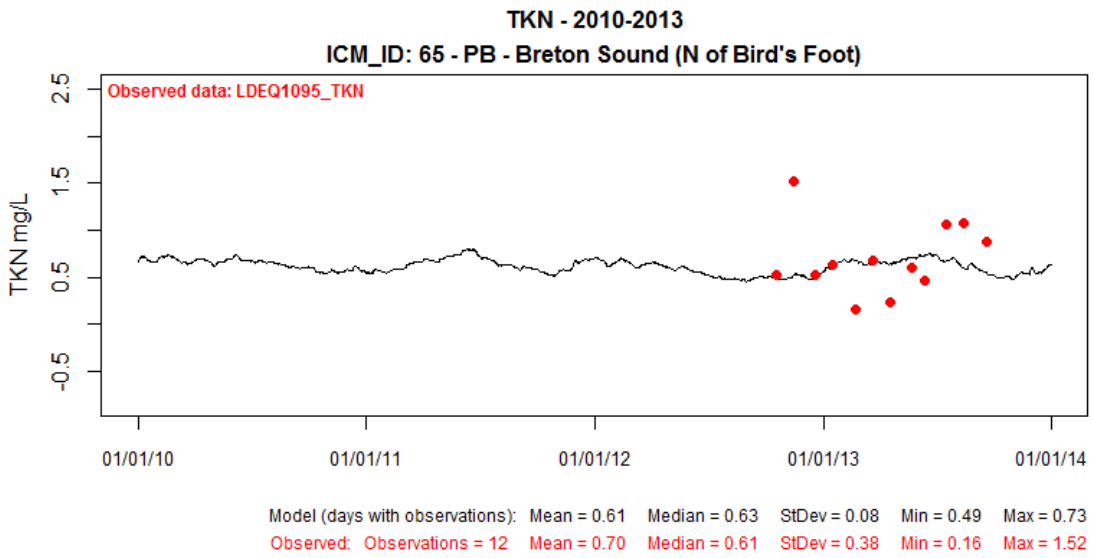


**Figure 37: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 65 (solid black line) Compared to Observed Data at LDEQ1095 for Calibration Period, 2010-2013.**

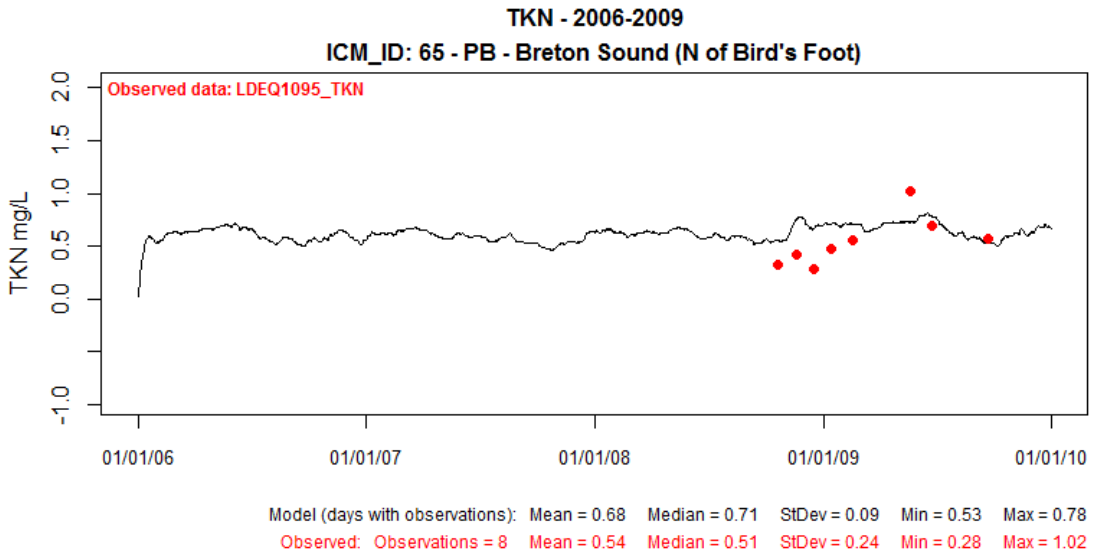


**Figure 38: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 65 (solid black line) Compared to Observed Data at LDEQ1095 for Validation Period, 2006-2009.**

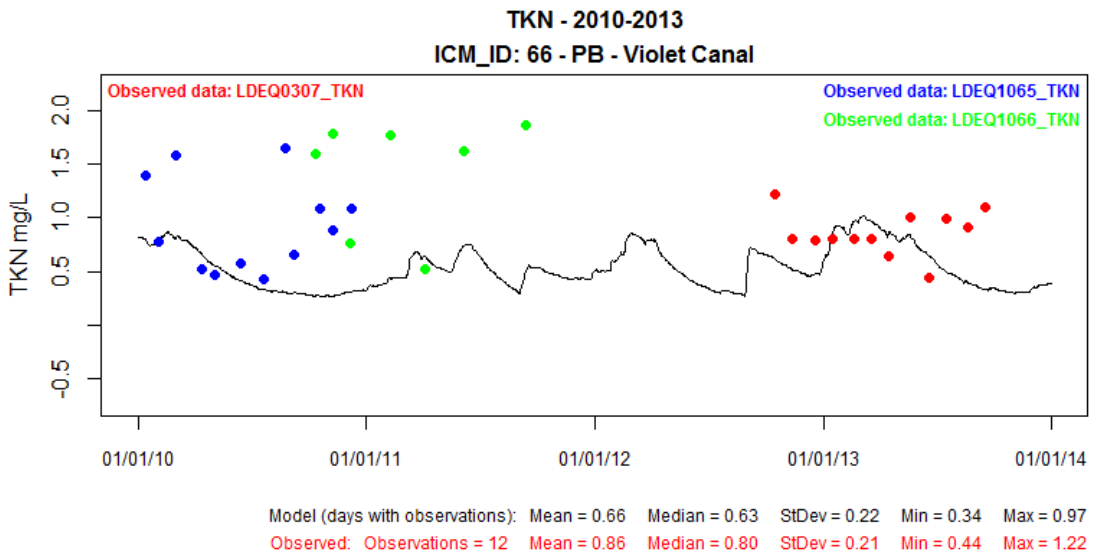


**Figure 39: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 66 (solid black line) Compared to Observed Data at LDEQ0307 for Calibration Period, 2010-2013.**

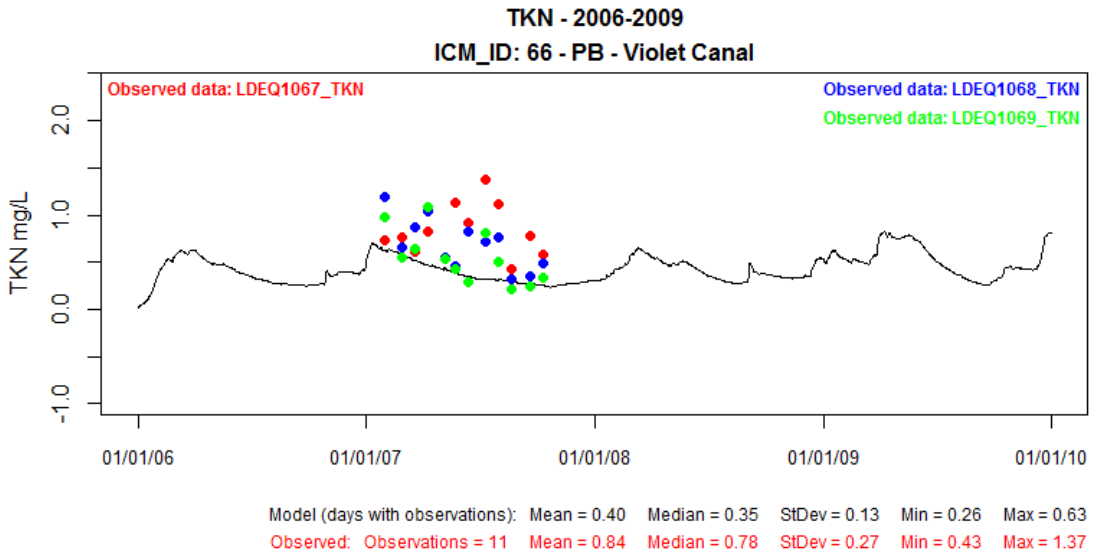


**Figure 40: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 66 (solid black line) Compared to Observed Data at LDEQ1067 for Validation Period, 2006-2009.**

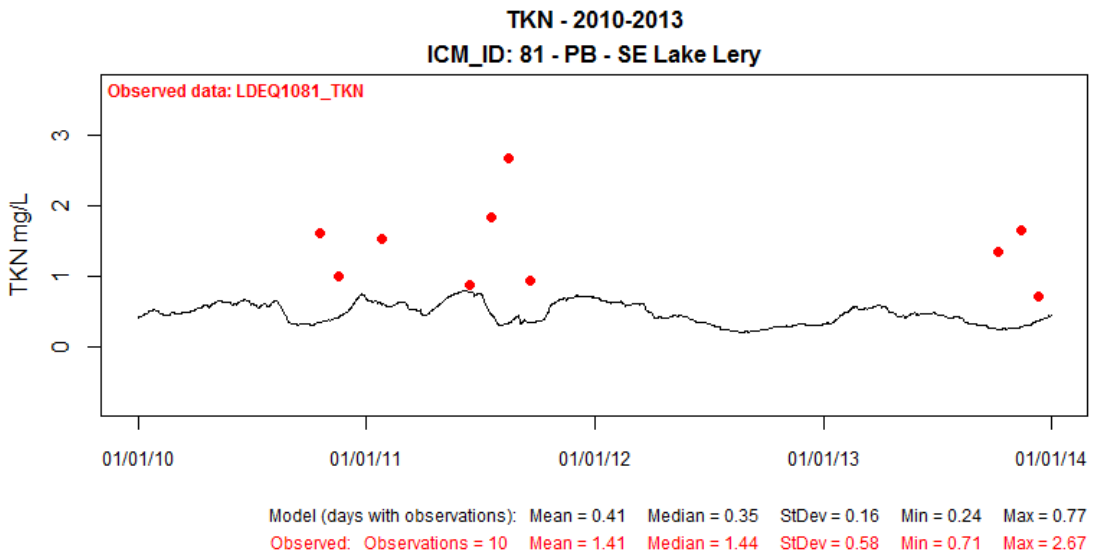


**Figure 41: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 81 (solid black line) Compared to Observed Data at LDEQ1081 for Calibration Period, 2010-2013.**

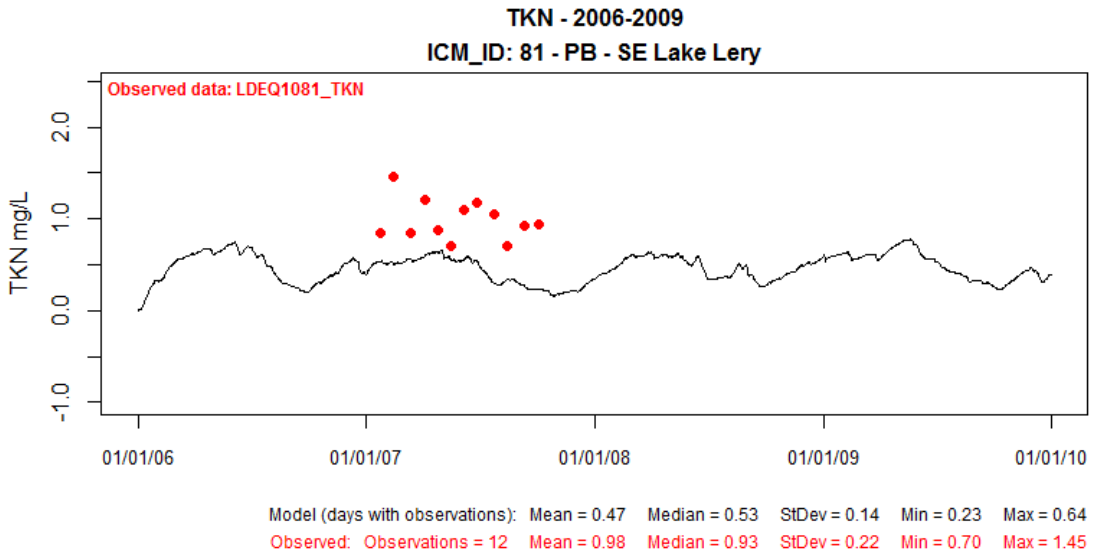


**Figure 42: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 81 (solid black line) Compared to Observed Data at LDEQ1081 for Validation Period, 2006-2009.**

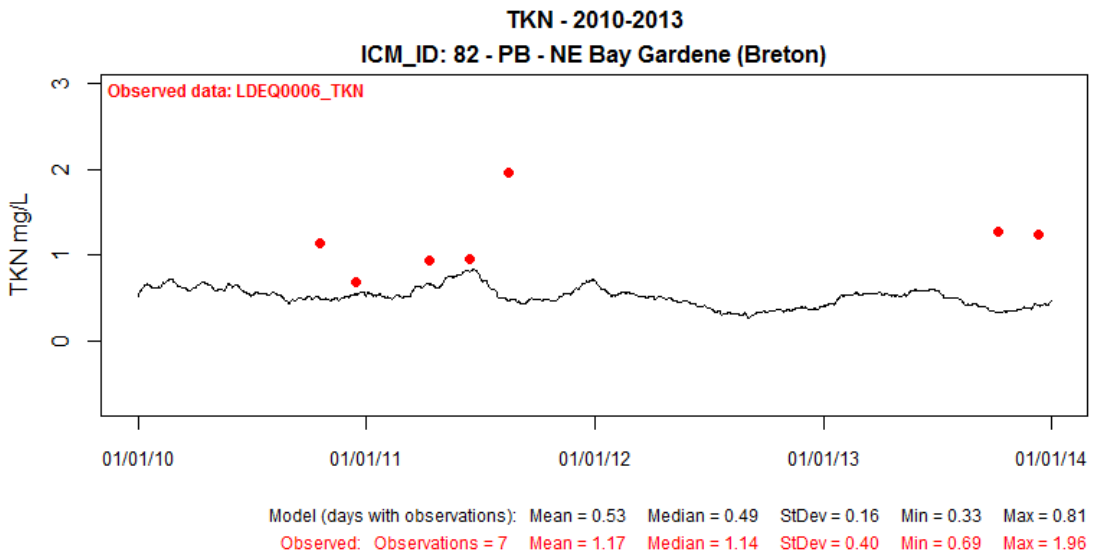


**Figure 43: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 82 (solid black line) Compared to Observed Data at LDEQ0006 for Calibration Period, 2010-2013.**

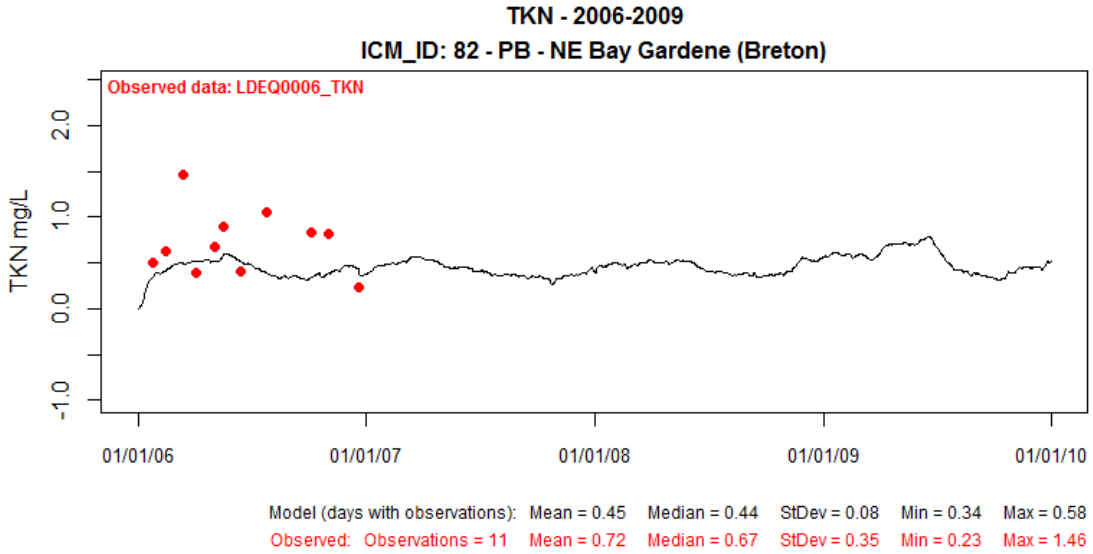


**Figure 44: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 82 (solid black line) Compared to Observed Data at LDEQ0006 for Validation Period, 2006-2009.**

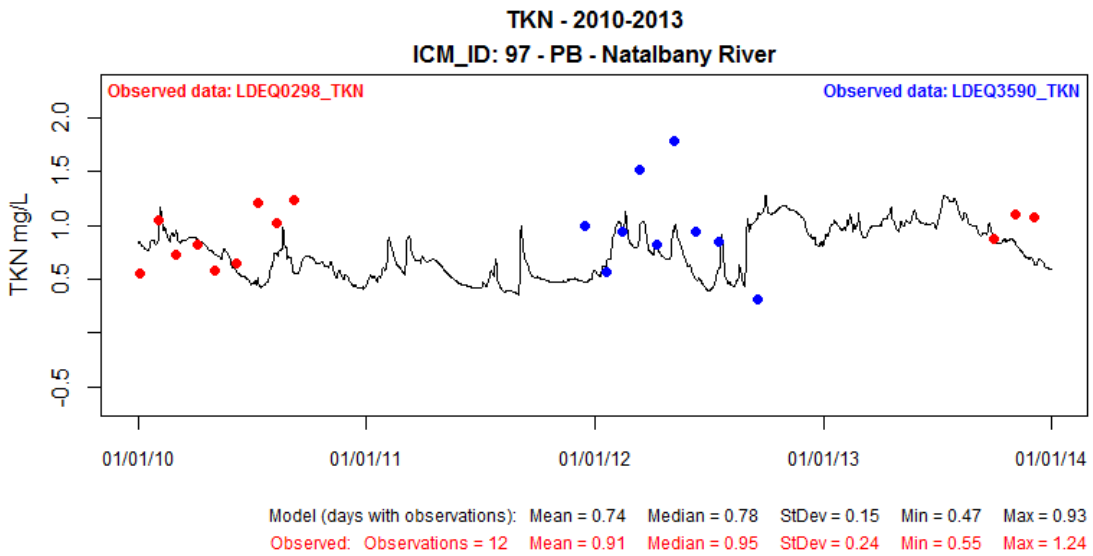


**Figure 45: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 97 (solid black line) Compared to Observed Data at LDEQ0298 for Calibration Period, 2010-2013.**

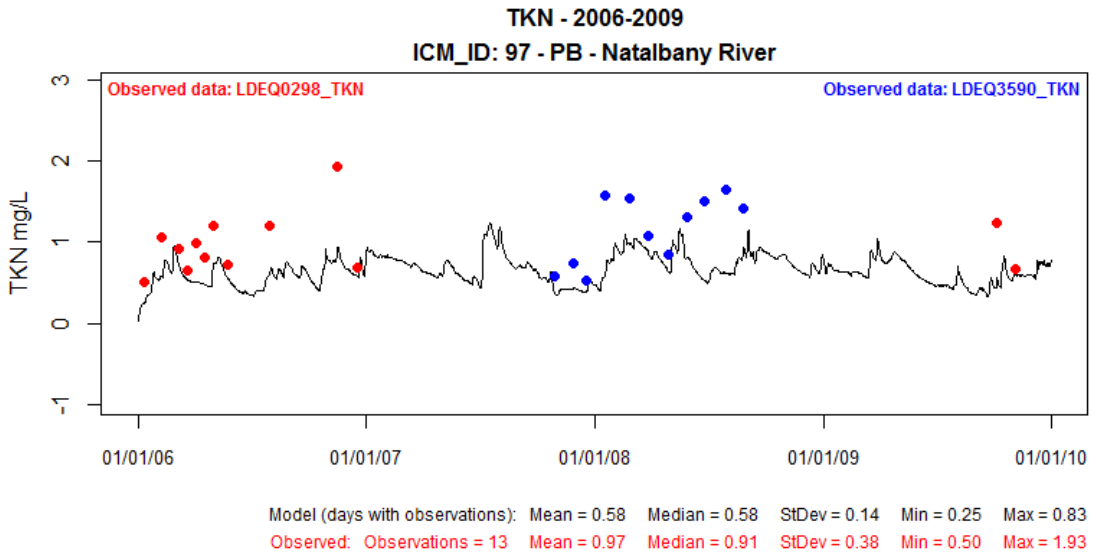


**Figure 46: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 97 (solid black line) Compared to Observed Data at LDEQ0298 for Validation Period, 2006-2009.**

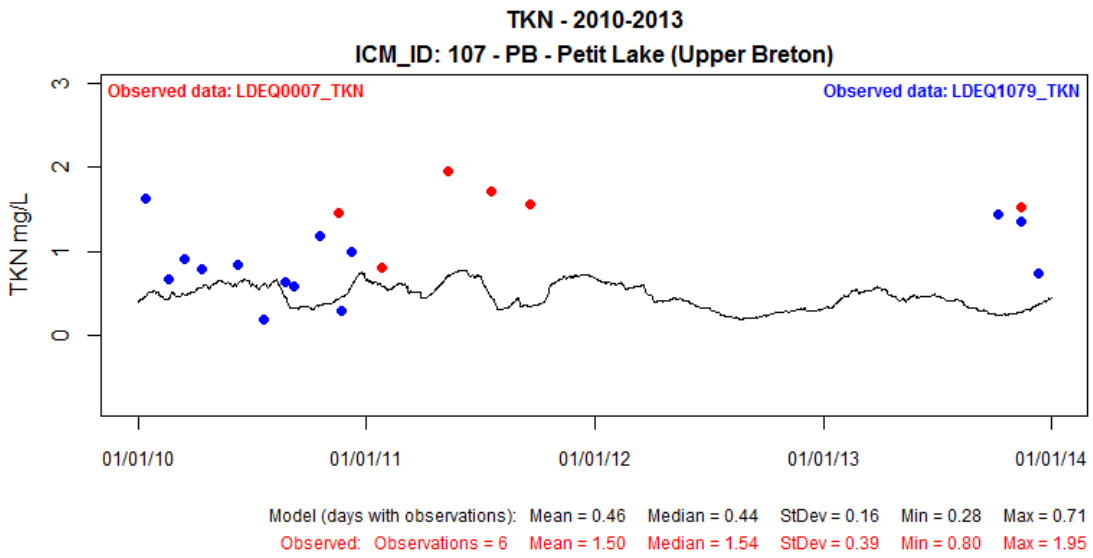


**Figure 47: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 107 (solid black line) Compared to Observed Data at LDEQ0007 for Calibration Period, 2010-2013.**

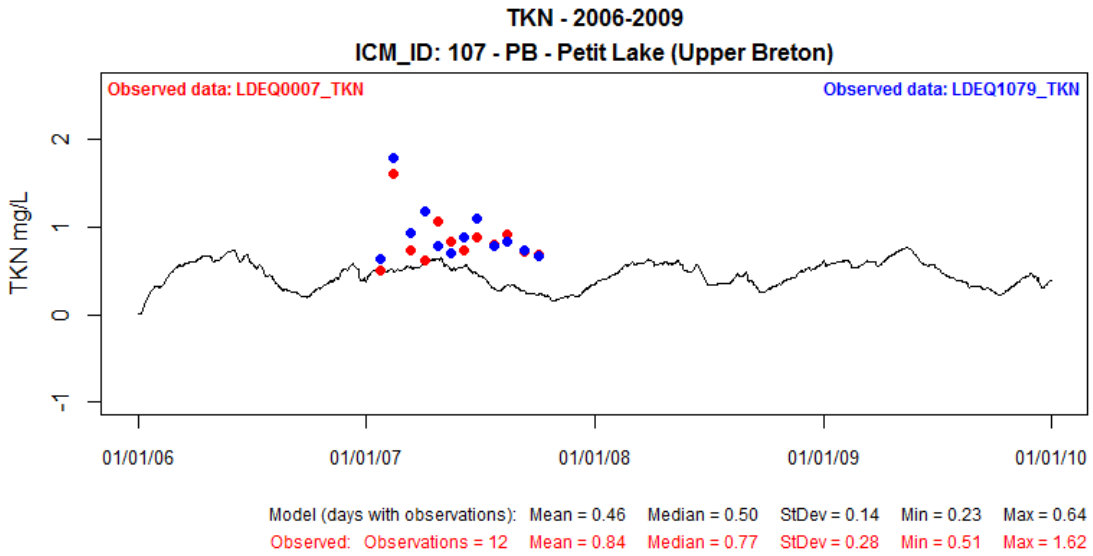


**Figure 48: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 107 (solid black line) Compared to Observed Data at LDEQ0007 for Validation Period, 2006-2009.**

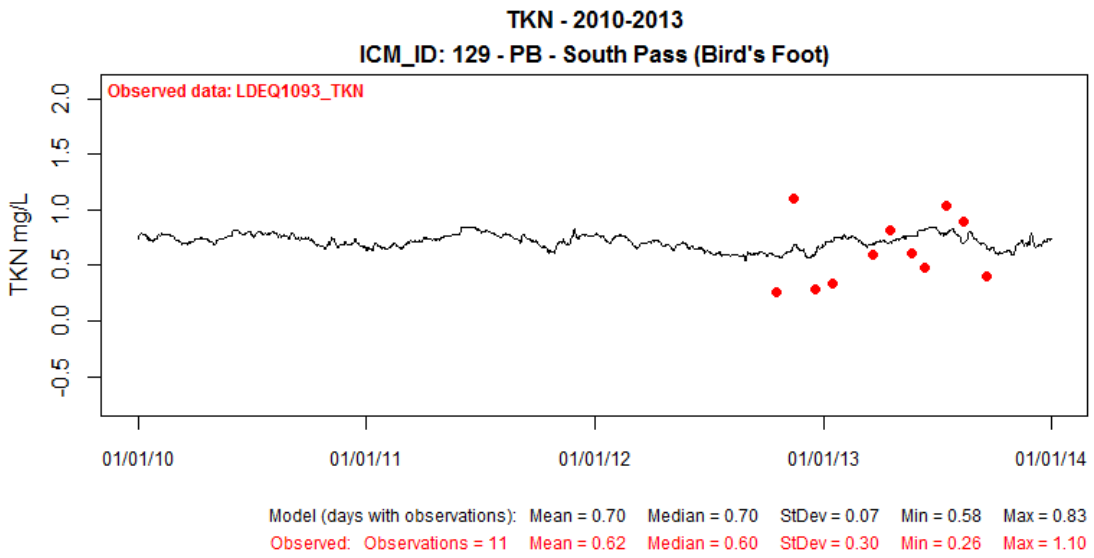


**Figure 49: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 129 (solid black line) Compared to Observed Data at LDEQ1093 for Calibration Period, 2010-2013.**

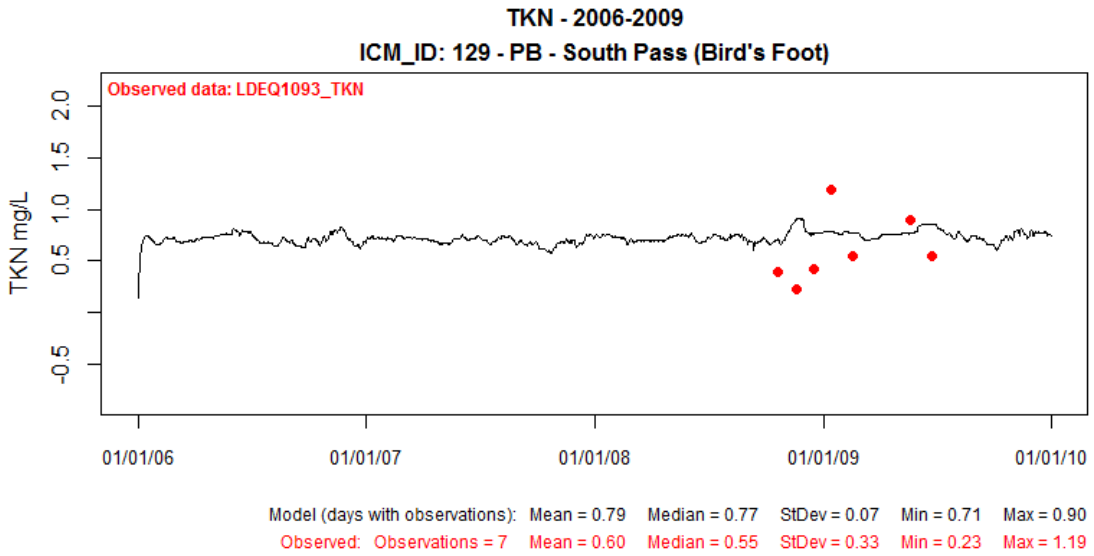


**Figure 50: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 129 (solid black line) Compared to Observed Data at LDEQ1093 for Validation Period, 2006-2009.**

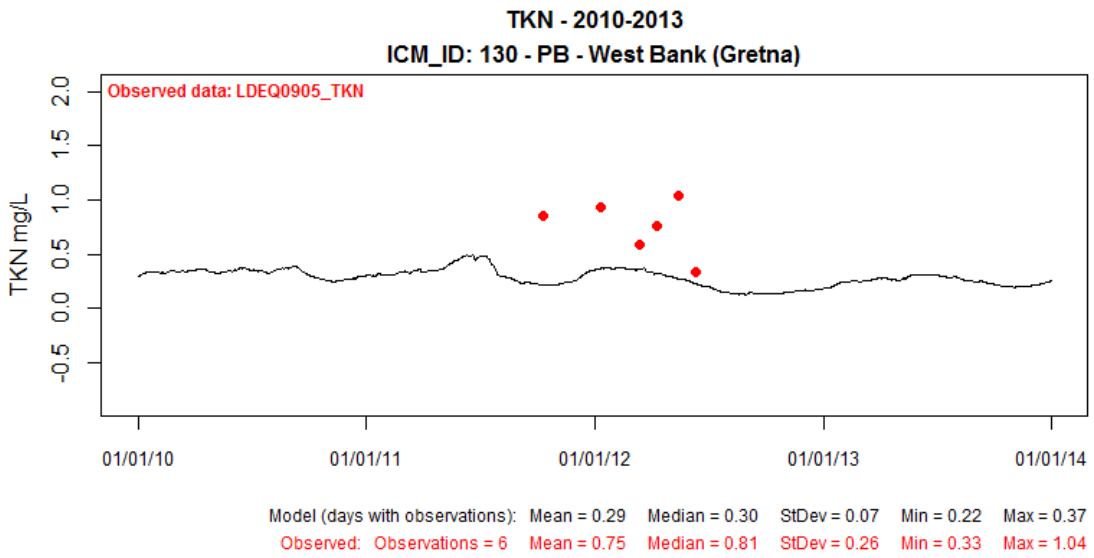


**Figure 51: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 130 (solid black line) Compared to Observed Data at LDEQ0905 for Calibration Period, 2010-2013.**

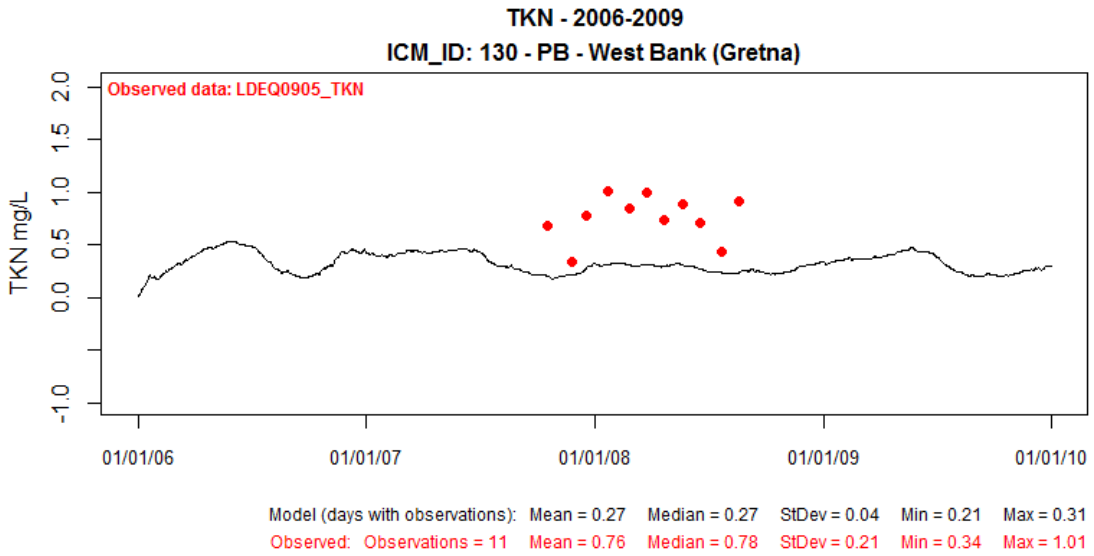


**Figure 52: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 130 (solid black line) Compared to Observed Data at LDEQ0905 for Validation Period, 2006-2009.**

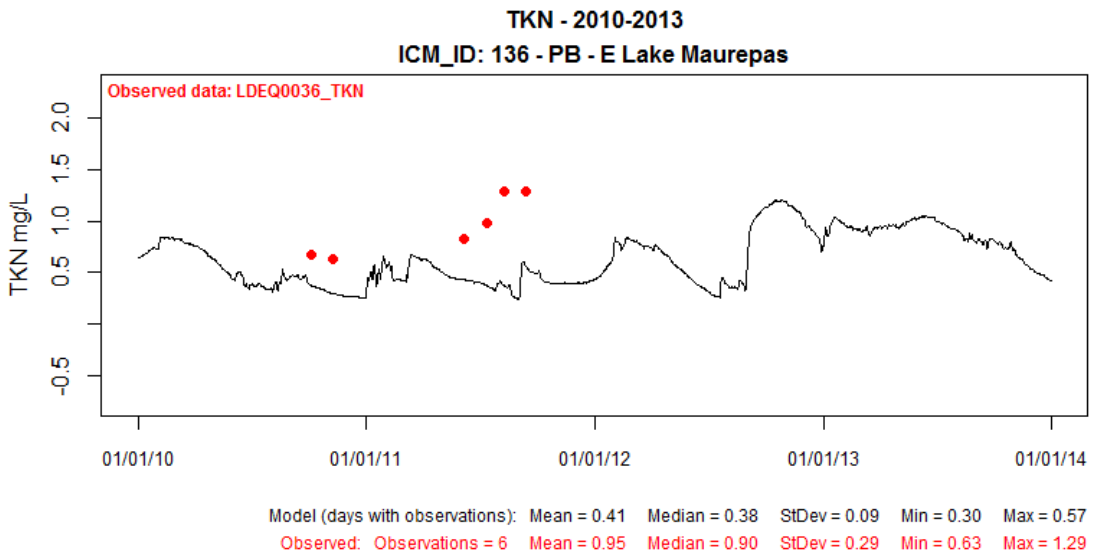


**Figure 53: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 136 (solid black line) Compared to Observed Data at LDEQ0036 for Calibration Period, 2010-2013.**

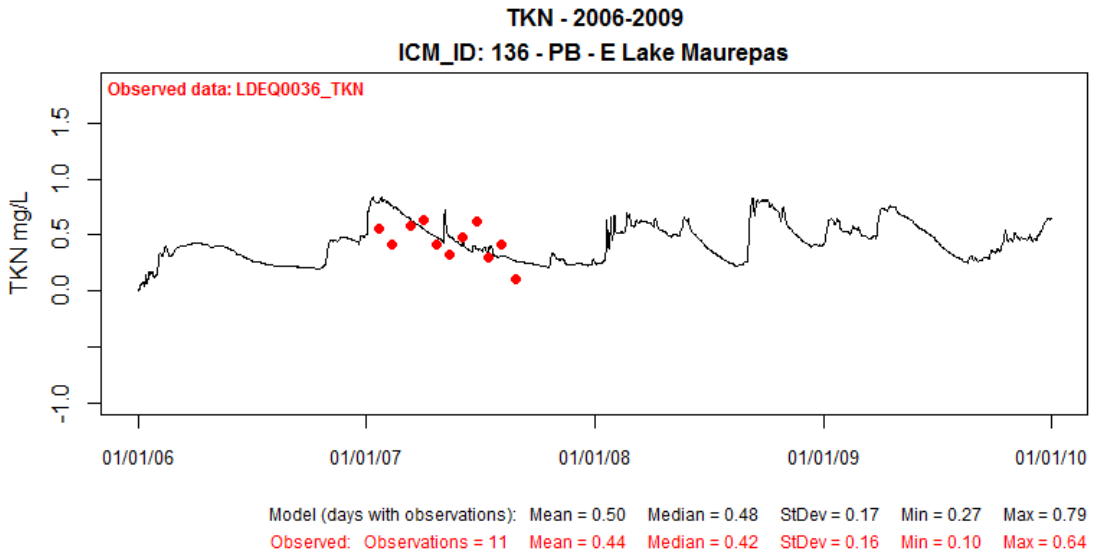


**Figure 54: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 136 (solid black line) Compared to Observed Data at LDEQ0036 for Validation Period, 2006-2009.**

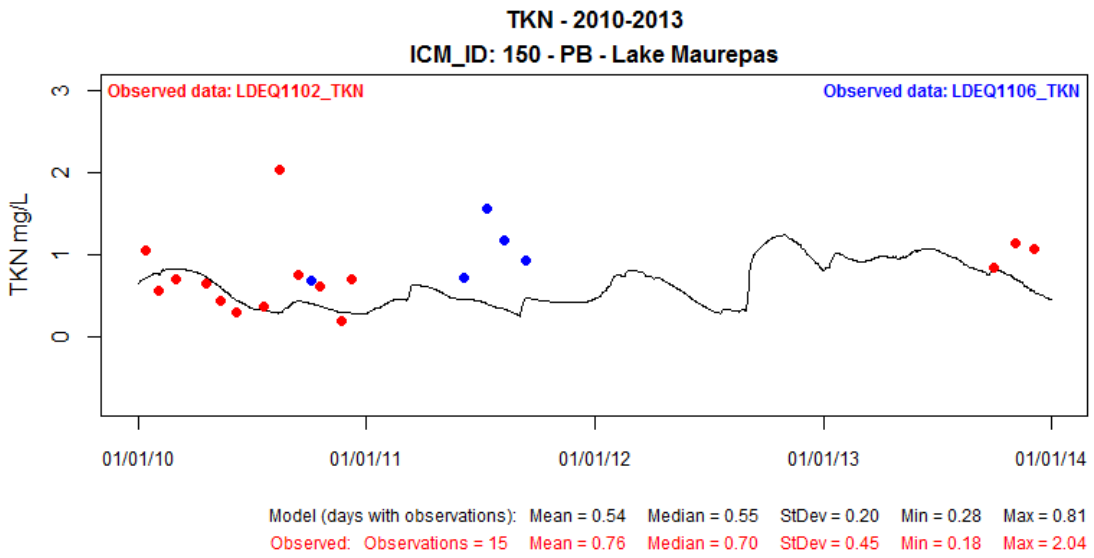


**Figure 55: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 150 (solid black line) Compared to Observed Data at LDEQ1102 for Calibration Period, 2010-2013.**

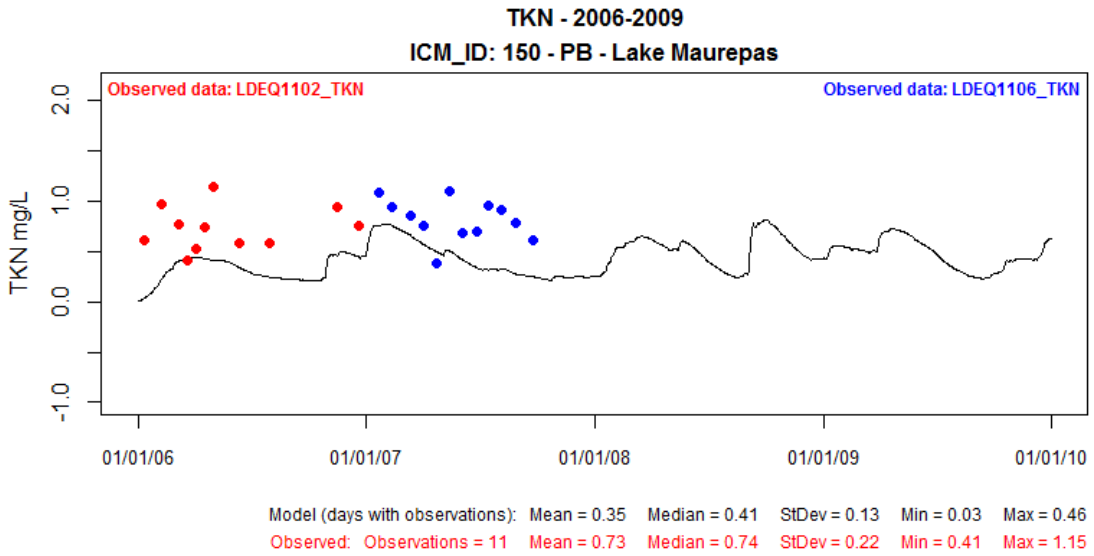


**Figure 56: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 150 (solid black line) Compared to Observed Data at LDEQ1102 for Validation Period, 2006-2009.**

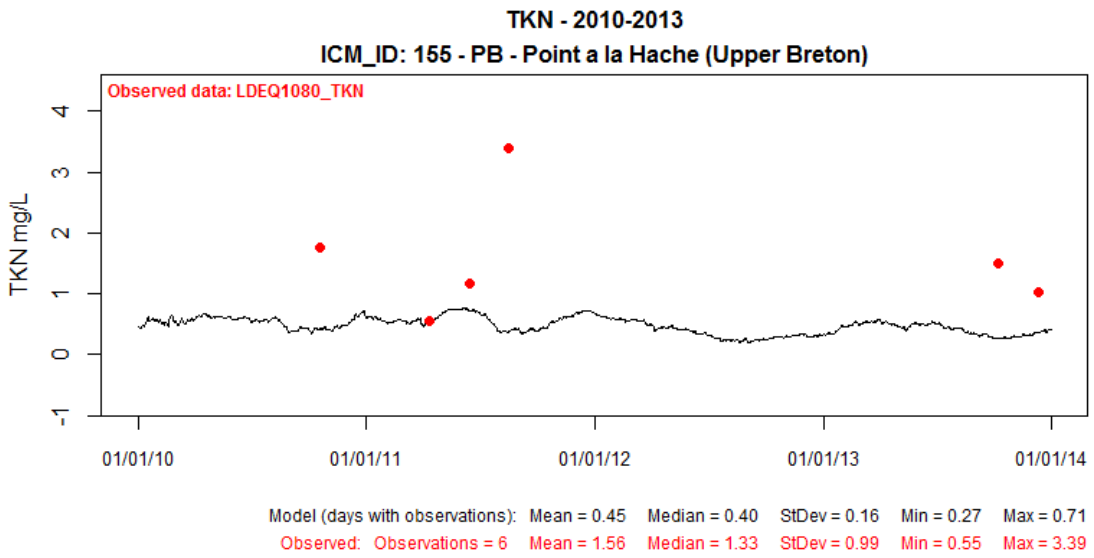


**Figure 57: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 155 (solid black line) Compared to Observed Data at LDEQ1080 for Calibration Period, 2010-2013.**

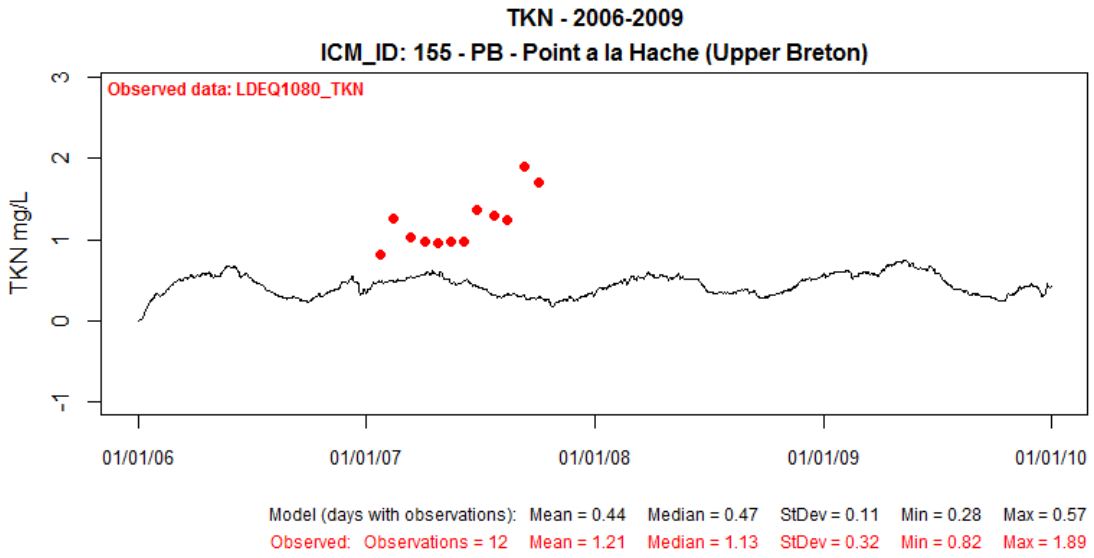


**Figure 58: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 155 (solid black line) Compared to Observed Data at LDEQ1080 for Validation Period, 2006-2009.**

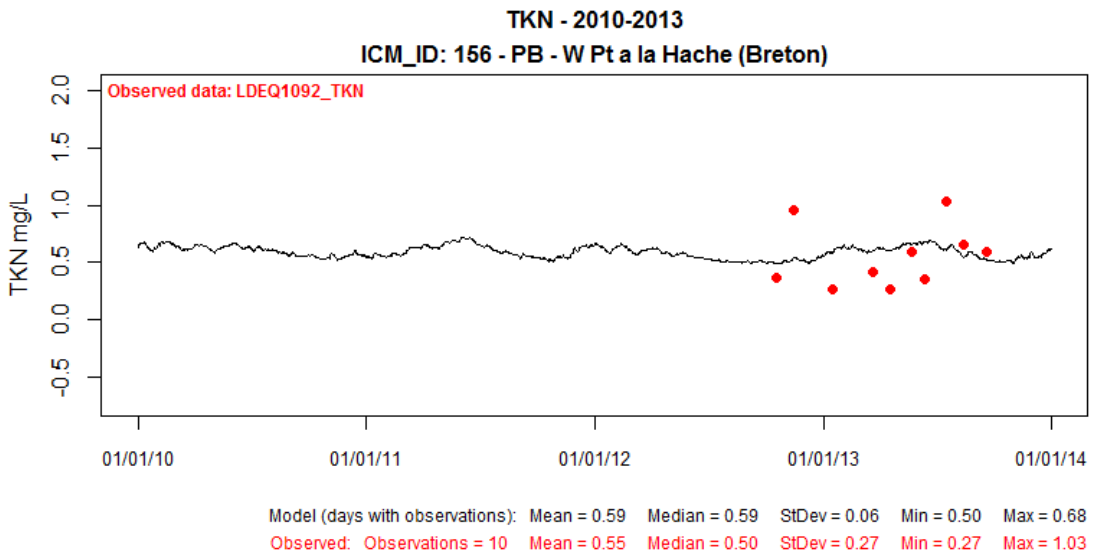


**Figure 59: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 156 (solid black line) Compared to Observed Data at LDEQ1092 for Calibration Period, 2010-2013.**

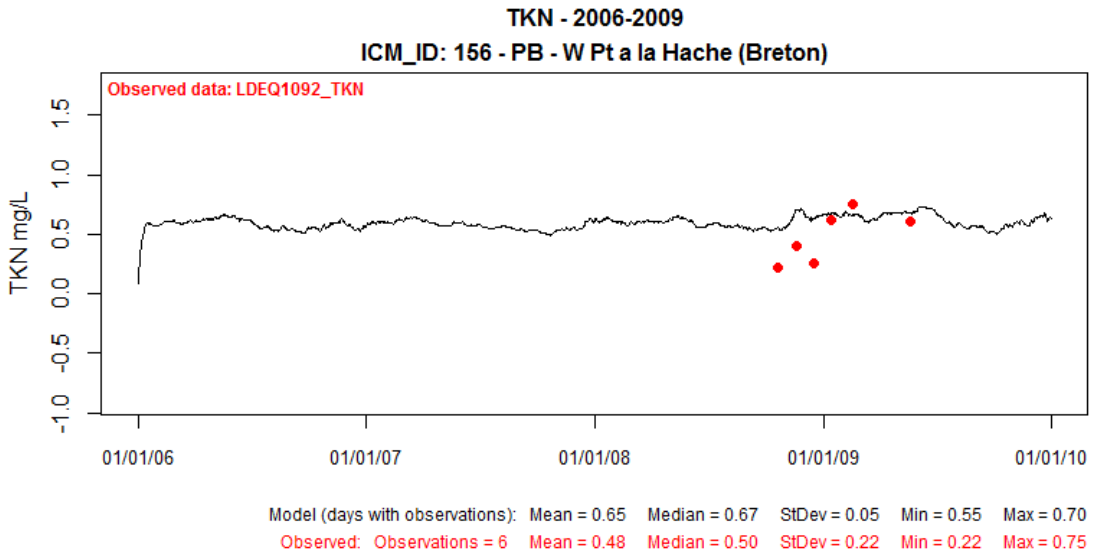


**Figure 60: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 156 (solid black line) Compared to Observed Data at LDEQ1092 for Validation Period, 2006-2009.**

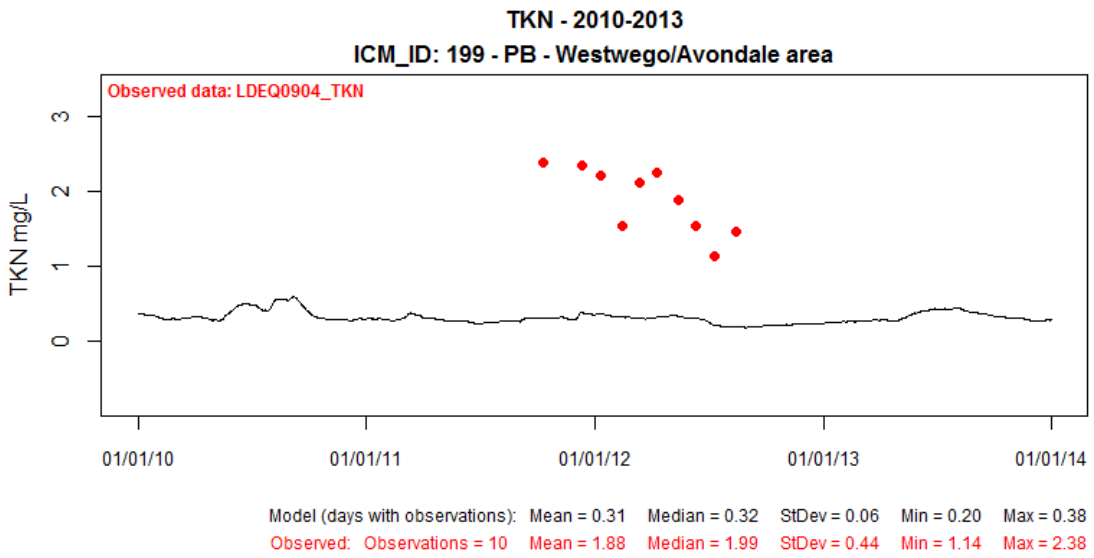


**Figure 61: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 199 (solid black line) Compared to Observed Data at LDEQ0904 for Calibration Period, 2010-2013.**

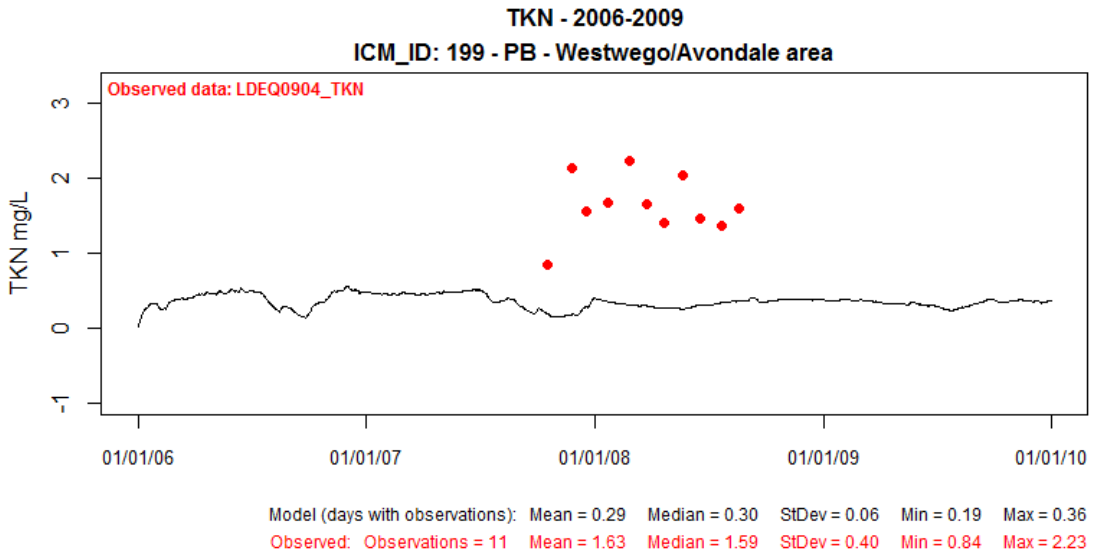


**Figure 62: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 199 (solid black line) Compared to Observed Data at LDEQ0904 for Validation Period, 2006-2009.**

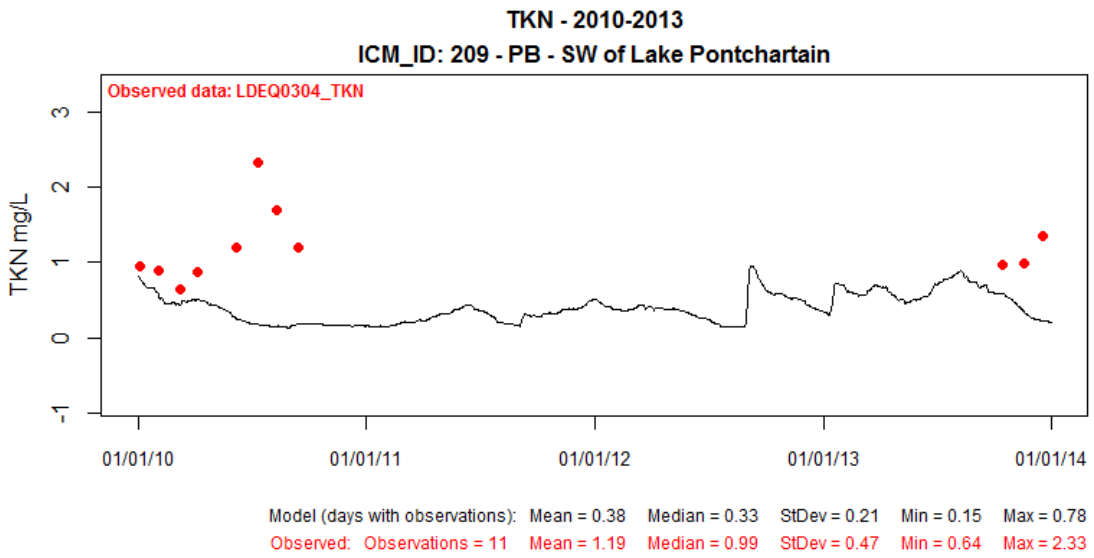


**Figure 63: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 209 (solid black line) Compared to Observed Data at LDEQ0304 for Calibration Period, 2010-2013.**

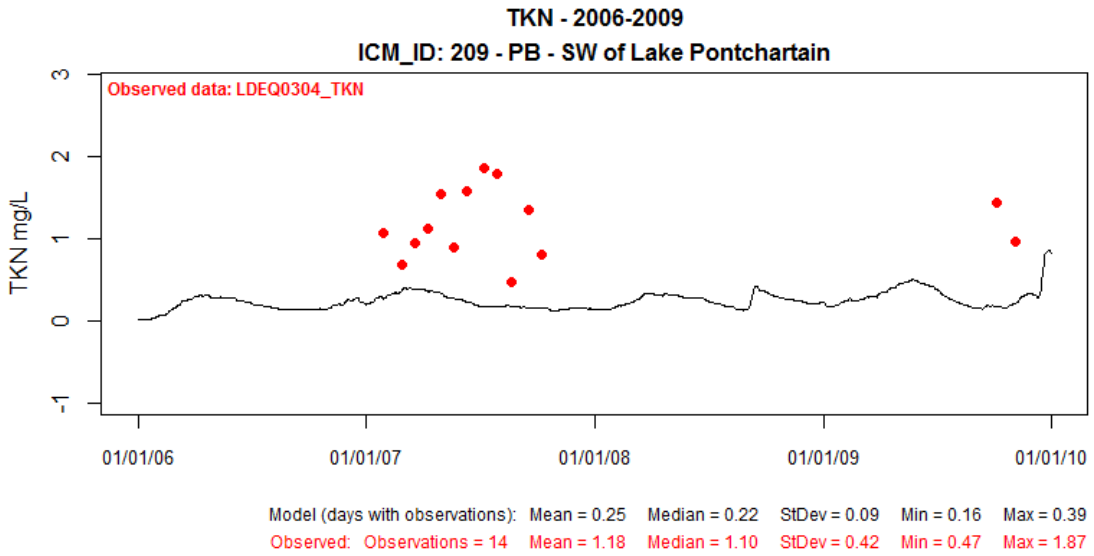


**Figure 64: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 209 (solid black line) Compared to Observed Data at LDEQ0304 for Validation Period, 2006-2009.**

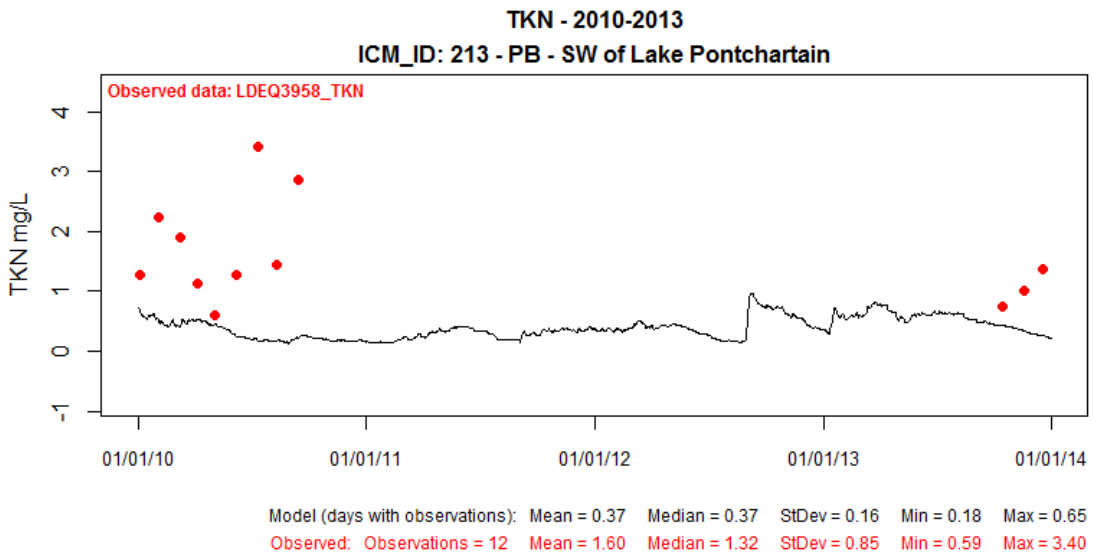


**Figure 65: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 213 (solid black line) Compared to Observed Data at LDEQ3958 for Calibration Period, 2010-2013.**

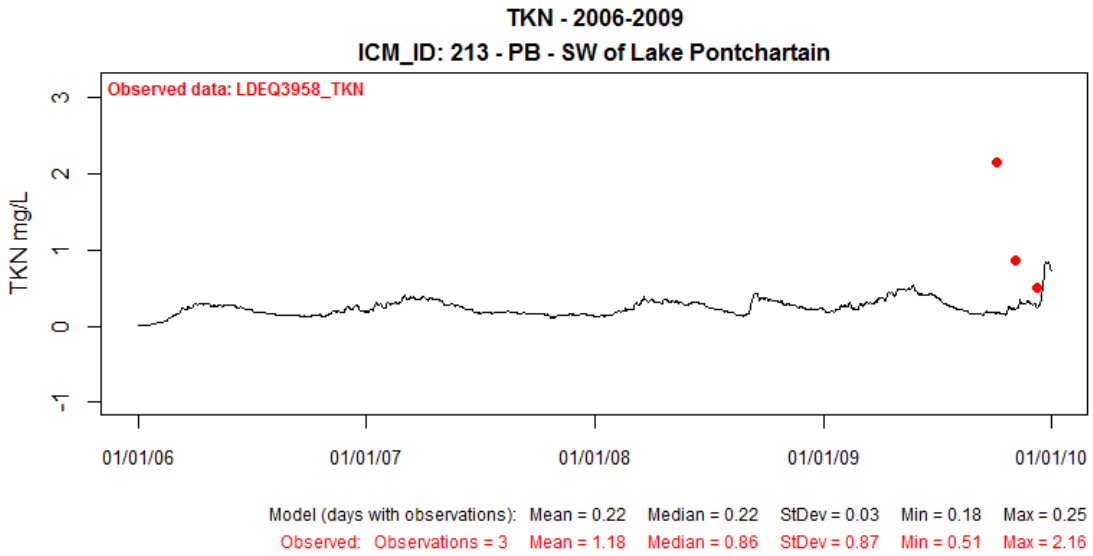


**Figure 66: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 213 (solid black line) Compared to Observed Data at LDEQ3958 for Validation Period, 2006-2009.**

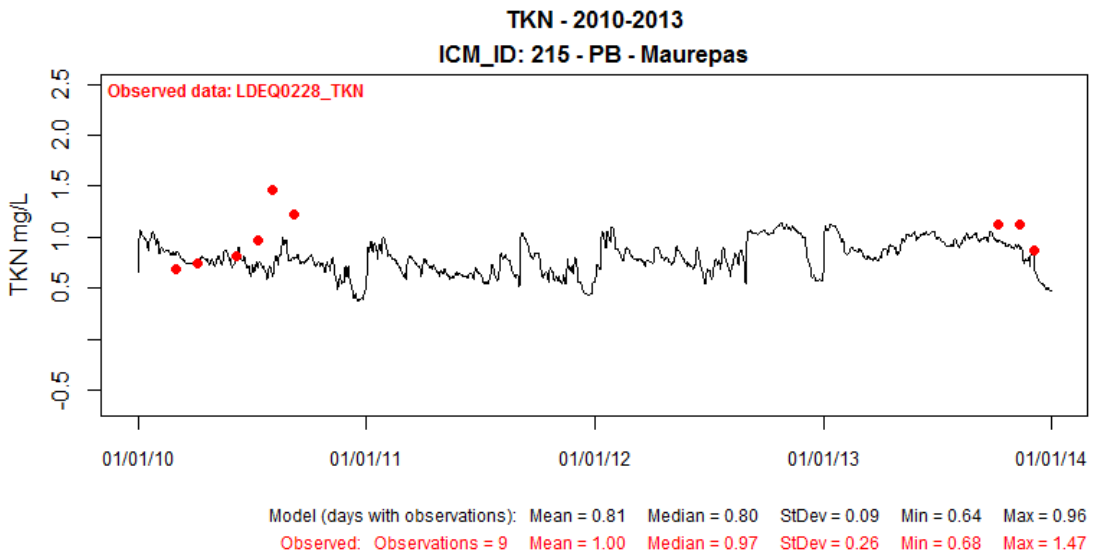


**Figure 67: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 215 (solid black line) Compared to Observed Data at LDEQ0228 for Calibration Period, 2010-2013.**

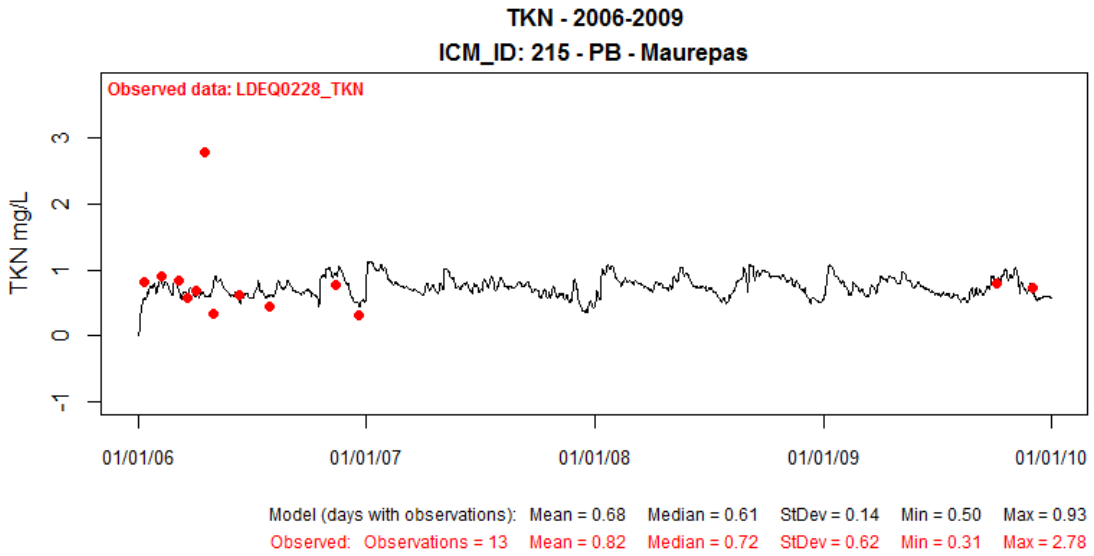


**Figure 68: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 215 (solid black line) Compared to Observed Data at LDEQ0228 for Validation Period, 2006-2009.**

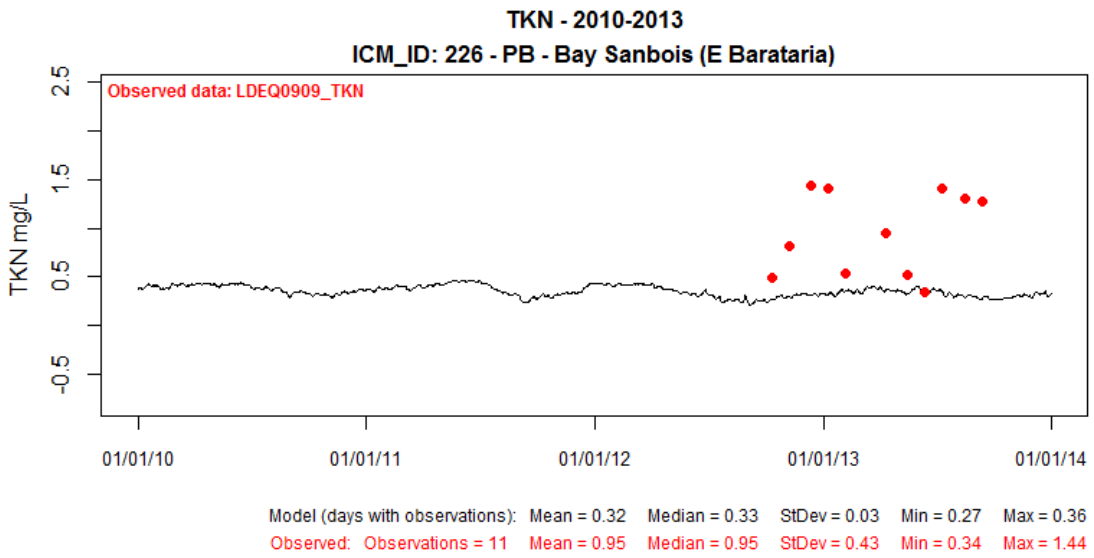


**Figure 69: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 226 (solid black line) Compared to Observed Data at LDEQ0909 for Calibration Period, 2010-2013.**

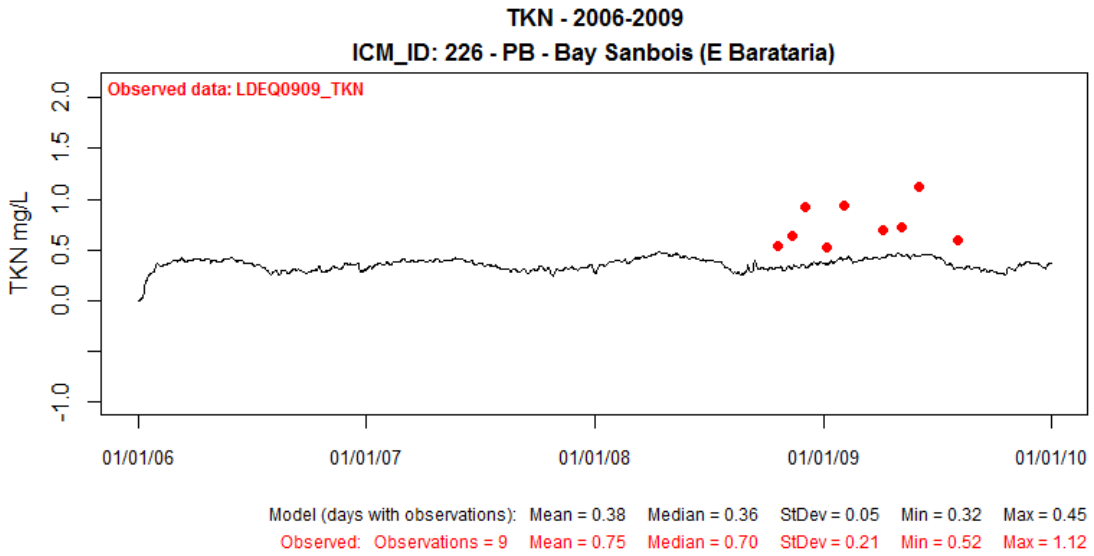


**Figure 70: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 226 (solid black line) Compared to Observed Data at LDEQ0909 for Validation Period, 2006-2009.**

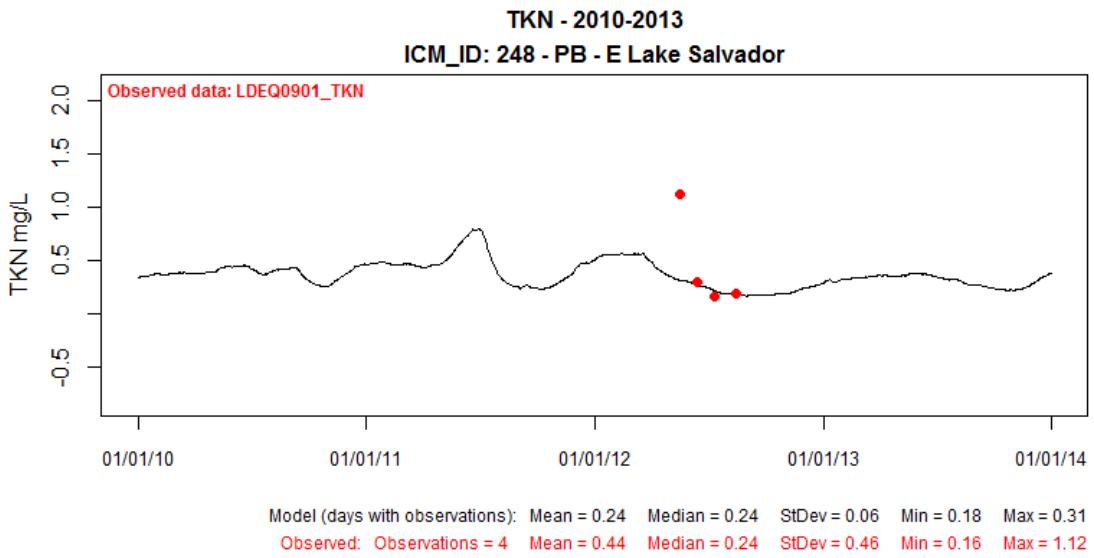


**Figure 71: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 248 (solid black line) Compared to Observed Data at LDEQ0901 for Calibration Period, 2010-2013.**

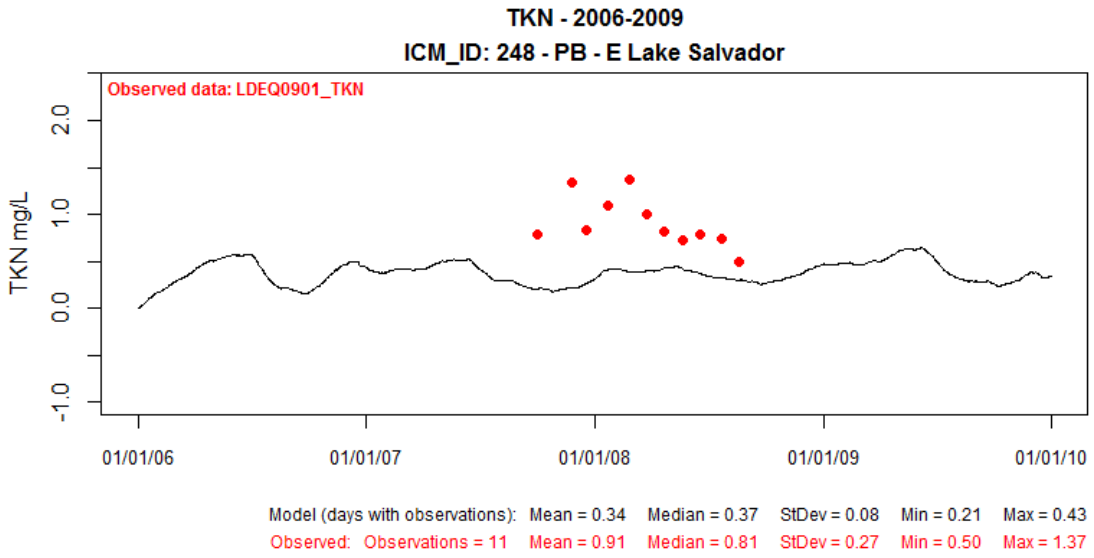


**Figure 72: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 248 (solid black line) Compared to Observed Data at LDEQ0901 for Validation Period, 2006-2009.**

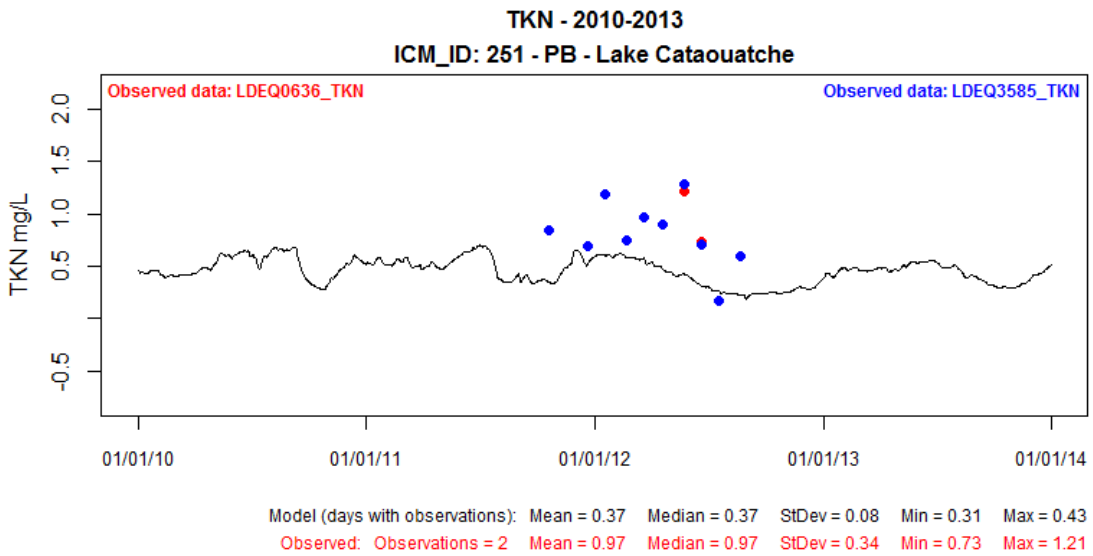


**Figure 73: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 251 (solid black line) Compared to Observed Data at LDEQ0636 for Calibration Period, 2010-2013.**

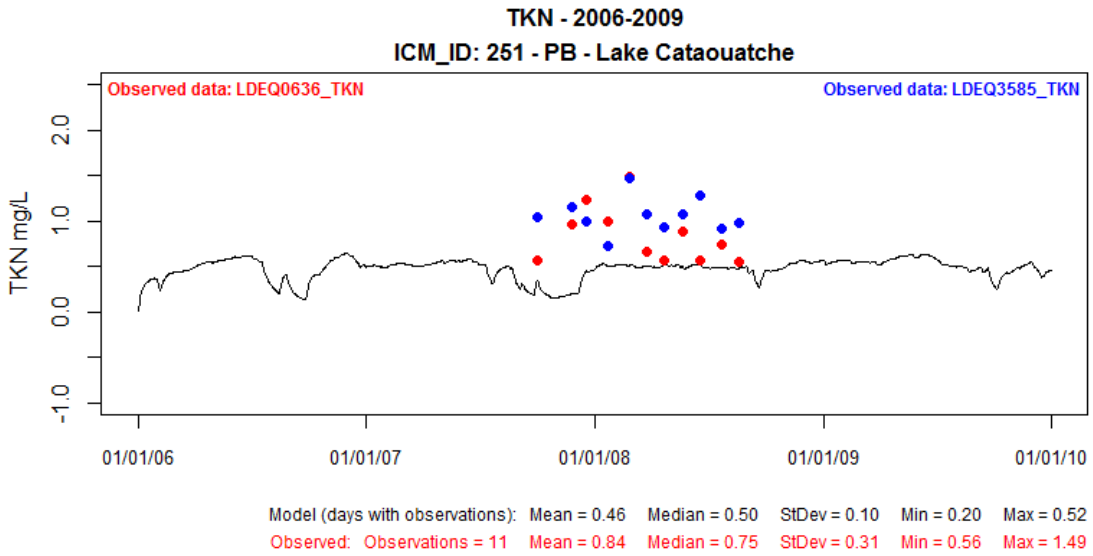


**Figure 74: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 251 (solid black line) Compared to Observed Data at LDEQ0636 for Validation Period, 2006-2009.**

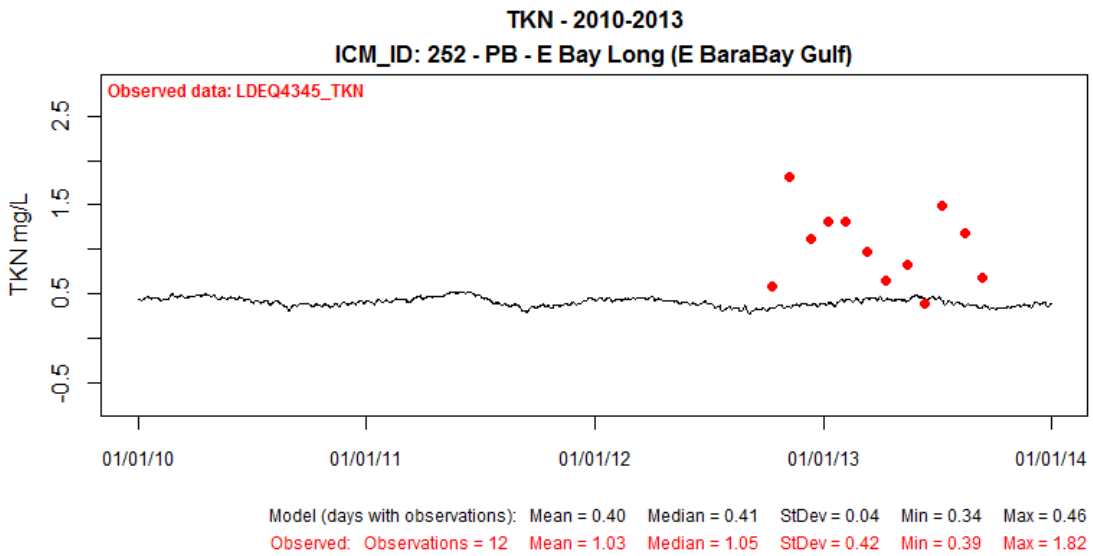


**Figure 75: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 252 (solid black line) Compared to Observed Data at LDEQ4345 for Calibration Period, 2010-2013.**

**Figure 76: No Validation Figure for ICM Compartment 252.**

DRAFT

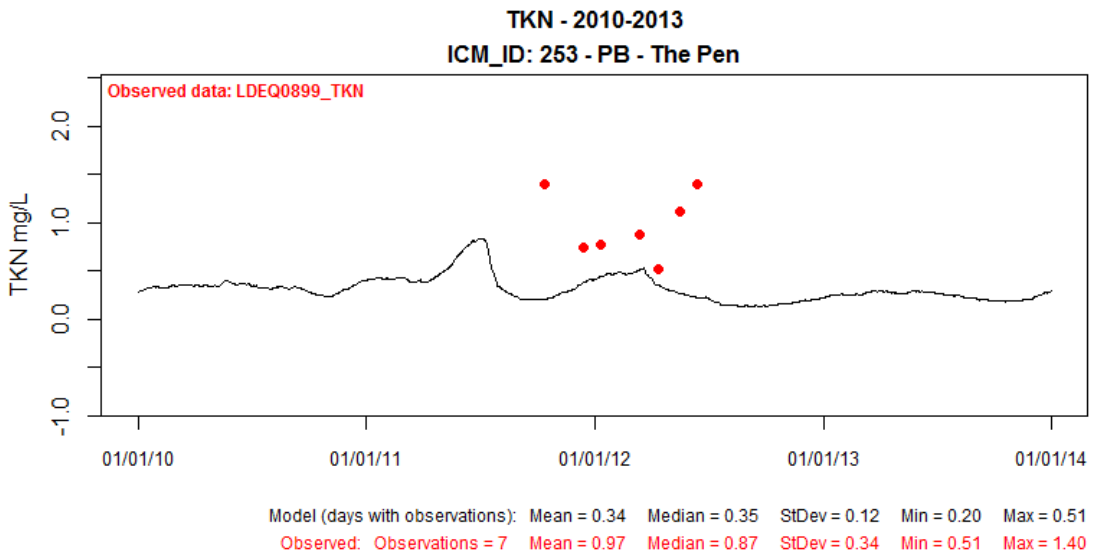


**Figure 77: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 253 (solid black line) Compared to Observed Data at LDEQ0899 for Calibration Period, 2010-2013.**

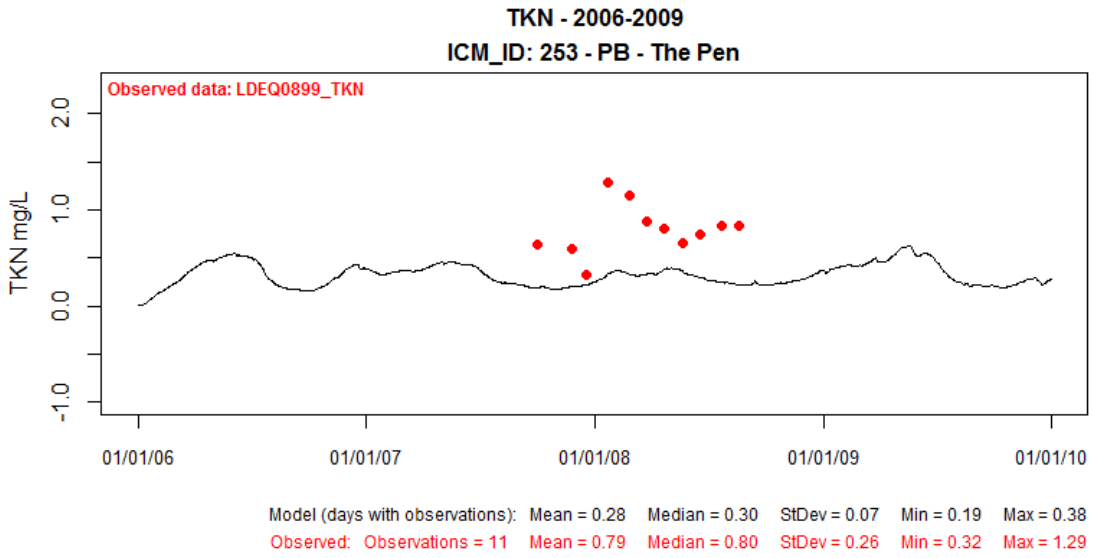


**Figure 78: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 253 (solid black line) Compared to Observed Data at LDEQ0899 for Validation Period, 2006-2009.**

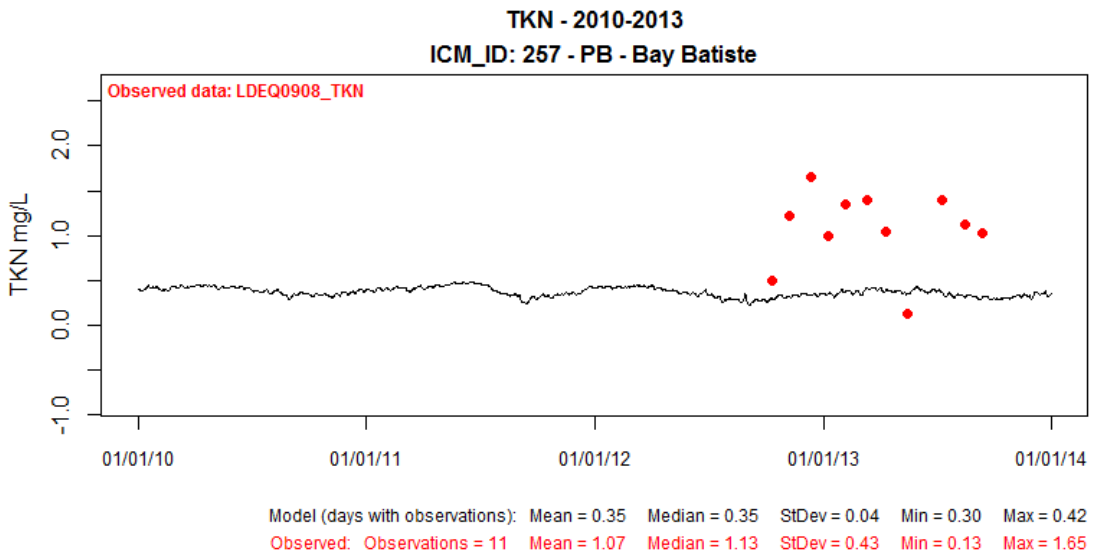


**Figure 79: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 257 (solid black line) Compared to Observed Data at LDEQ0908 for Calibration Period, 2010-2013.**

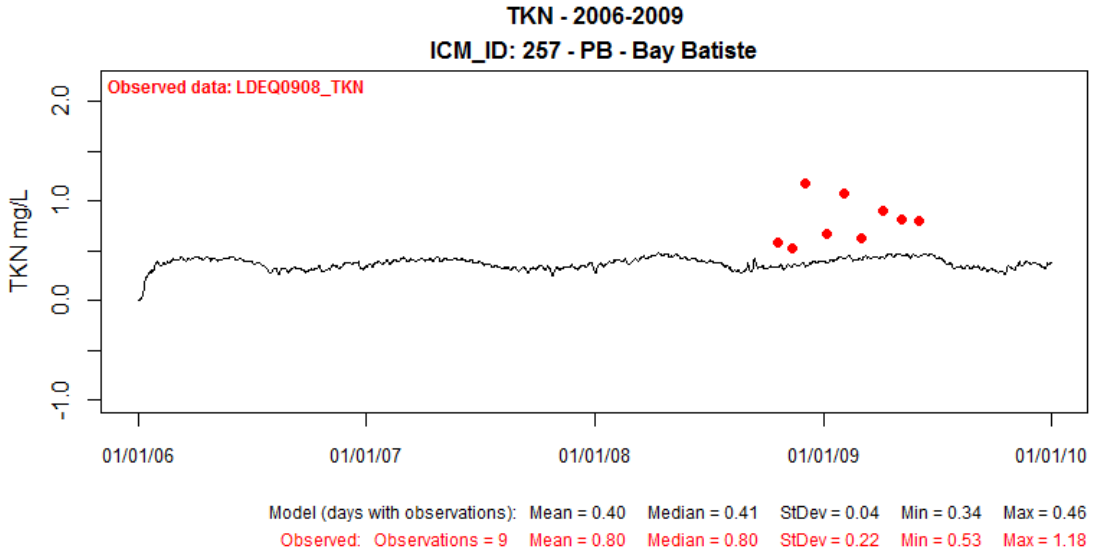


**Figure 80: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 257 (solid black line) Compared to Observed Data at LDEQ0908 for Validation Period, 2006-2009.**

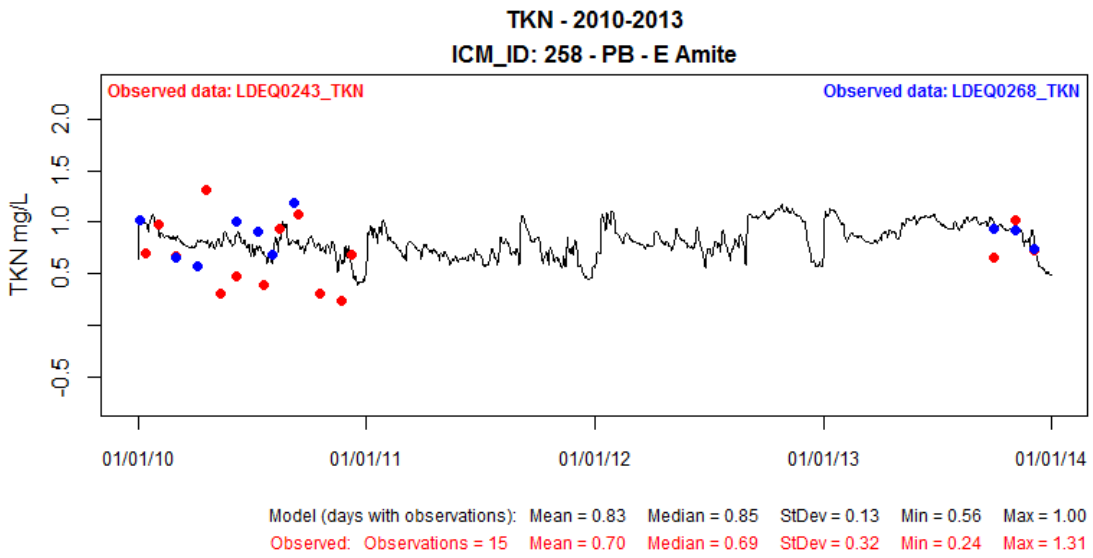


**Figure 81: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 258 (solid black line) Compared to Observed Data at LDEQ0243 for Calibration Period, 2010-2013.**

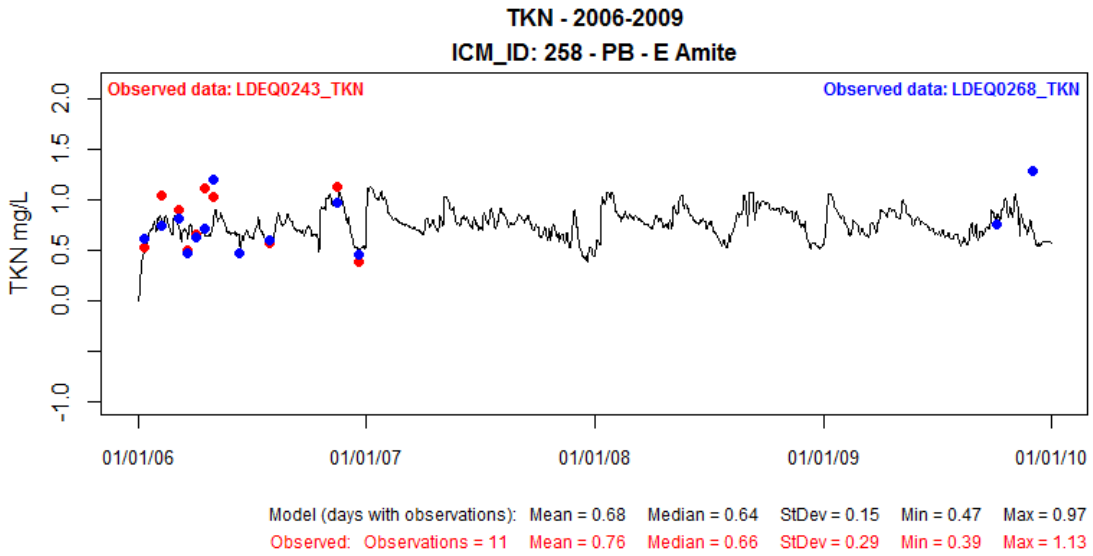


**Figure 82: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 258 (solid black line) Compared to Observed Data at LDEQ0243 for Validation Period, 2006-2009.**

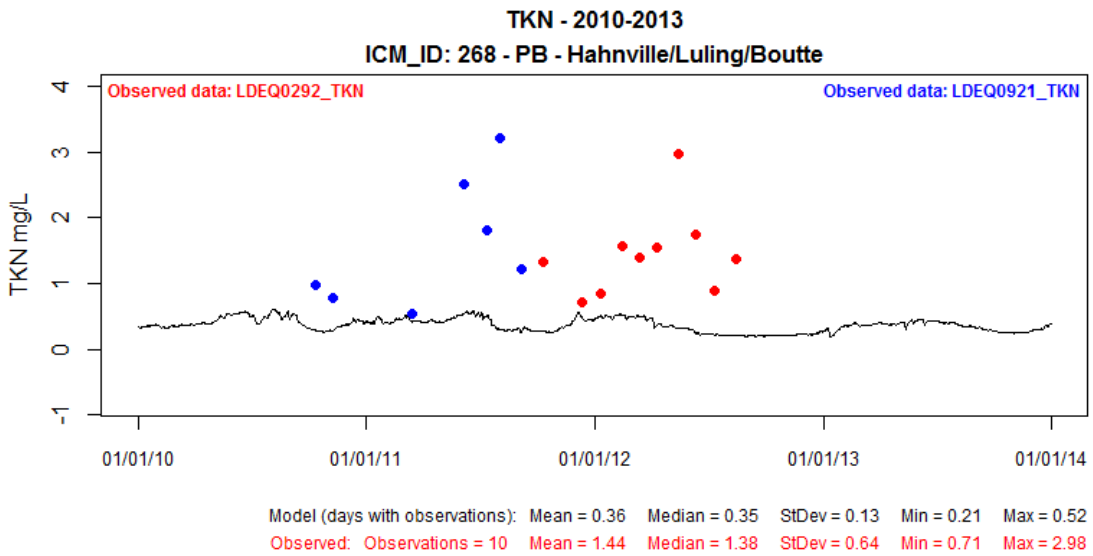


**Figure 83: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 268 (solid black line) Compared to Observed Data at LDEQ0292 for Calibration Period, 2010-2013.**

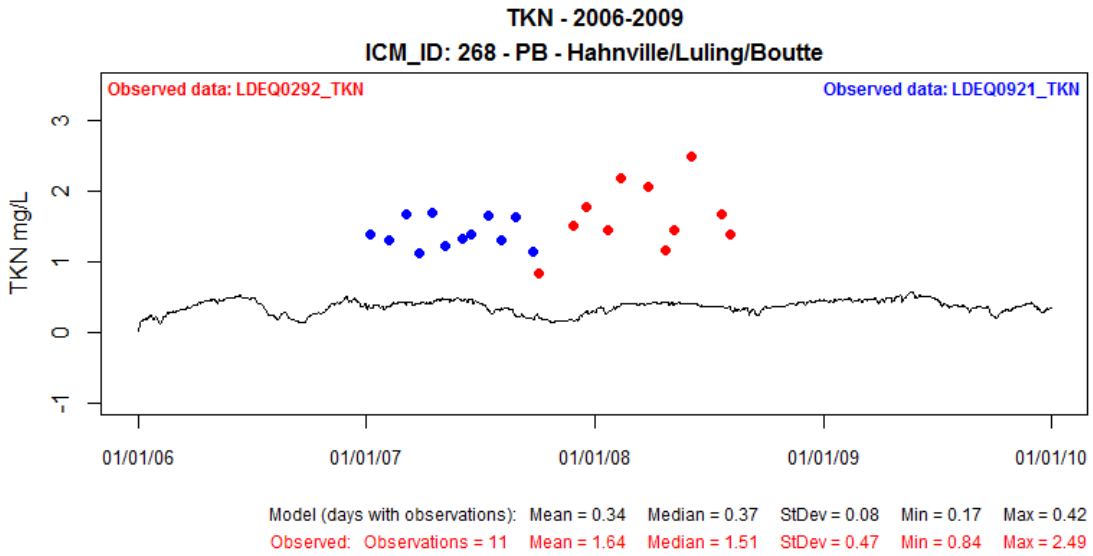


**Figure 84: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 268 (solid black line) Compared to Observed Data at LDEQ0292 for Validation Period, 2006-2009.**

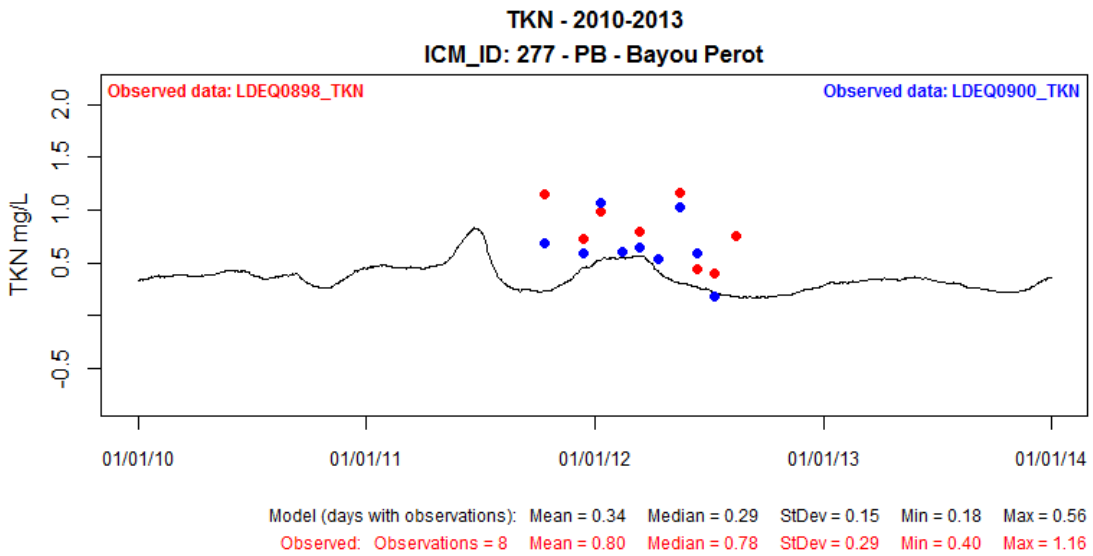


**Figure 85: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 277 (solid black line) Compared to Observed Data at LDEQ0898 for Calibration Period, 2010-2013.**

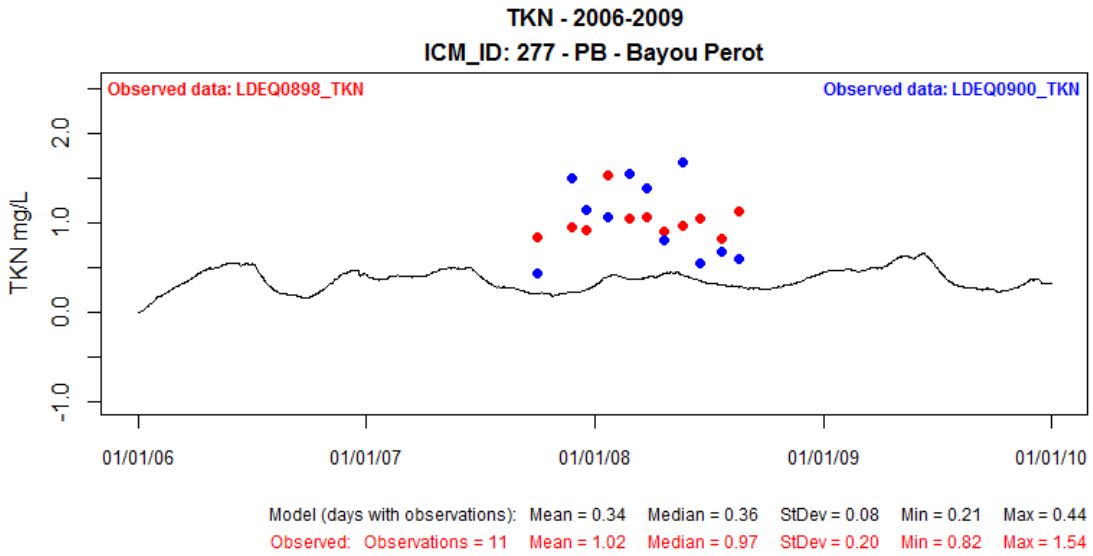


**Figure 86: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 277 (solid black line) Compared to Observed Data at LDEQ0898 for Validation Period, 2006-2009.**

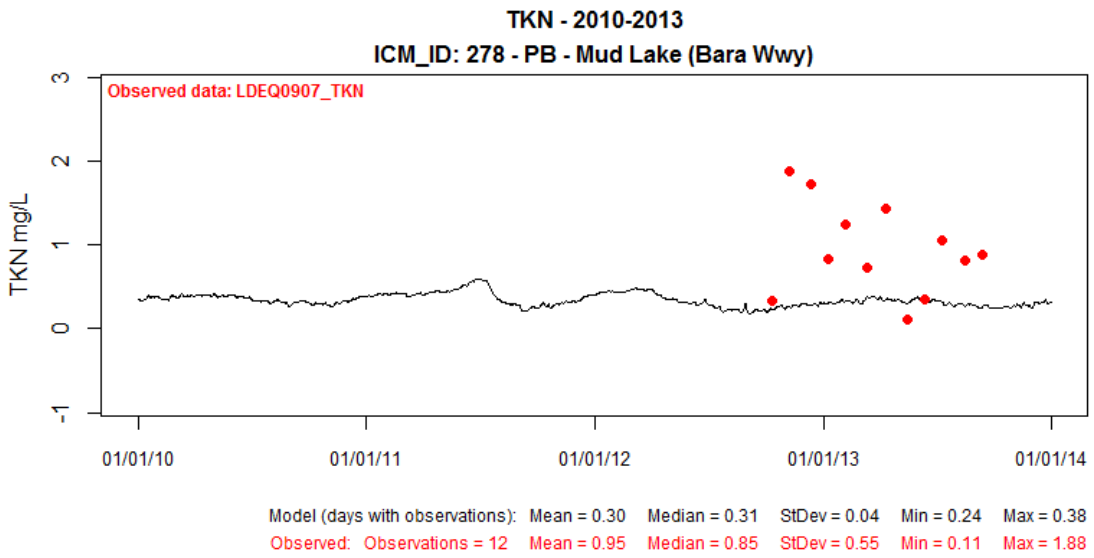


**Figure 87: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 278 (solid black line) Compared to Observed Data at LDEQ0907 for Calibration Period, 2010-2013.**

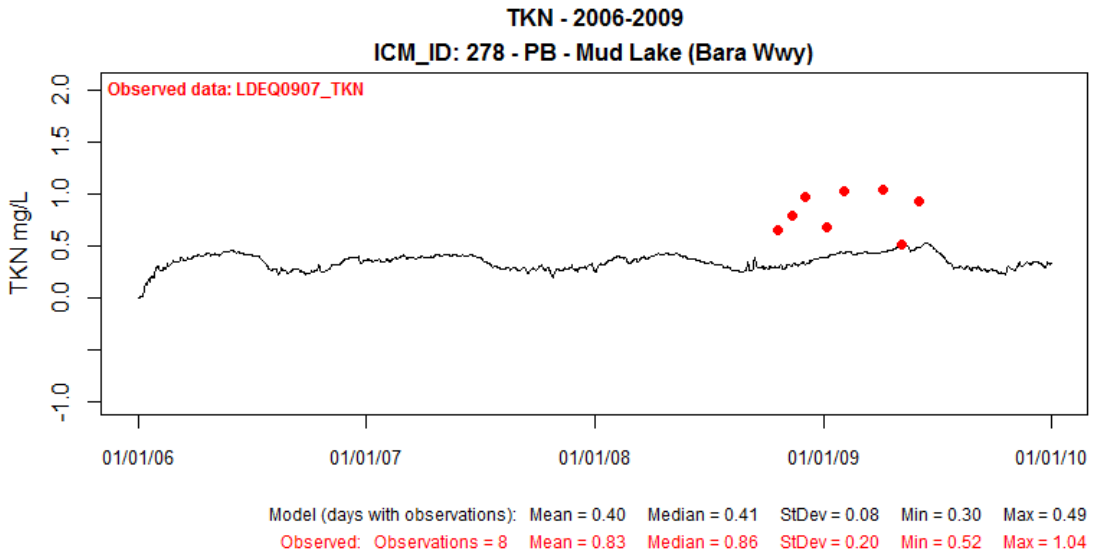


**Figure 88: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 278 (solid black line) Compared to Observed Data at LDEQ0907 for Validation Period, 2006-2009.**

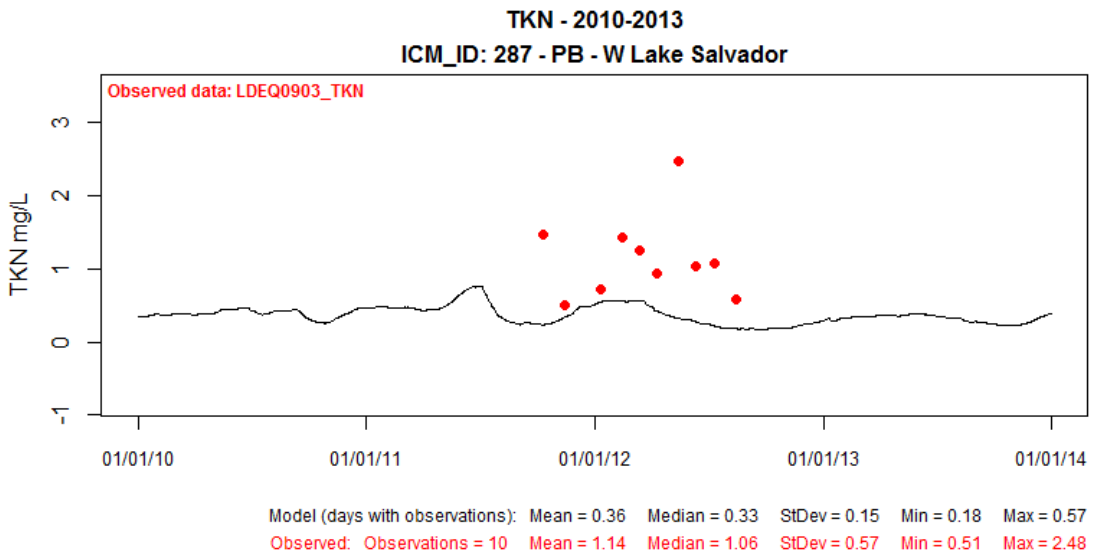


**Figure 89: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 287 (solid black line) Compared to Observed Data at LDEQ0903 for Calibration Period, 2010-2013.**

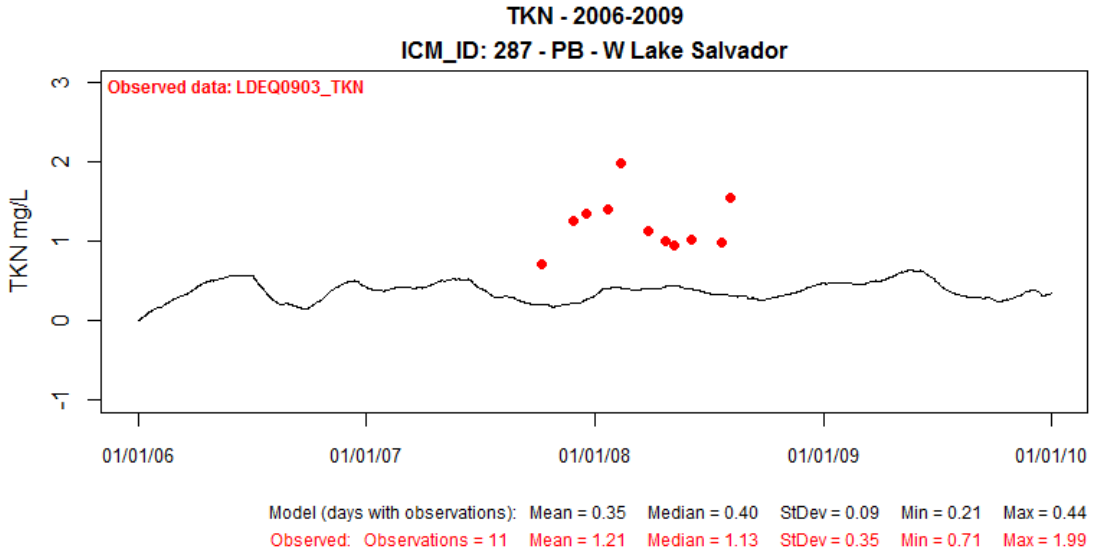


**Figure 90: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 287 (solid black line) Compared to Observed Data at LDEQ0903 for Validation Period, 2006-2009.**

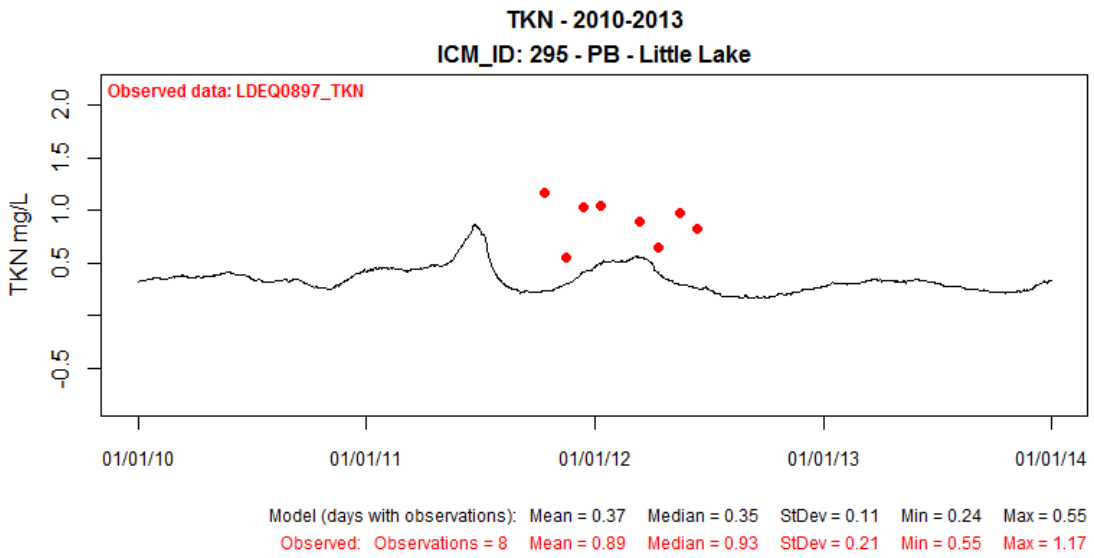


**Figure 91: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 295 (solid black line) Compared to Observed Data at LDEQ0897 for Calibration Period, 2010-2013.**

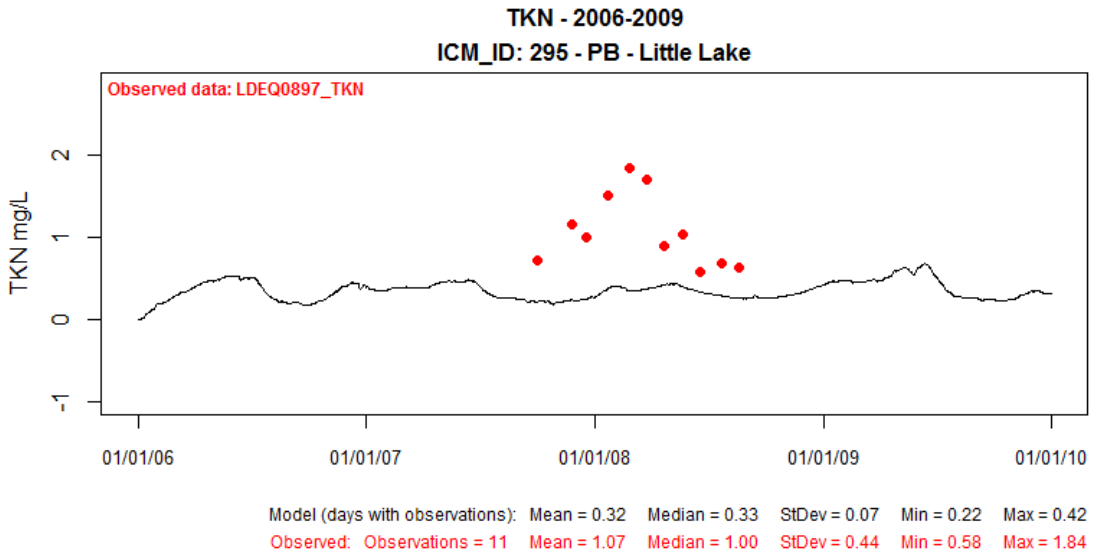


**Figure 92: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 295 (solid black line) Compared to Observed Data at LDEQ0897 for Validation Period, 2006-2009.**

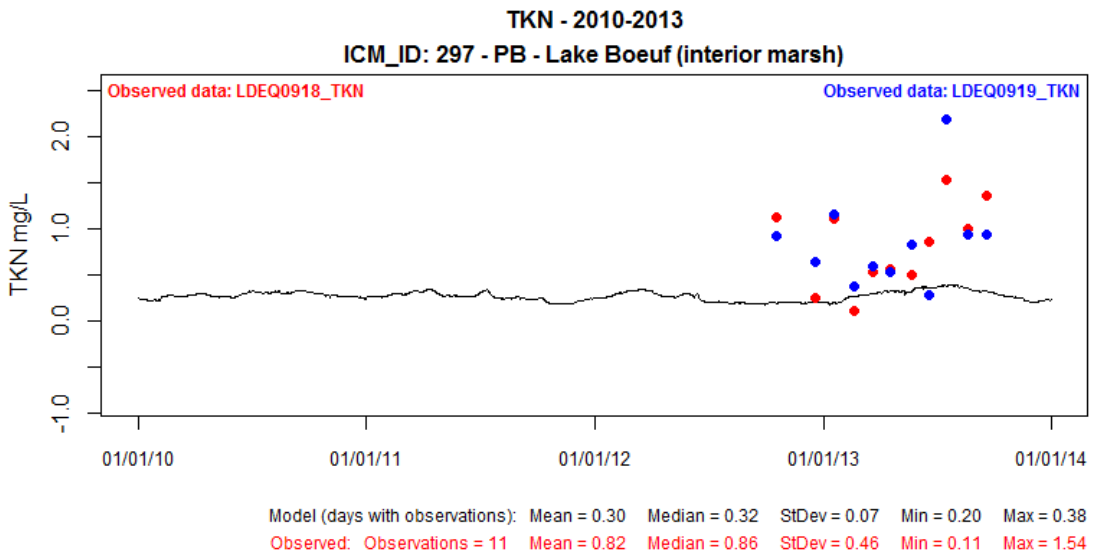


**Figure 93: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 297 (solid black line) Compared to Observed Data at LDEQ0918 for Calibration Period, 2010-2013.**

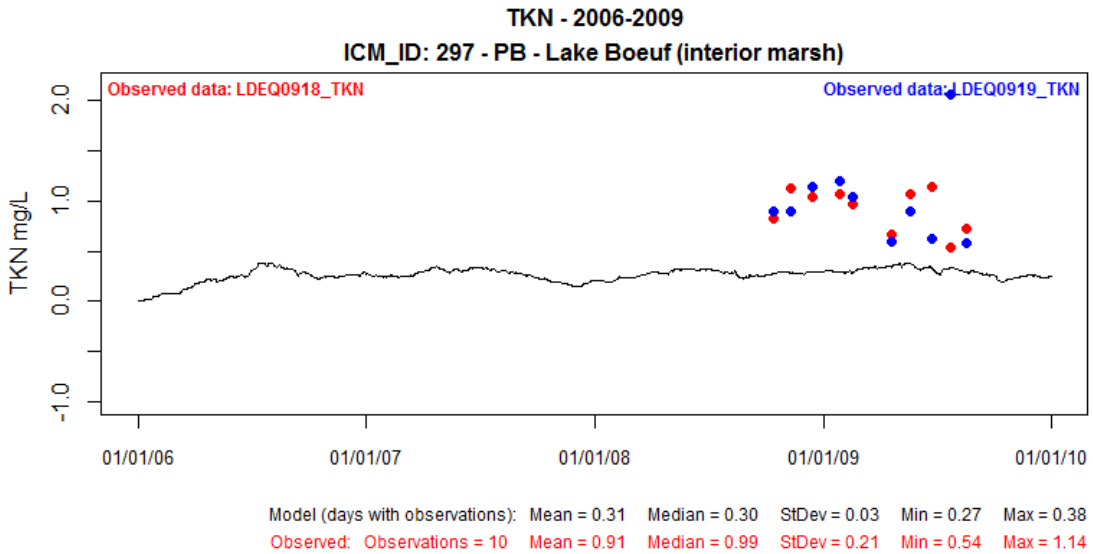


**Figure 94: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 297 (solid black line) Compared to Observed Data at LDEQ0918 for Validation Period, 2006-2009.**

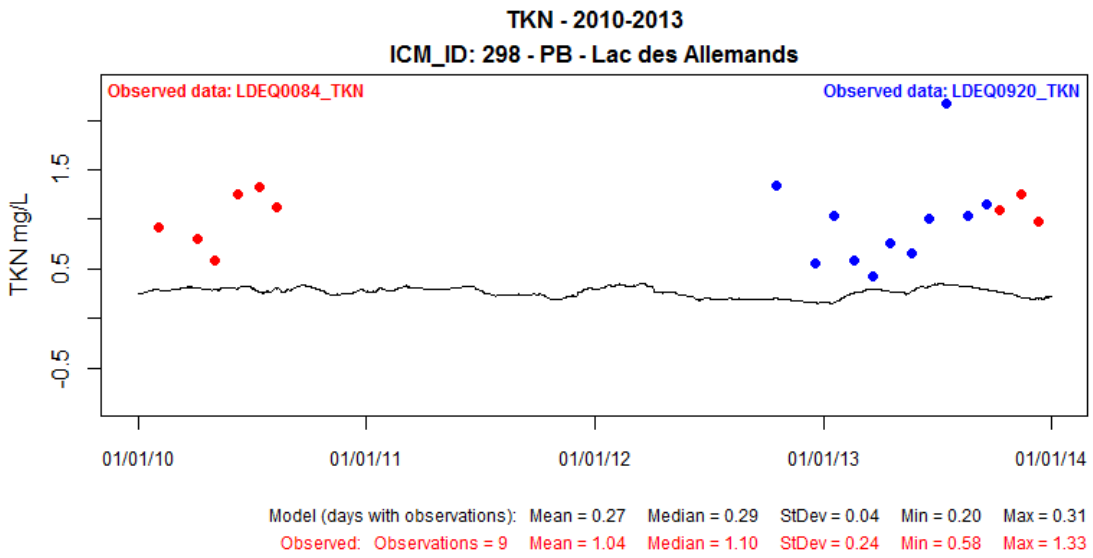


**Figure 95: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 298 (solid black line) Compared to Observed Data at LDEQ0084 for Calibration Period, 2010-2013.**

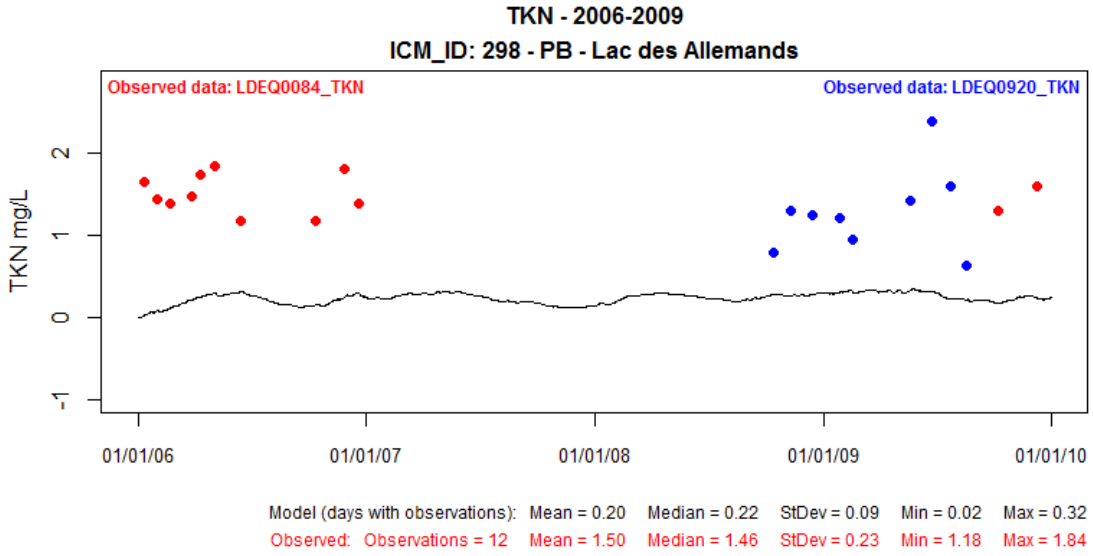


**Figure 96: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 298 (solid black line) Compared to Observed Data at LDEQ0084 for Validation Period, 2006-2009.**

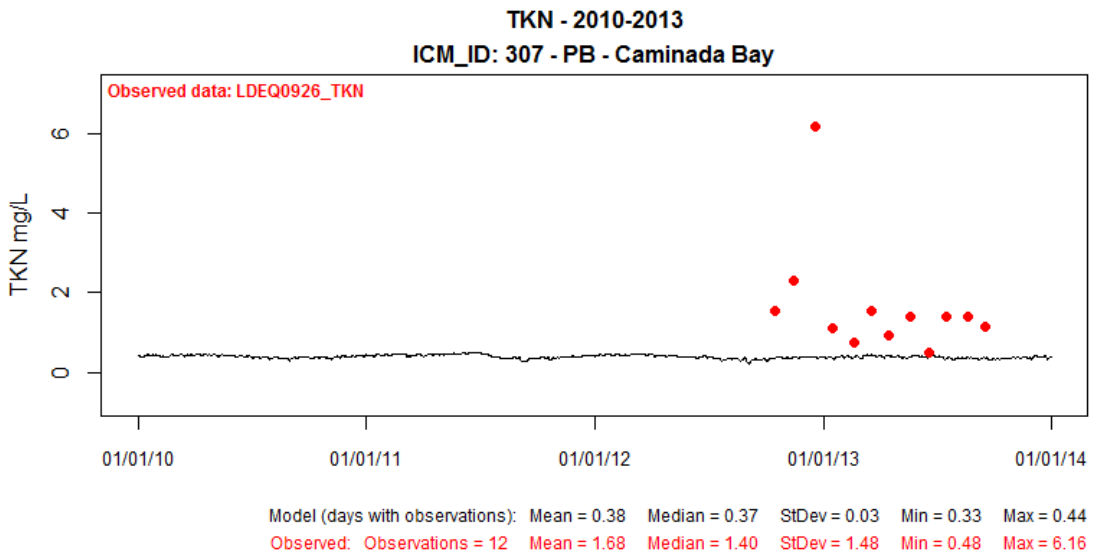


**Figure 97: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 307 (solid black line) Compared to Observed Data at LDEQ0926 for Calibration Period, 2010-2013.**

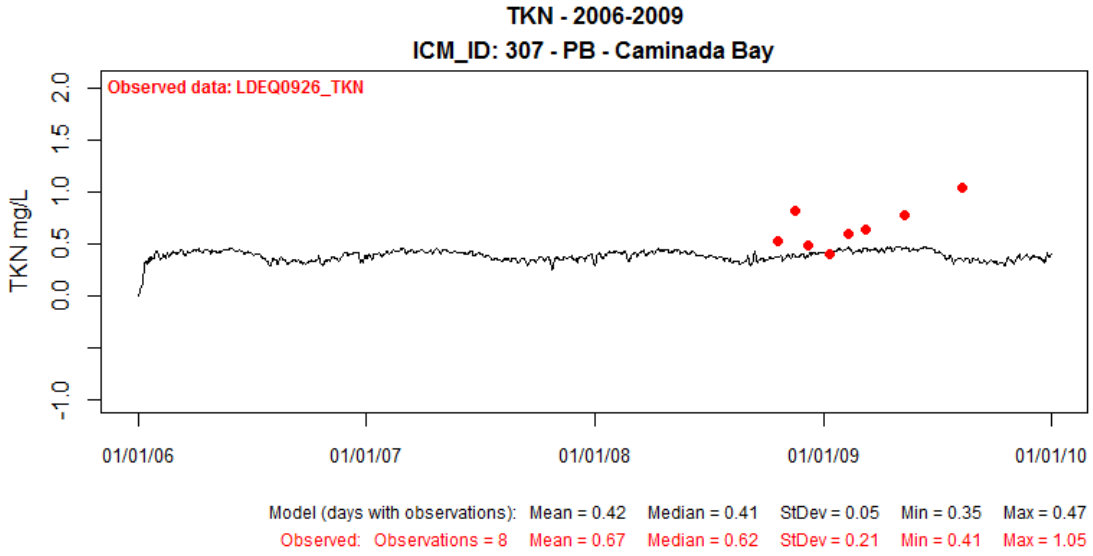


**Figure 98: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 307 (solid black line) Compared to Observed Data at LDEQ0926 for Validation Period, 2006-2009.**

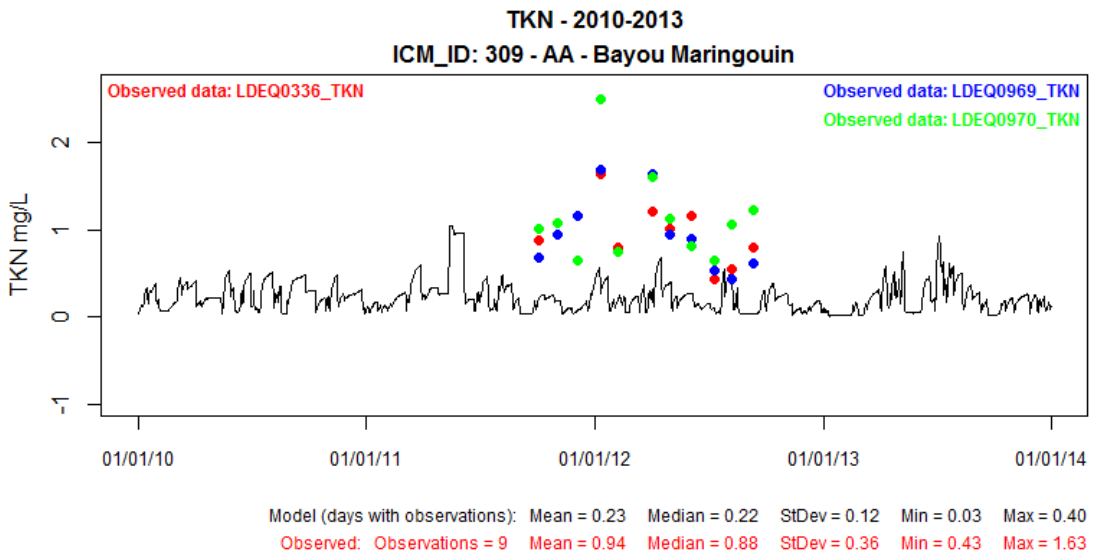


**Figure 99: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 309 (solid black line) Compared to Observed Data at LDEQ0336 for Calibration Period, 2010-2013.**

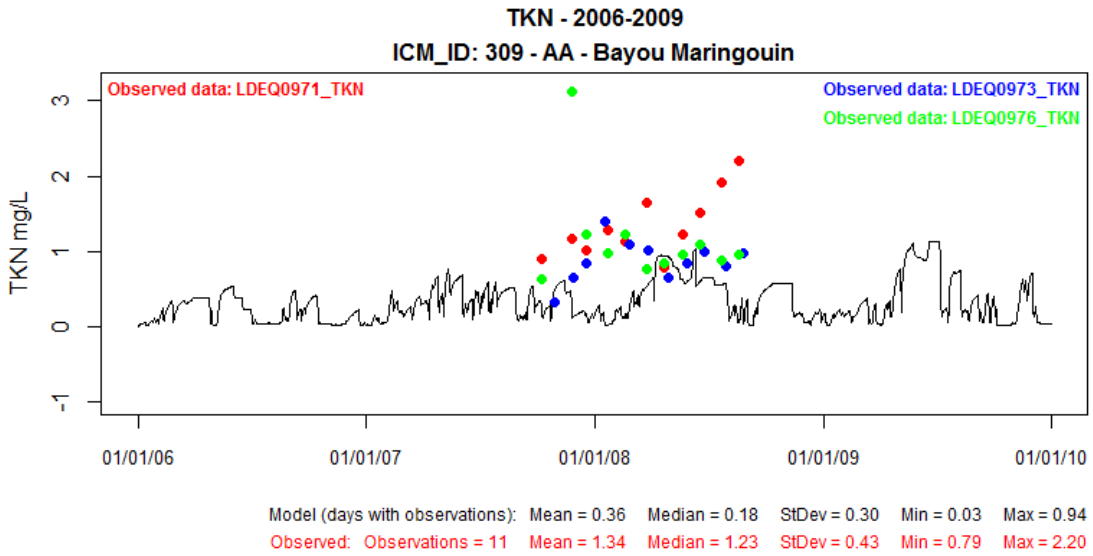


**Figure 100: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 309 (solid black line) Compared to Observed Data at LDEQ0971 for Validation Period, 2006-2009.**

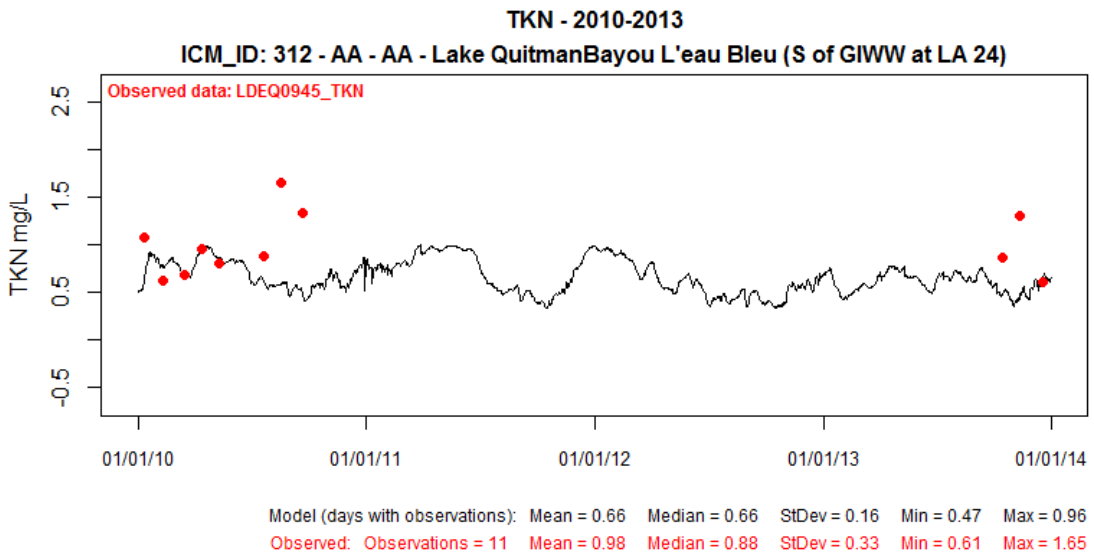


**Figure 101: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 312 (solid black line) Compared to Observed Data at LDEQ0945 for Calibration Period, 2010-2013.**

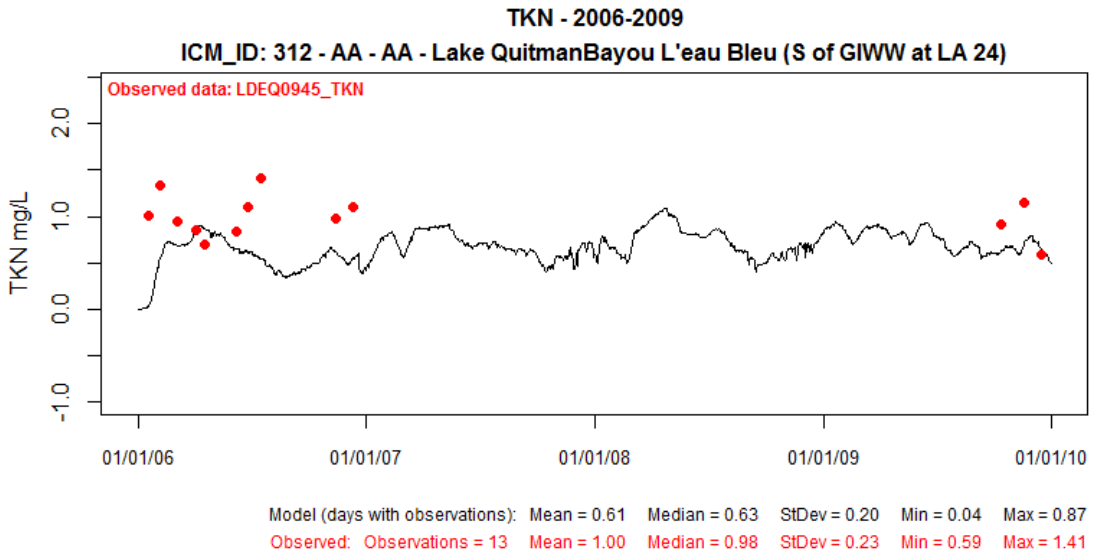


**Figure 102: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 312 (solid black line) Compared to Observed Data at LDEQ0945 for Validation Period, 2006-2009.**

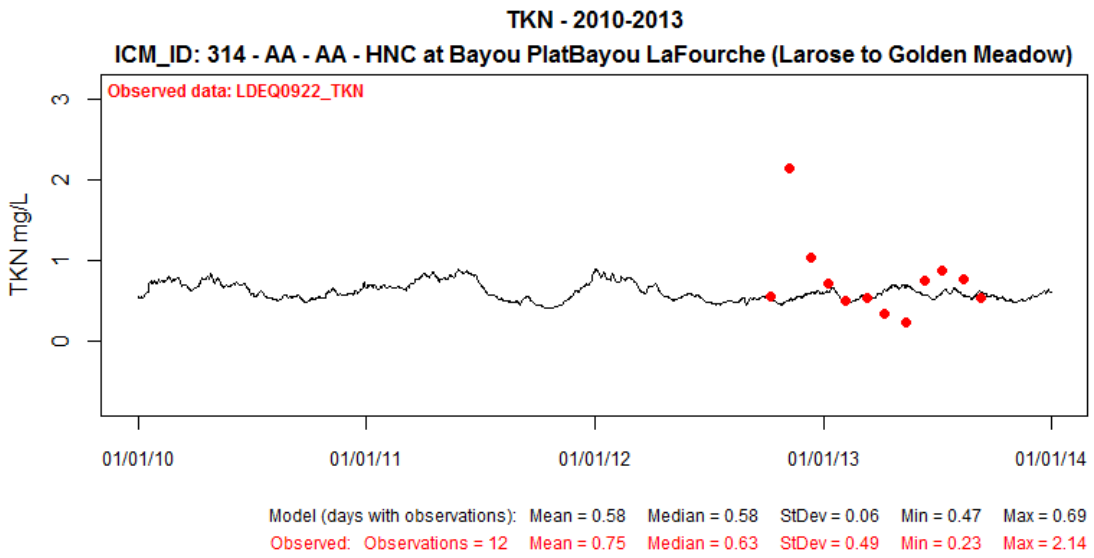


**Figure 103: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 314 (solid black line) Compared to Observed Data at LDEQ0922 for Calibration Period, 2010-2013.**

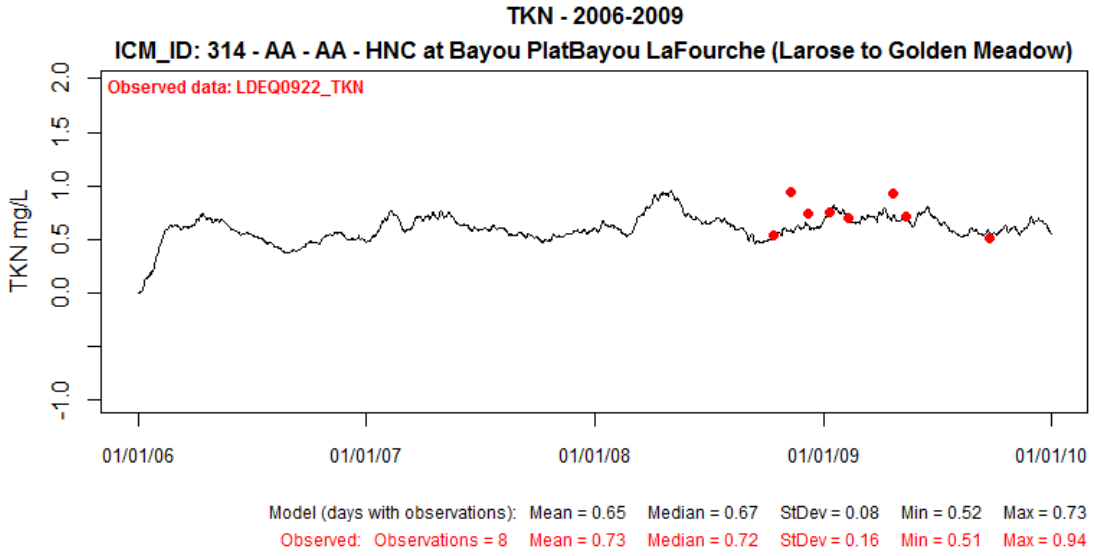


**Figure 104: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 314 (solid black line) Compared to Observed Data at LDEQ0922 for Validation Period, 2006-2009.**

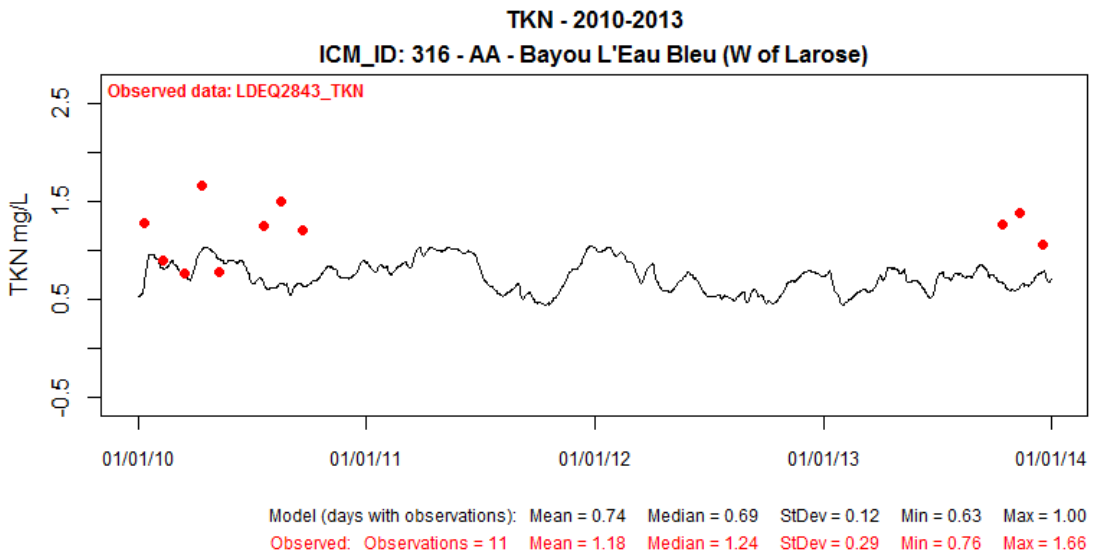


**Figure 105: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 316 (solid black line) Compared to Observed Data at LDEQ2843 for Calibration Period, 2010-2013.**

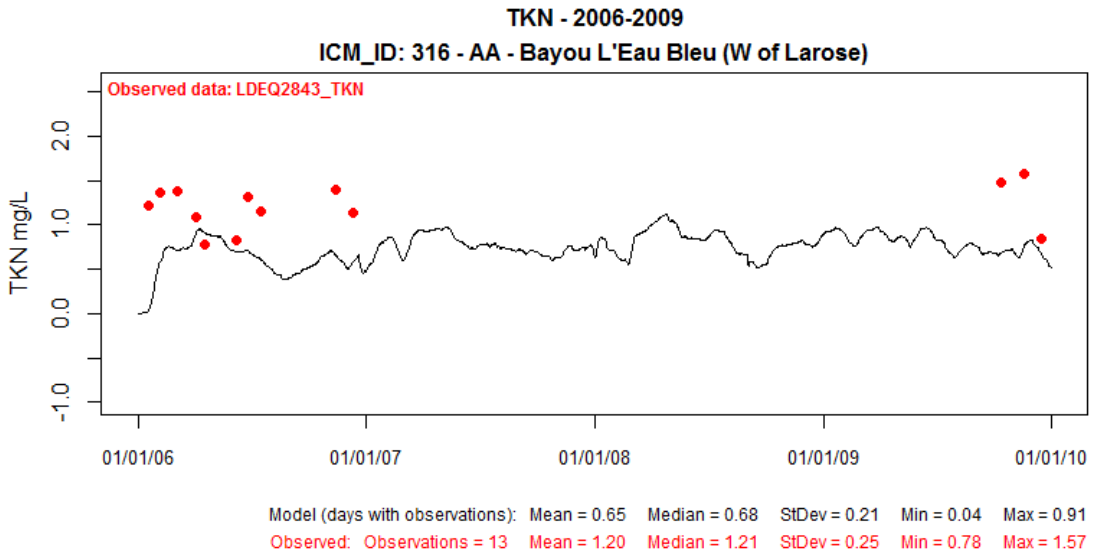


**Figure 106: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 316 (solid black line) Compared to Observed Data at LDEQ2843 for Validation Period, 2006-2009.**

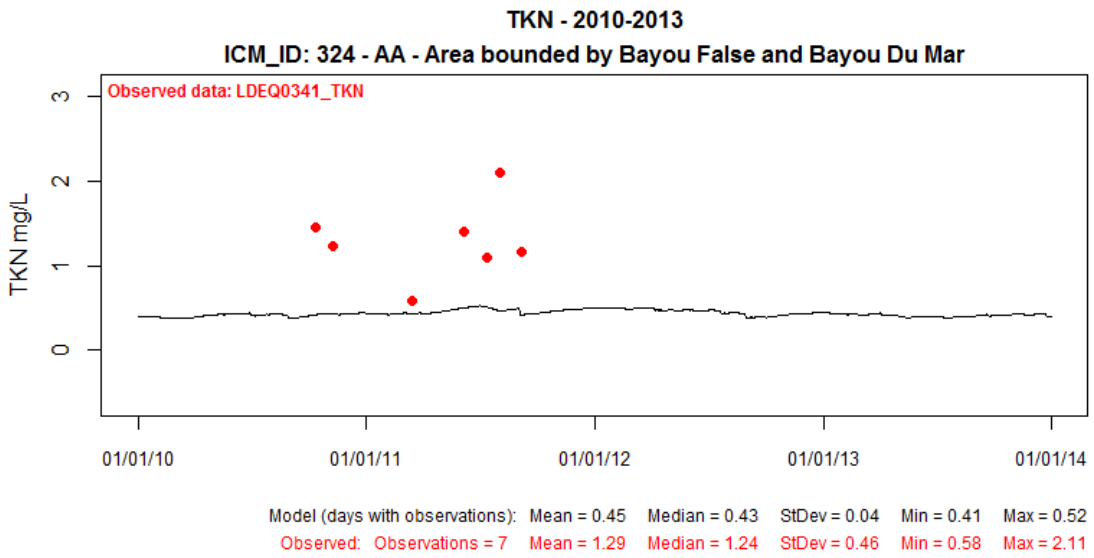


**Figure 107: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 324 (solid black line) Compared to Observed Data at LDEQ0341 for Calibration Period, 2010-2013.**

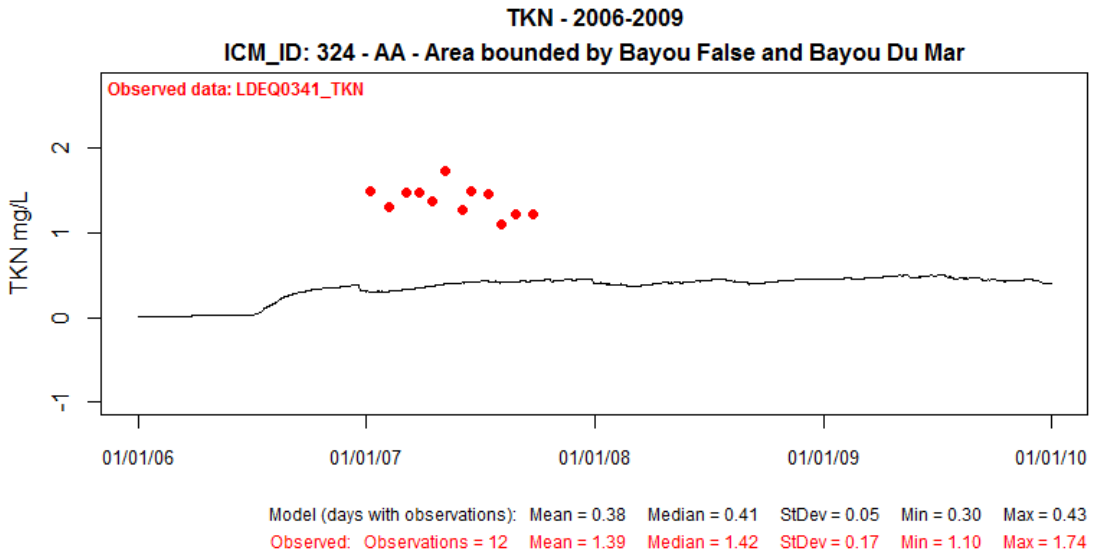


**Figure 108: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 324 (solid black line) Compared to Observed Data at LDEQ0341 for Validation Period, 2006-2009.**

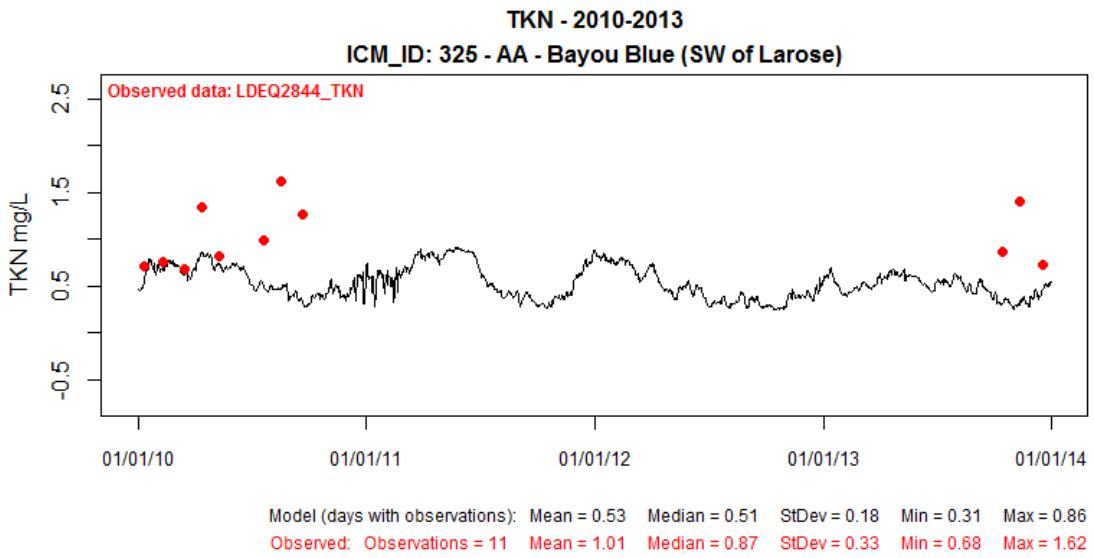


**Figure 109: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 325 (solid black line) Compared to Observed Data at LDEQ2844 for Calibration Period, 2010-2013.**

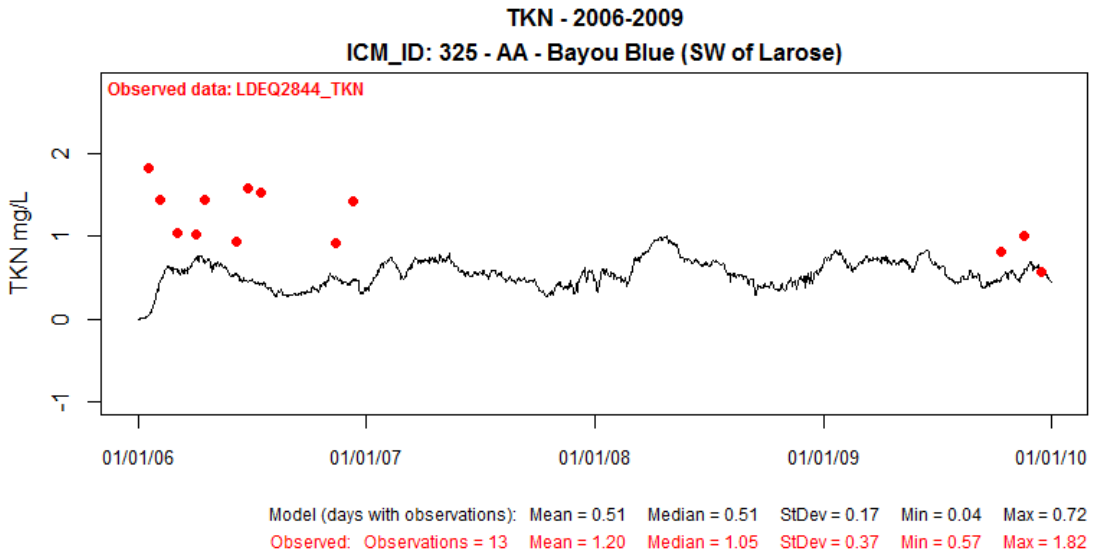


**Figure 110: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 325 (solid black line) Compared to Observed Data at LDEQ2844 for Validation Period, 2006-2009.**

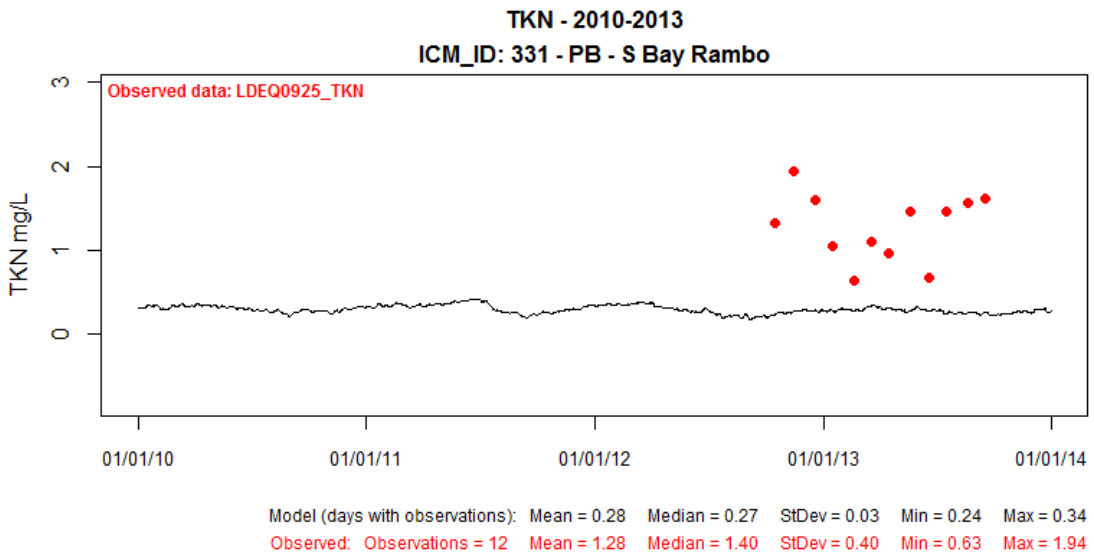


**Figure 111: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 331 (solid black line) Compared to Observed Data at LDEQ0925 for Calibration Period, 2010-2013.**

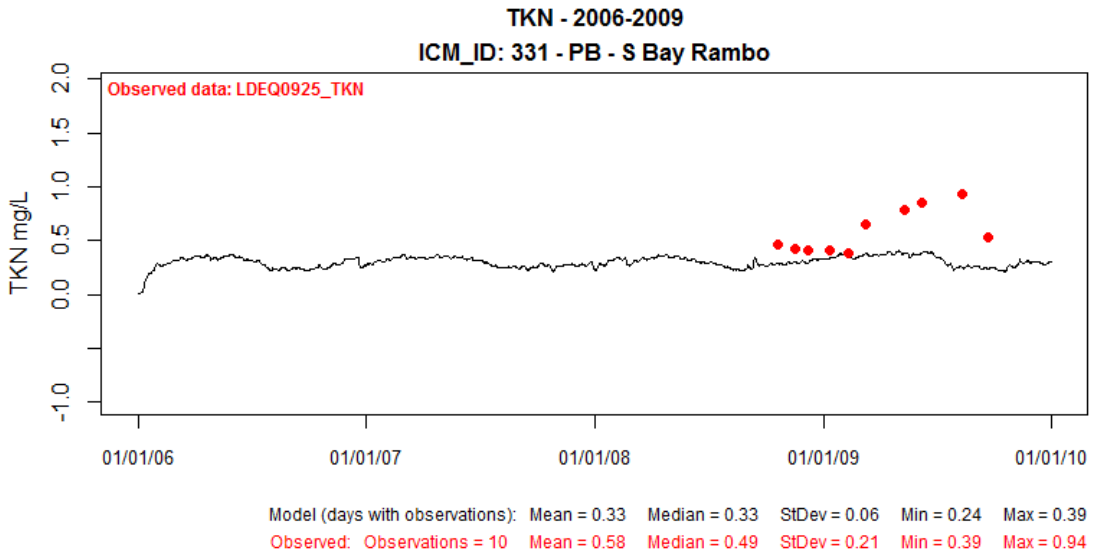


**Figure 112: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 331 (solid black line) Compared to Observed Data at LDEQ0925 for Validation Period, 2006-2009.**

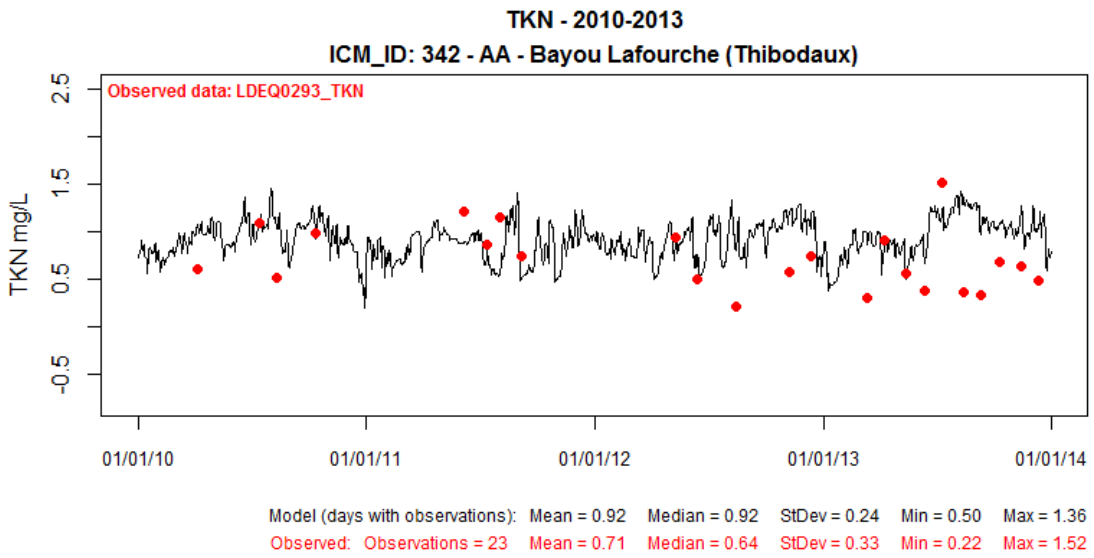


**Figure 113: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 342 (solid black line) Compared to Observed Data at LDEQ0293 for Calibration Period, 2010-2013.**

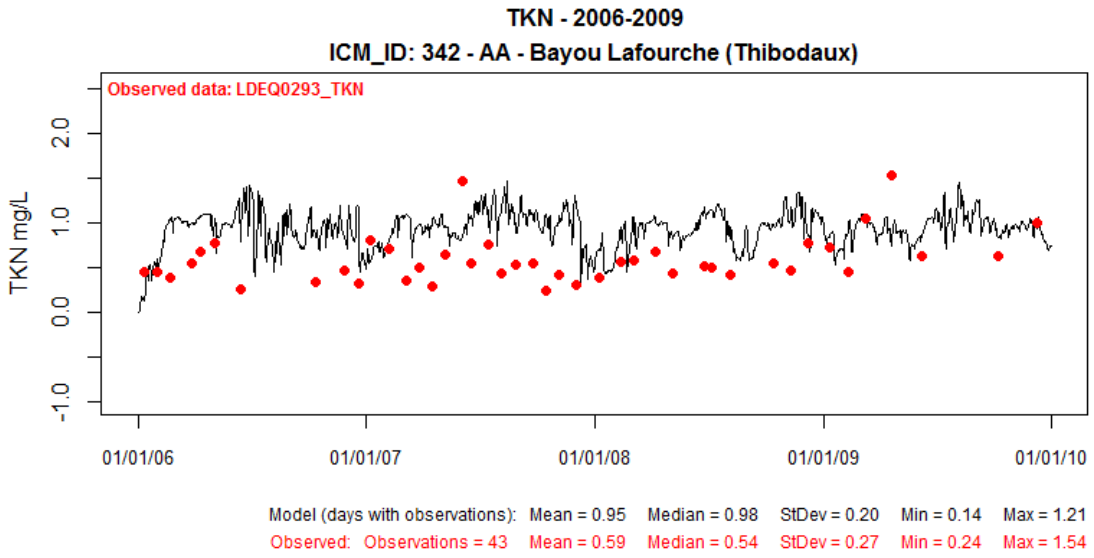


**Figure 114: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 342 (solid black line) Compared to Observed Data at LDEQ0293 for Validation Period, 2006-2009.**

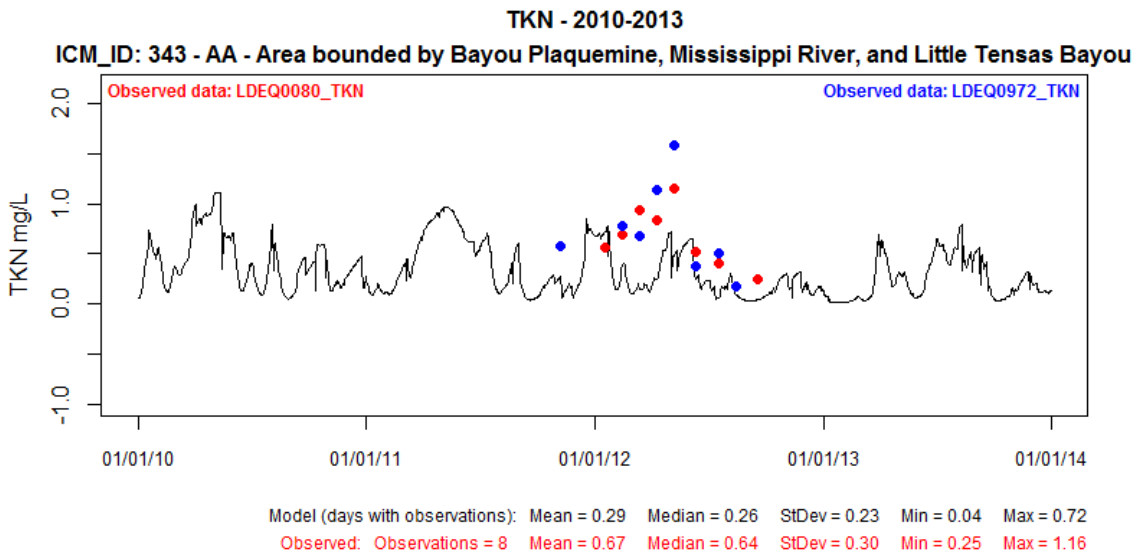


**Figure 115: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 343 (solid black line) Compared to Observed Data at LDEQ0080 for Calibration Period, 2010-2013.**

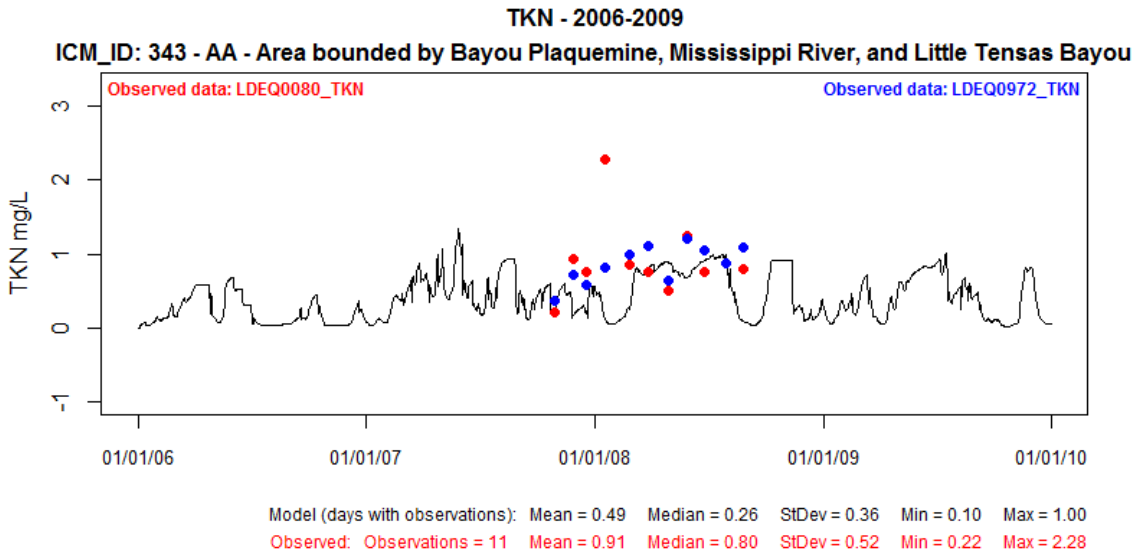


**Figure 116: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 343 (solid black line) Compared to Observed Data at LDEQ0080 for Validation Period, 2006-2009.**

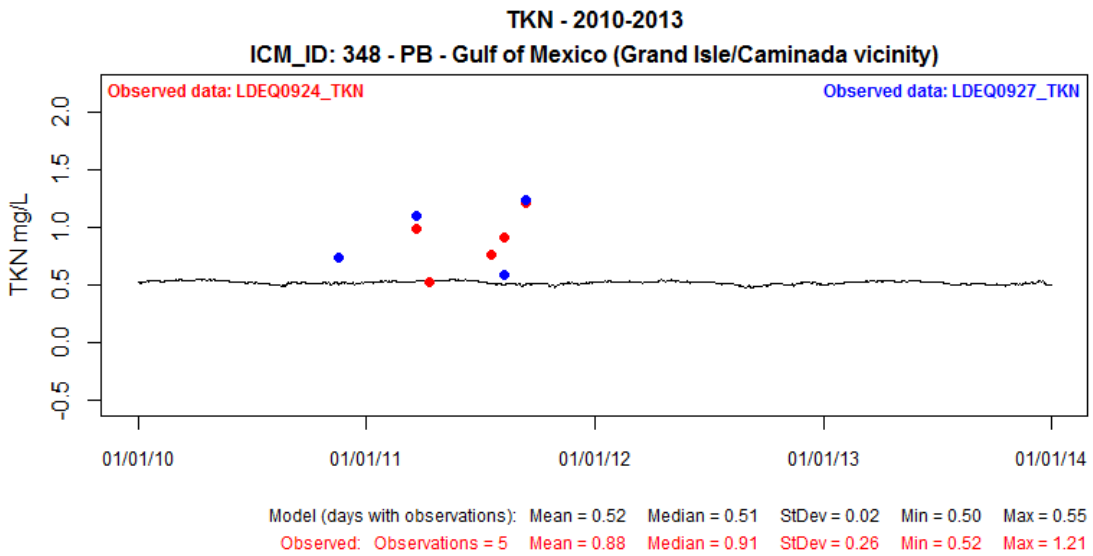


**Figure 117: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 348 (solid black line) Compared to Observed Data at LDEQ0924 for Calibration Period, 2010-2013.**

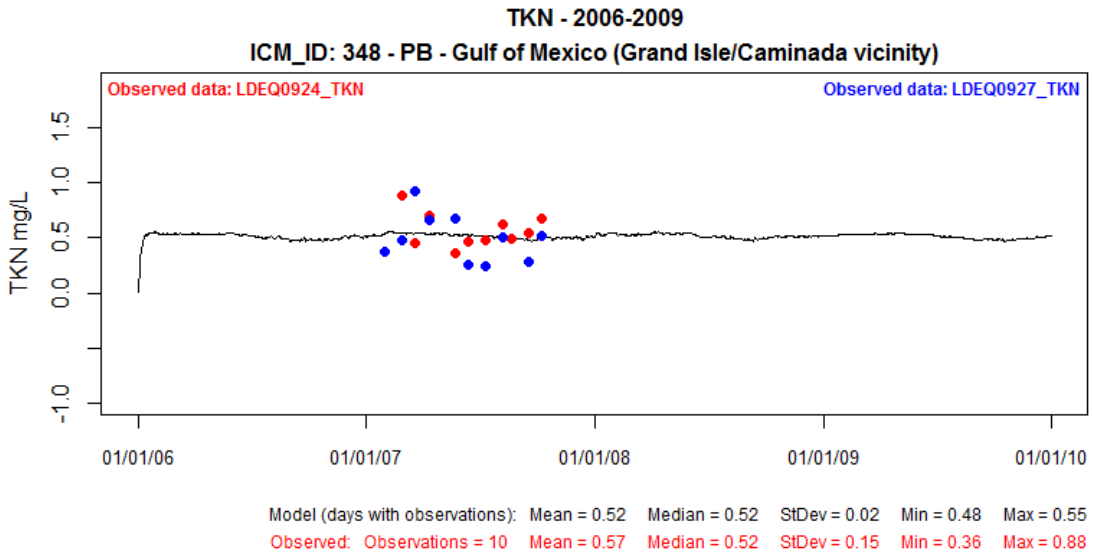


**Figure 118: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 348 (solid black line) Compared to Observed Data at LDEQ0924 for Validation Period, 2006-2009.**

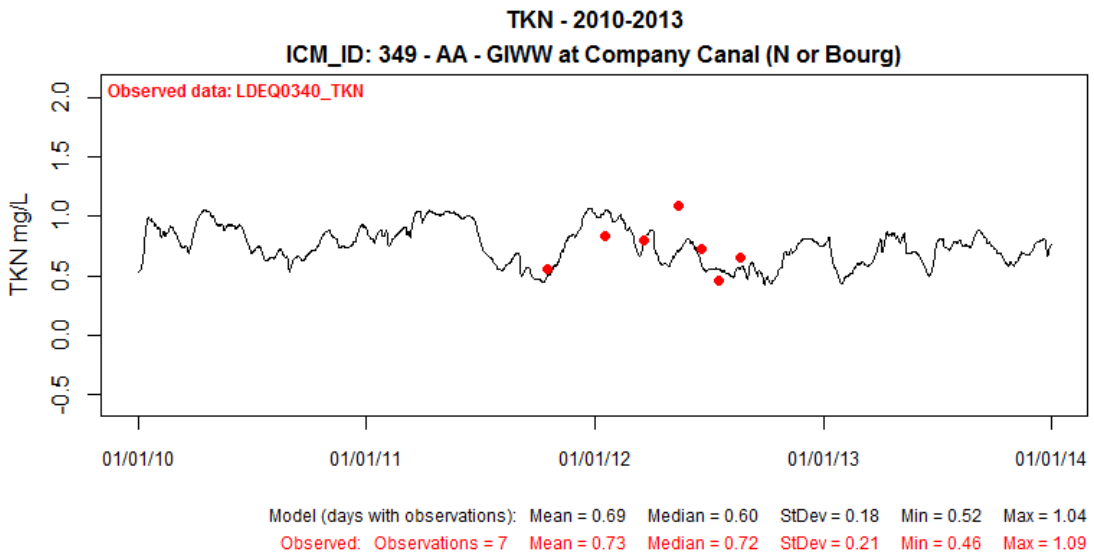


**Figure 119: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 349 (solid black line) Compared to Observed Data at LDEQ0340 for Calibration Period, 2010-2013.**

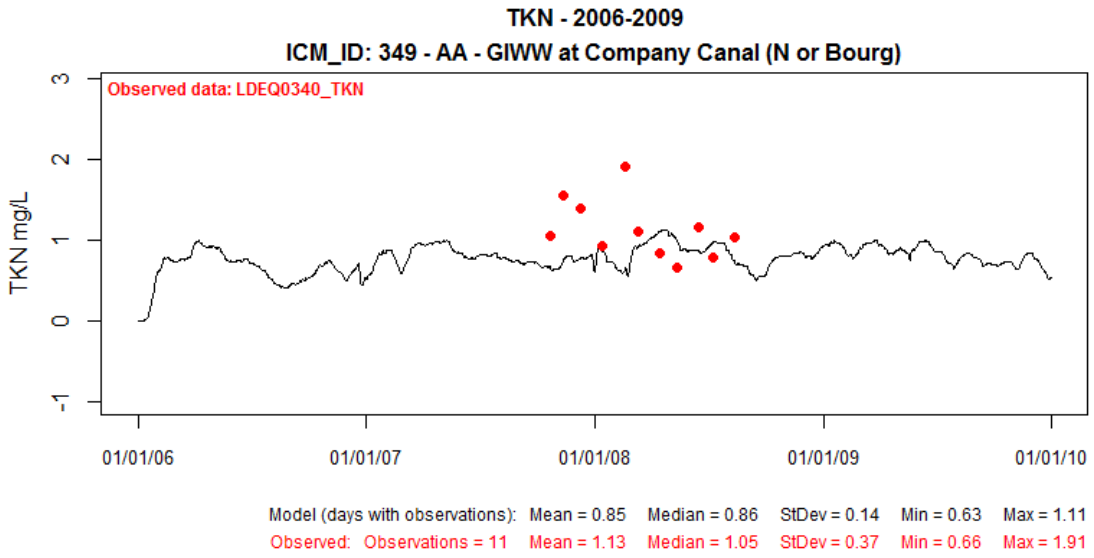


**Figure 120: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 349 (solid black line) Compared to Observed Data at LDEQ0340 for Validation Period, 2006-2009.**

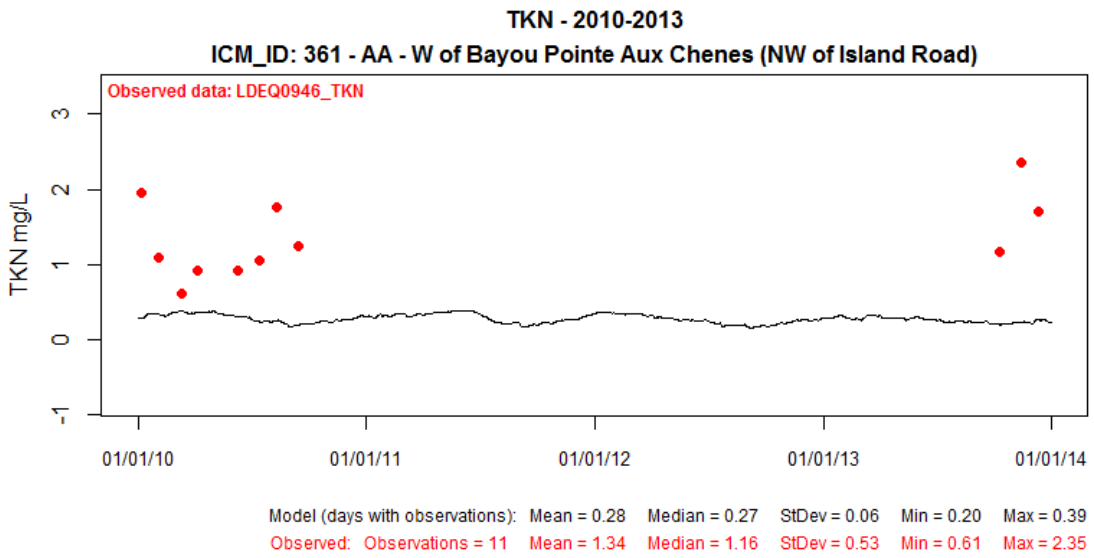


**Figure 121: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 361 (solid black line) Compared to Observed Data at LDEQ0946 for Calibration Period, 2010-2013.**

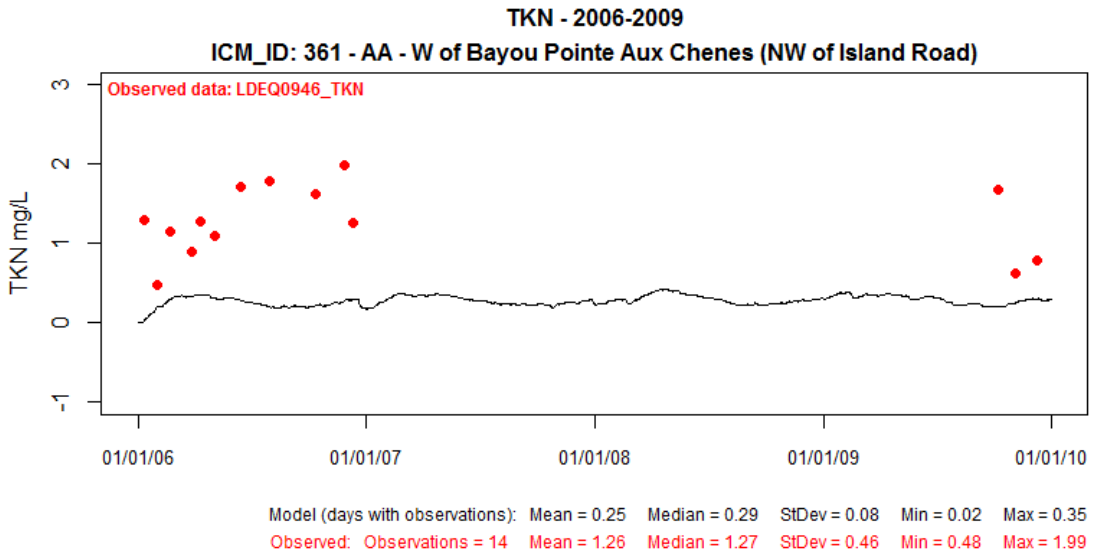


**Figure 122: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 361 (solid black line) Compared to Observed Data at LDEQ0946 for Validation Period, 2006-2009.**

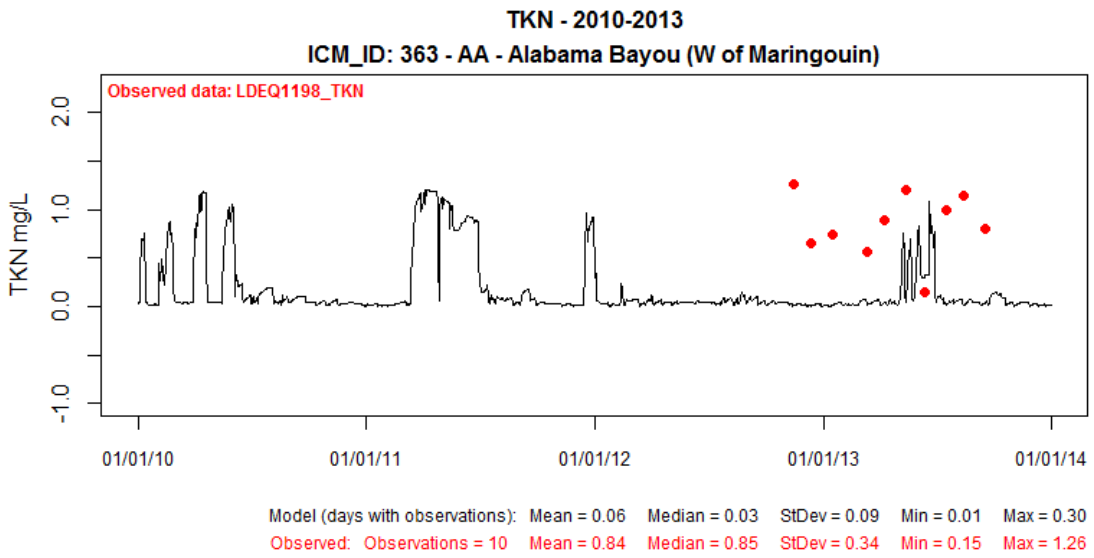


**Figure 123: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 363 (solid black line) Compared to Observed Data at LDEQ1198 for Calibration Period, 2010-2013.**

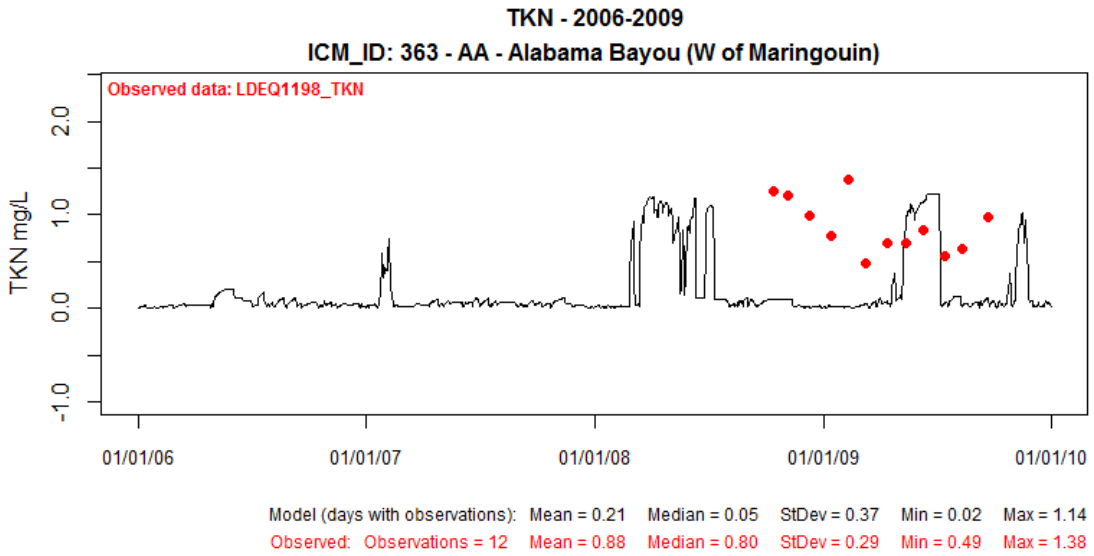


**Figure 124: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 363 (solid black line) Compared to Observed Data at LDEQ1198 for Validation Period, 2006-2009.**

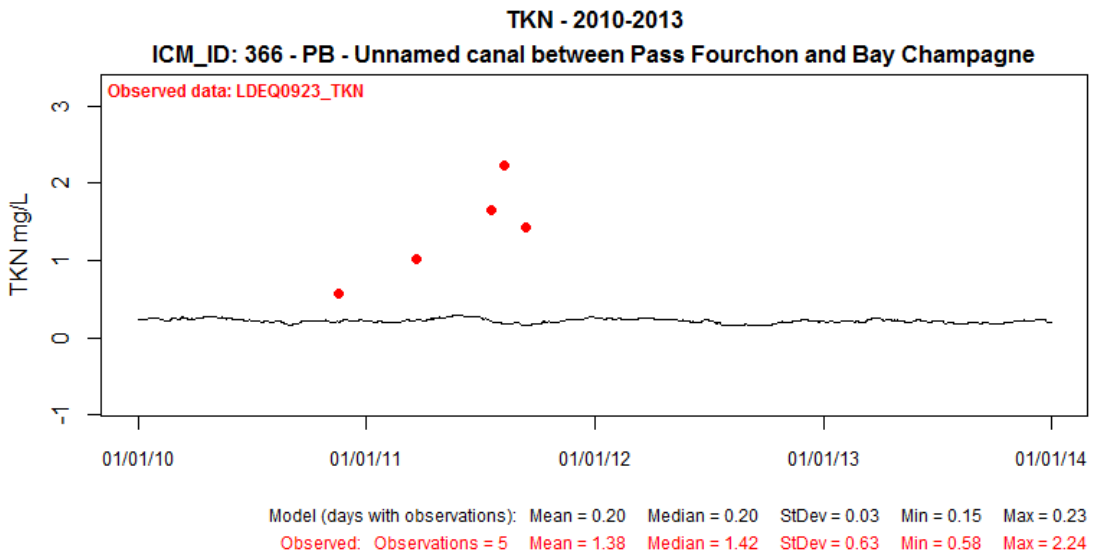


**Figure 125: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 366 (solid black line) Compared to Observed Data at LDEQ0923 for Calibration Period, 2010-2013.**

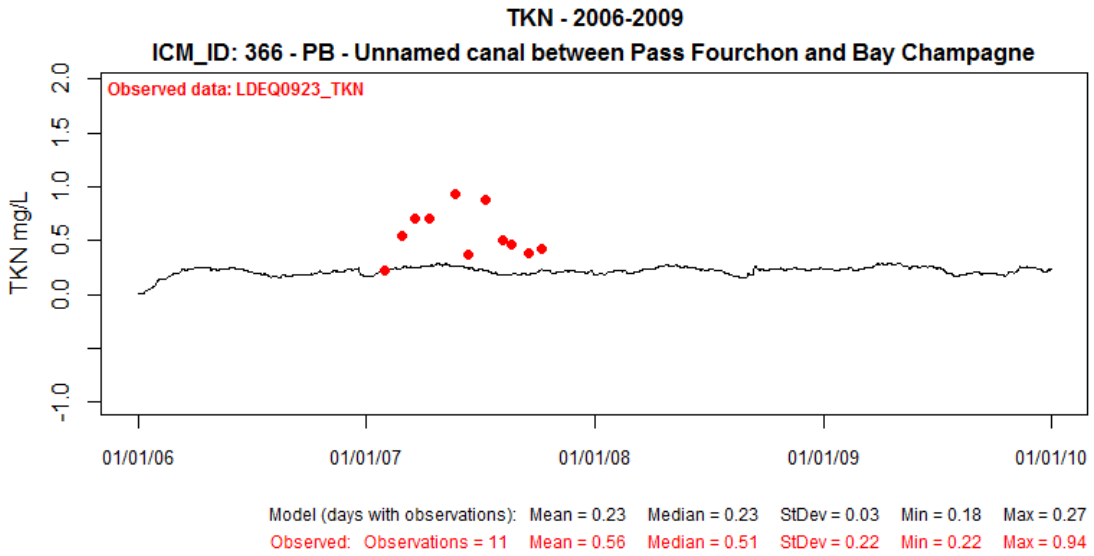


**Figure 126: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 366 (solid black line) Compared to Observed Data at LDEQ0923 for Validation Period, 2006-2009.**

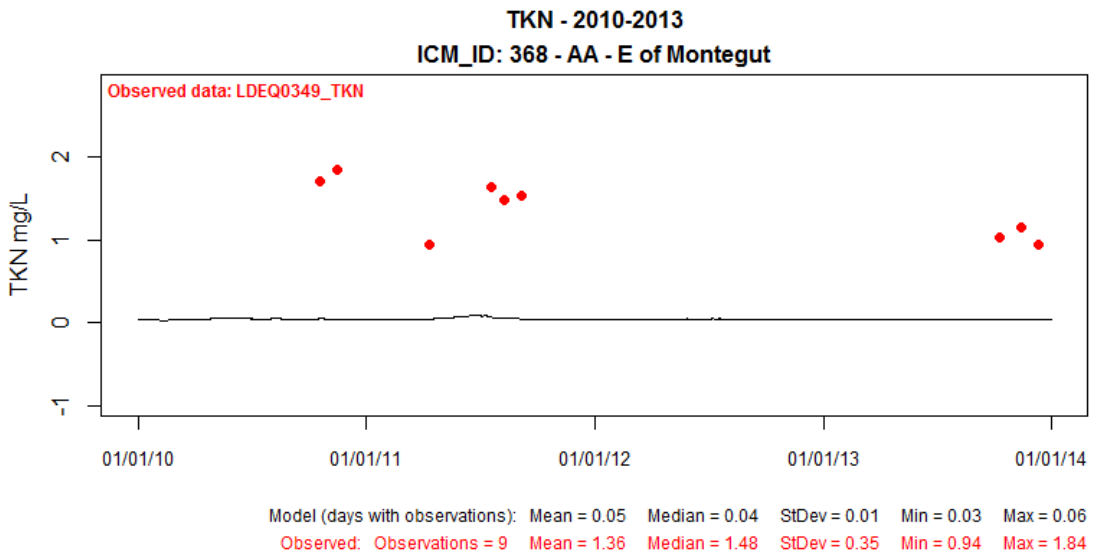


**Figure 127: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 368 (solid black line) Compared to Observed Data at LDEQ0349 for Calibration Period, 2010-2013.**

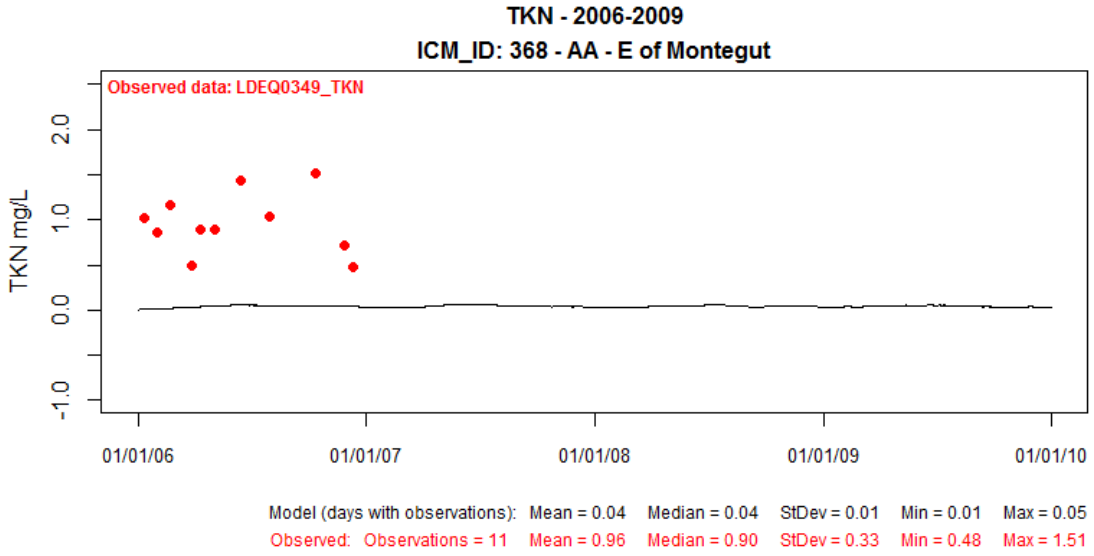


**Figure 128: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 368 (solid black line) Compared to Observed Data at LDEQ0349 for Validation Period, 2006-2009.**

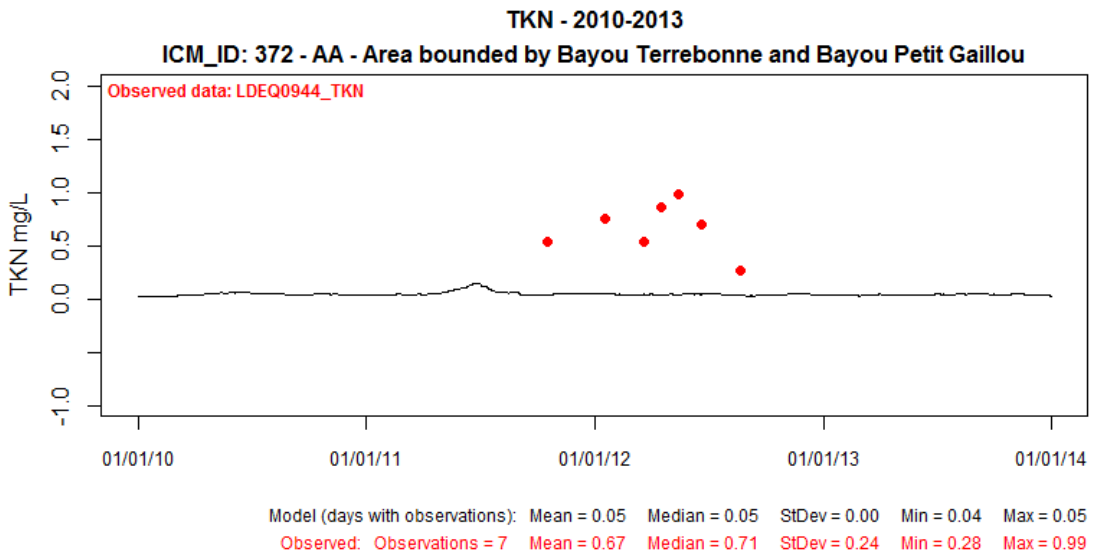


**Figure 129: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 372 (solid black line) Compared to Observed Data at LDEQ0944 for Calibration Period, 2010-2013.**

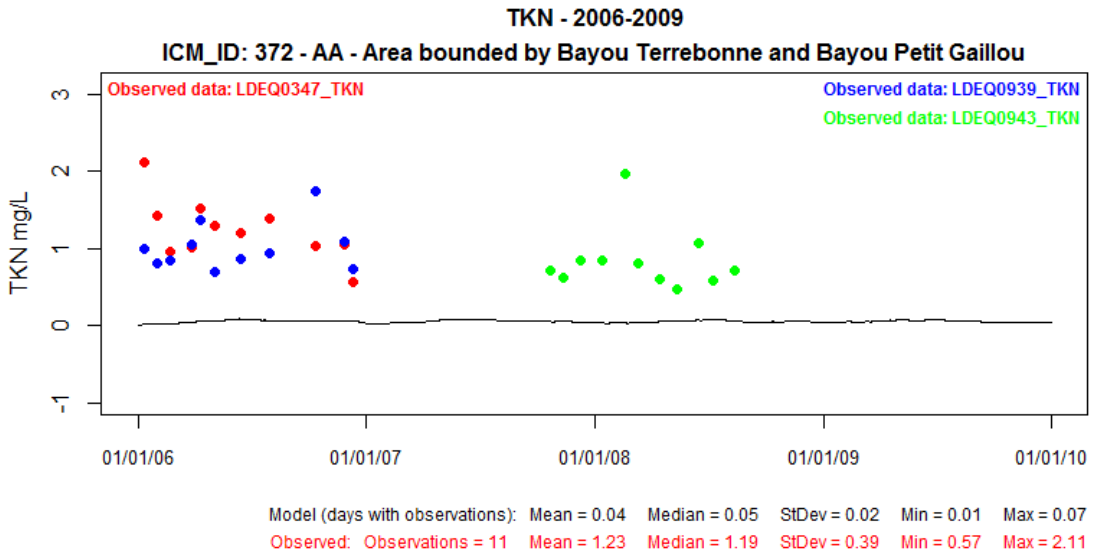


**Figure 130: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 372 (solid black line) Compared to Observed Data at LDEQ0347 for Validation Period, 2006-2009.**

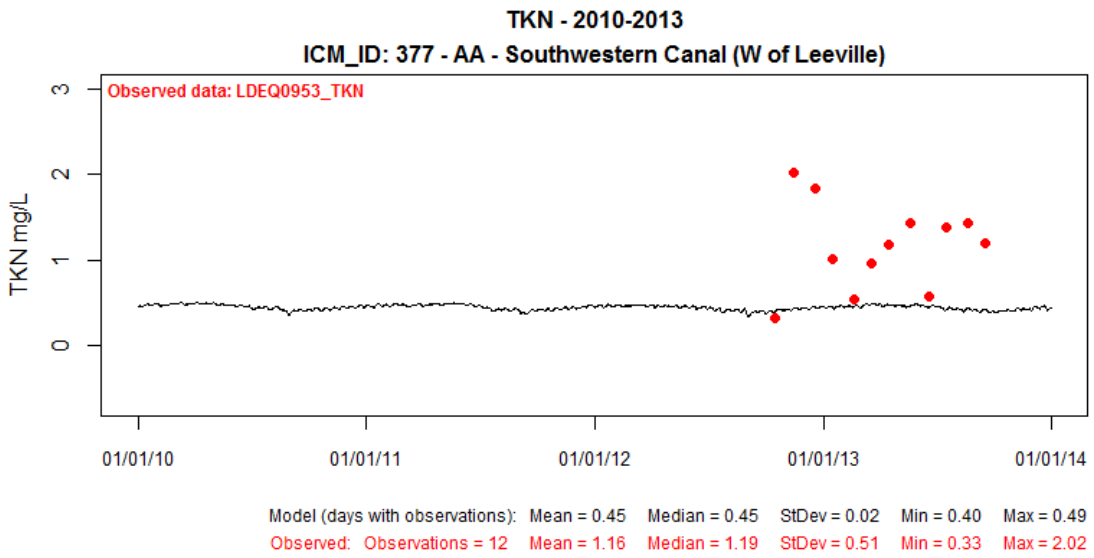


**Figure 131: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 377 (solid black line) Compared to Observed Data at LDEQ0953 for Calibration Period, 2010-2013.**

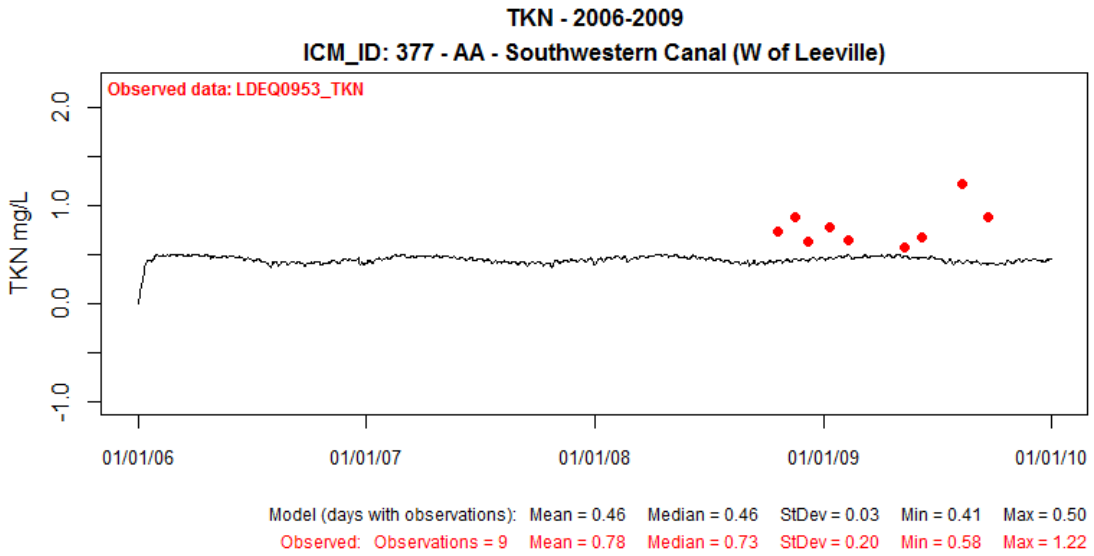


**Figure 132: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 377 (solid black line) Compared to Observed Data at LDEQ0953 for Validation Period, 2006-2009.**

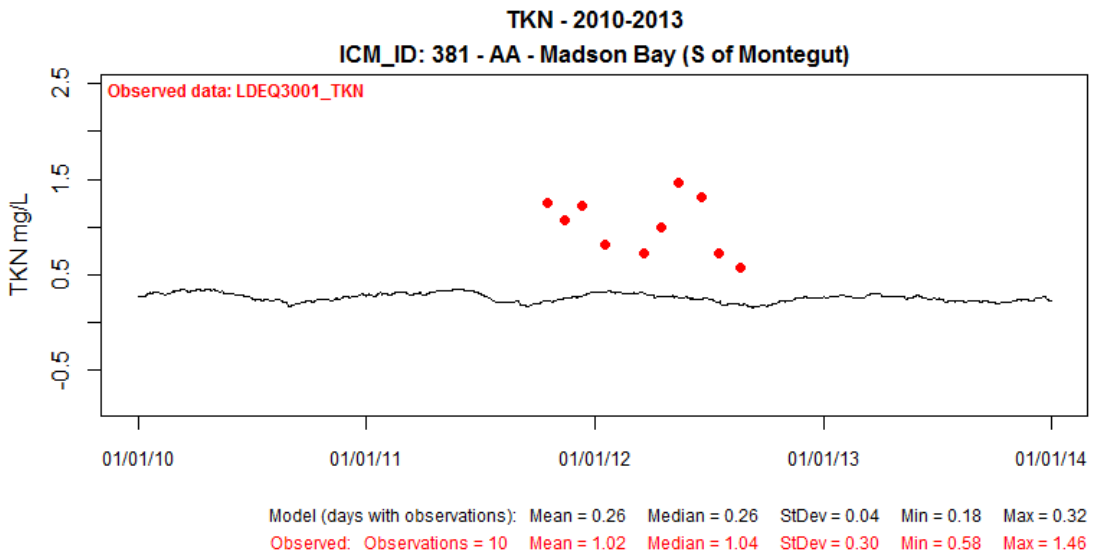


**Figure 133: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 381 (solid black line) Compared to Observed Data at LDEQ3001 for Calibration Period, 2010-2013.**

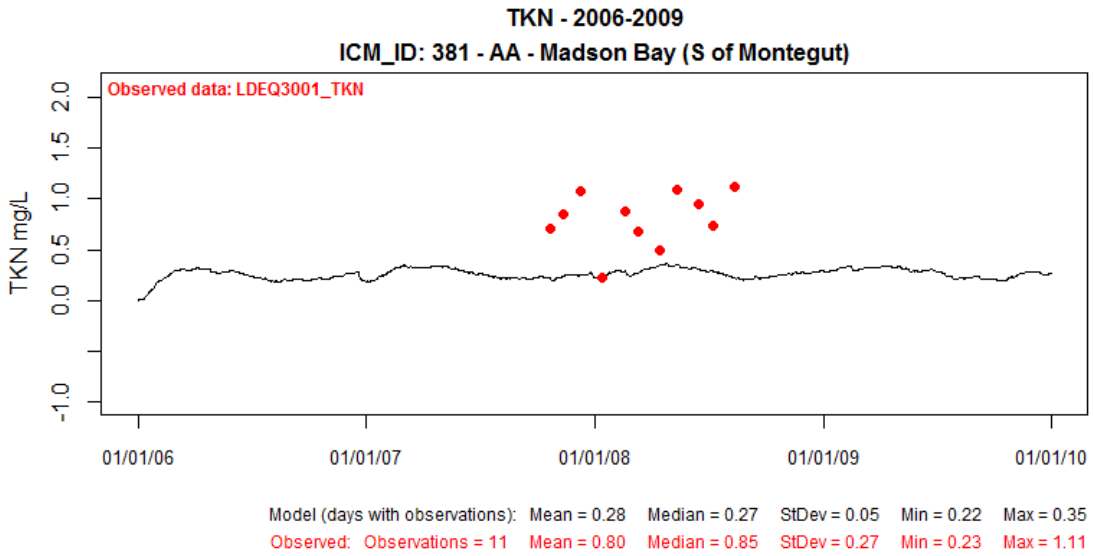


**Figure 134: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 381 (solid black line) Compared to Observed Data at LDEQ3001 for Validation Period, 2006-2009.**

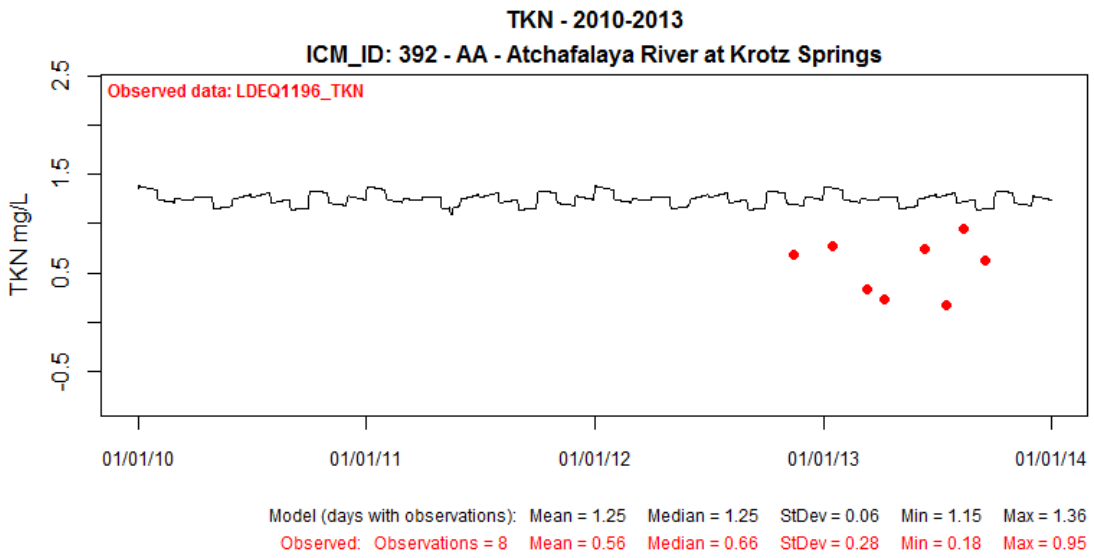


**Figure 135: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 392 (solid black line) Compared to Observed Data at LDEQ1196 for Calibration Period, 2010-2013.**

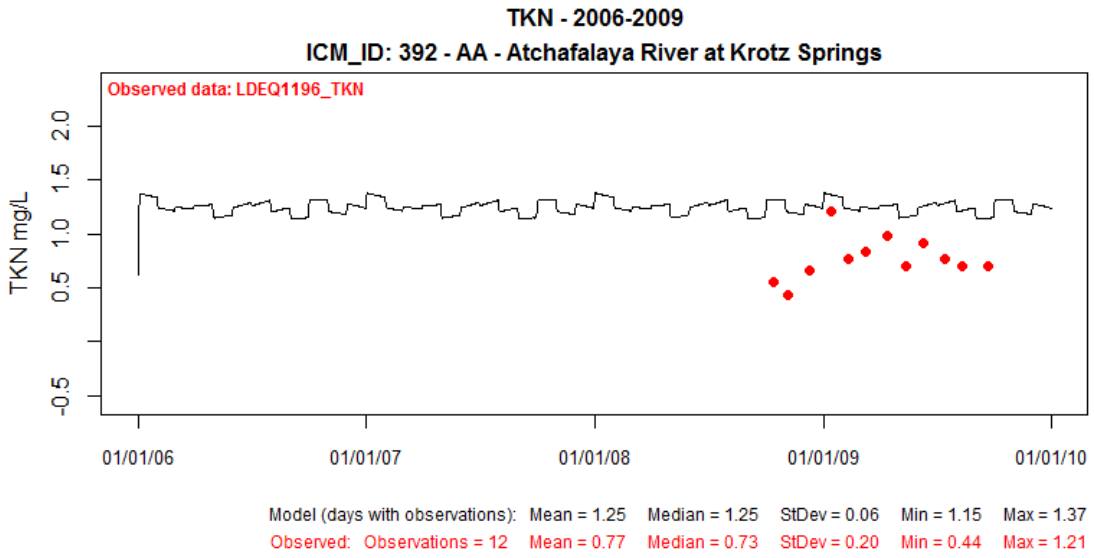


**Figure 136: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 392 (solid black line) Compared to Observed Data at LDEQ1196 for Validation Period, 2006-2009.**

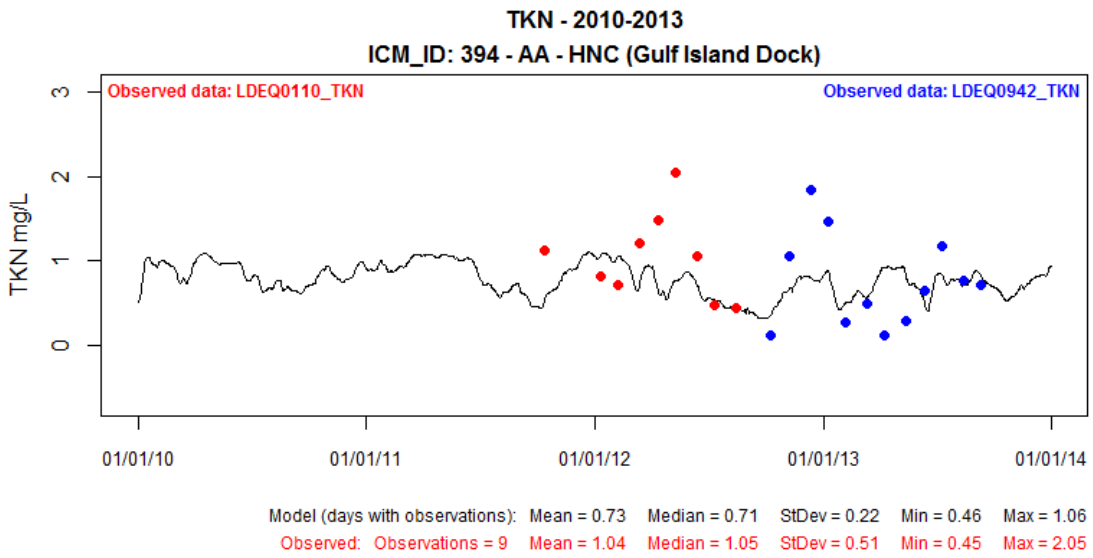


**Figure 137: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 394 (solid black line) Compared to Observed Data at LDEQ0110 for Calibration Period, 2010-2013.**

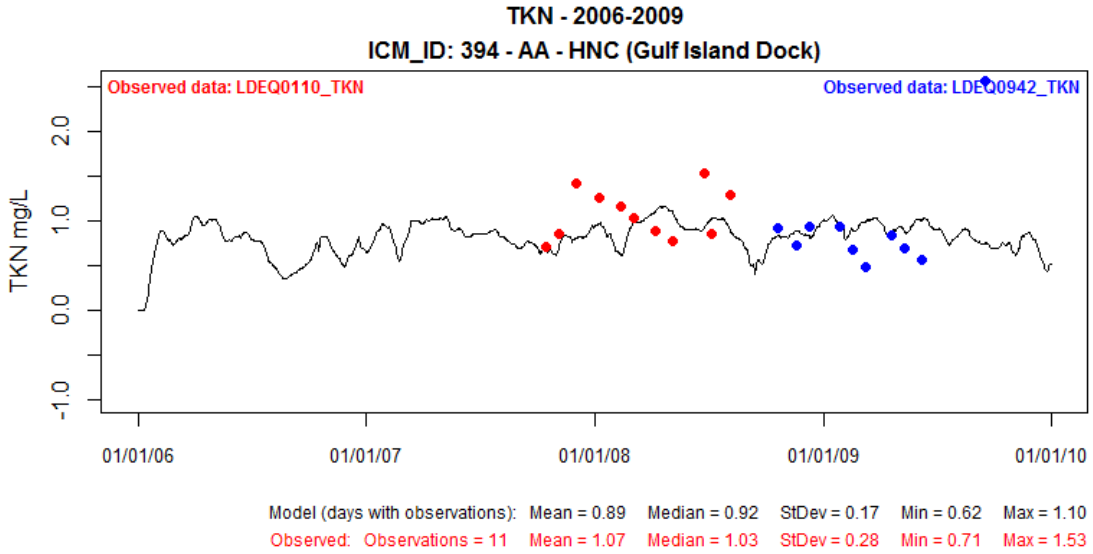


**Figure 138: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 394 (solid black line) Compared to Observed Data at LDEQ0110 for Validation Period, 2006-2009.**

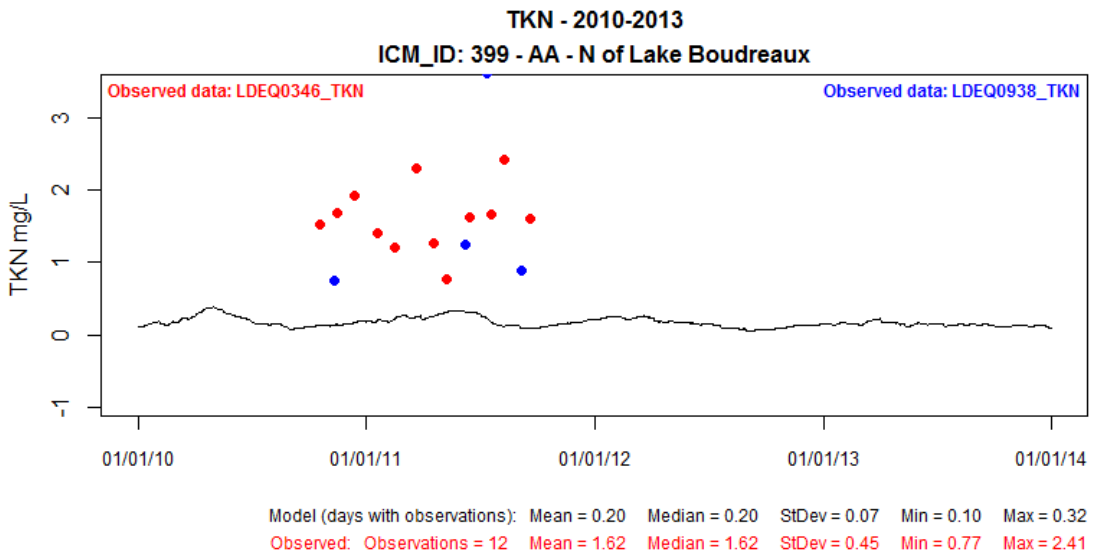


**Figure 139: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 399 (solid black line) Compared to Observed Data at LDEQ0346 for Calibration Period, 2010-2013.**

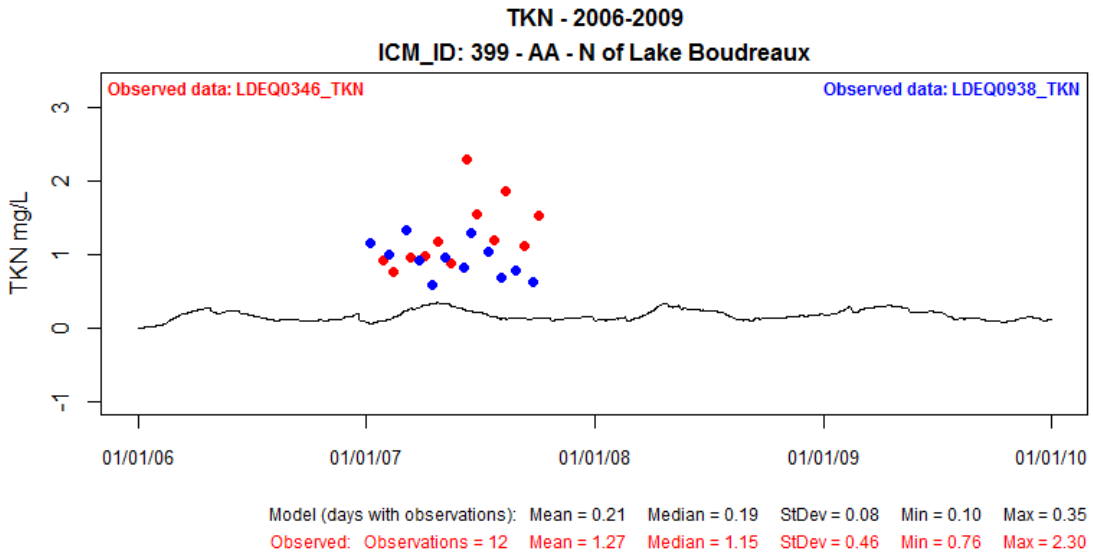


**Figure 140: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 399 (solid black line) Compared to Observed Data at LDEQ0346 for Validation Period, 2006-2009.**

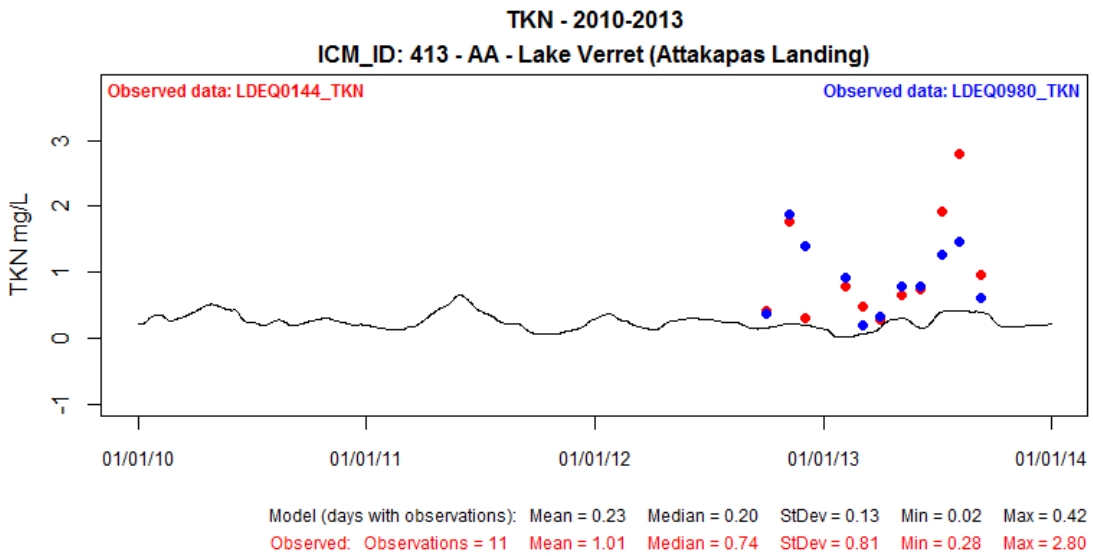


**Figure 141: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 413 (solid black line) Compared to Observed Data at LDEQ0144 for Calibration Period, 2010-2013.**

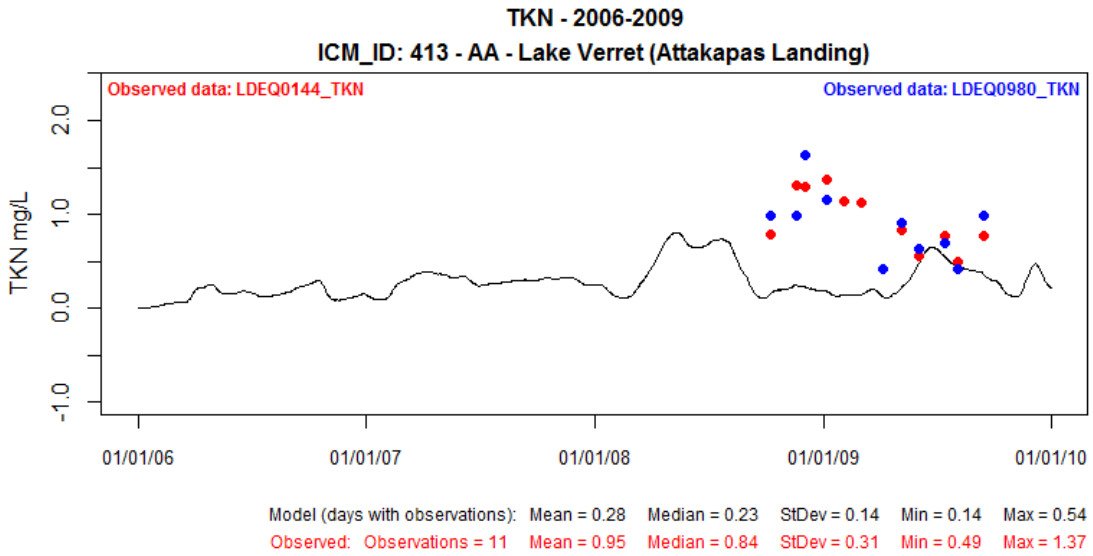


**Figure 142: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 413 (solid black line) Compared to Observed Data at LDEQ0144 for Validation Period, 2006-2009.**

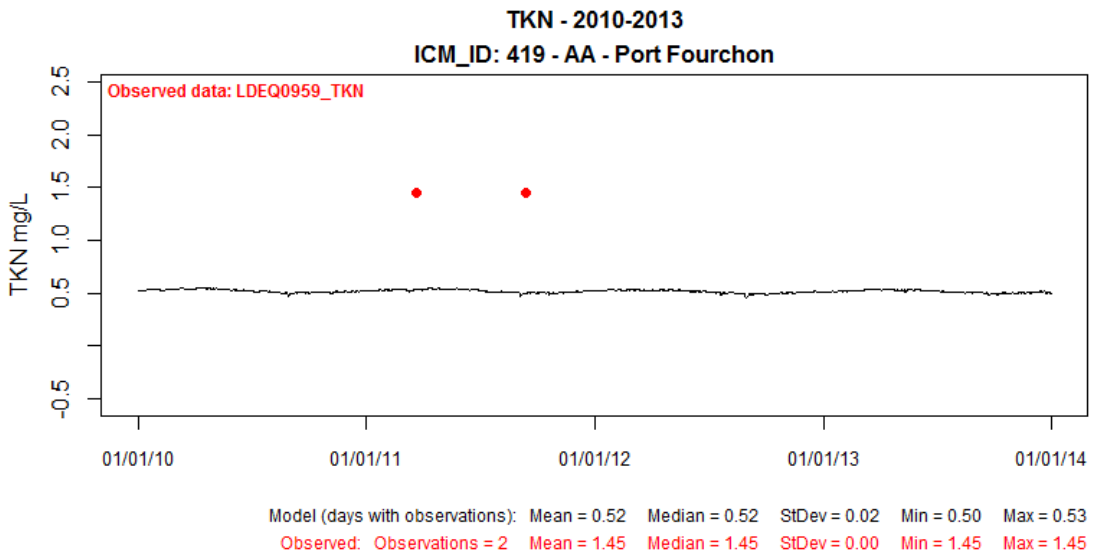


**Figure 143: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 419 (solid black line) Compared to Observed Data at LDEQ0959 for Calibration Period, 2010-2013.**

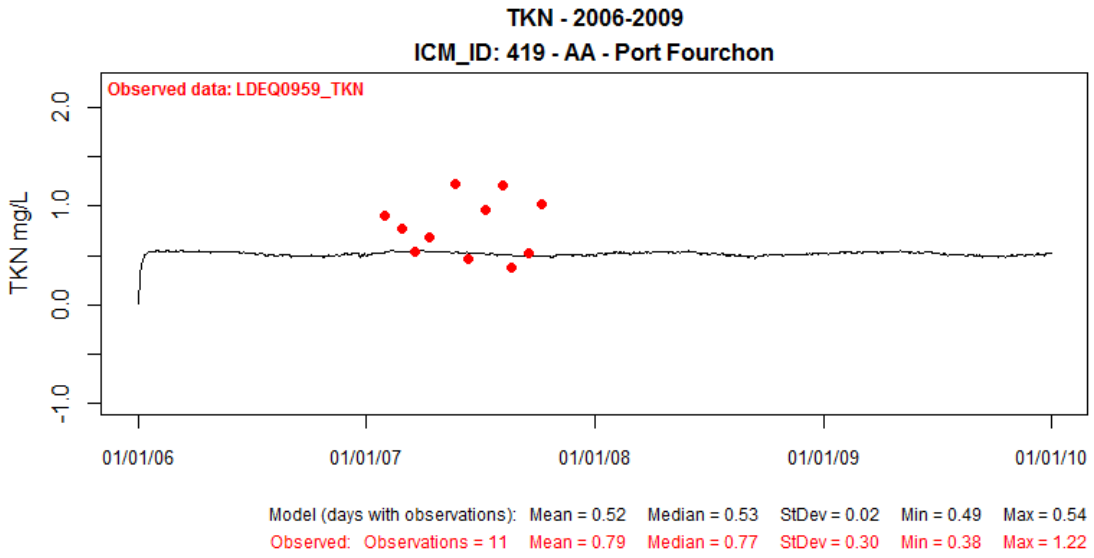


**Figure 144: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 419 (solid black line) Compared to Observed Data at LDEQ0959 for Validation Period, 2006-2009.**

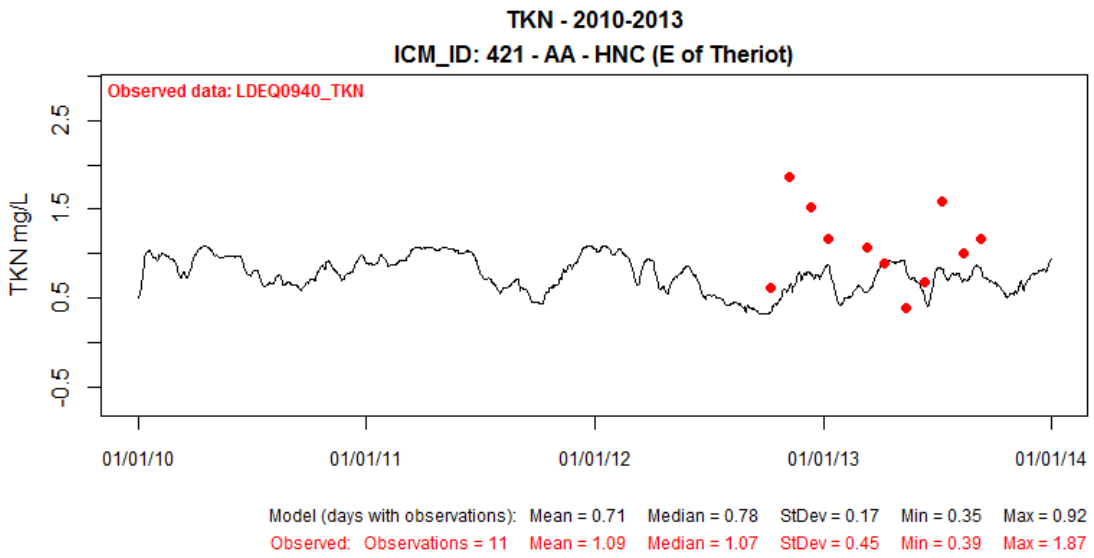


**Figure 145: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 421 (solid black line) Compared to Observed Data at LDEQ0940 for Calibration Period, 2010-2013.**

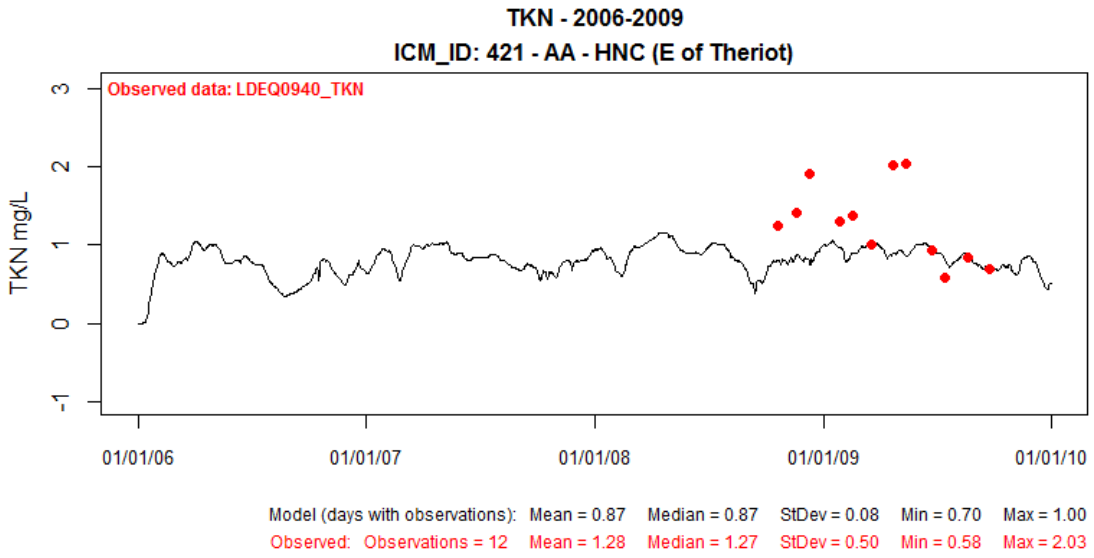


**Figure 146: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 421 (solid black line) Compared to Observed Data at LDEQ0940 for Validation Period, 2006-2009.**

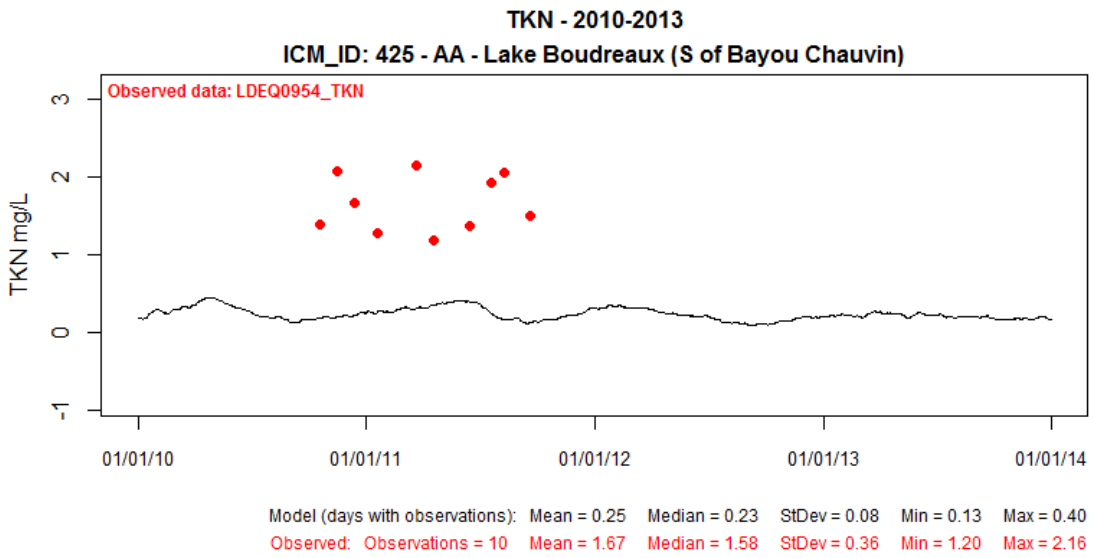


**Figure 147: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 425 (solid black line) Compared to Observed Data at LDEQ0954 for Calibration Period, 2010-2013.**

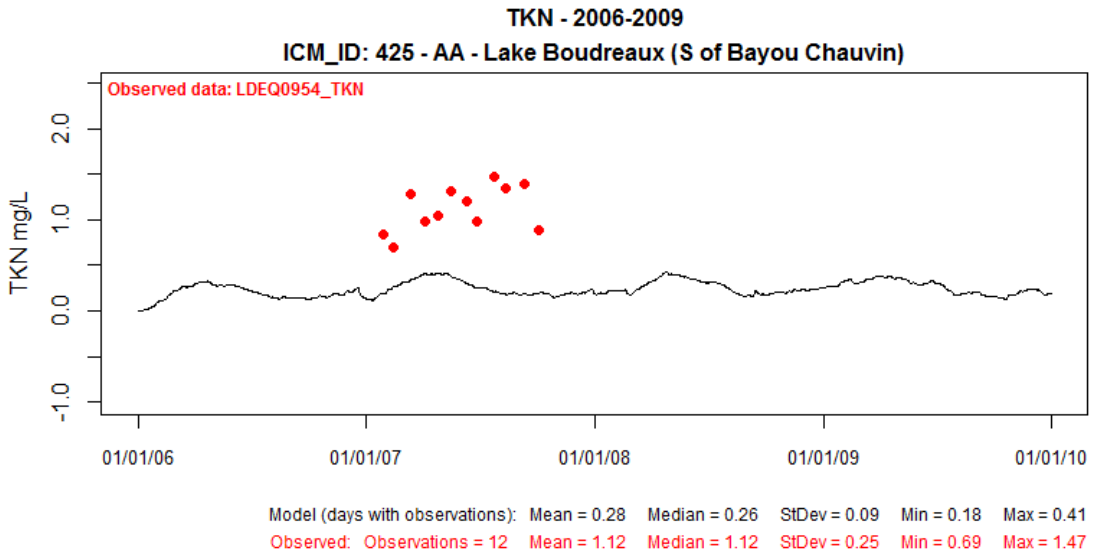


**Figure 148: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 425 (solid black line) Compared to Observed Data at LDEQ0954 for Validation Period, 2006-2009.**

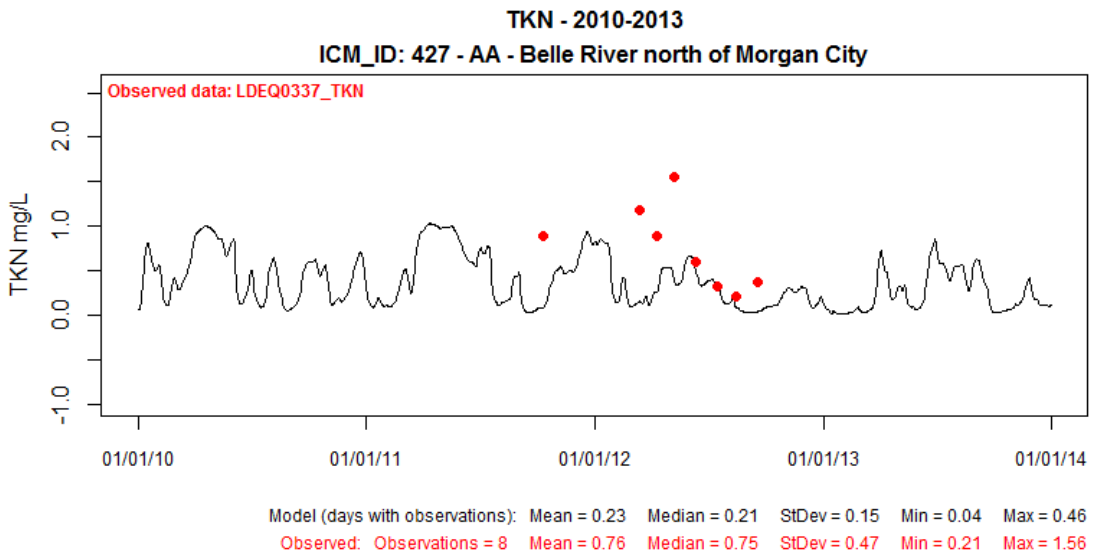


**Figure 149: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 427 (solid black line) Compared to Observed Data at LDEQ0337 for Calibration Period, 2010-2013.**

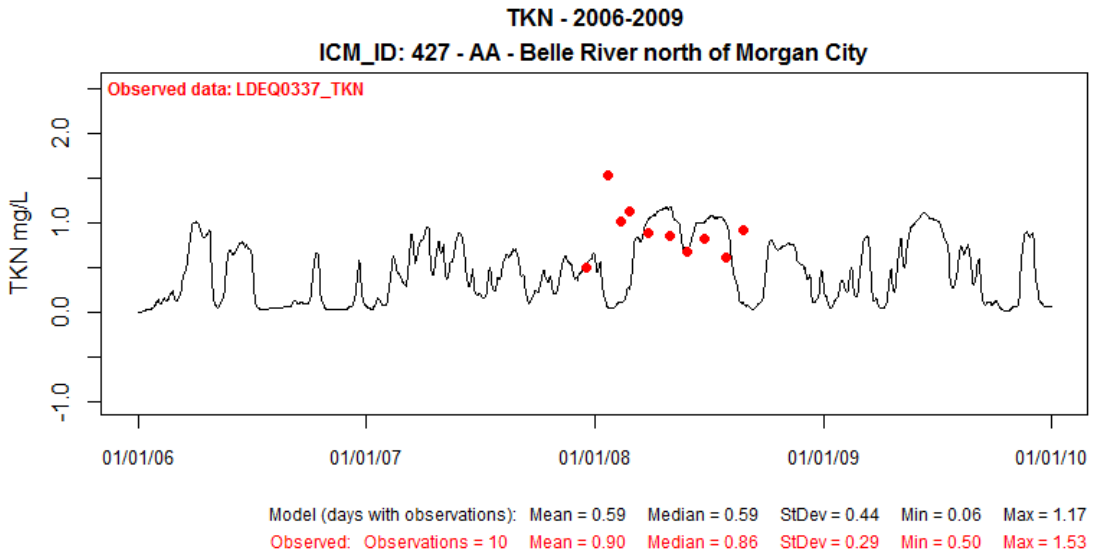


**Figure 150: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 427 (solid black line) Compared to Observed Data at LDEQ0337 for Validation Period, 2006-2009.**

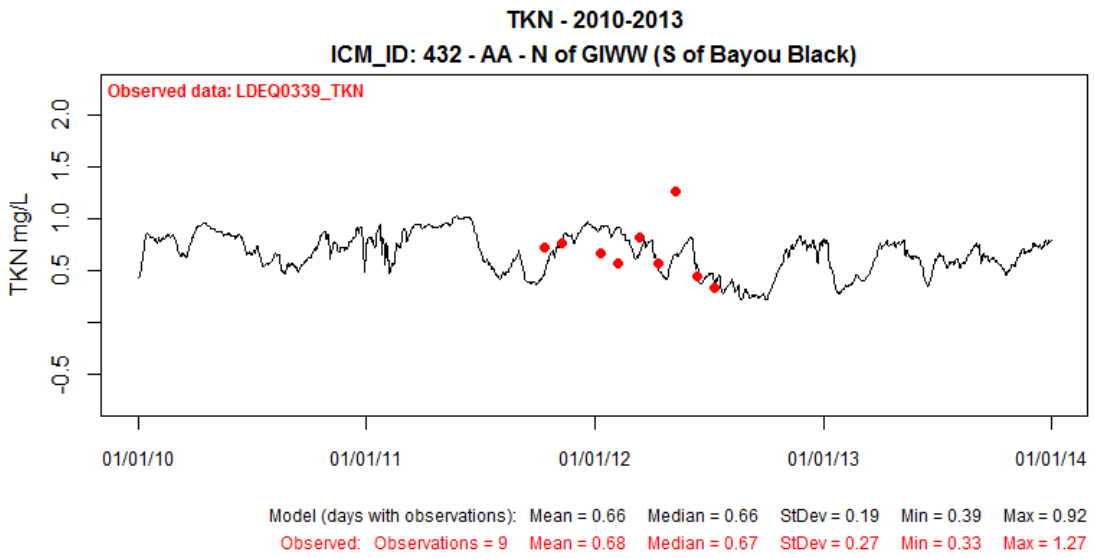


**Figure 151: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 432 (solid black line) Compared to Observed Data at LDEQ0339 for Calibration Period, 2010-2013.**

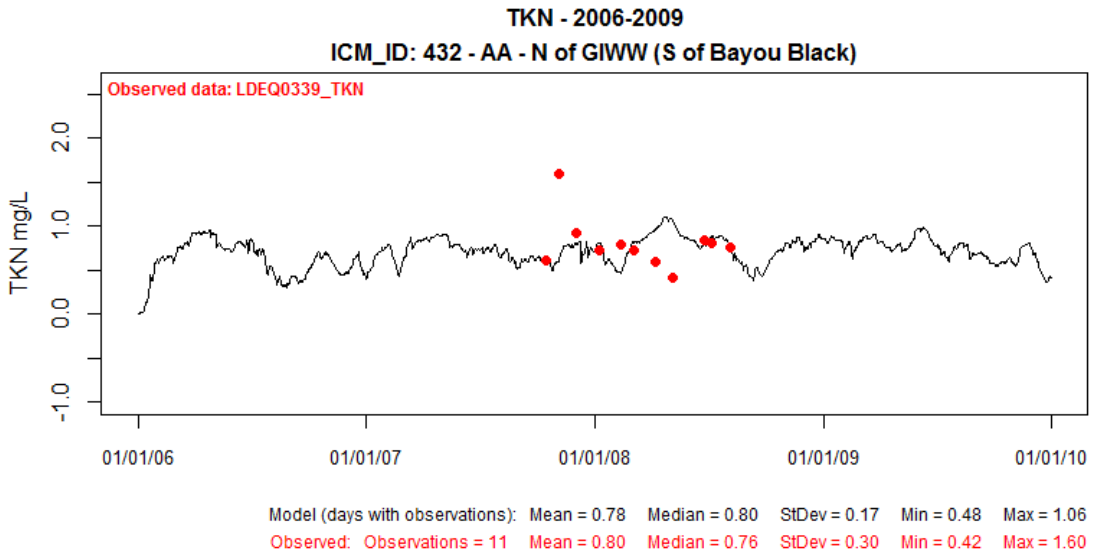


**Figure 152: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 432 (solid black line) Compared to Observed Data at LDEQ0339 for Validation Period, 2006-2009.**

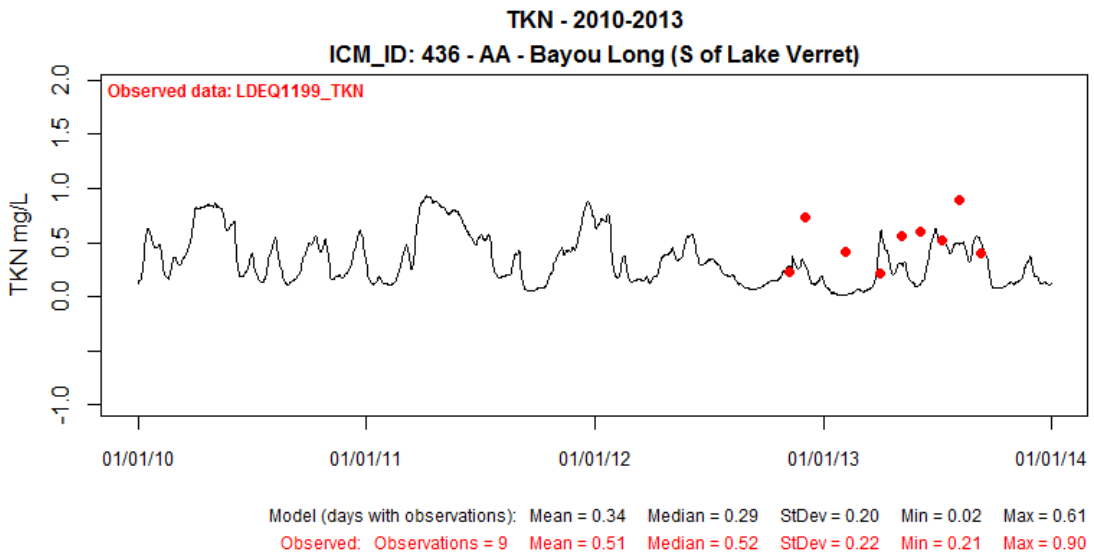


**Figure 153: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 436 (solid black line) Compared to Observed Data at LDEQ1199 for Calibration Period, 2010-2013.**

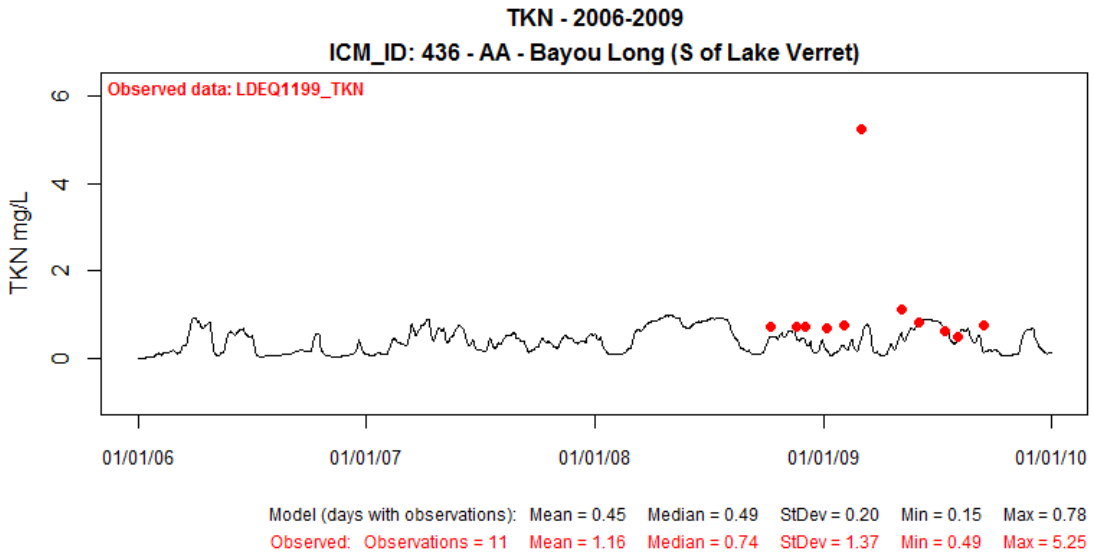


**Figure 154: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 436 (solid black line) Compared to Observed Data at LDEQ1199 for Validation Period, 2006-2009.**

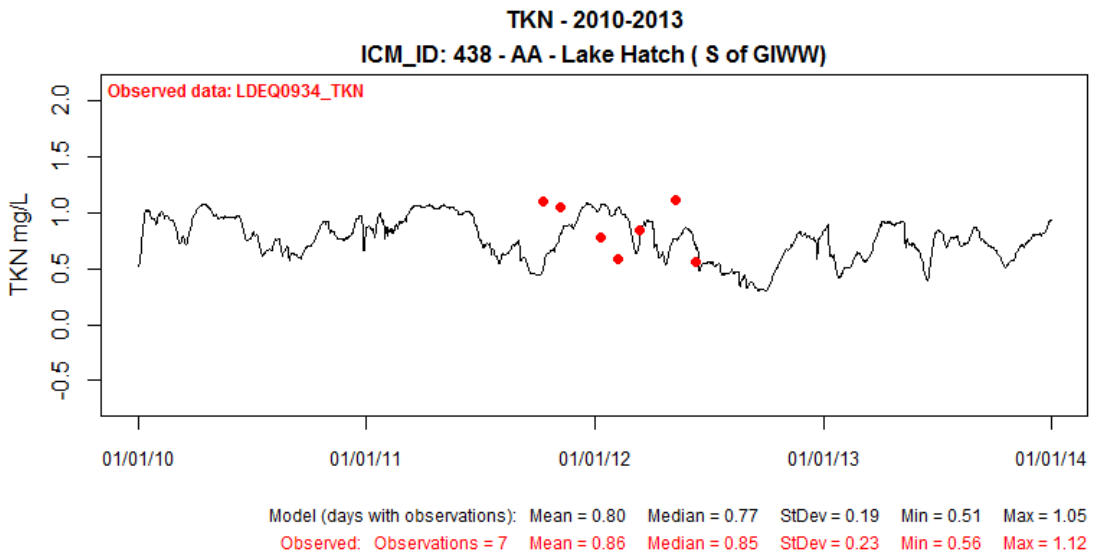


**Figure 155: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 438 (solid black line) Compared to Observed Data at LDEQ0934 for Calibration Period, 2010-2013.**

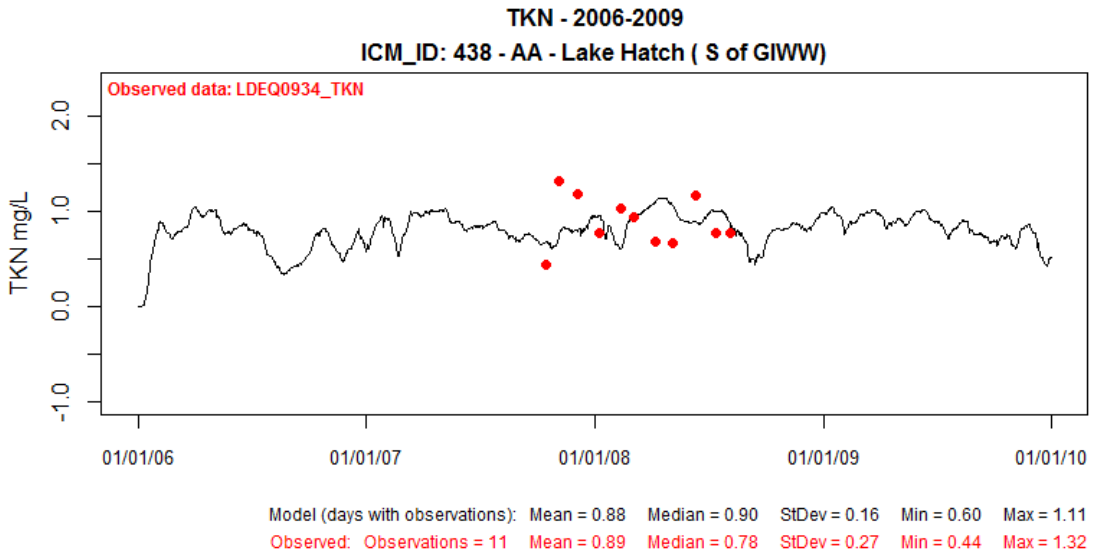


**Figure 156: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 438 (solid black line) Compared to Observed Data at LDEQ0934 for Validation Period, 2006-2009.**

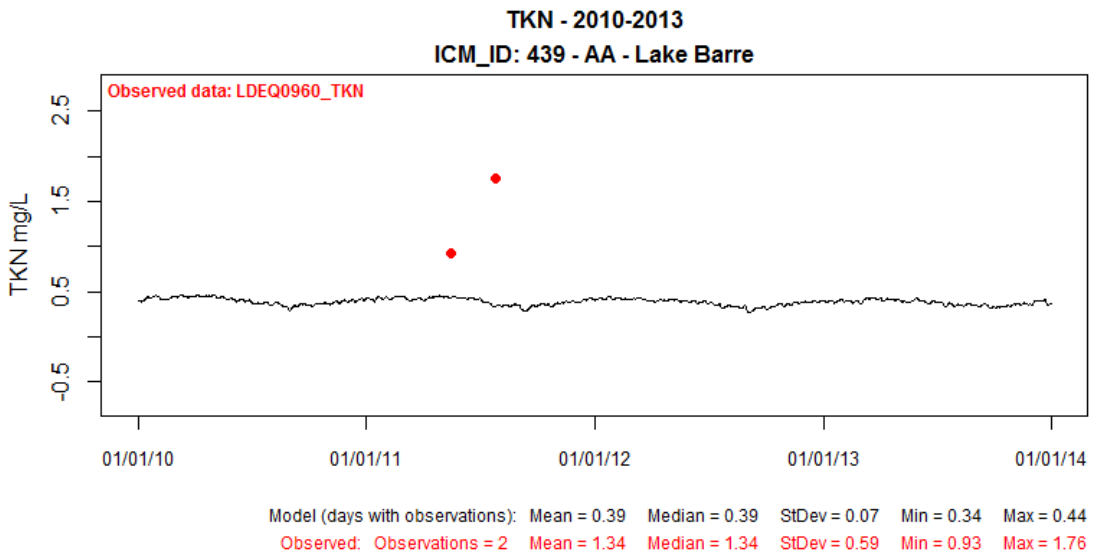


**Figure 157: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 439 (solid black line) Compared to Observed Data at LDEQ0960 for Calibration Period, 2010-2013.**

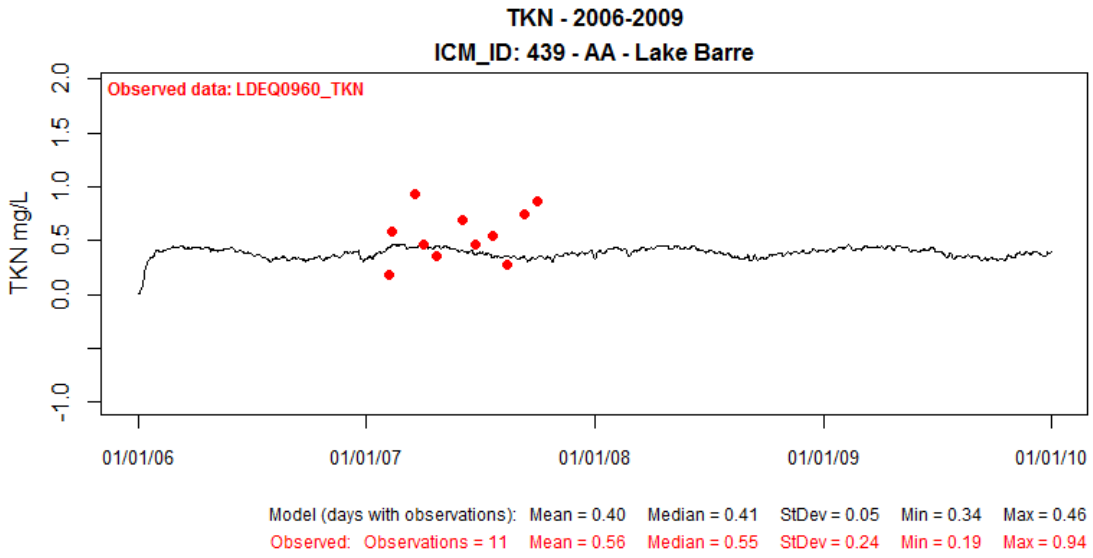


**Figure 158: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 439 (solid black line) Compared to Observed Data at LDEQ0960 for Validation Period, 2006-2009.**

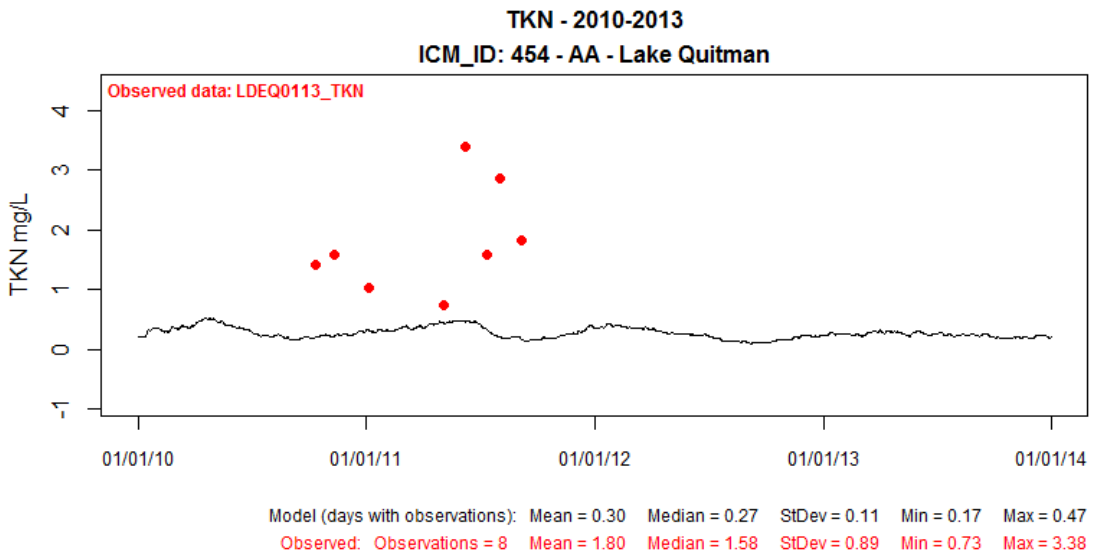


**Figure 159: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 454 (solid black line) Compared to Observed Data at LDEQ0113 for Calibration Period, 2010-2013.**

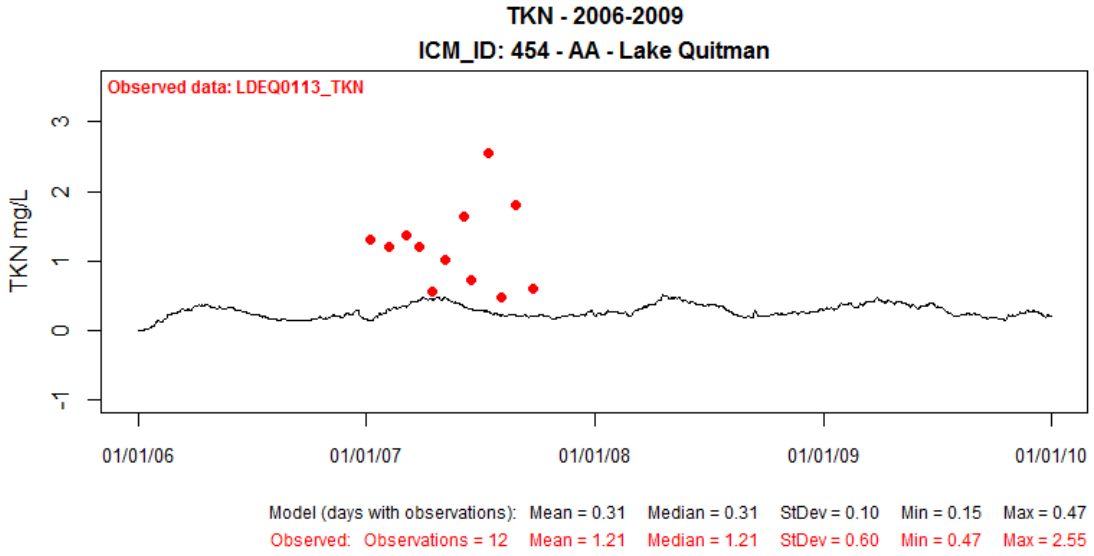


**Figure 160: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 454 (solid black line) Compared to Observed Data at LDEQ0113 for Validation Period, 2006-2009.**

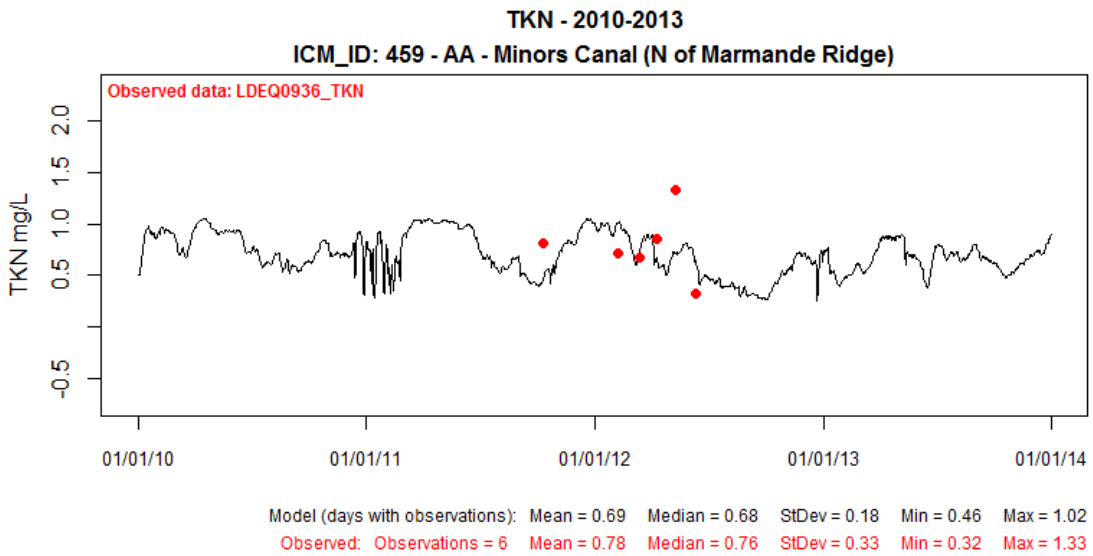


**Figure 161: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 459 (solid black line) Compared to Observed Data at LDEQ0936 for Calibration Period, 2010-2013.**

**Figure 162: No Validation Figure for ICM Compartment 459.**

DRAFT

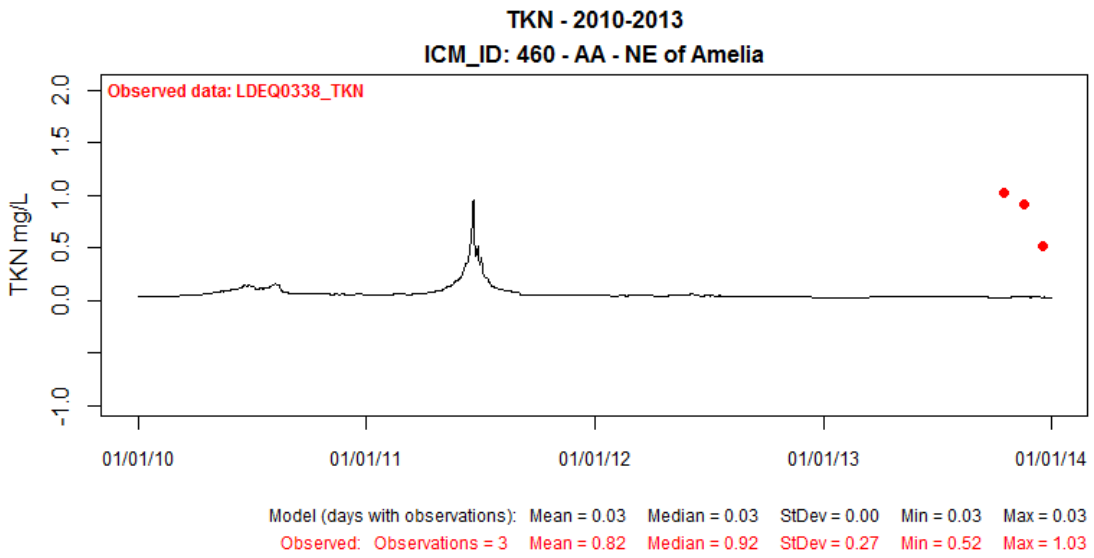


**Figure 163: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 460 (solid black line) Compared to Observed Data at LDEQ0338 for Calibration Period, 2010-2013.**

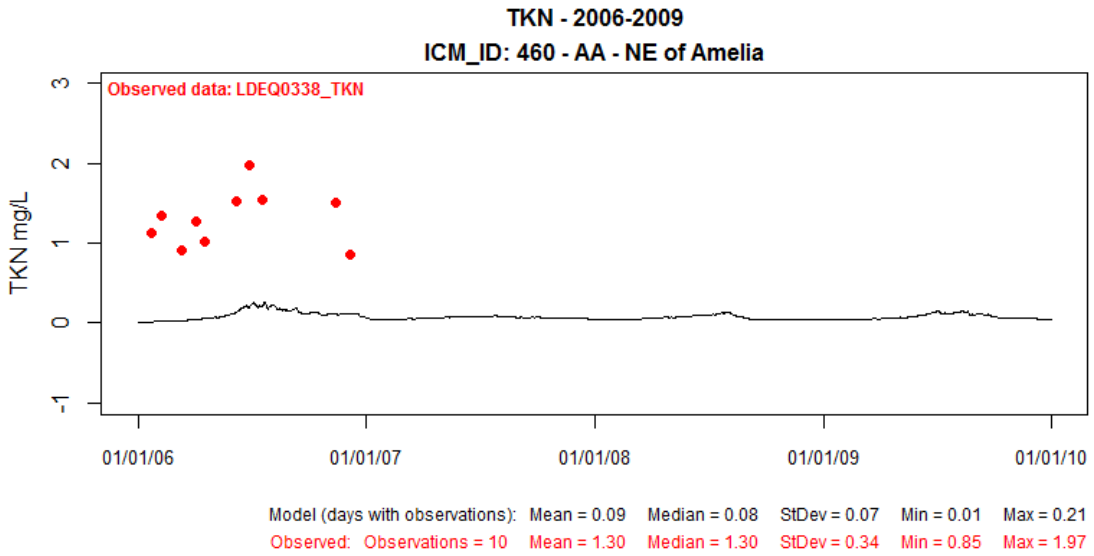


**Figure 164: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 460 (solid black line) Compared to Observed Data at LDEQ0338 for Validation Period, 2006-2009.**

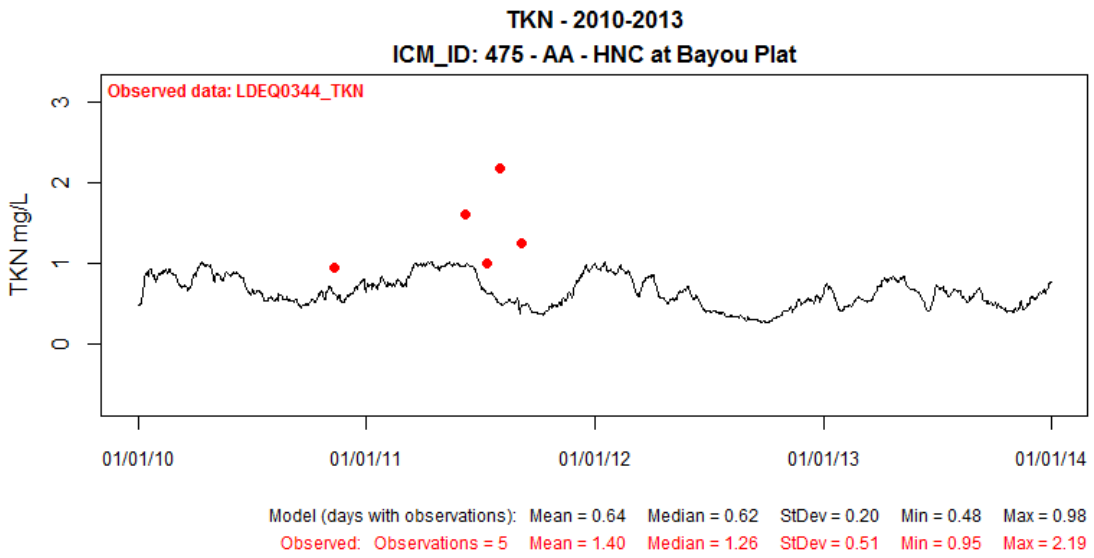


**Figure 165: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 475 (solid black line) Compared to Observed Data at LDEQ0344 for Calibration Period, 2010-2013.**

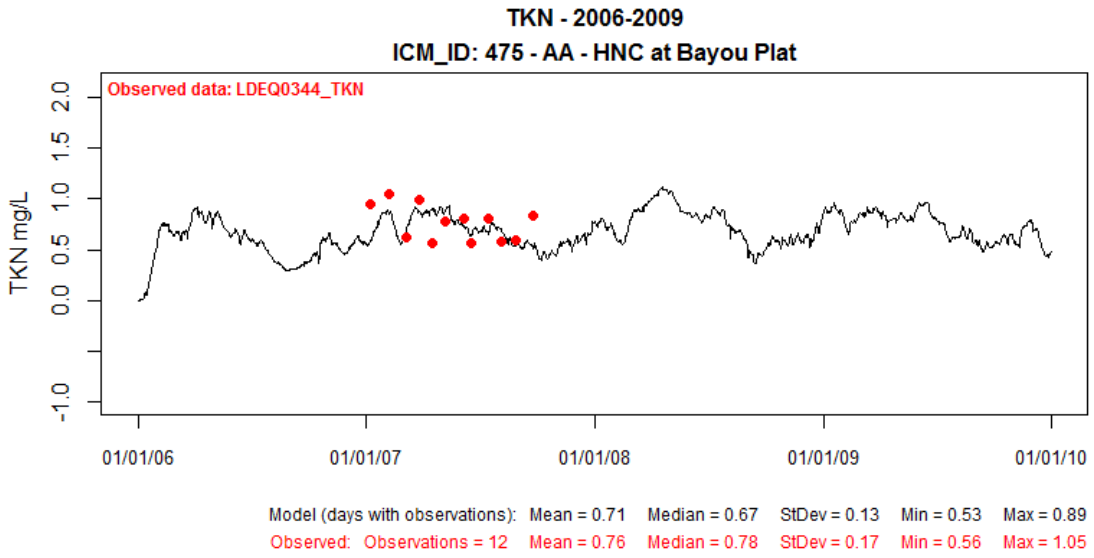


**Figure 166: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 475 (solid black line) Compared to Observed Data at LDEQ0344 for Validation Period, 2006-2009.**

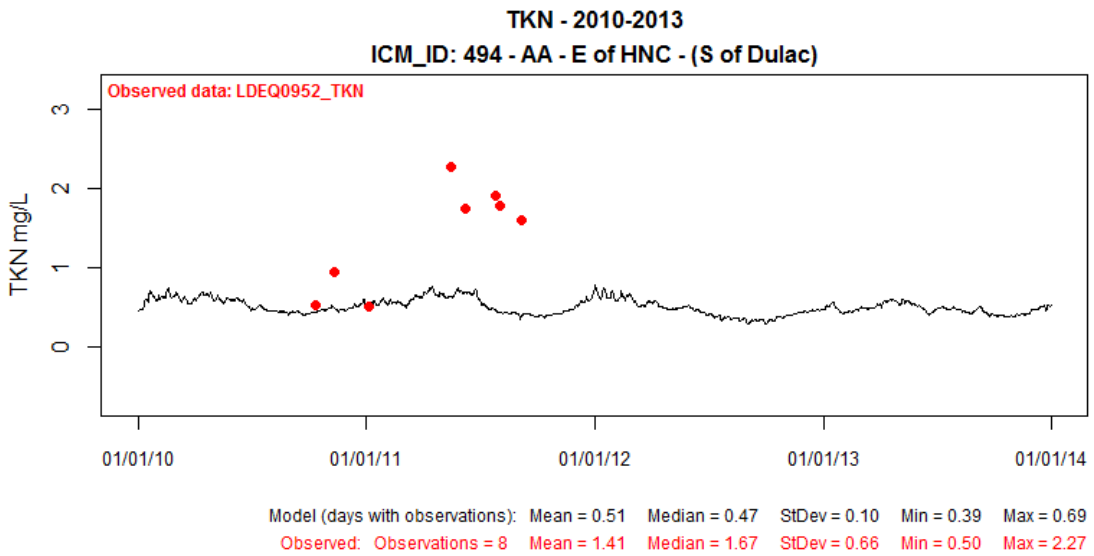


**Figure 167: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 494 (solid black line) Compared to Observed Data at LDEQ0952 for Calibration Period, 2010-2013.**

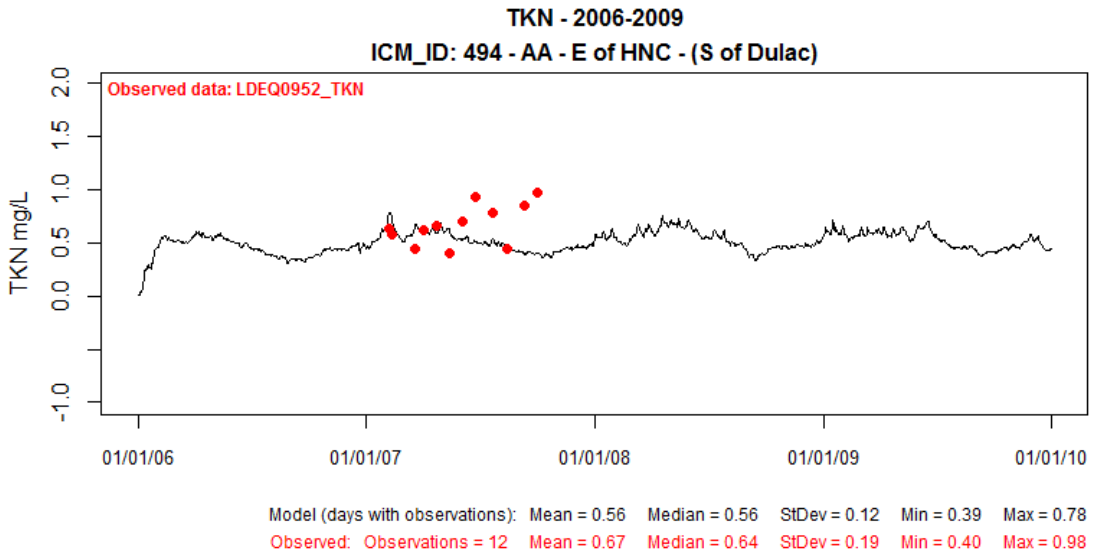


**Figure 168: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 494 (solid black line) Compared to Observed Data at LDEQ0952 for Validation Period, 2006-2009.**

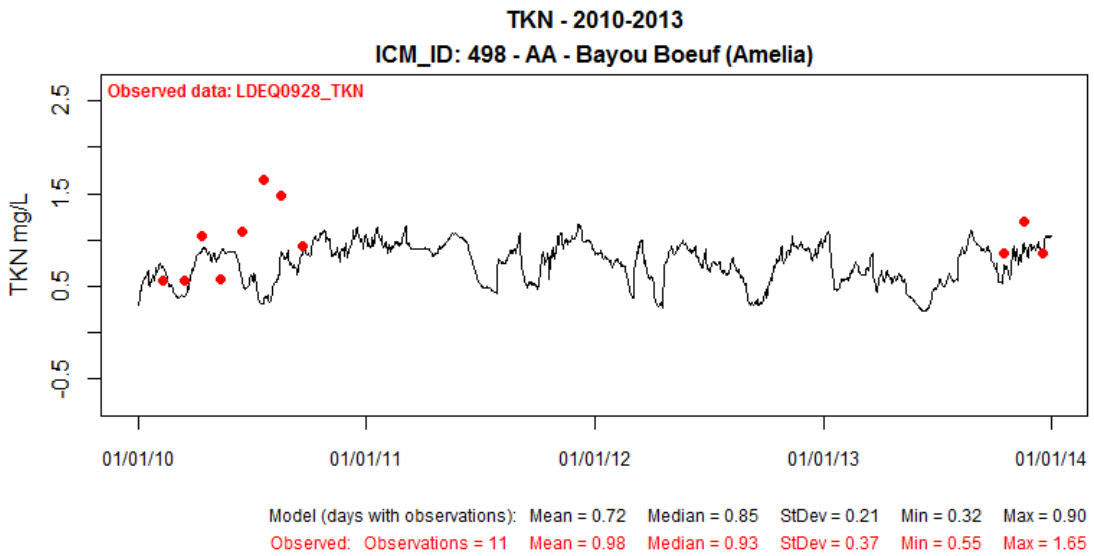


**Figure 169: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 498 (solid black line) Compared to Observed Data at LDEQ0928 for Calibration Period, 2010-2013.**

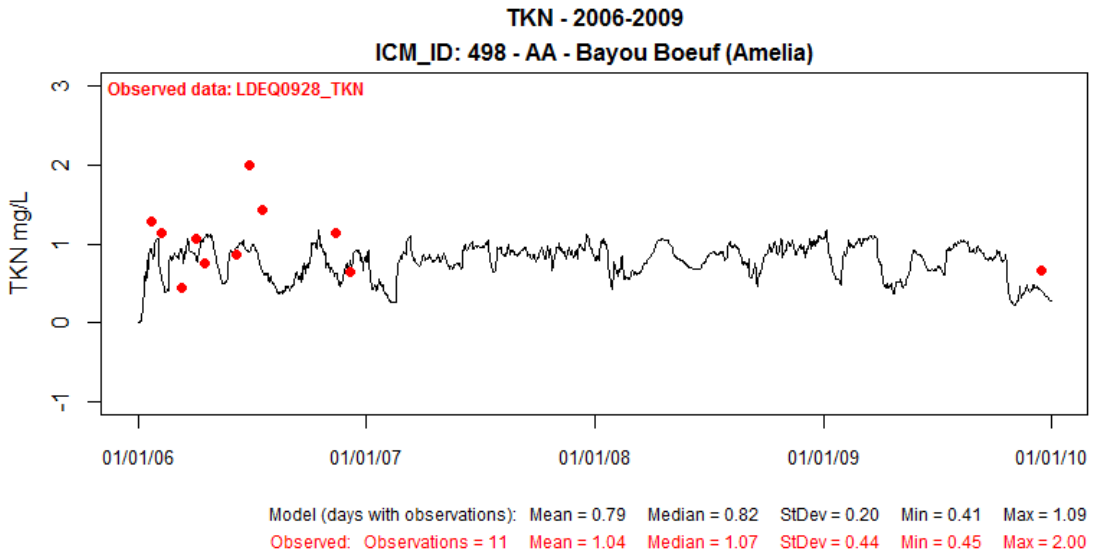


**Figure 170: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 498 (solid black line) Compared to Observed Data at LDEQ0928 for Validation Period, 2006-2009.**

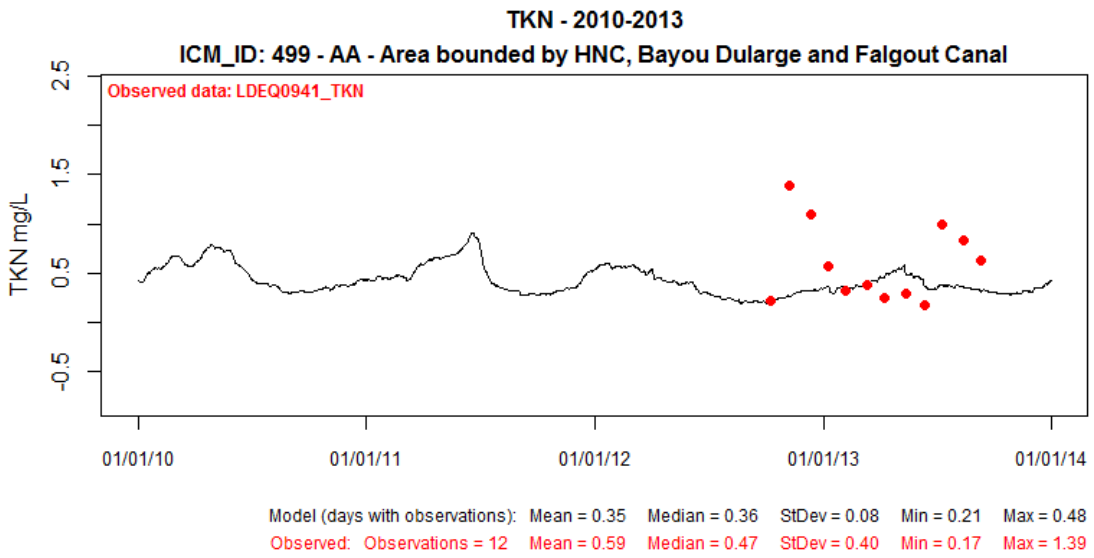


**Figure 171: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 499 (solid black line) Compared to Observed Data at LDEQ0941 for Calibration Period, 2010-2013.**

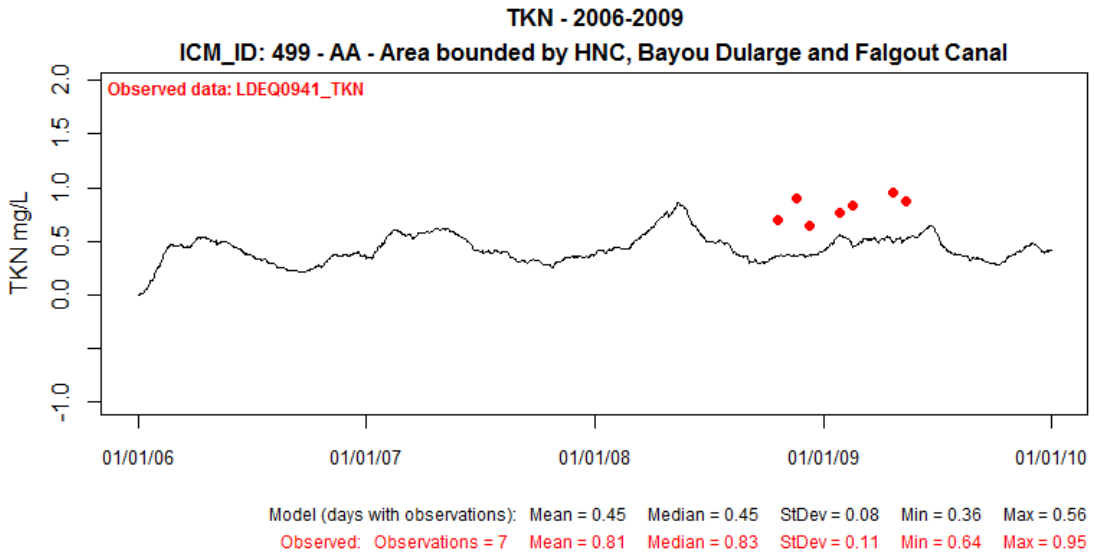


**Figure 172: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 499 (solid black line) Compared to Observed Data at LDEQ0941 for Validation Period, 2006-2009.**

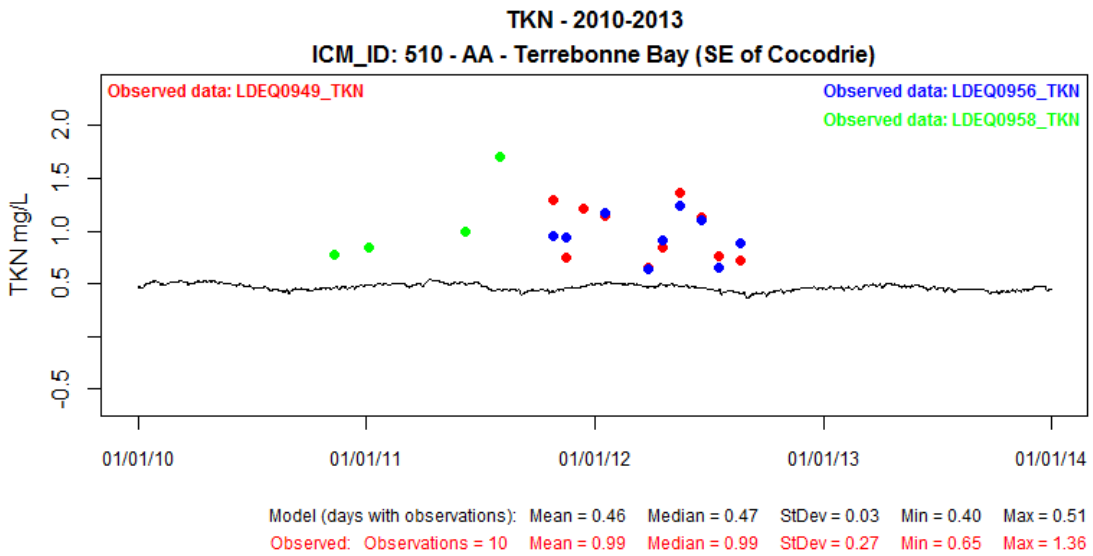


**Figure 173: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 510 (solid black line) Compared to Observed Data at LDEQ0949 for Calibration Period, 2010-2013.**

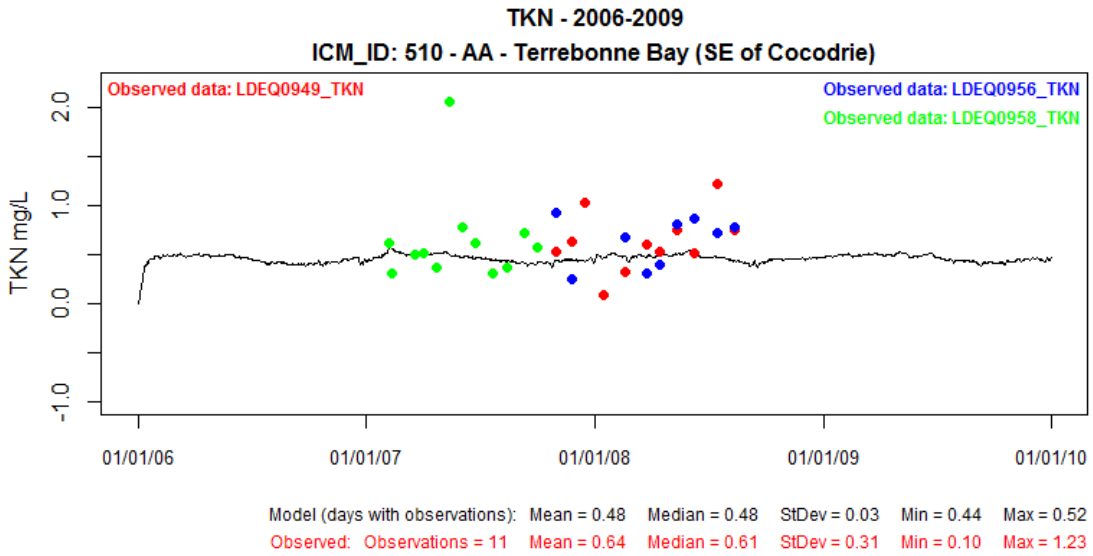


**Figure 174: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 510 (solid black line) Compared to Observed Data at LDEQ0949 for Validation Period, 2006-2009.**

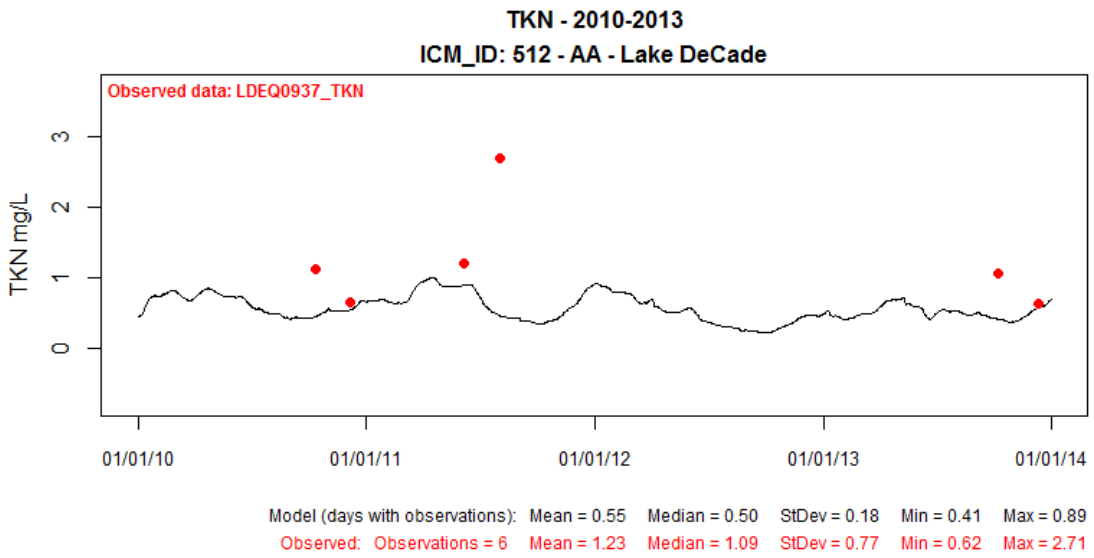


**Figure 175: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 512 (solid black line) Compared to Observed Data at LDEQ0937 for Calibration Period, 2010-2013.**

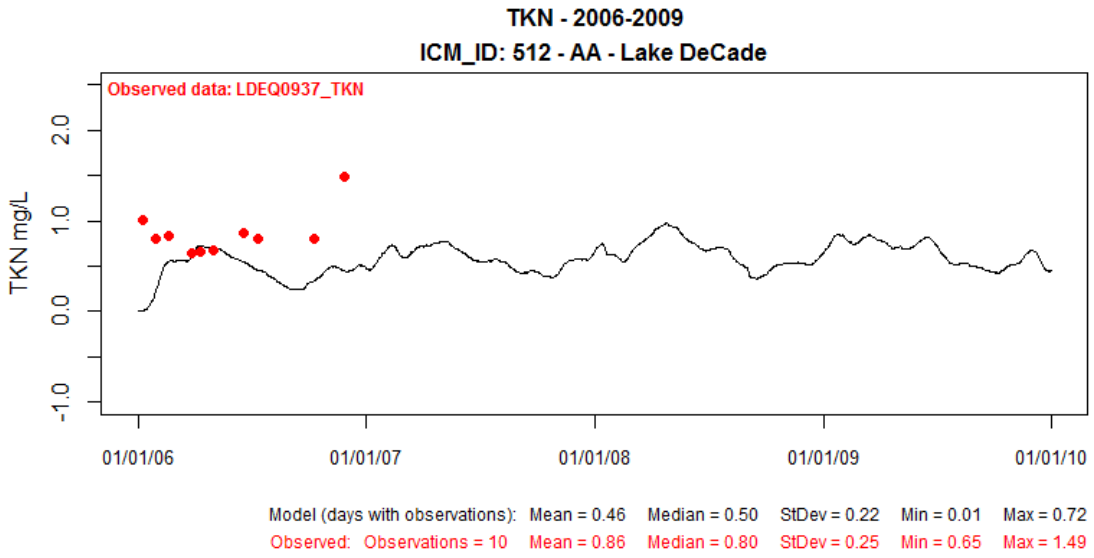


**Figure 176: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 512 (solid black line) Compared to Observed Data at LDEQ0937 for Validation Period, 2006-2009.**

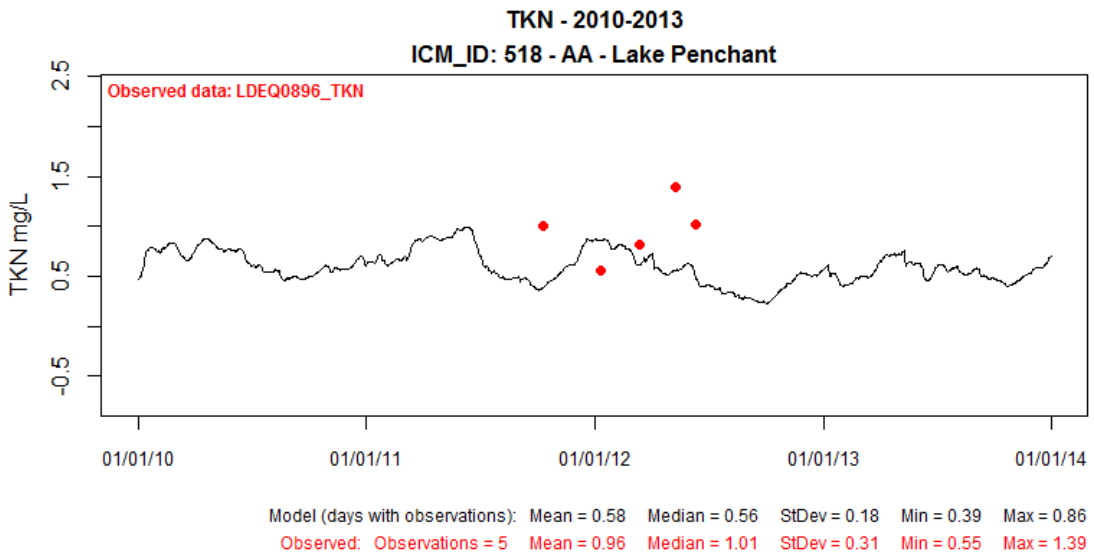


**Figure 177: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 518 (solid black line) Compared to Observed Data at LDEQ0896 for Calibration Period, 2010-2013.**

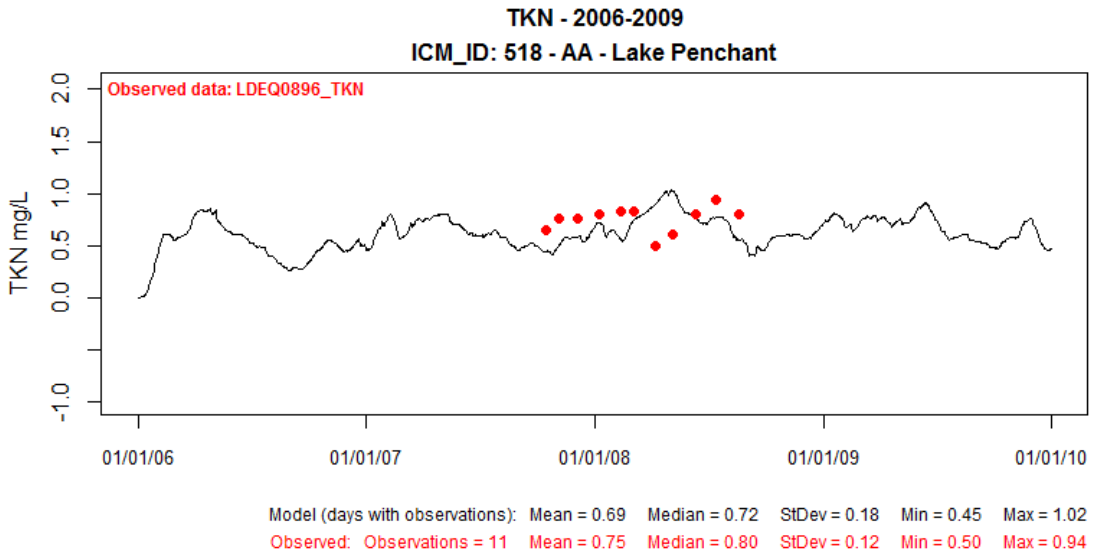


**Figure 178: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 518 (solid black line) Compared to Observed Data at LDEQ0896 for Validation Period, 2006-2009.**

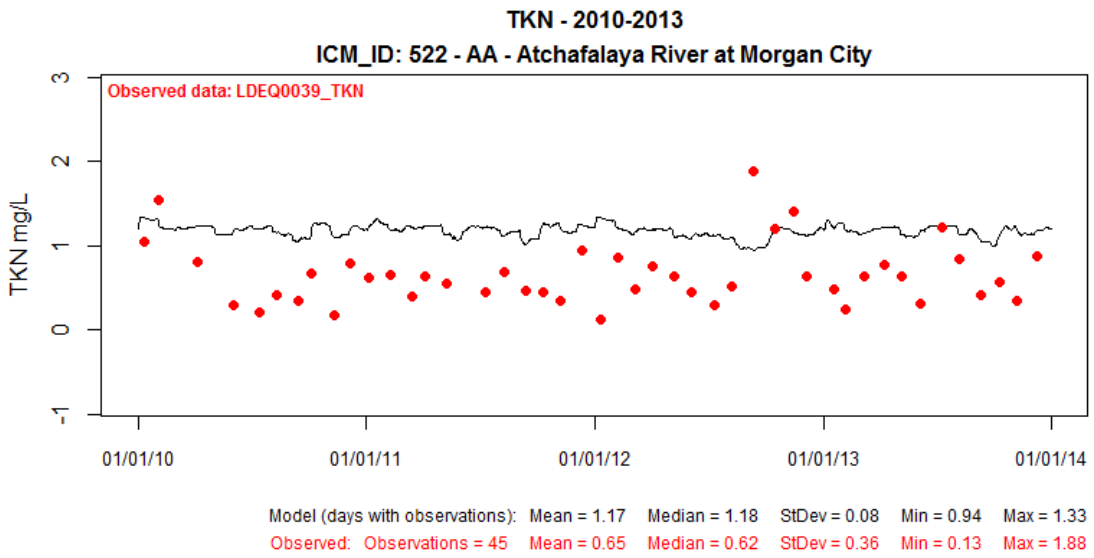


**Figure 179: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 522 (solid black line) Compared to Observed Data at LDEQ0039 for Calibration Period, 2010-2013.**

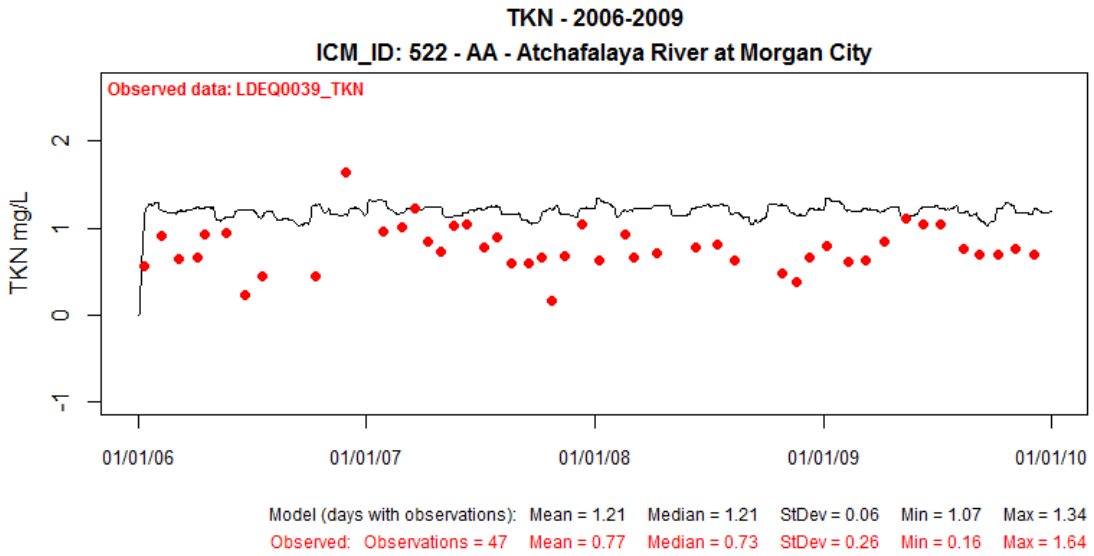


**Figure 180: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 522 (solid black line) Compared to Observed Data at LDEQ0039 for Validation Period, 2006-2009.**

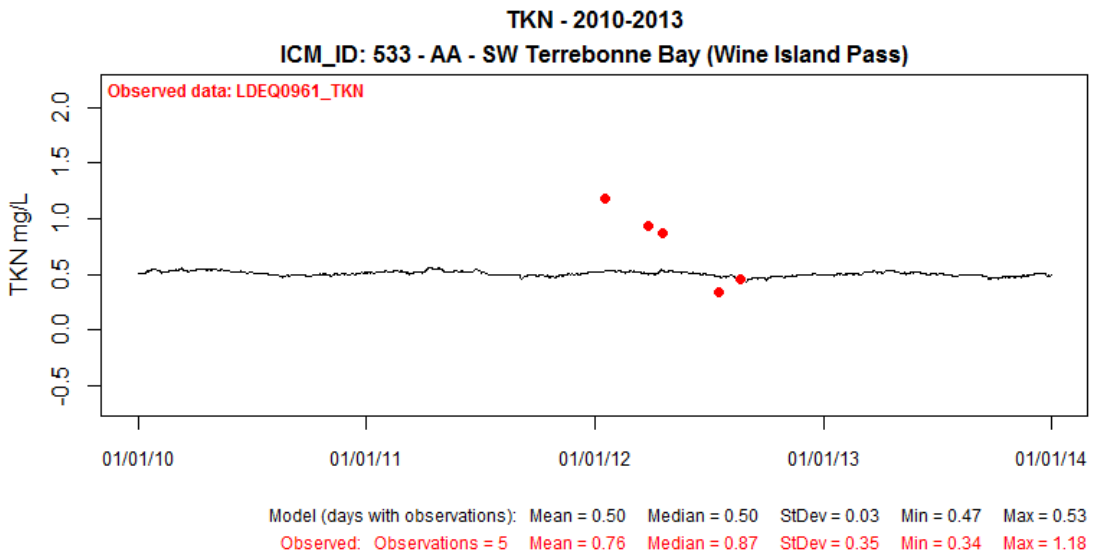


**Figure 181: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 533 (solid black line) Compared to Observed Data at LDEQ0961 for Calibration Period, 2010-2013.**

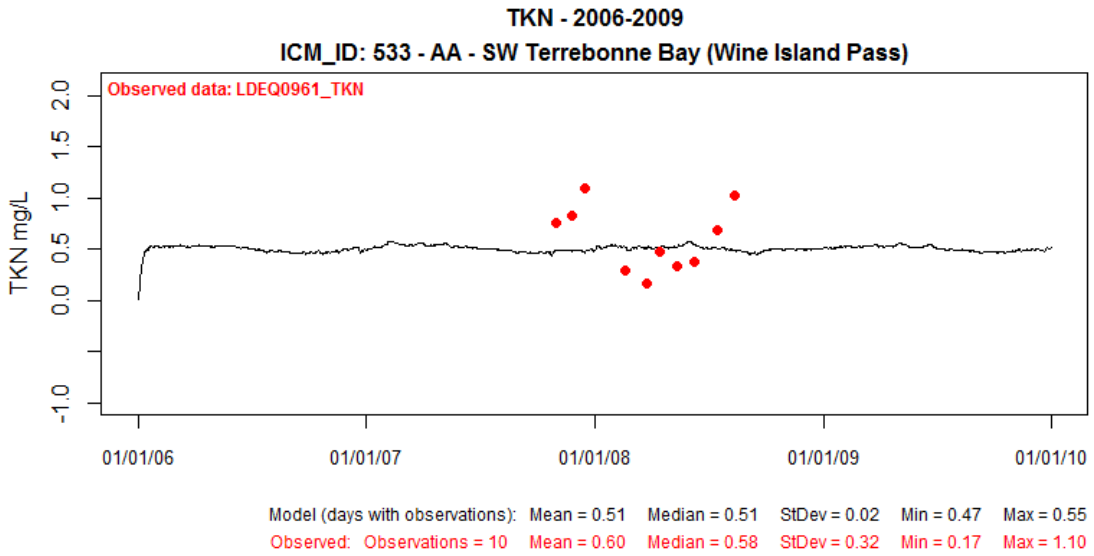


**Figure 182: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 533 (solid black line) Compared to Observed Data at LDEQ0961 for Validation Period, 2006-2009.**

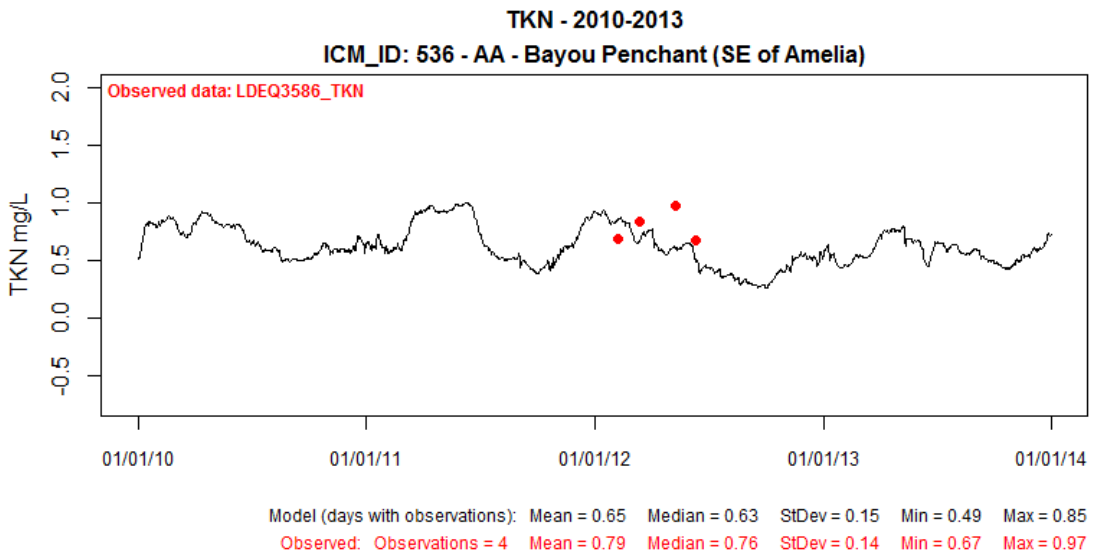


**Figure 183: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 536 (solid black line) Compared to Observed Data at LDEQ3586 for Calibration Period, 2010-2013.**

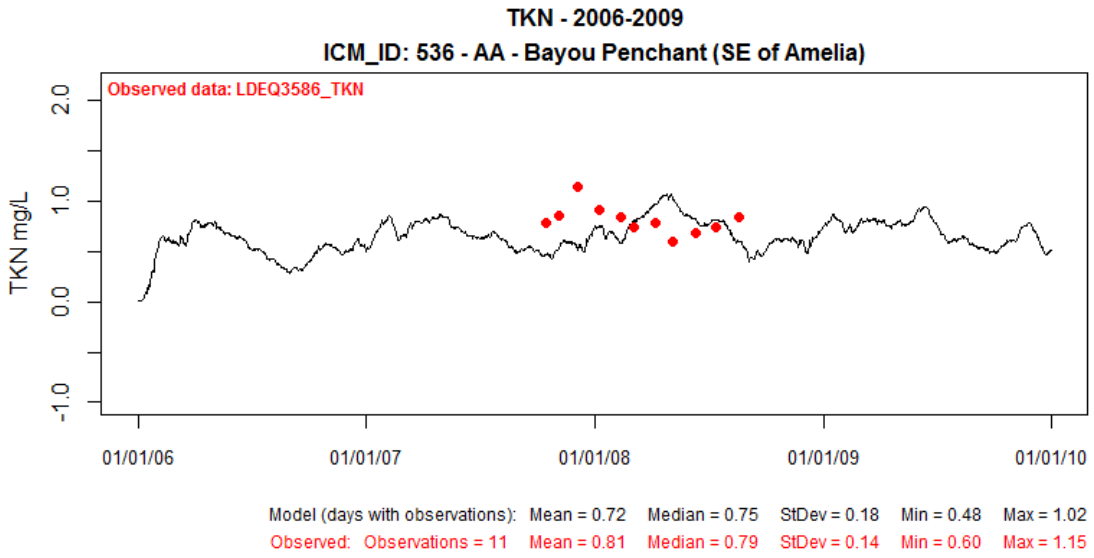


**Figure 184: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 536 (solid black line) Compared to Observed Data at LDEQ3586 for Validation Period, 2006-2009.**

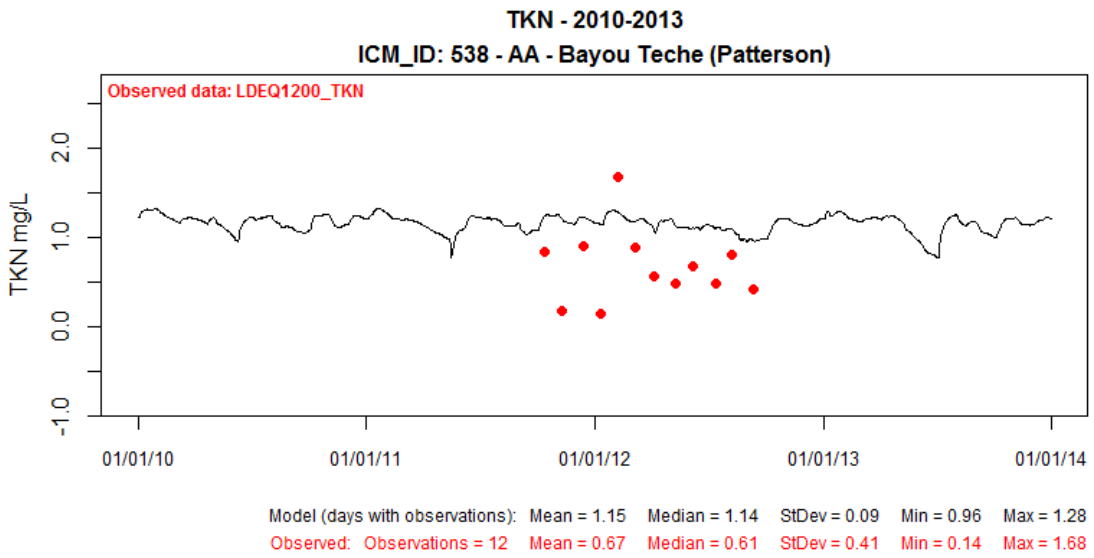


**Figure 185: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 538 (solid black line) Compared to Observed Data at LDEQ1200 for Calibration Period, 2010-2013.**

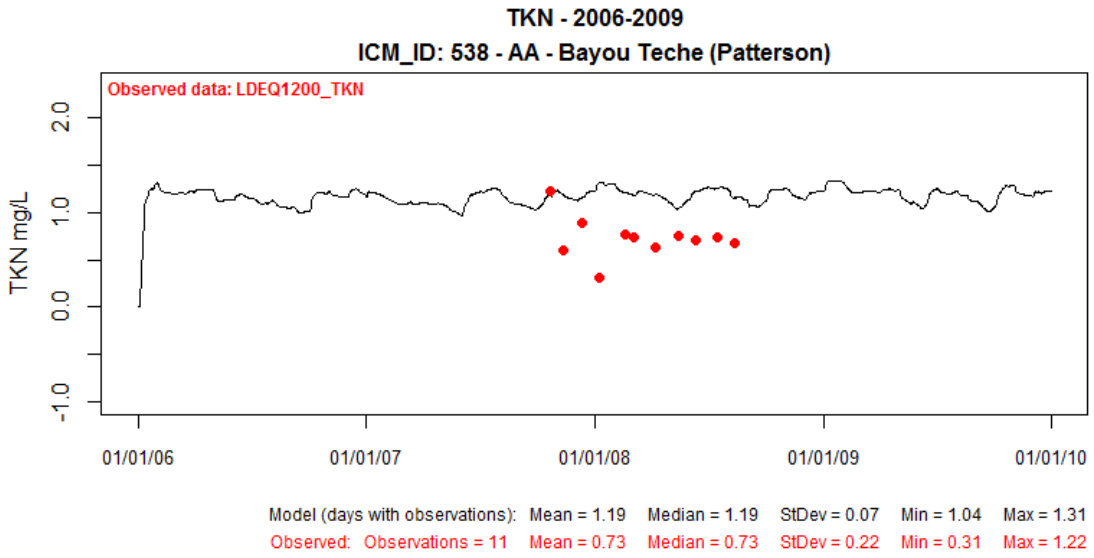


**Figure 186: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 538 (solid black line) Compared to Observed Data at LDEQ1200 for Validation Period, 2006-2009.**

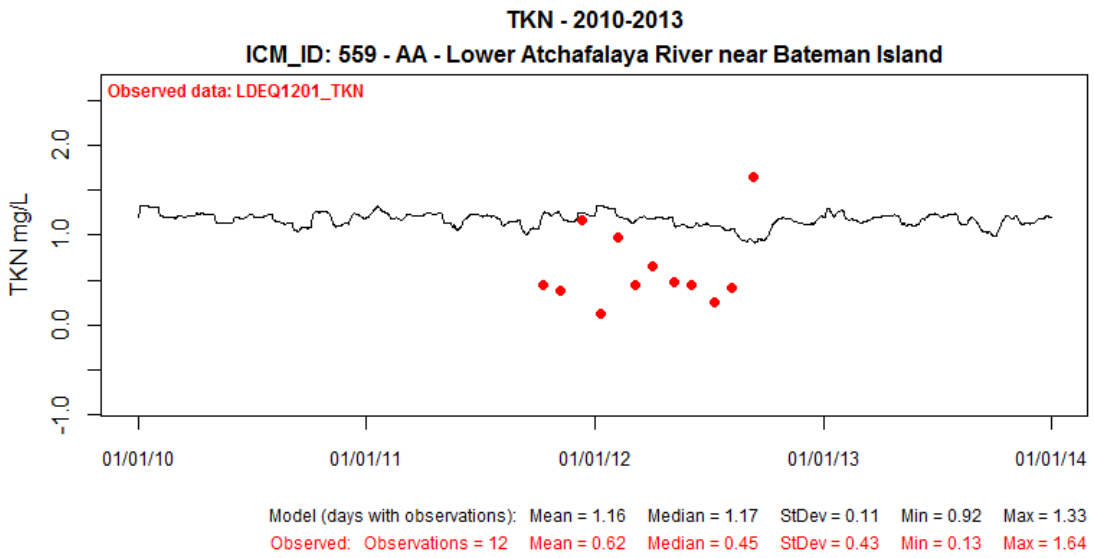


**Figure 187: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 559 (solid black line) Compared to Observed Data at LDEQ1201 for Calibration Period, 2010-2013.**

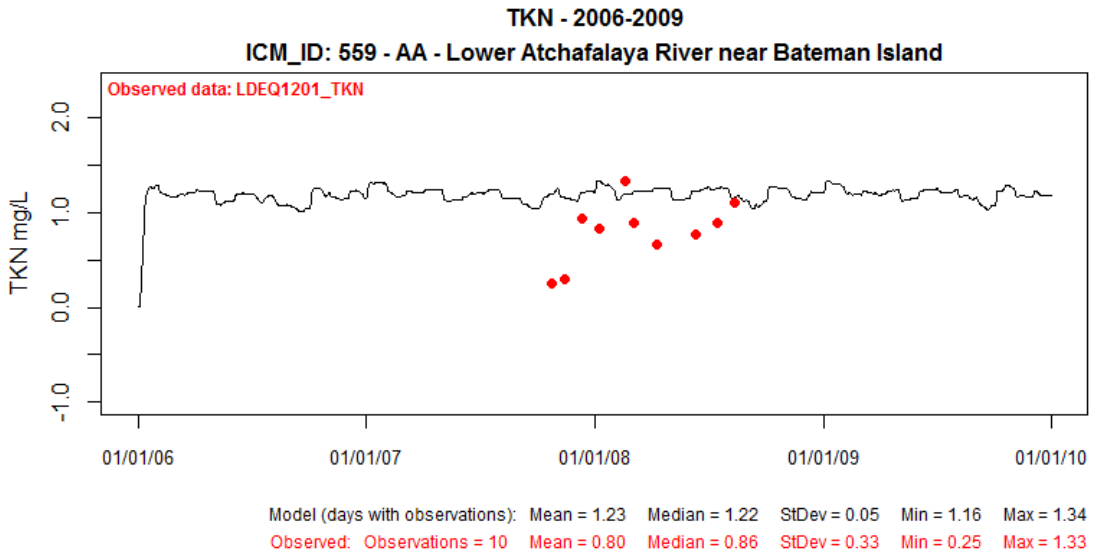


**Figure 188: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 559 (solid black line) Compared to Observed Data at LDEQ1201 for Validation Period, 2006-2009.**

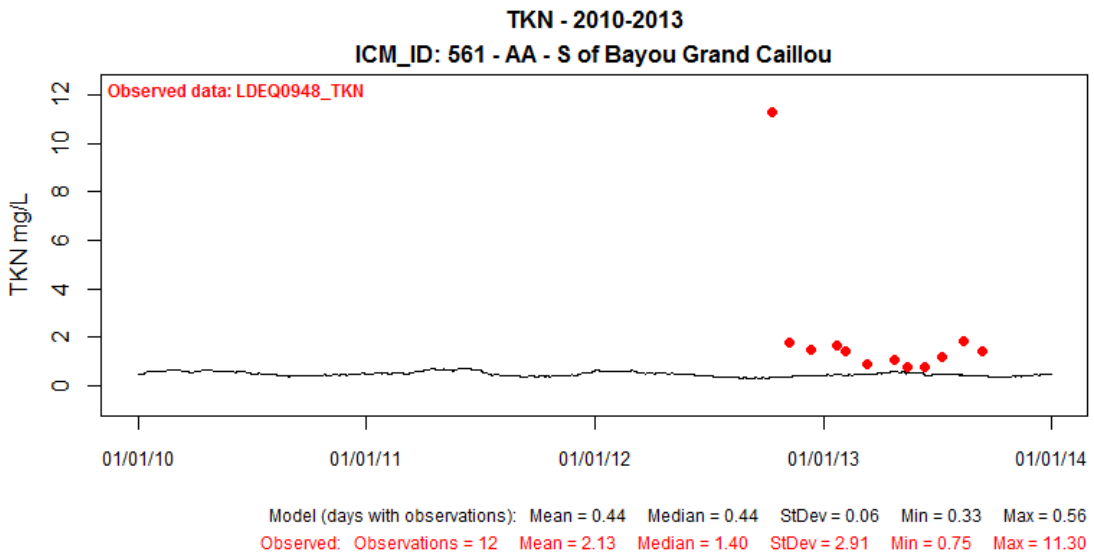


**Figure 189: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 561 (solid black line) Compared to Observed Data at LDEQ0948 for Calibration Period, 2010-2013.**

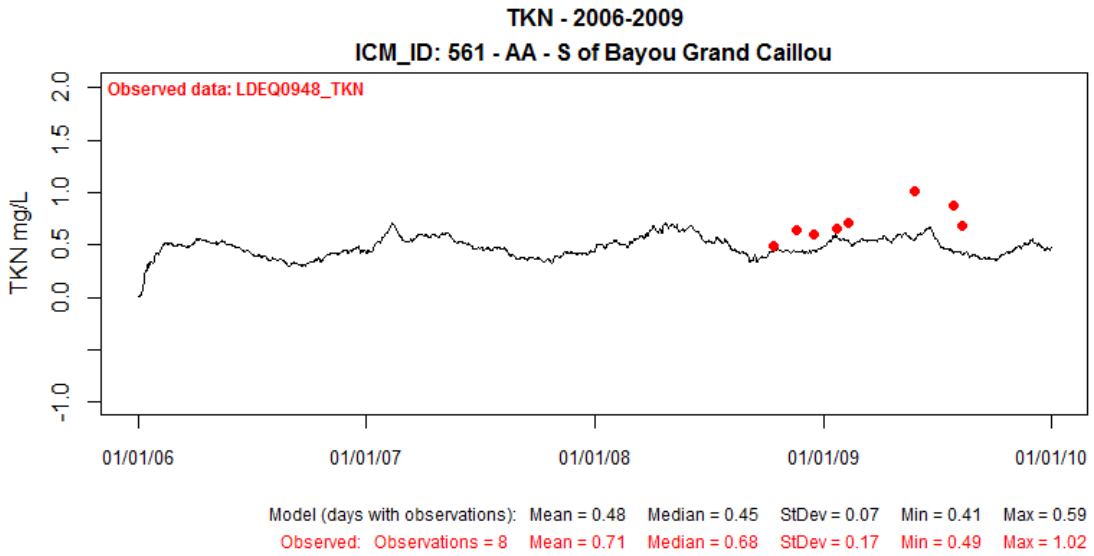


**Figure 190: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 561 (solid black line) Compared to Observed Data at LDEQ0948 for Validation Period, 2006-2009.**

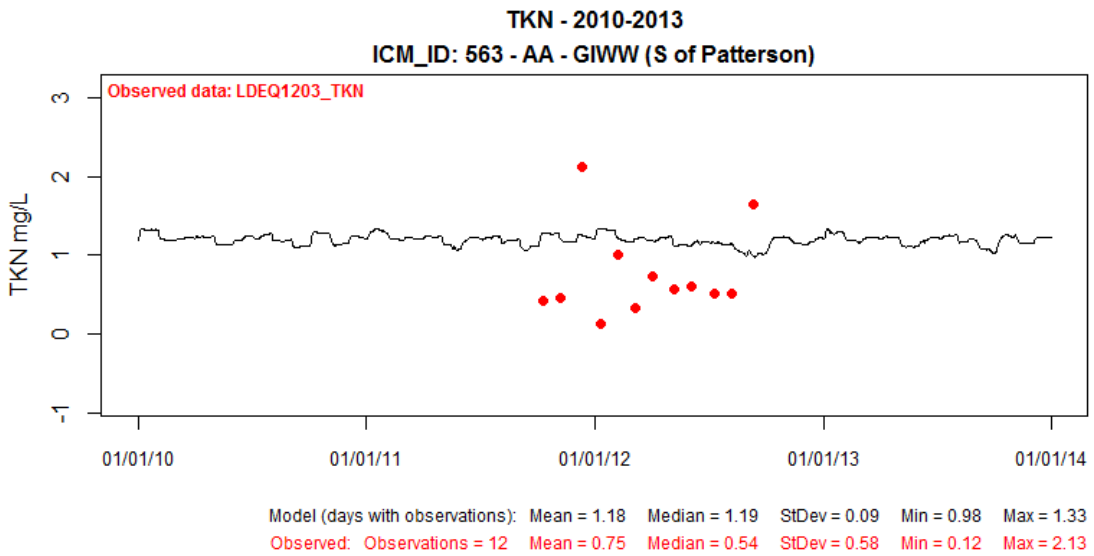


**Figure 191: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 563 (solid black line) Compared to Observed Data at LDEQ1203 for Calibration Period, 2010-2013.**

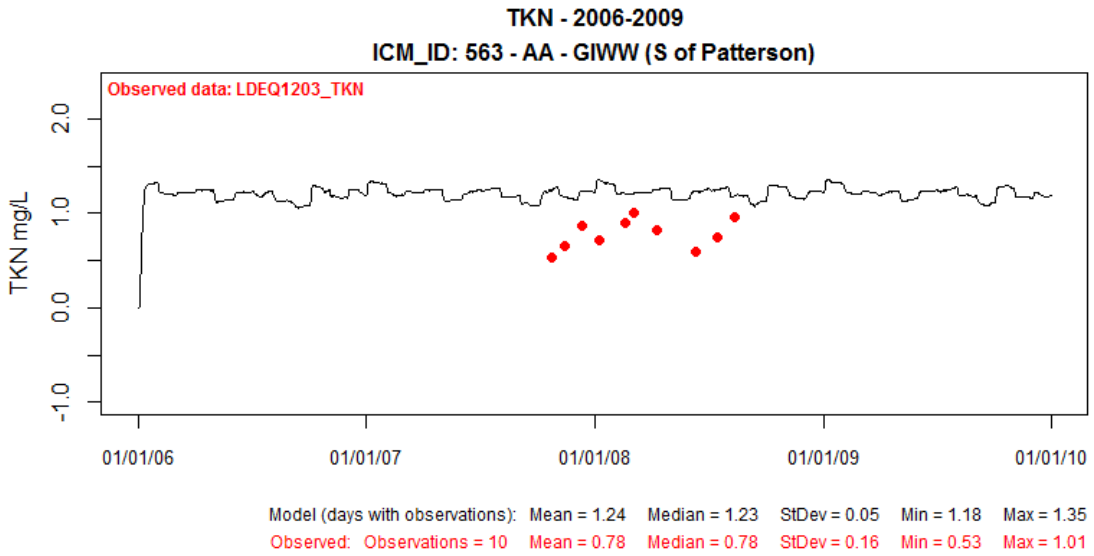


**Figure 192: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 563 (solid black line) Compared to Observed Data at LDEQ1203 for Validation Period, 2006-2009.**

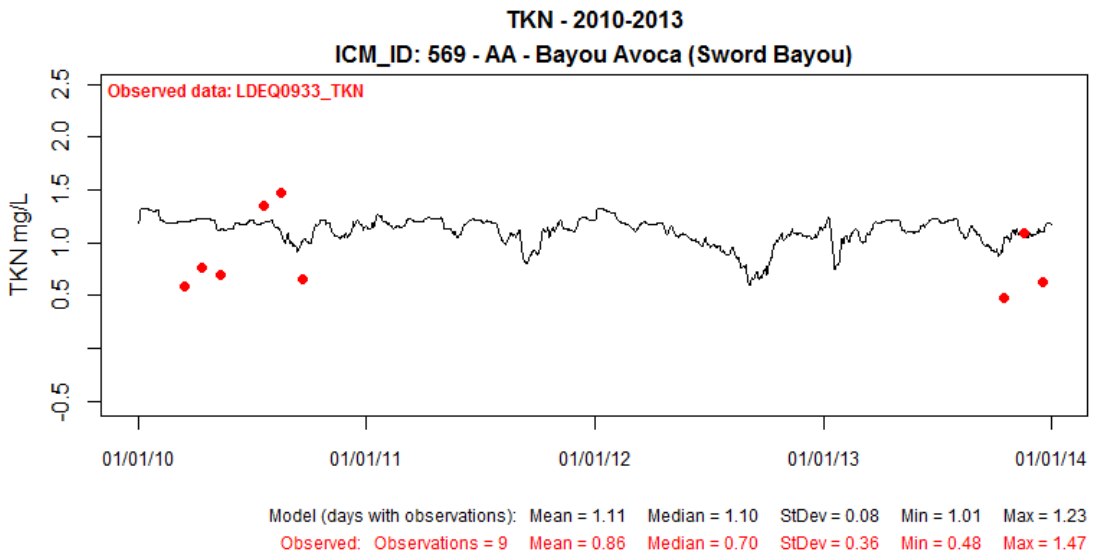


**Figure 193: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 569 (solid black line) Compared to Observed Data at LDEQ0933 for Calibration Period, 2010-2013.**

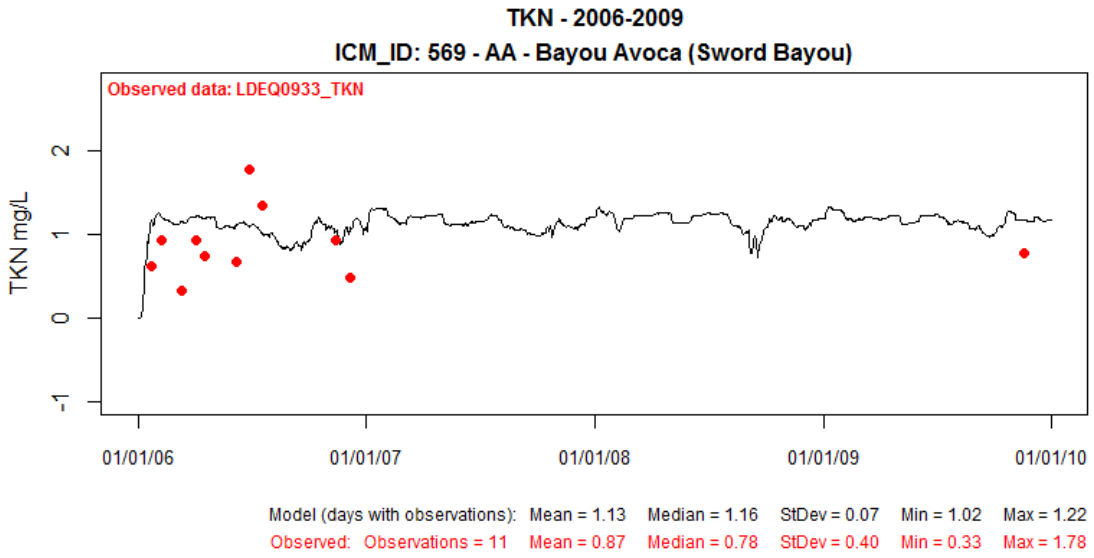


**Figure 194: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 569 (solid black line) Compared to Observed Data at LDEQ0933 for Validation Period, 2006-2009.**

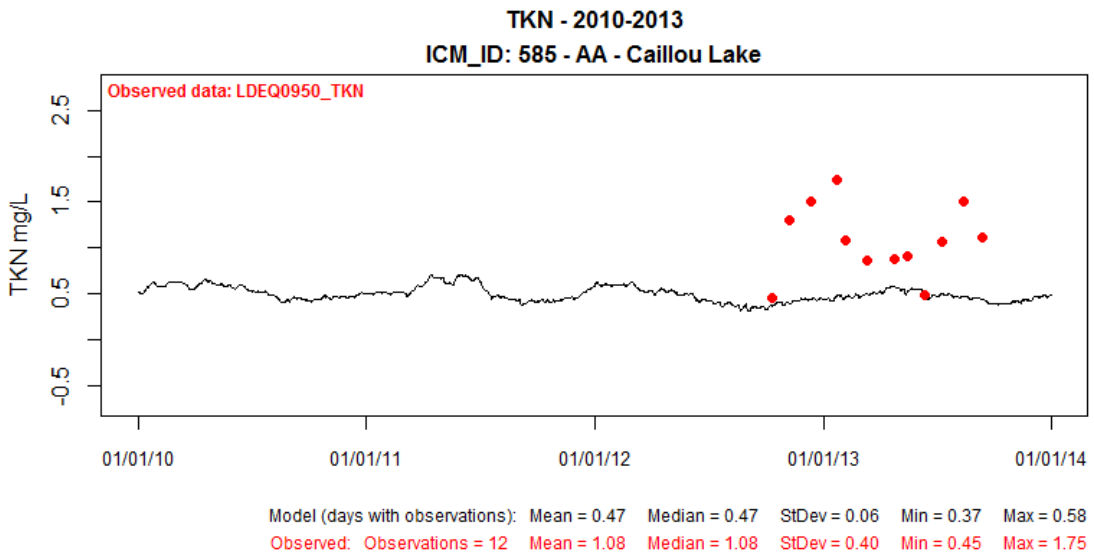


**Figure 195: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 585 (solid black line) Compared to Observed Data at LDEQ0950 for Calibration Period, 2010-2013.**

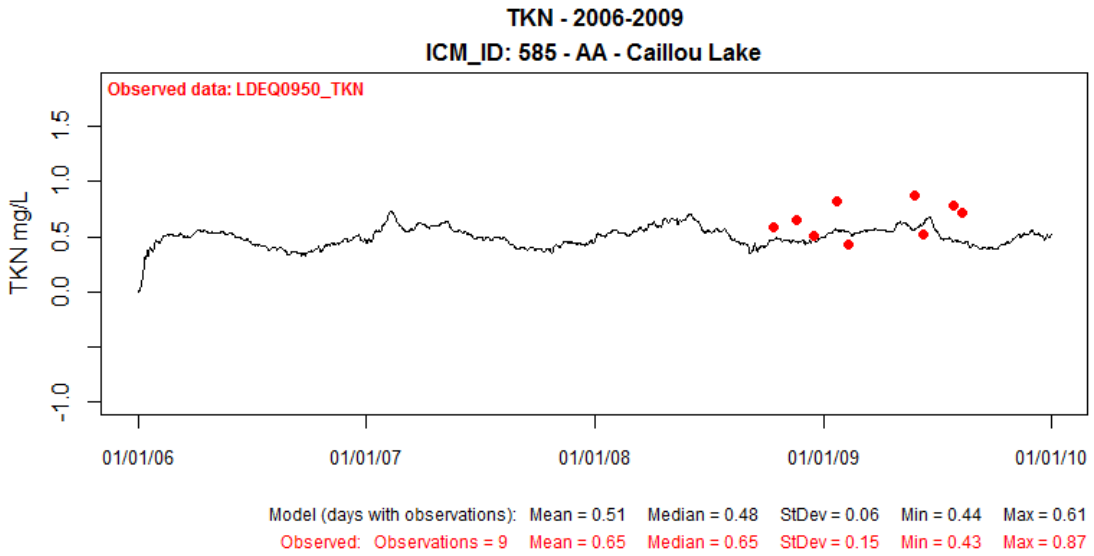


**Figure 196: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 585 (solid black line) Compared to Observed Data at LDEQ0950 for Validation Period, 2006-2009.**

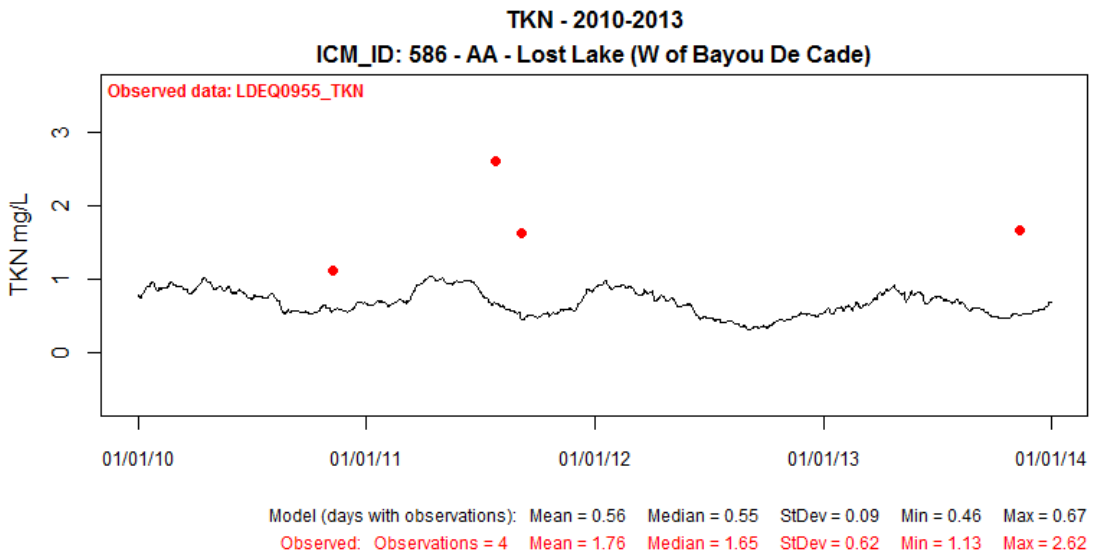


**Figure 197: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 586 (solid black line) Compared to Observed Data at LDEQ0955 for Calibration Period, 2010-2013.**

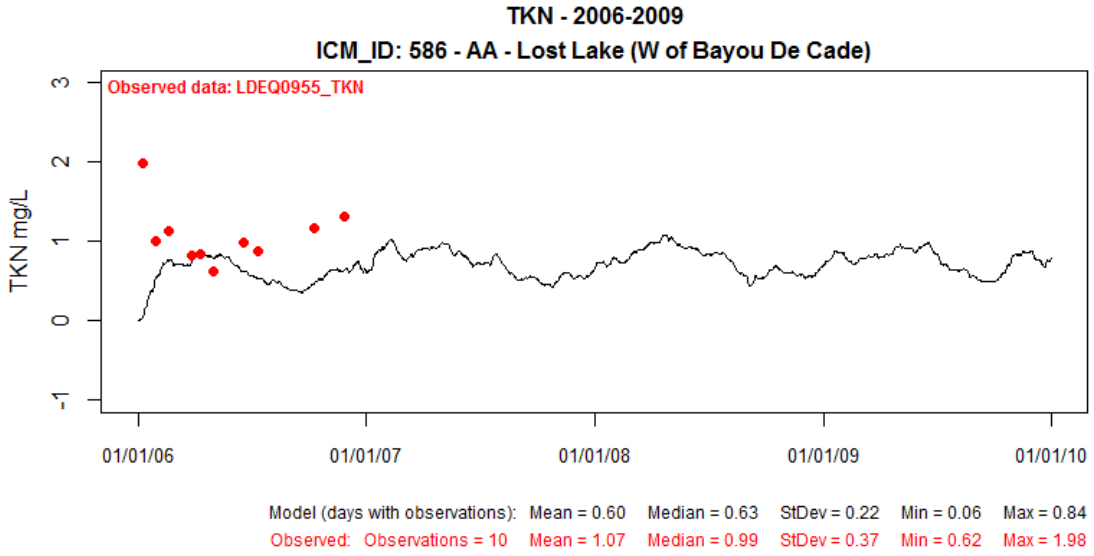


**Figure 198: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 586 (solid black line) Compared to Observed Data at LDEQ0955 for Validation Period, 2006-2009.**

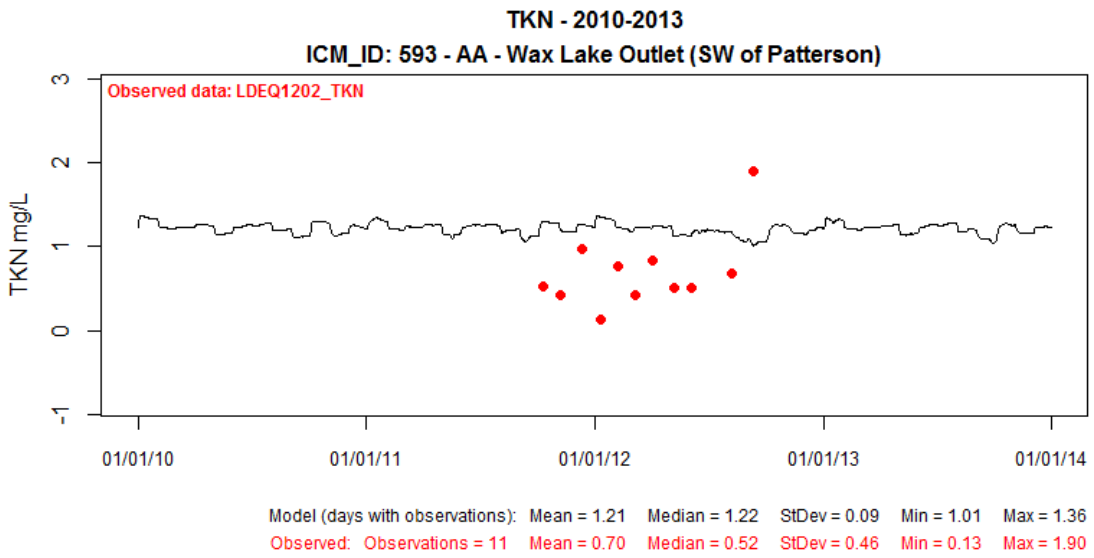


**Figure 199: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 593 (solid black line) Compared to Observed Data at LDEQ1202 for Calibration Period, 2010-2013.**

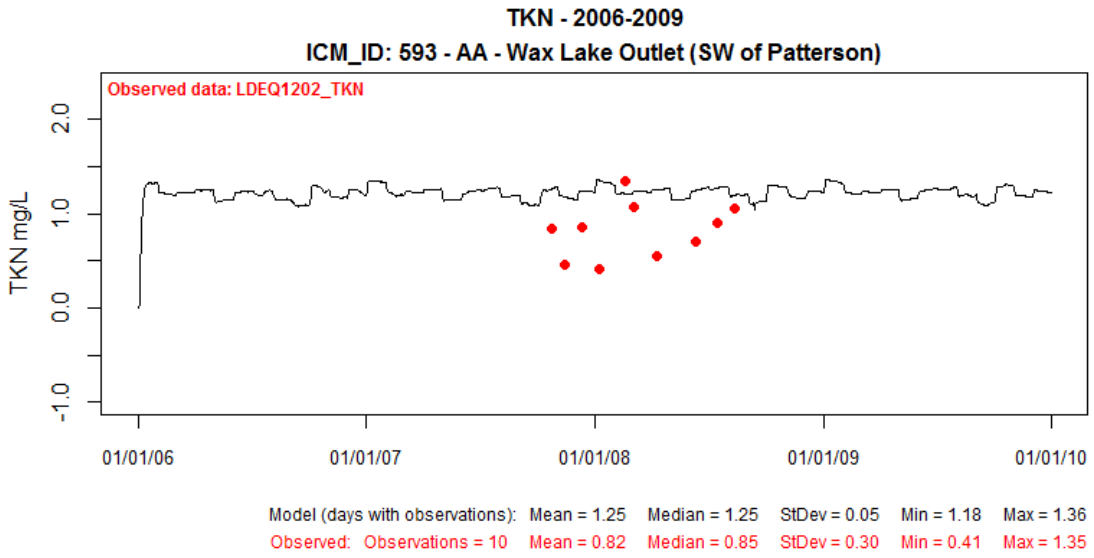


**Figure 200: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 593 (solid black line) Compared to Observed Data at LDEQ1202 for Validation Period, 2006-2009.**

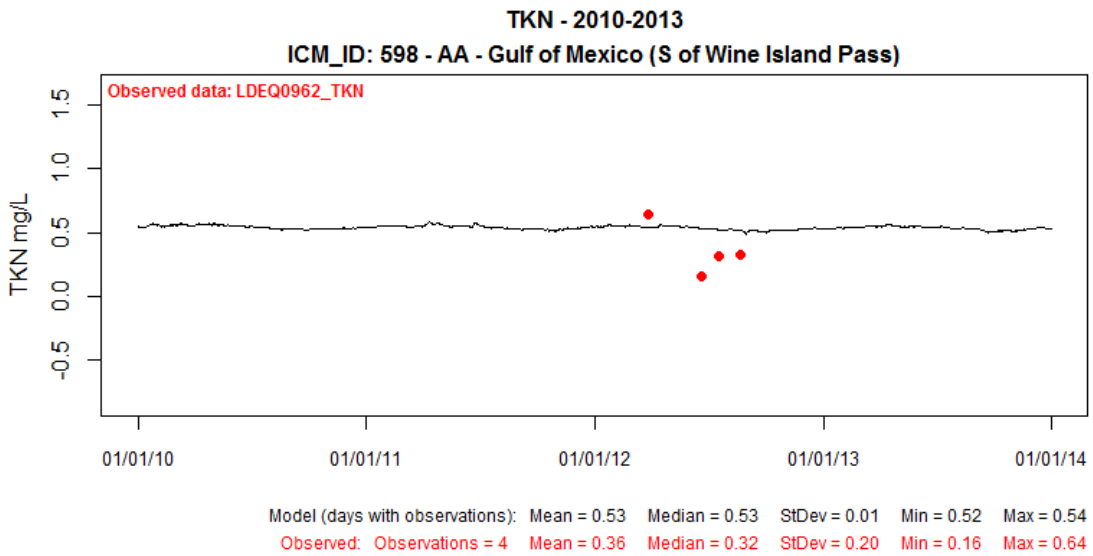


**Figure 201: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 598 (solid black line) Compared to Observed Data at LDEQ0962 for Calibration Period, 2010-2013.**

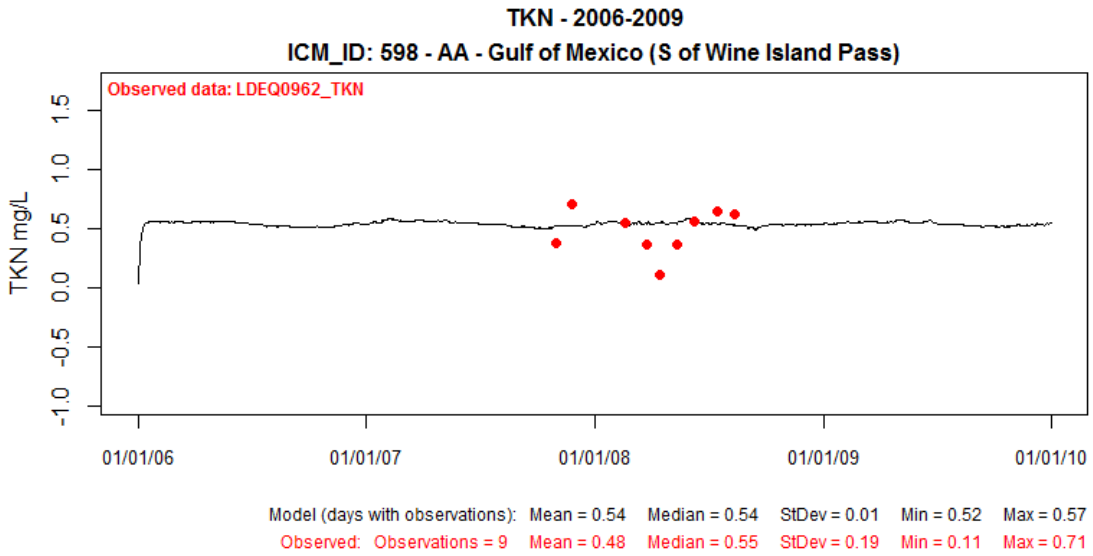


**Figure 202: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 598 (solid black line) Compared to Observed Data at LDEQ0962 for Validation Period, 2006-2009.**

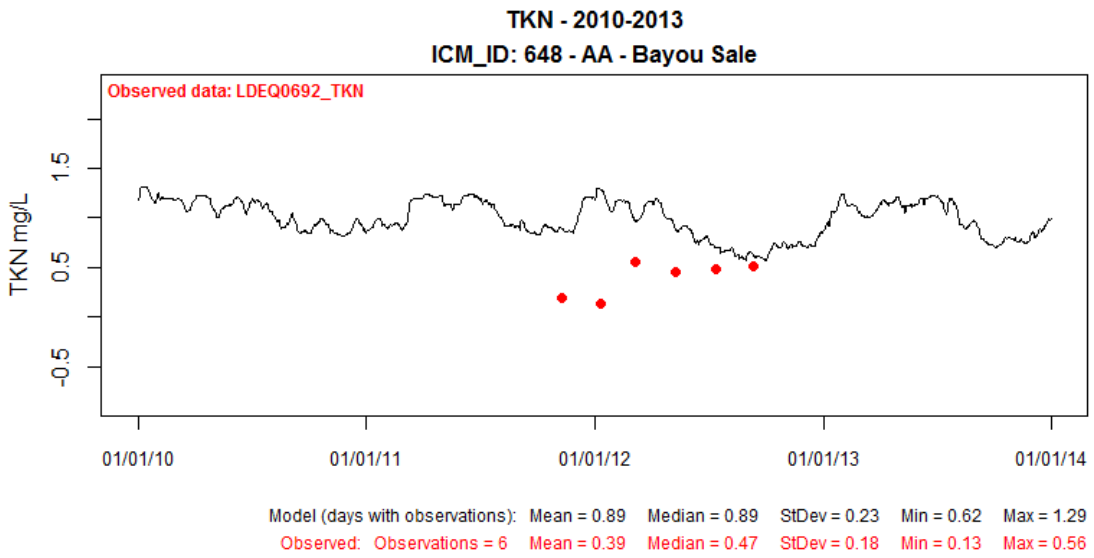


**Figure 203: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 648 (solid black line) Compared to Observed Data at LDEQ0692 for Calibration Period, 2010-2013.**

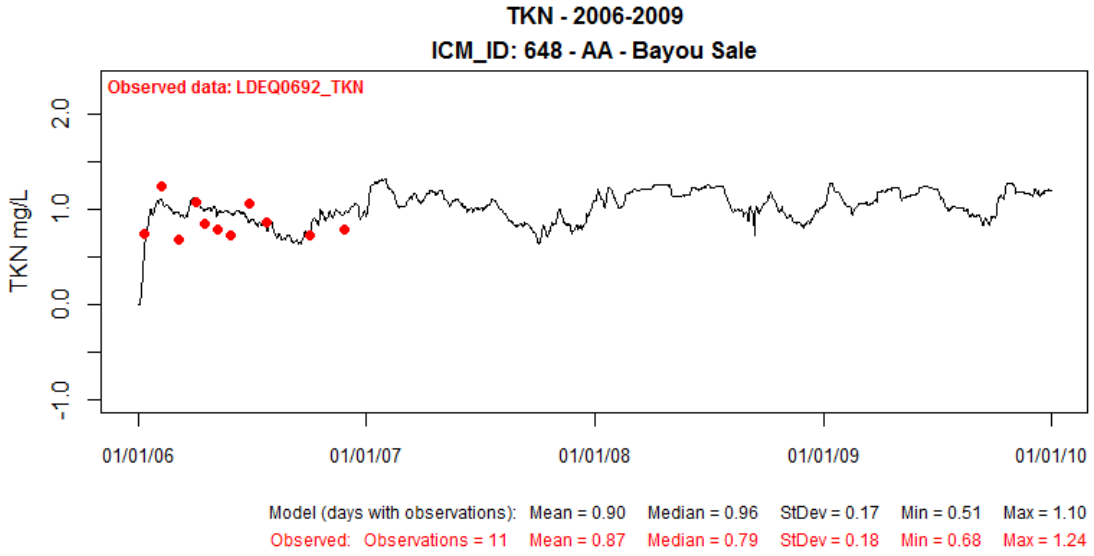


**Figure 204: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 648 (solid black line) Compared to Observed Data at LDEQ0692 for Validation Period, 2006-2009.**

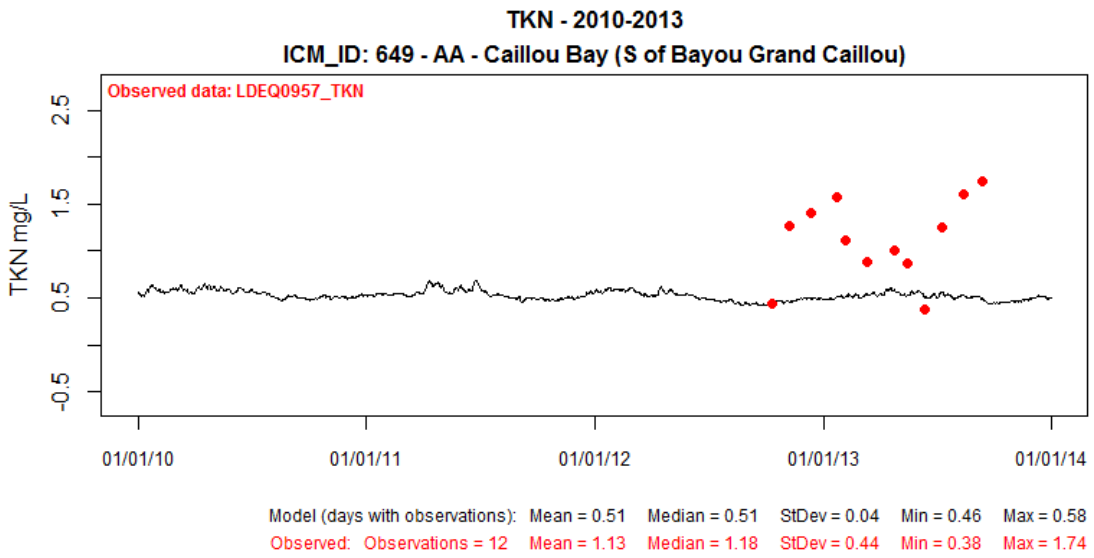


**Figure 205: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 649 (solid black line) Compared to Observed Data at LDEQ0957 for Calibration Period, 2010-2013.**

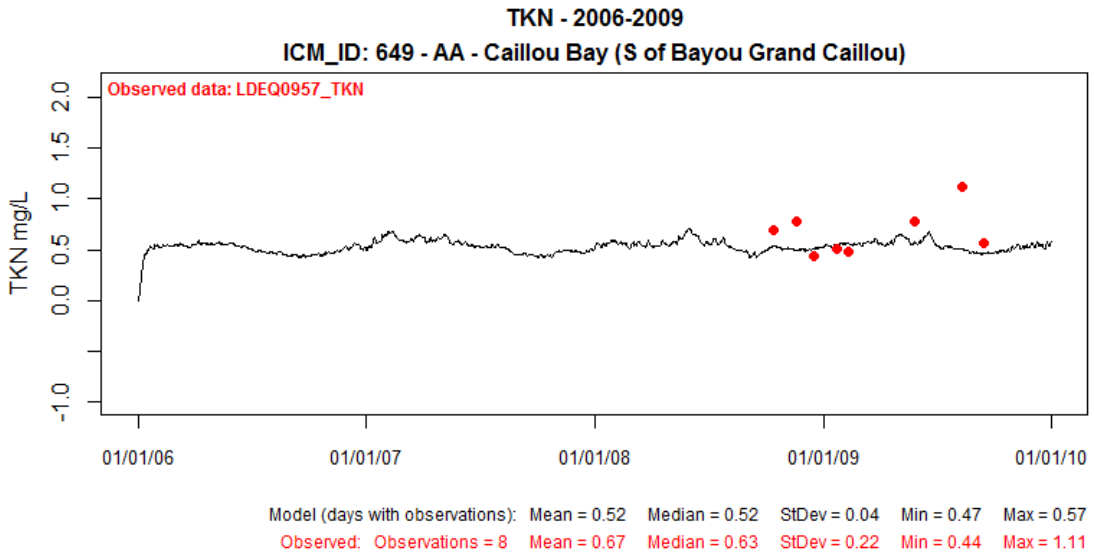


**Figure 206: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 649 (solid black line) Compared to Observed Data at LDEQ0957 for Validation Period, 2006-2009.**

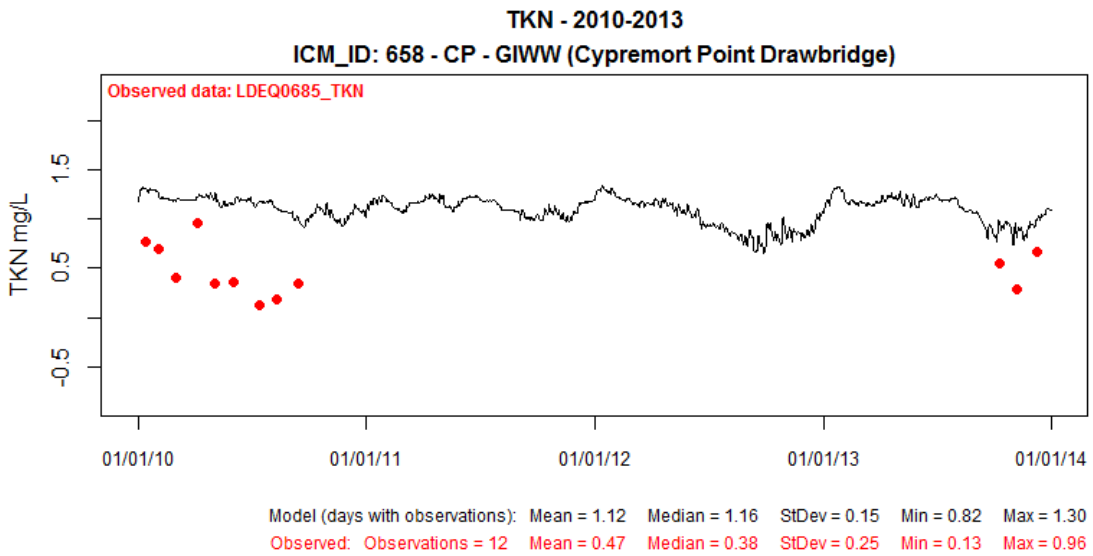


**Figure 207: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 658 (solid black line) Compared to Observed Data at LDEQ0685 for Calibration Period, 2010-2013.**

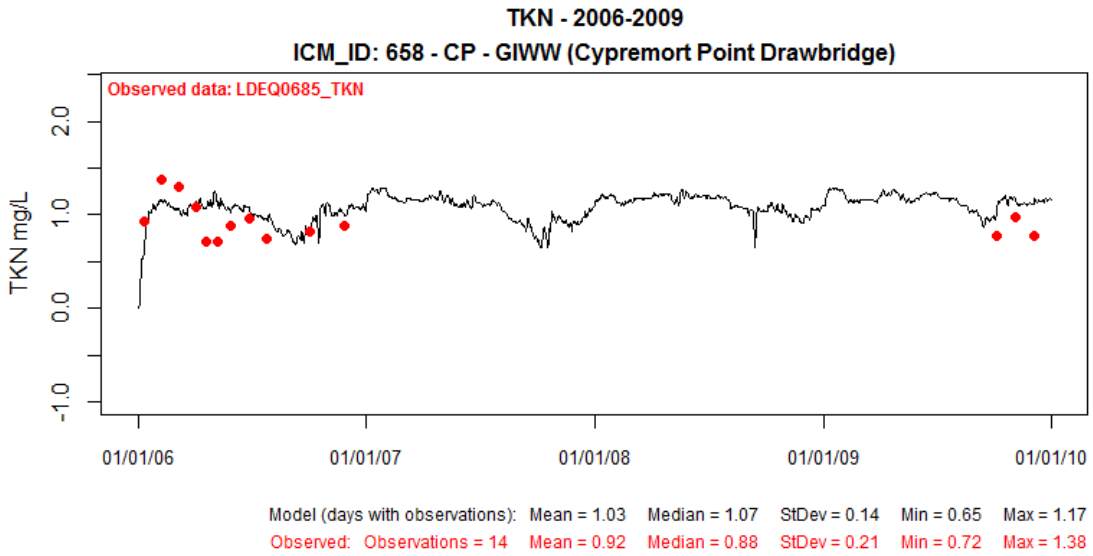


**Figure 208: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 658 (solid black line) Compared to Observed Data at LDEQ0685 for Validation Period, 2006-2009.**

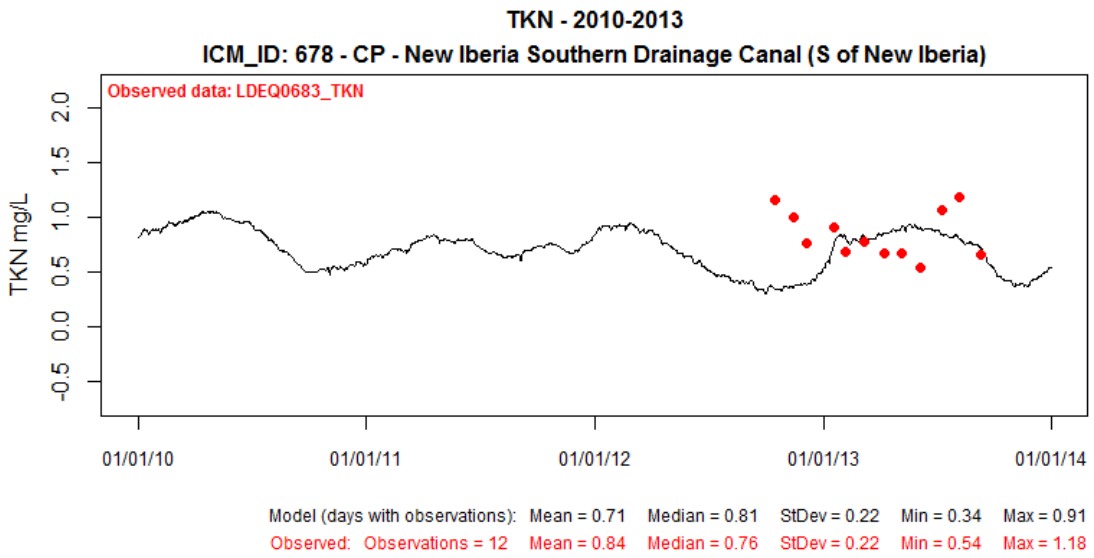


**Figure 209: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 678 (solid black line) Compared to Observed Data at LDEQ0683 for Calibration Period, 2010-2013.**

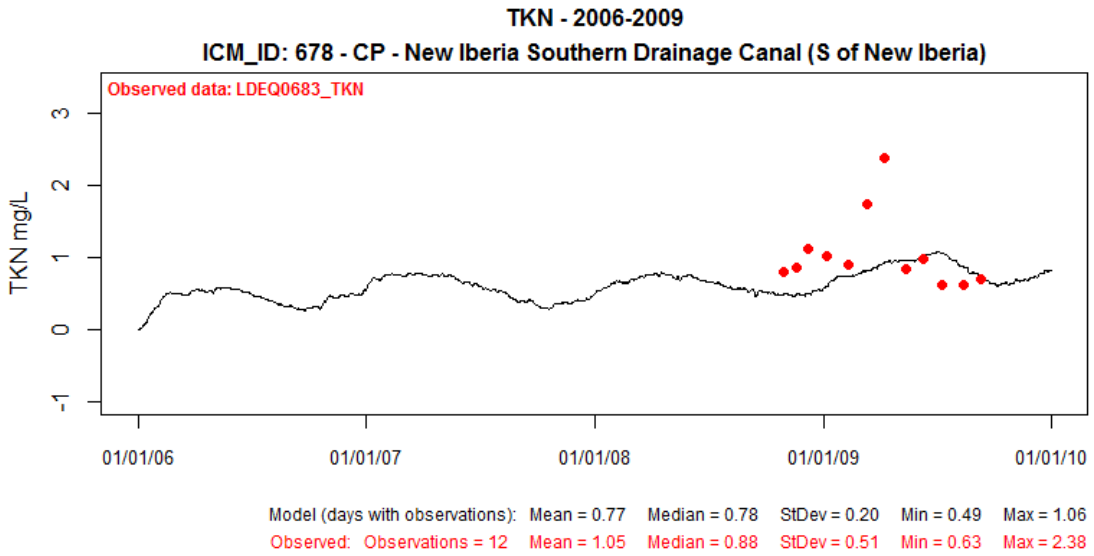


**Figure 210: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 678 (solid black line) Compared to Observed Data at LDEQ0683 for Validation Period, 2006-2009.**

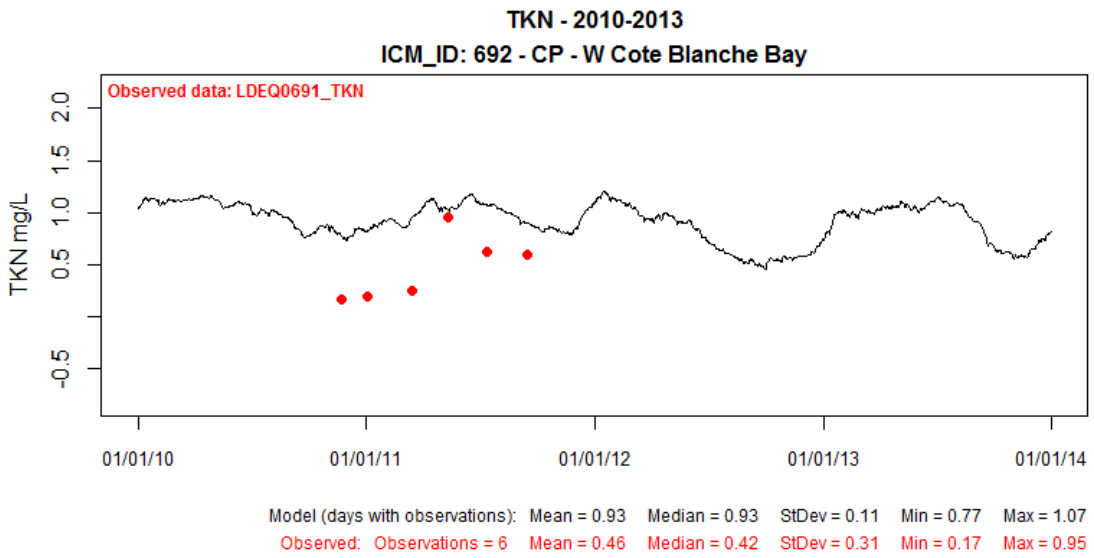


**Figure 211: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 692 (solid black line) Compared to Observed Data at LDEQ0691 for Calibration Period, 2010-2013.**

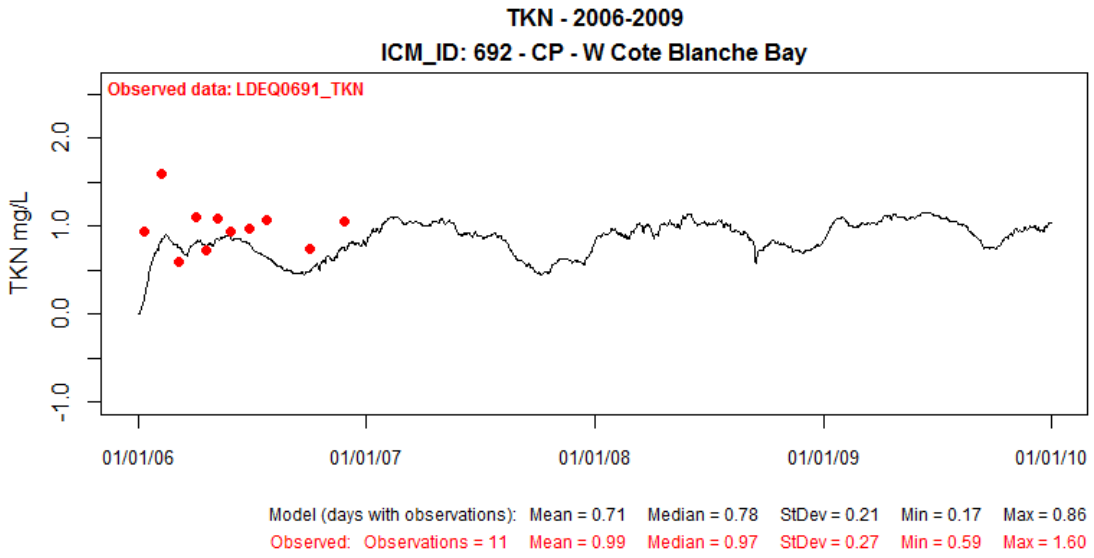


**Figure 212: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 692 (solid black line) Compared to Observed Data at LDEQ0691 for Validation Period, 2006-2009.**

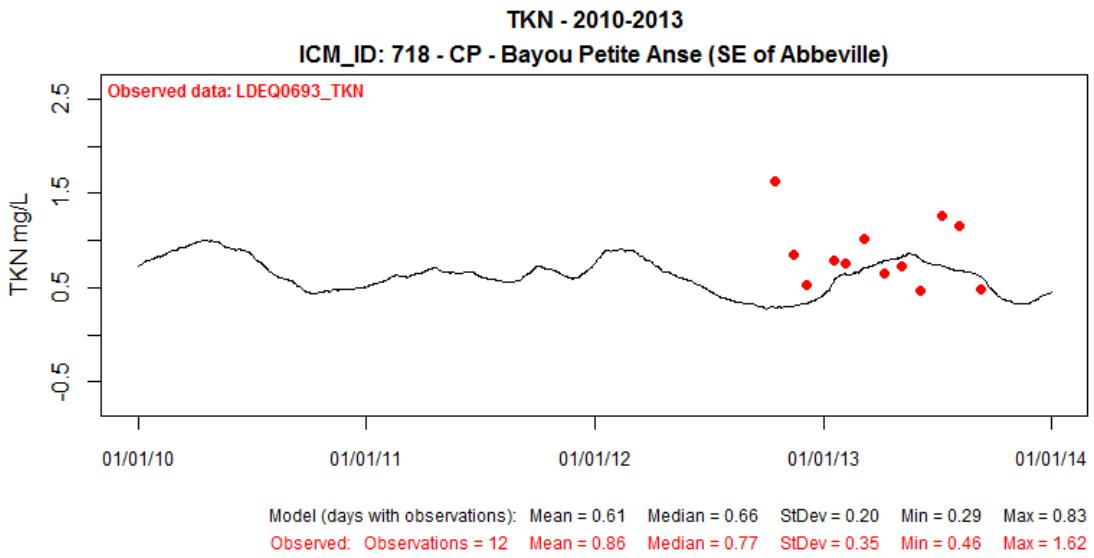


**Figure 213: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 718 (solid black line) Compared to Observed Data at LDEQ0693 for Calibration Period, 2010-2013.**

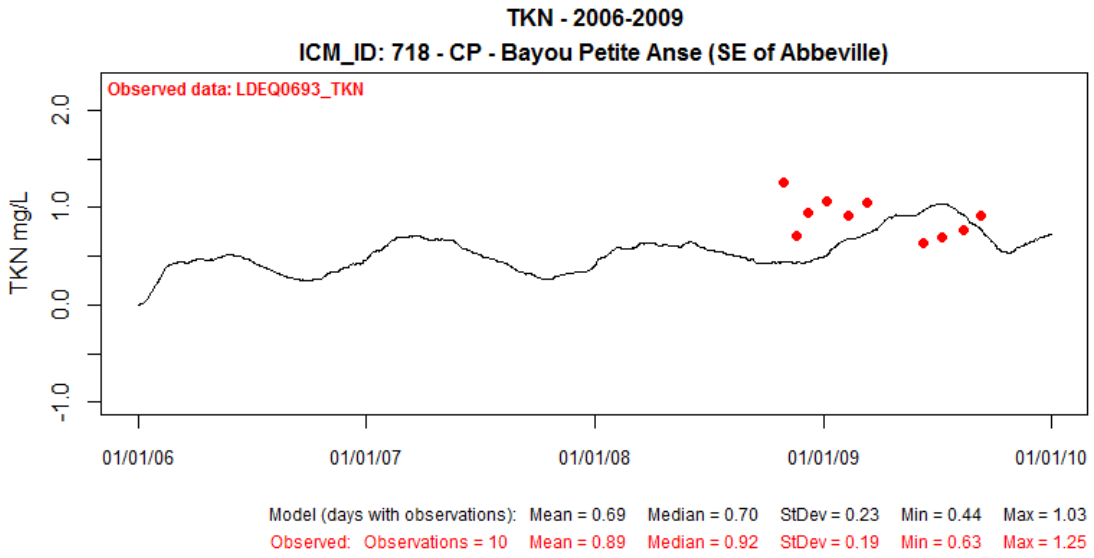


**Figure 214: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 718 (solid black line) Compared to Observed Data at LDEQ0693 for Validation Period, 2006-2009.**

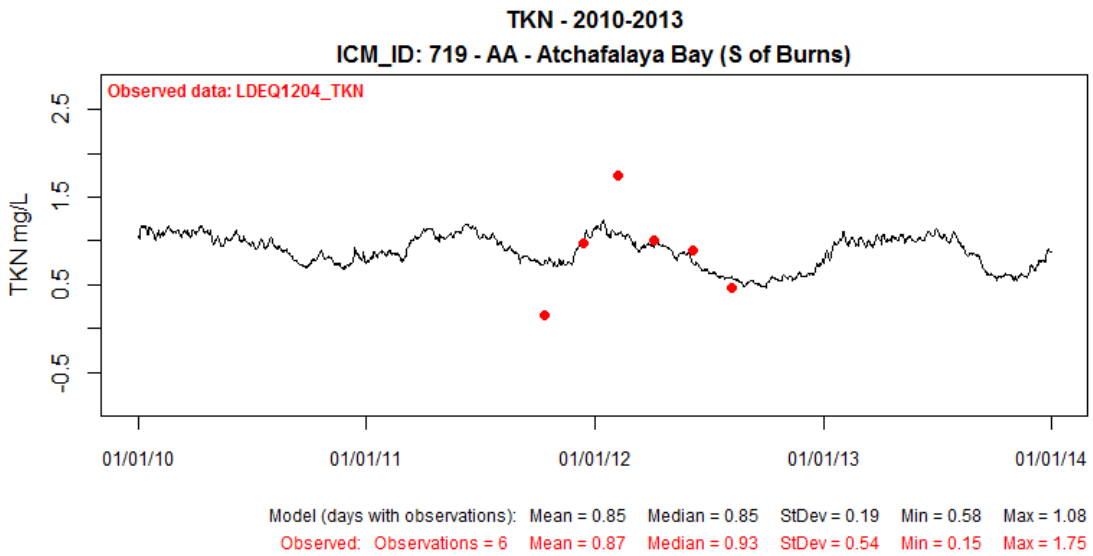


**Figure 215: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 719 (solid black line) Compared to Observed Data at LDEQ1204 for Calibration Period, 2010-2013.**

**Figure 216: No Validation Figure for ICM Compartment 719.**

DRAFT

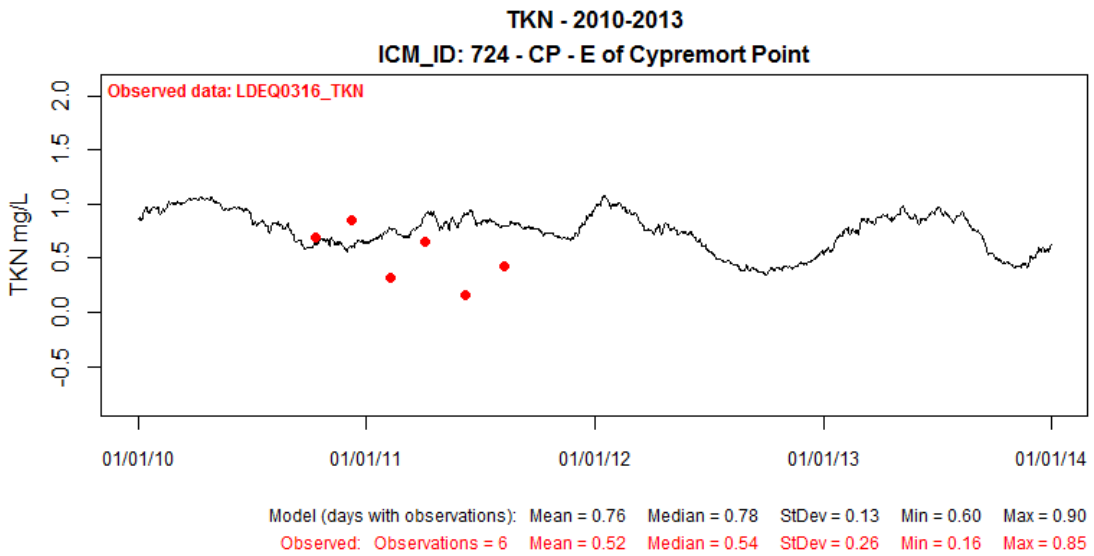


**Figure 217: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 724 (solid black line) Compared to Observed Data at LDEQ0316 for Calibration Period, 2010-2013.**

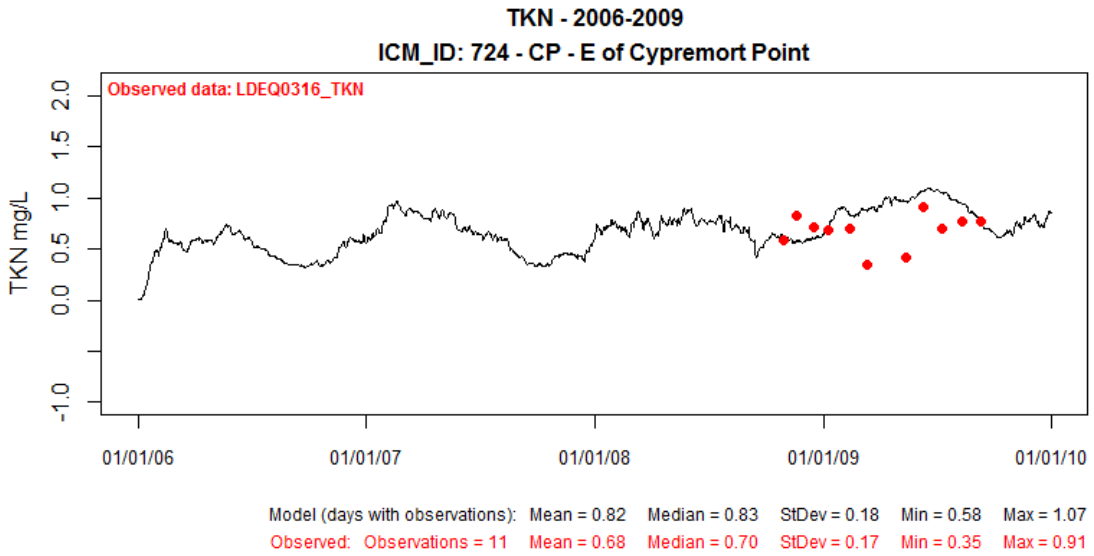


**Figure 218: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 724 (solid black line) Compared to Observed Data at LDEQ0316 for Validation Period, 2006-2009.**

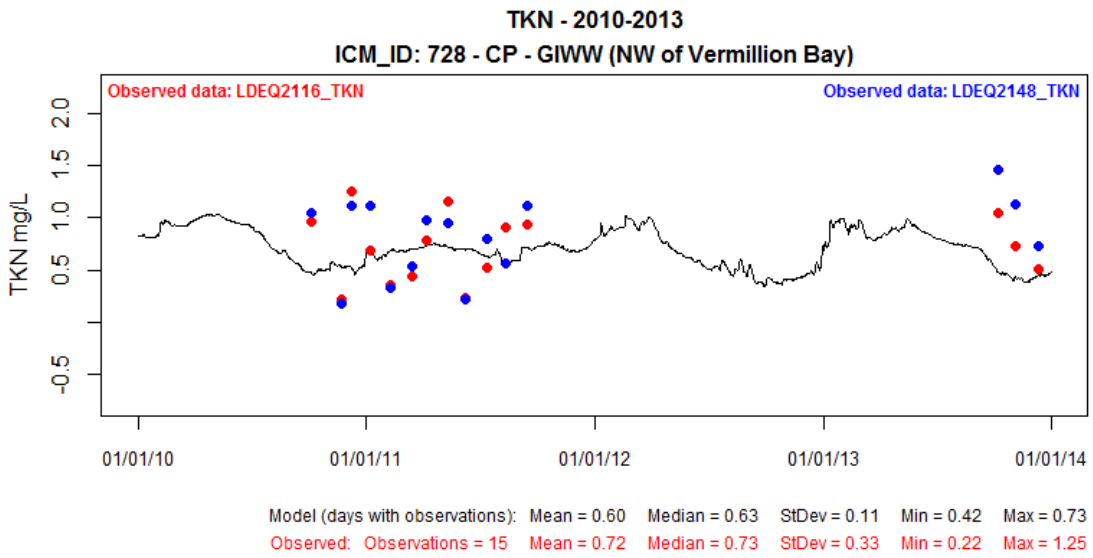


**Figure 219: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 728 (solid black line) Compared to Observed Data at LDEQ2116 for Calibration Period, 2010-2013.**

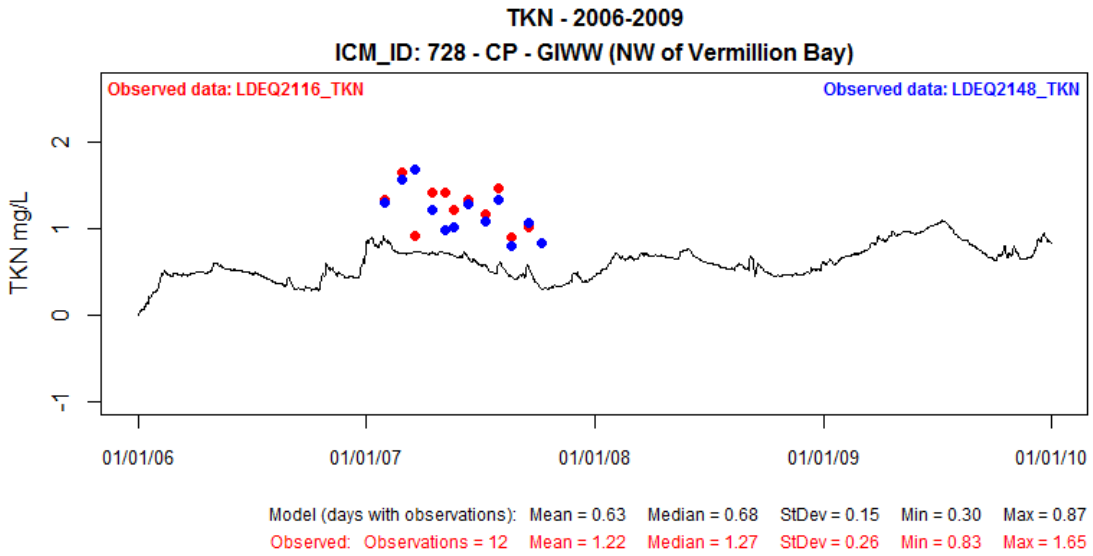


**Figure 220: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 728 (solid black line) Compared to Observed Data at LDEQ2116 for Validation Period, 2006-2009.**

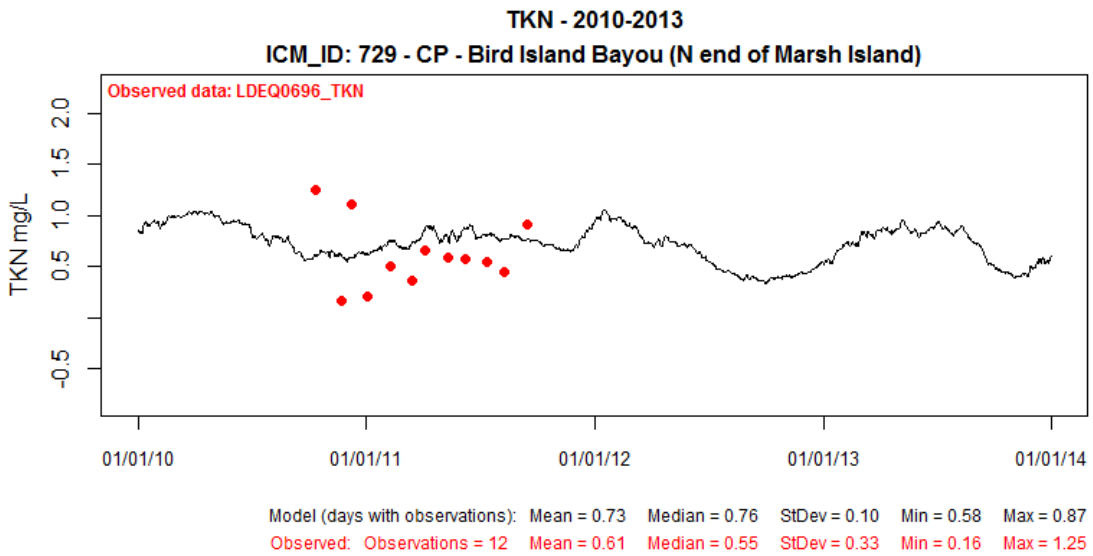


**Figure 221: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 729 (solid black line) Compared to Observed Data at LDEQ0696 for Calibration Period, 2010-2013.**

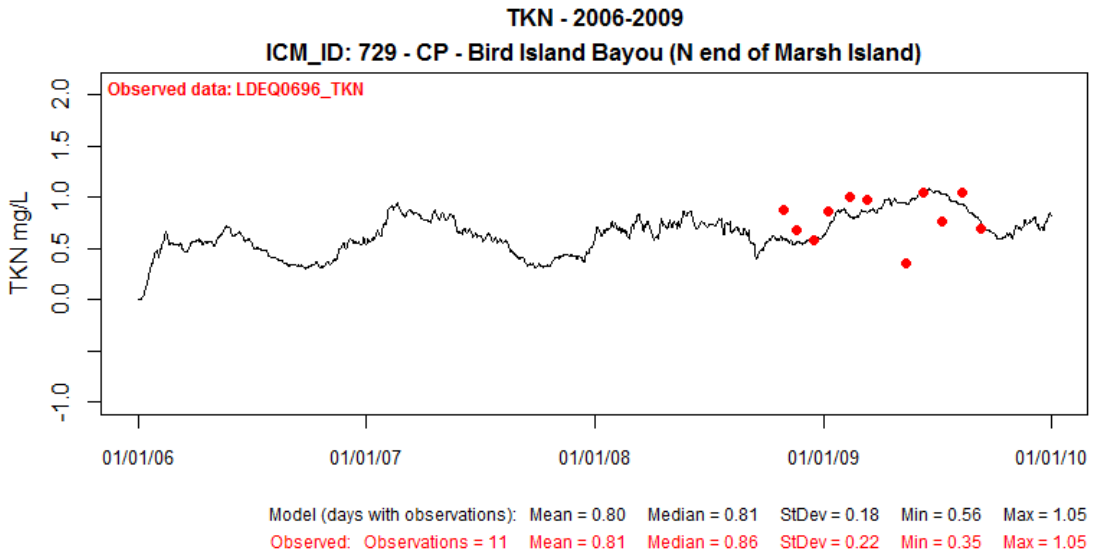


**Figure 222: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 729 (solid black line) Compared to Observed Data at LDEQ0696 for Validation Period, 2006-2009.**

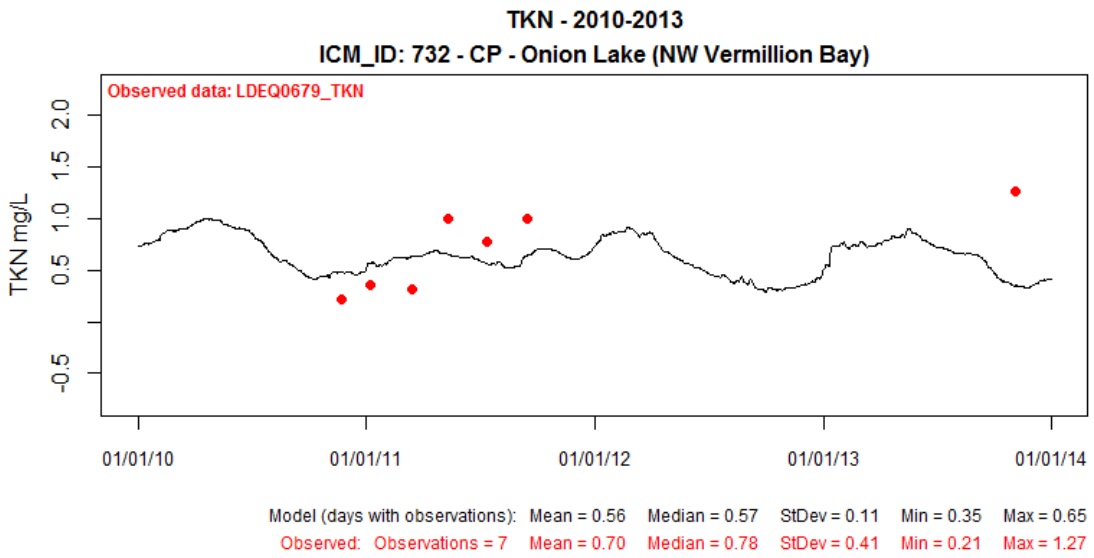


**Figure 223: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 732 (solid black line) Compared to Observed Data at LDEQ0679 for Calibration Period, 2010-2013.**

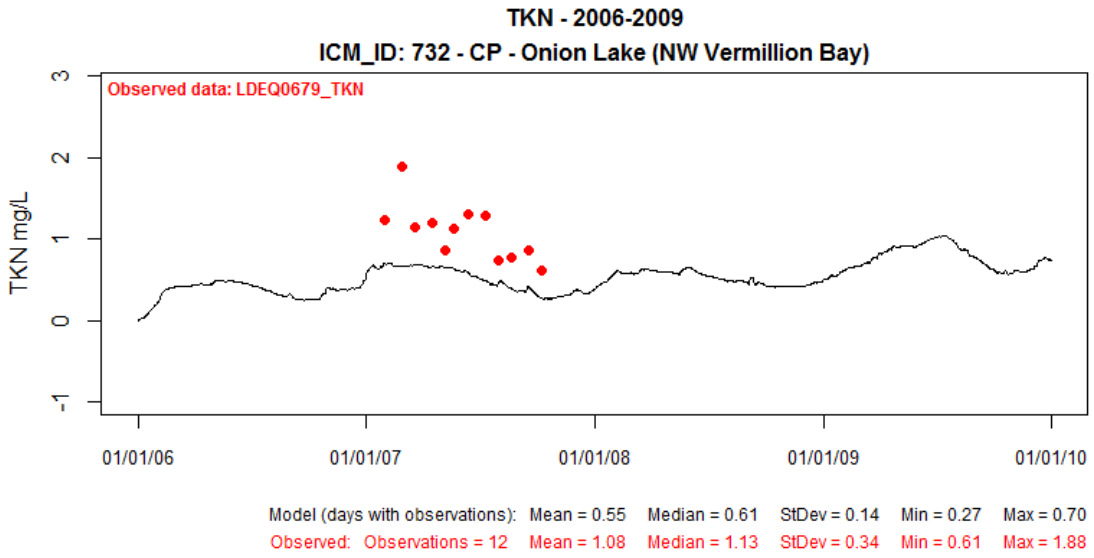


**Figure 224: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 732 (solid black line) Compared to Observed Data at LDEQ0679 for Validation Period, 2006-2009.**

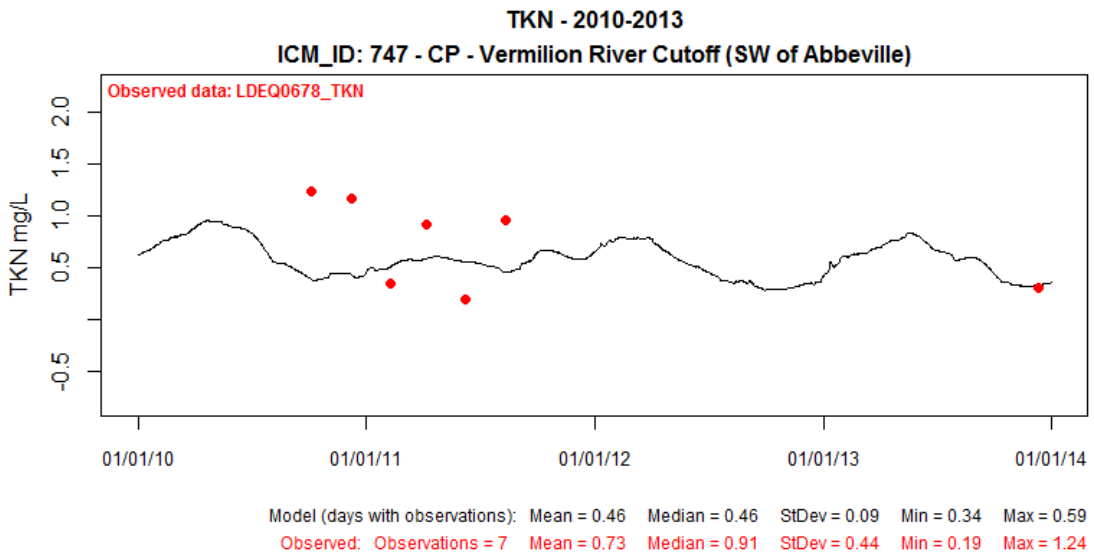


**Figure 225: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 747 (solid black line) Compared to Observed Data at LDEQ0678 for Calibration Period, 2010-2013.**

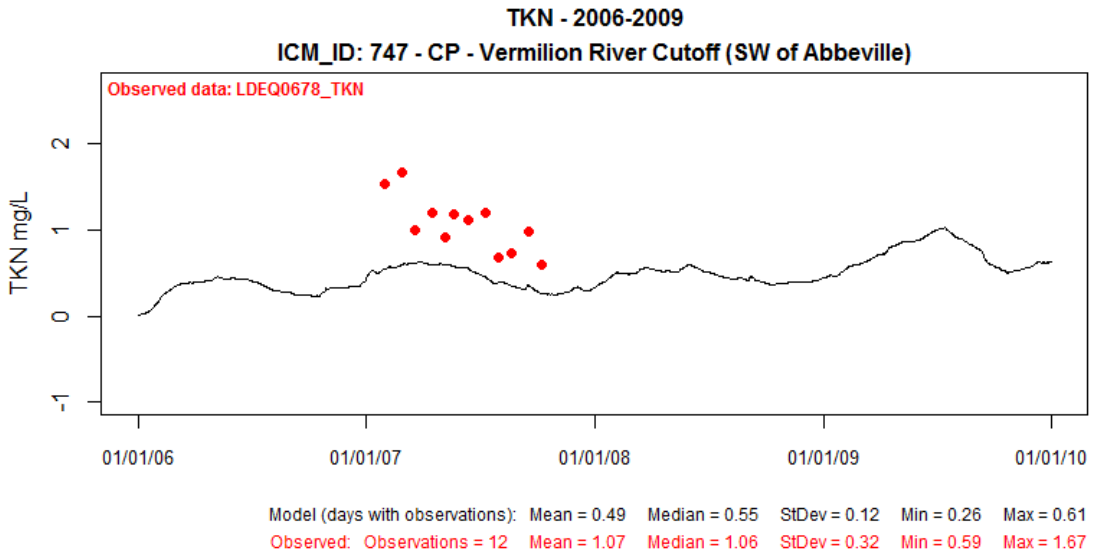


**Figure 226: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 747 (solid black line) Compared to Observed Data at LDEQ0678 for Validation Period, 2006-2009.**

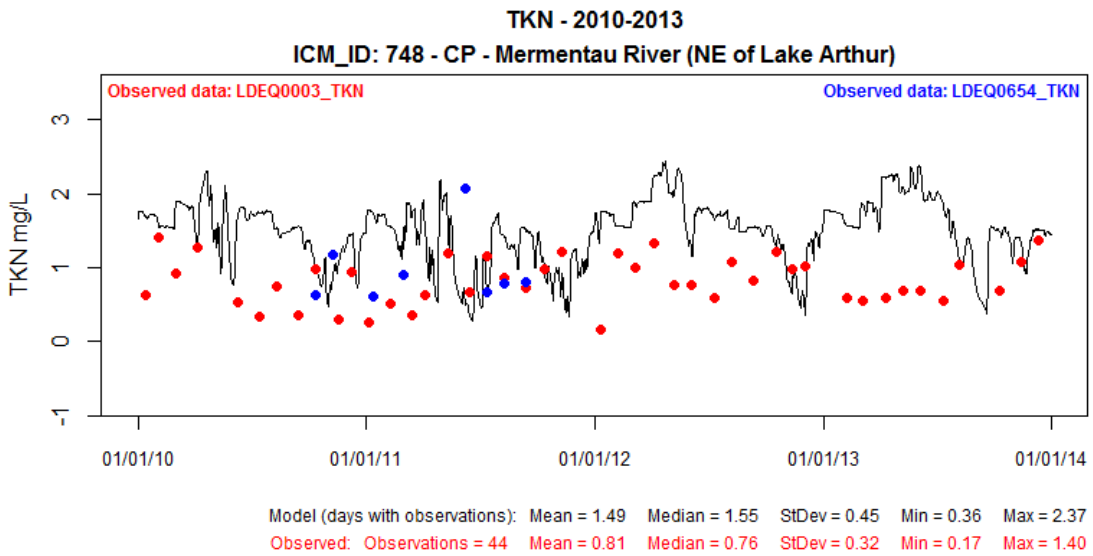


**Figure 227: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 748 (solid black line) Compared to Observed Data at LDEQ0003 for Calibration Period, 2010-2013.**

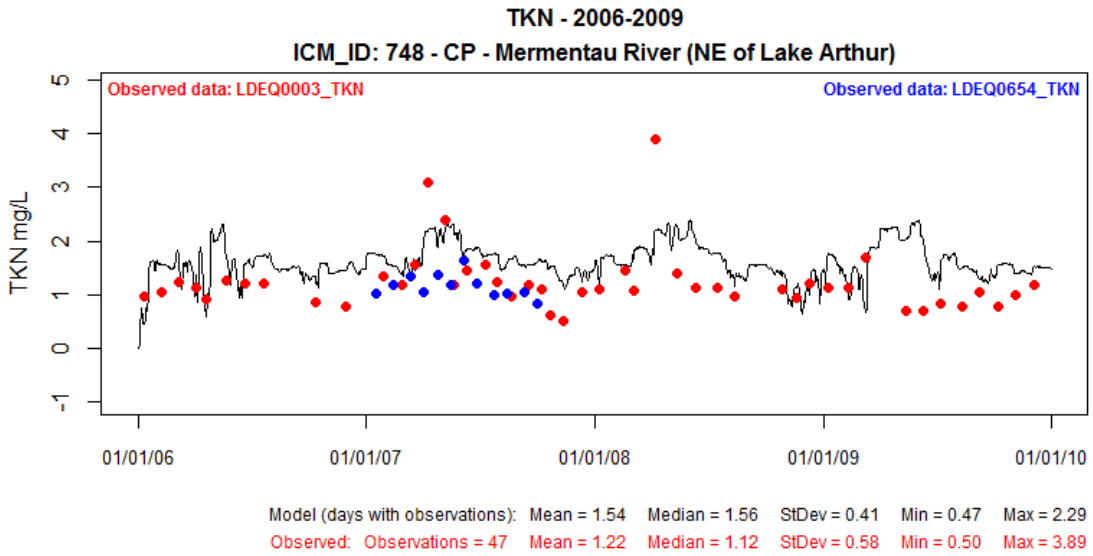


**Figure 228: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 748 (solid black line) Compared to Observed Data at LDEQ0003 for Validation Period, 2006-2009.**

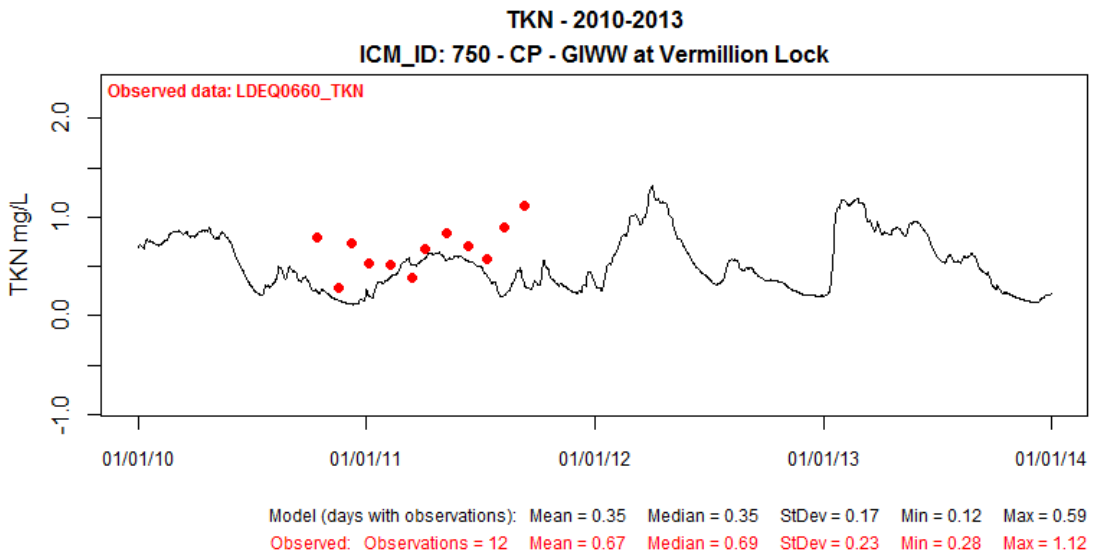


**Figure 229: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 750 (solid black line) Compared to Observed Data at LDEQ0660 for Calibration Period, 2010-2013.**

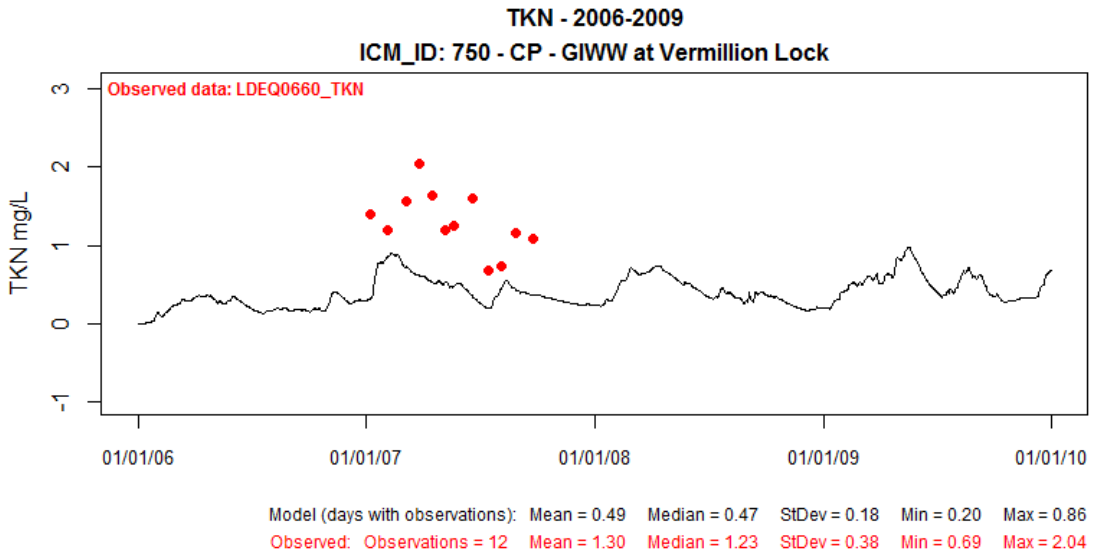


**Figure 230: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 750 (solid black line) Compared to Observed Data at LDEQ0660 for Validation Period, 2006-2009.**

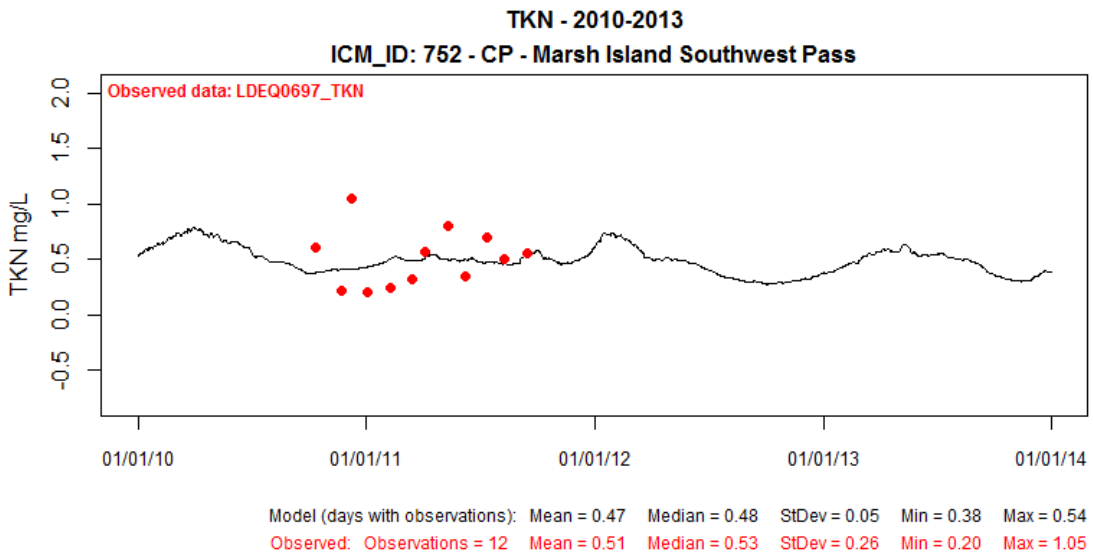


**Figure 231: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 752 (solid black line) Compared to Observed Data at LDEQ0697 for Calibration Period, 2010-2013.**

**Figure 232: No Validation Figure for ICM Compartment 752.**

DRAFT

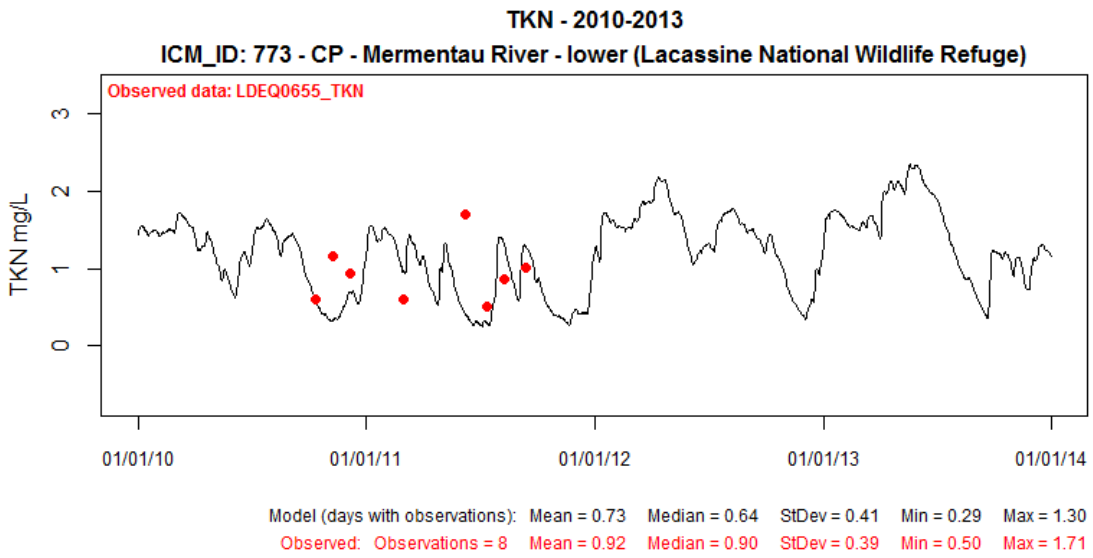


**Figure 233: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 773 (solid black line) Compared to Observed Data at LDEQ0655 for Calibration Period, 2010-2013.**

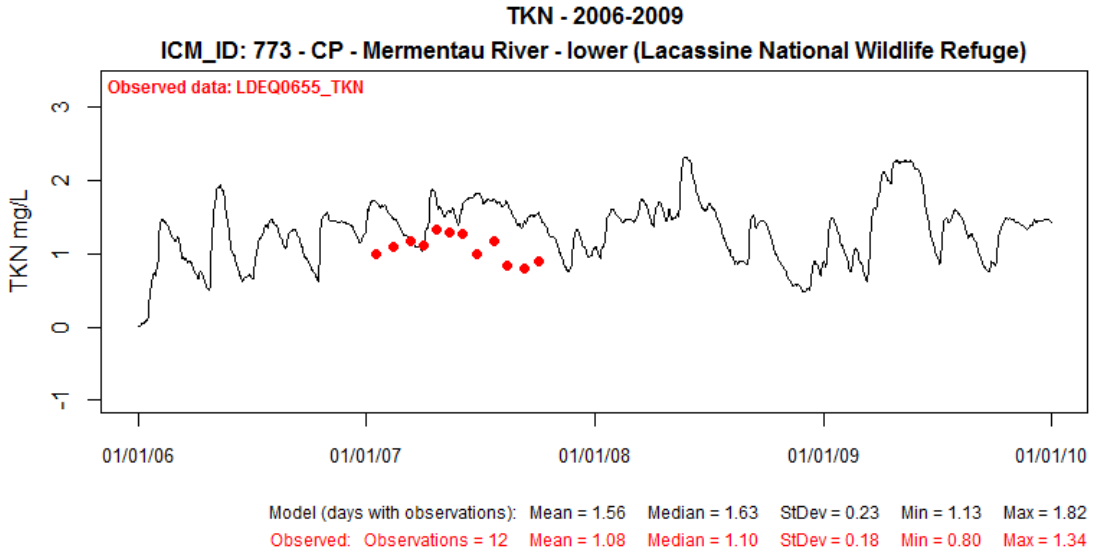


**Figure 234: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 773 (solid black line) Compared to Observed Data at LDEQ0655 for Validation Period, 2006-2009.**

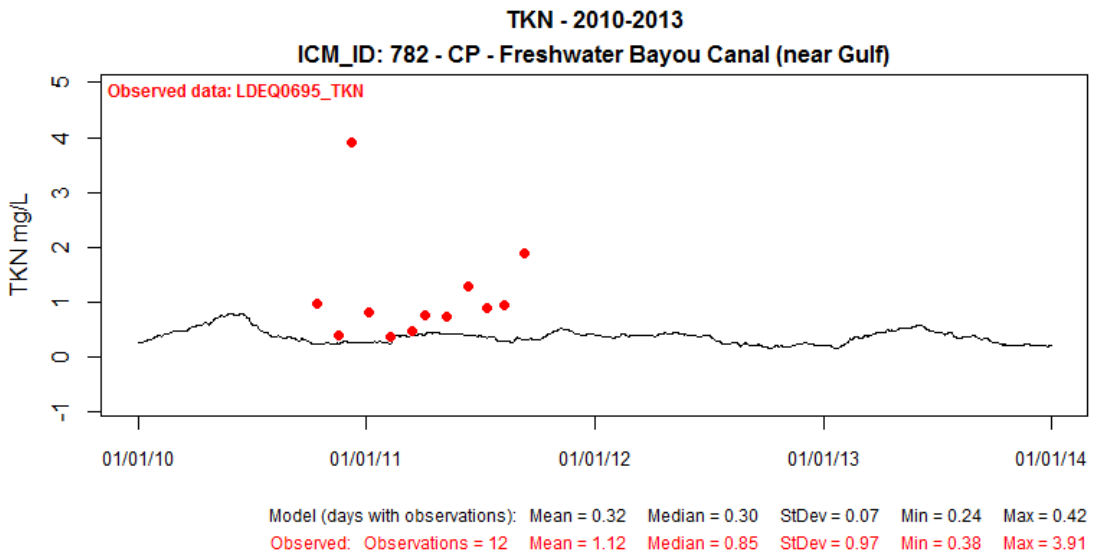


**Figure 235: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 782 (solid black line) Compared to Observed Data at LDEQ0695 for Calibration Period, 2010-2013.**

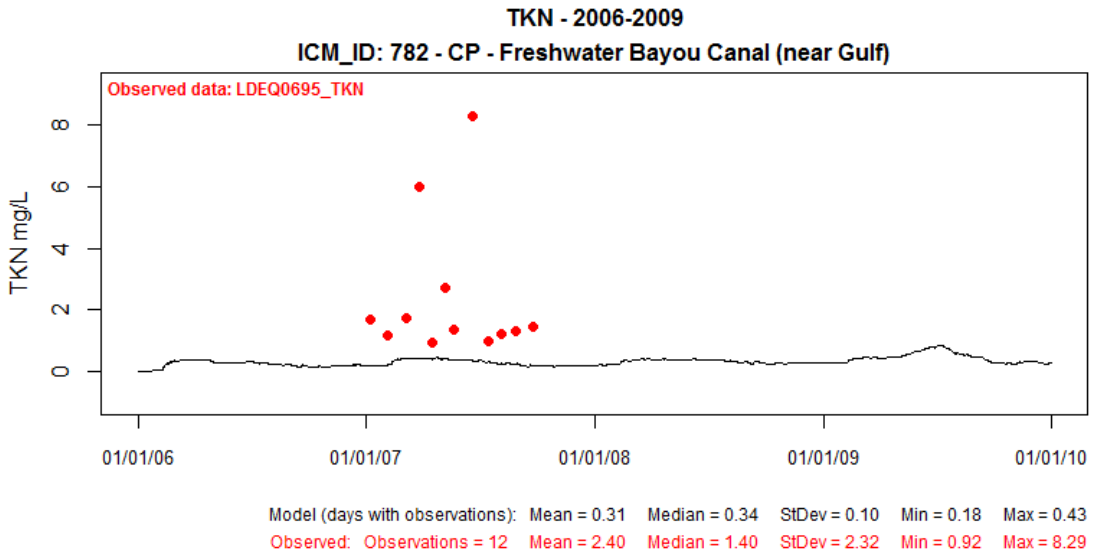


**Figure 236: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 782 (solid black line) Compared to Observed Data at LDEQ0695 for Validation Period, 2006-2009.**

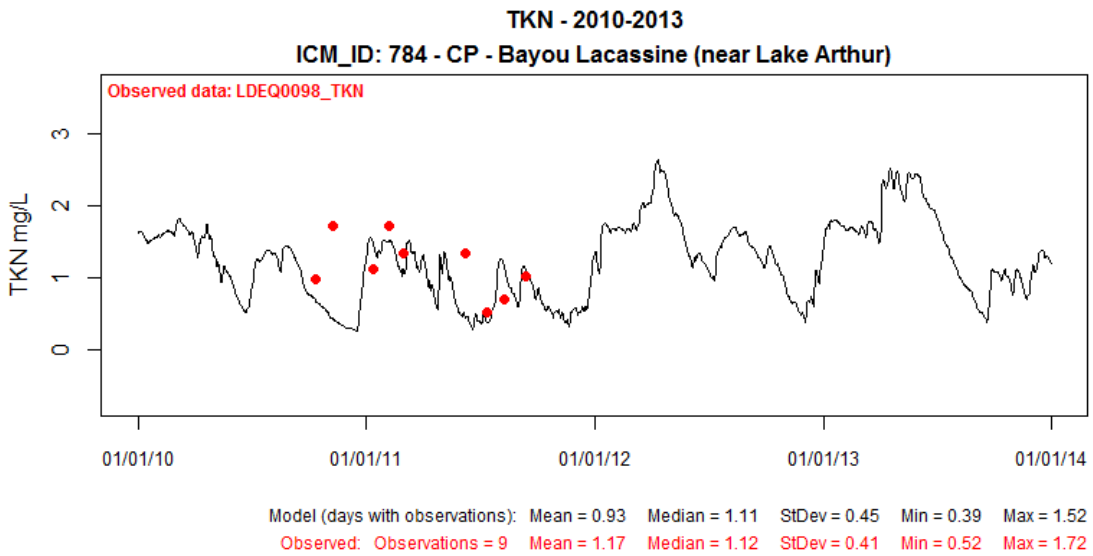


**Figure 237: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 784 (solid black line) Compared to Observed Data at LDEQ0098 for Calibration Period, 2010-2013.**

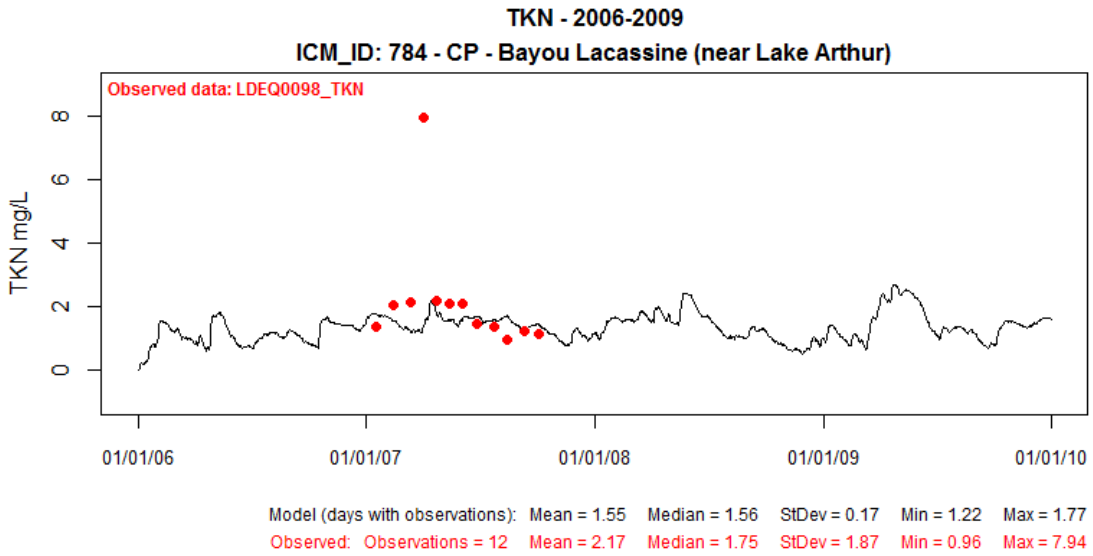


**Figure 238: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 784 (solid black line) Compared to Observed Data at LDEQ0098 for Validation Period, 2006-2009.**

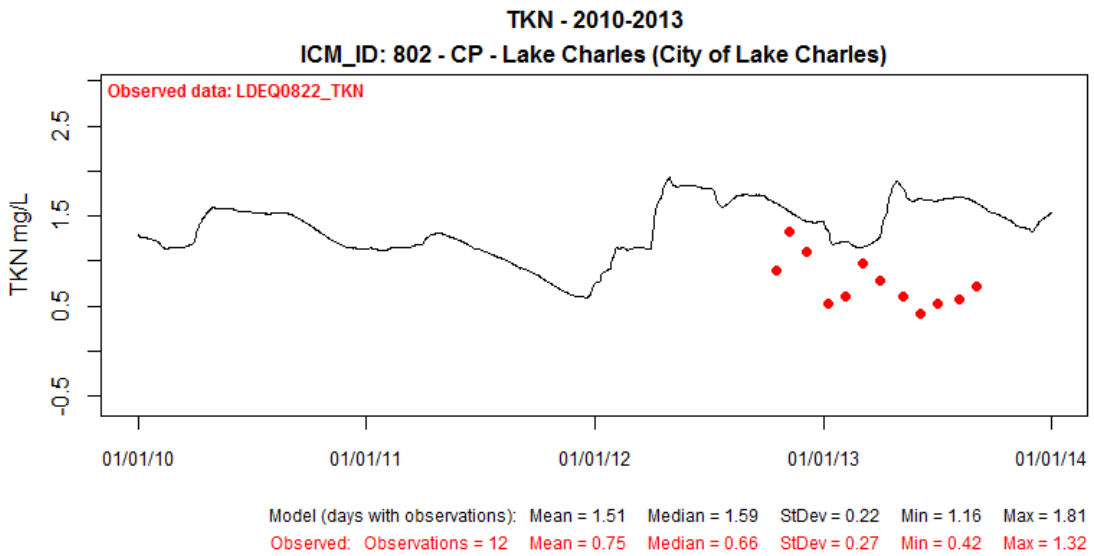


**Figure 239: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 802 (solid black line) Compared to Observed Data at LDEQ0822 for Calibration Period, 2010-2013.**

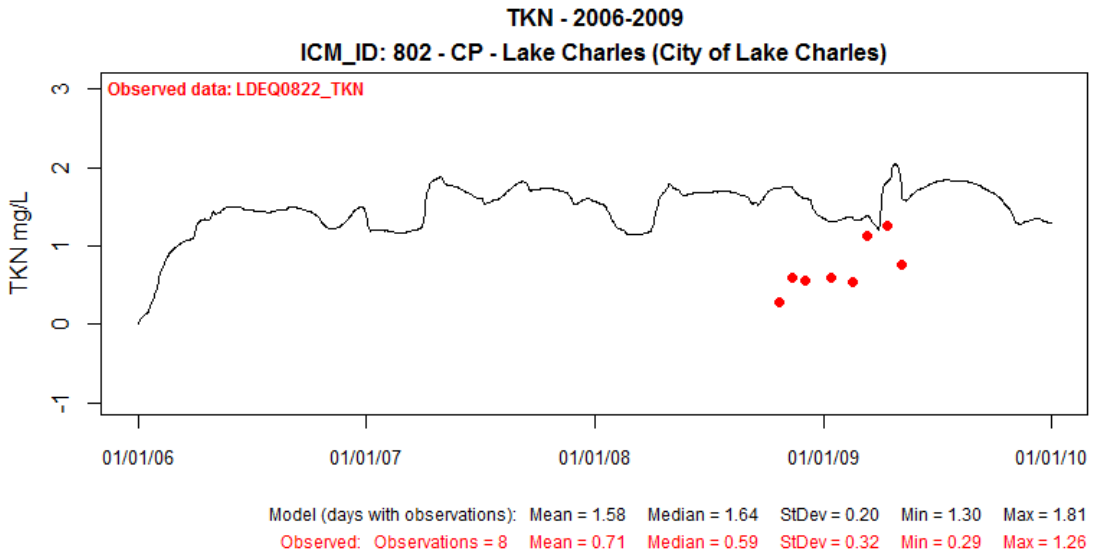


**Figure 240: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 802 (solid black line) Compared to Observed Data at LDEQ0822 for Validation Period, 2006-2009.**

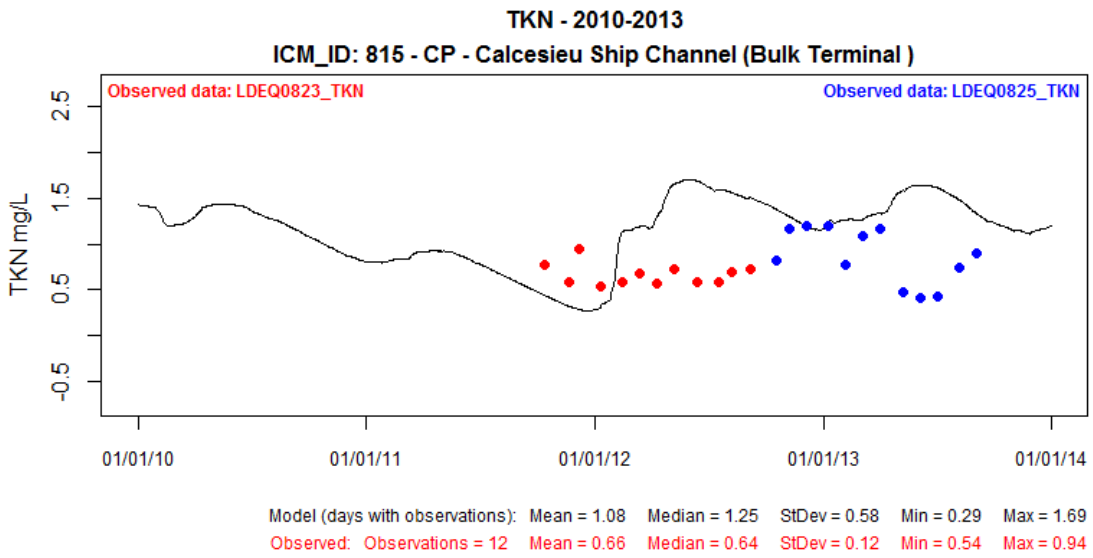


**Figure 241: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 815 (solid black line) Compared to Observed Data at LDEQ0823 for Calibration Period, 2010-2013.**

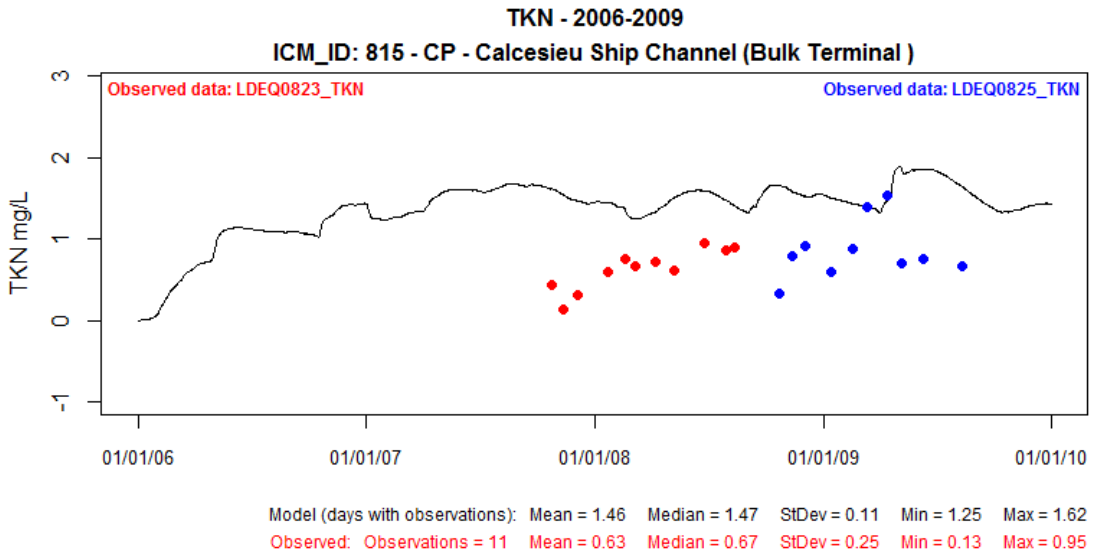


**Figure 242: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 815 (solid black line) Compared to Observed Data at LDEQ0823 for Validation Period, 2006-2009.**

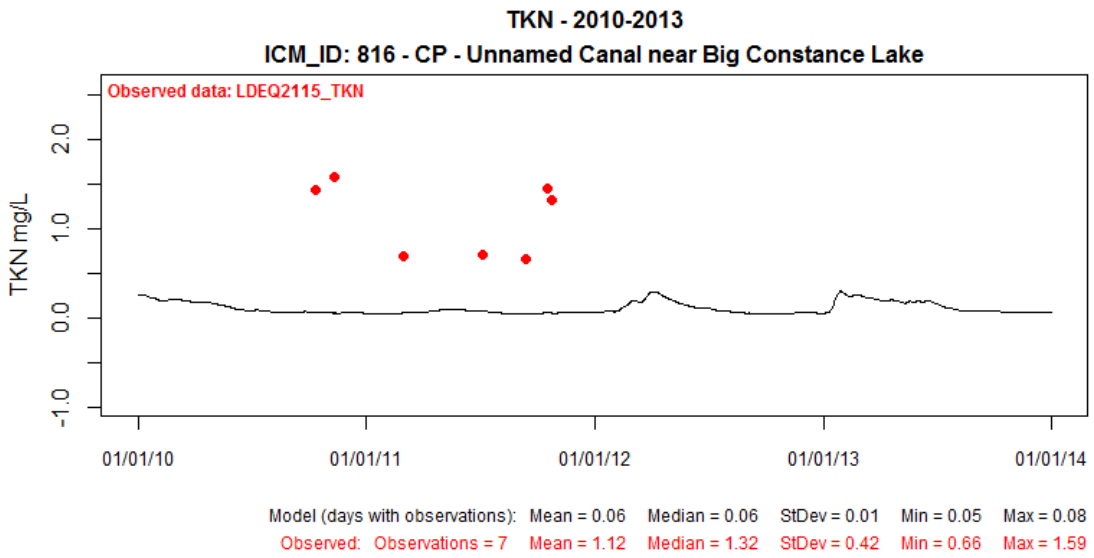


**Figure 243: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 816 (solid black line) Compared to Observed Data at LDEQ2115 for Calibration Period, 2010-2013.**

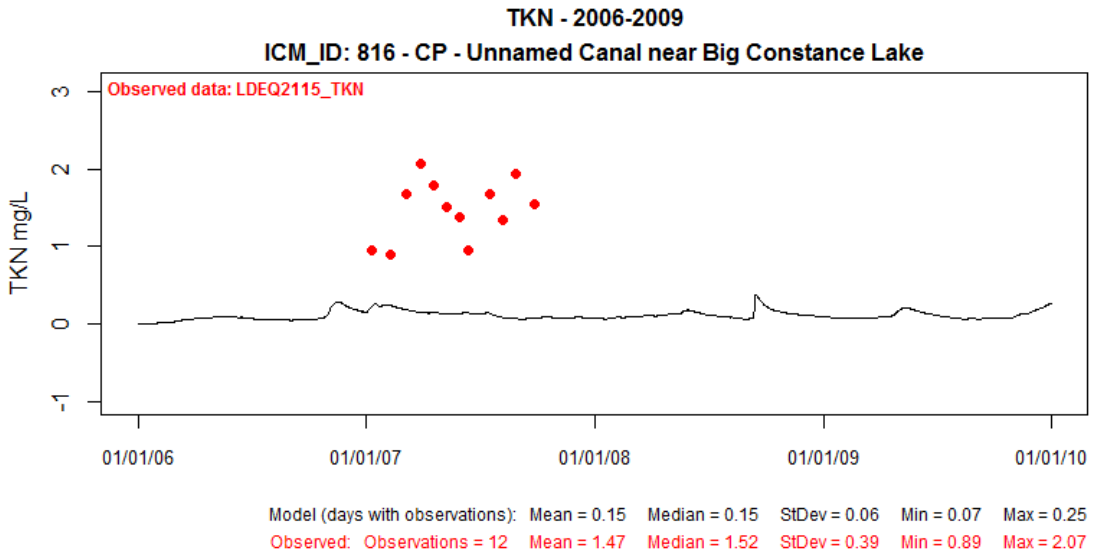


**Figure 244: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 816 (solid black line) Compared to Observed Data at LDEQ2115 for Validation Period, 2006-2009.**

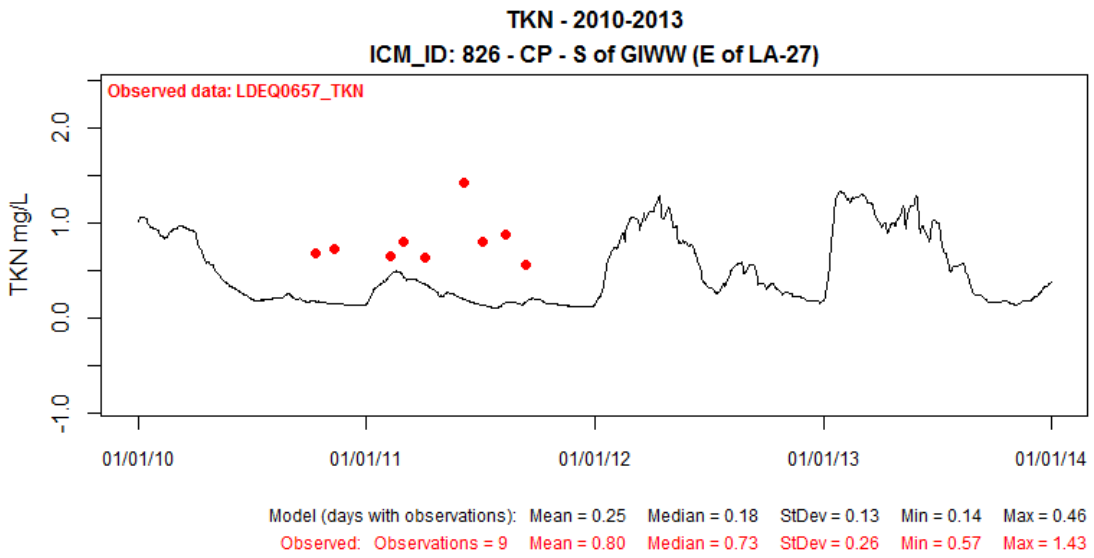


**Figure 245: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 826 (solid black line) Compared to Observed Data at LDEQ0657 for Calibration Period, 2010-2013.**

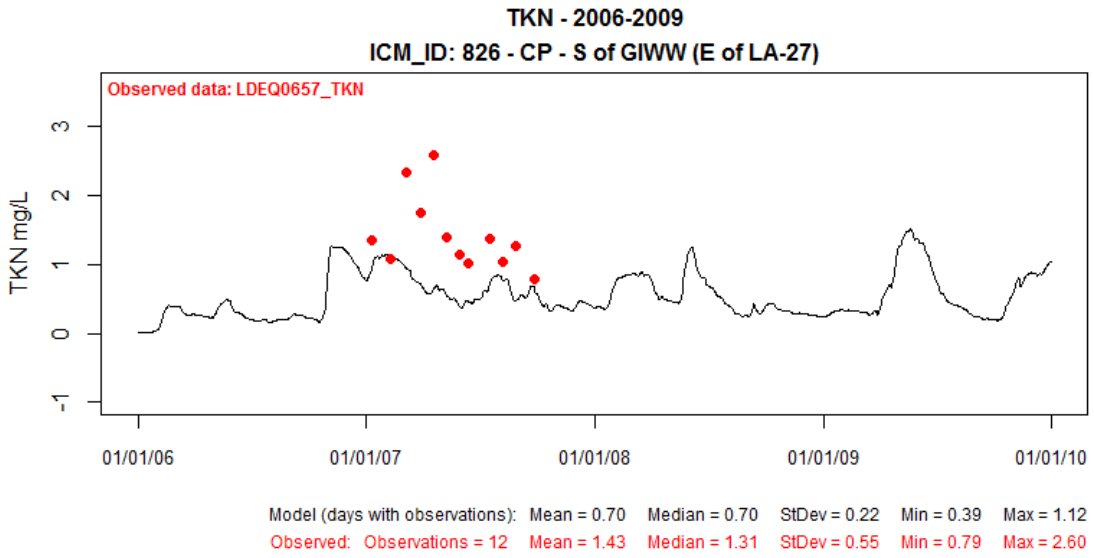


**Figure 246: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 826 (solid black line) Compared to Observed Data at LDEQ0657 for Validation Period, 2006-2009.**

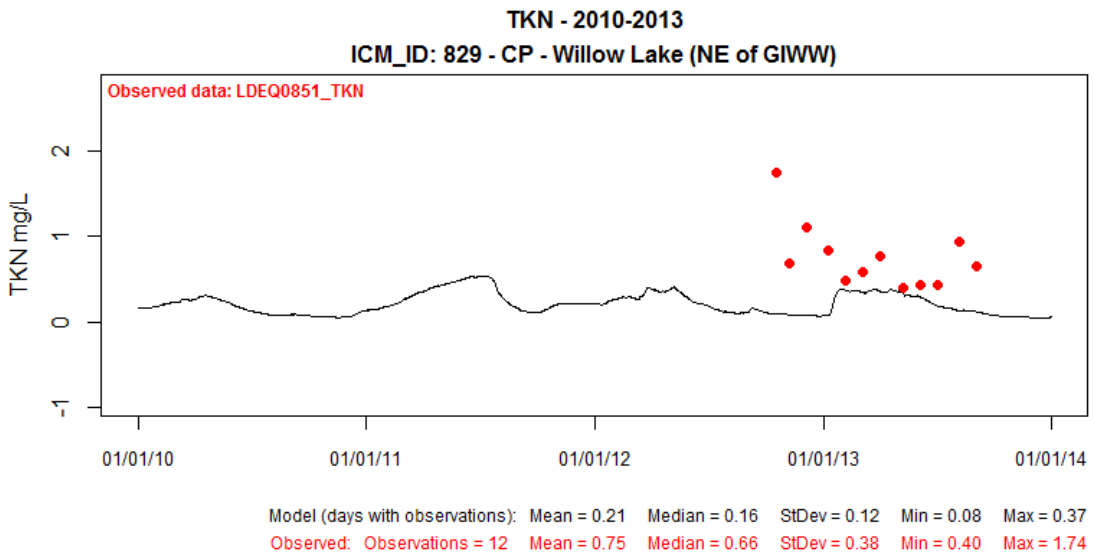


**Figure 247: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 829 (solid black line) Compared to Observed Data at LDEQ0851 for Calibration Period, 2010-2013.**

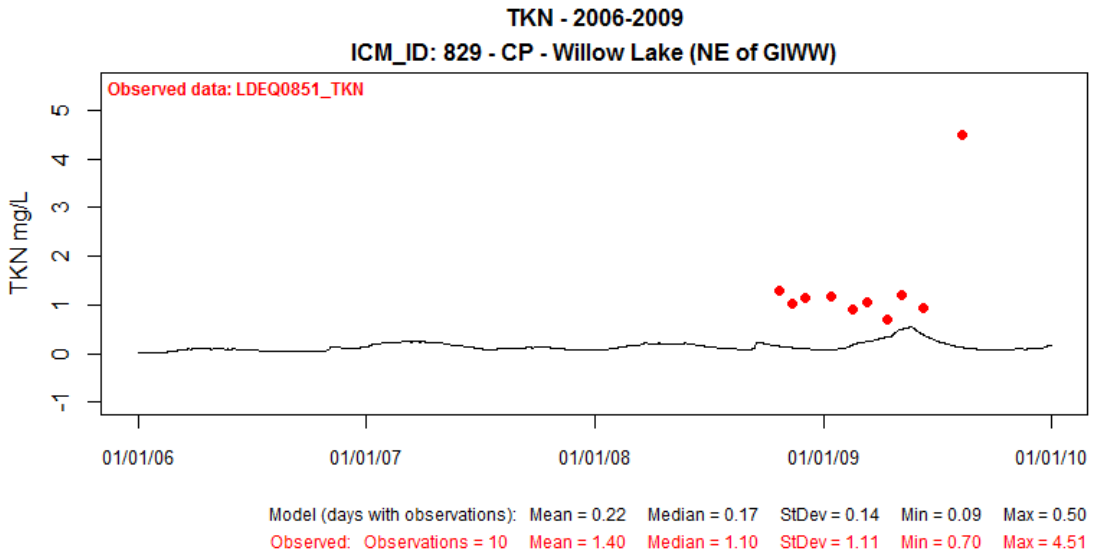


**Figure 248: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 829 (solid black line) Compared to Observed Data at LDEQ0851 for Validation Period, 2006-2009.**

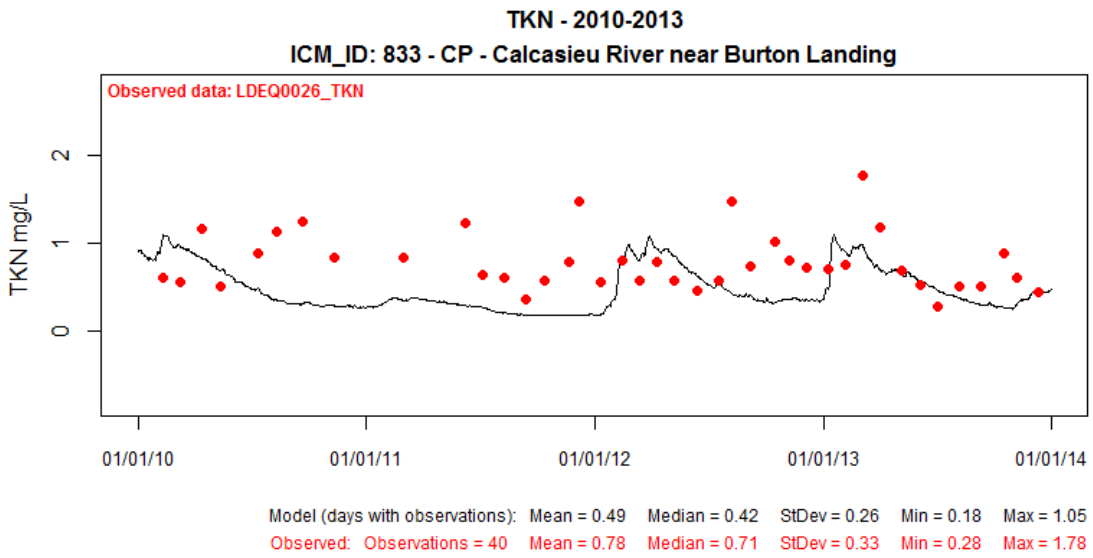


**Figure 249: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 833 (solid black line) Compared to Observed Data at LDEQ0026 for Calibration Period, 2010-2013.**

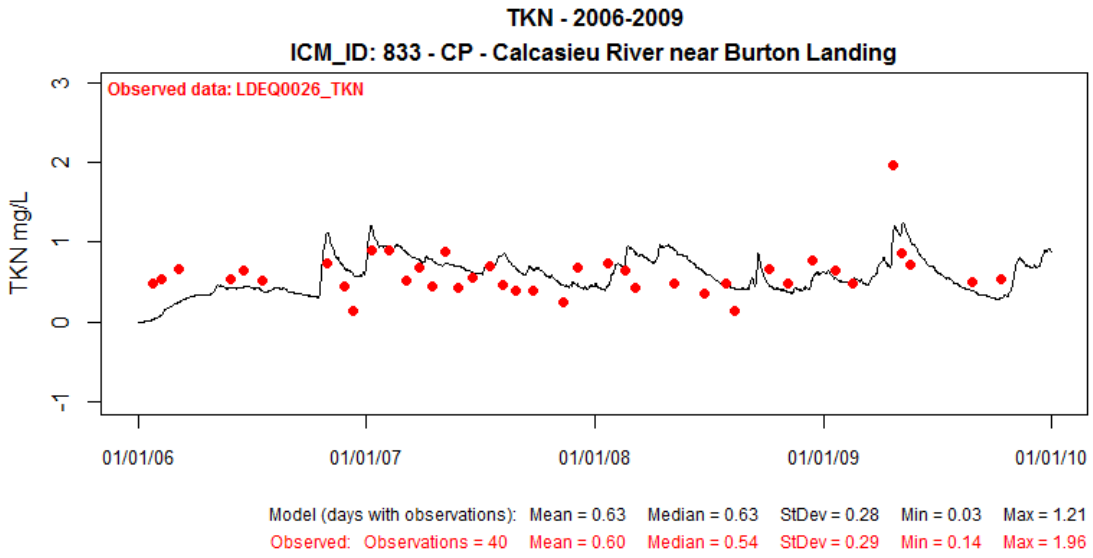


**Figure 250: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 833 (solid black line) Compared to Observed Data at LDEQ0026 for Validation Period, 2006-2009.**

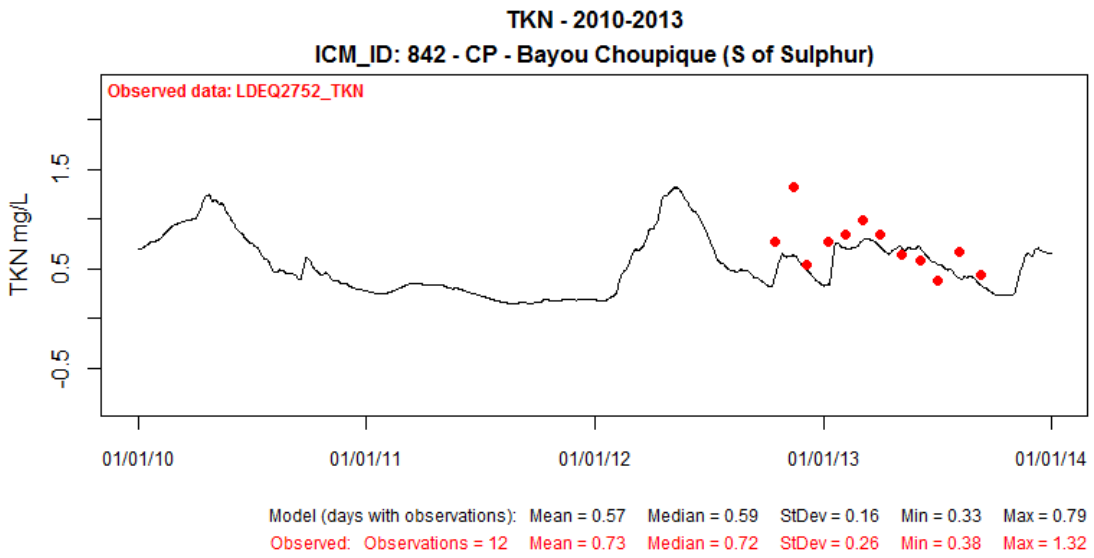


**Figure 251: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 842 (solid black line) Compared to Observed Data at LDEQ2752 for Calibration Period, 2010-2013.**

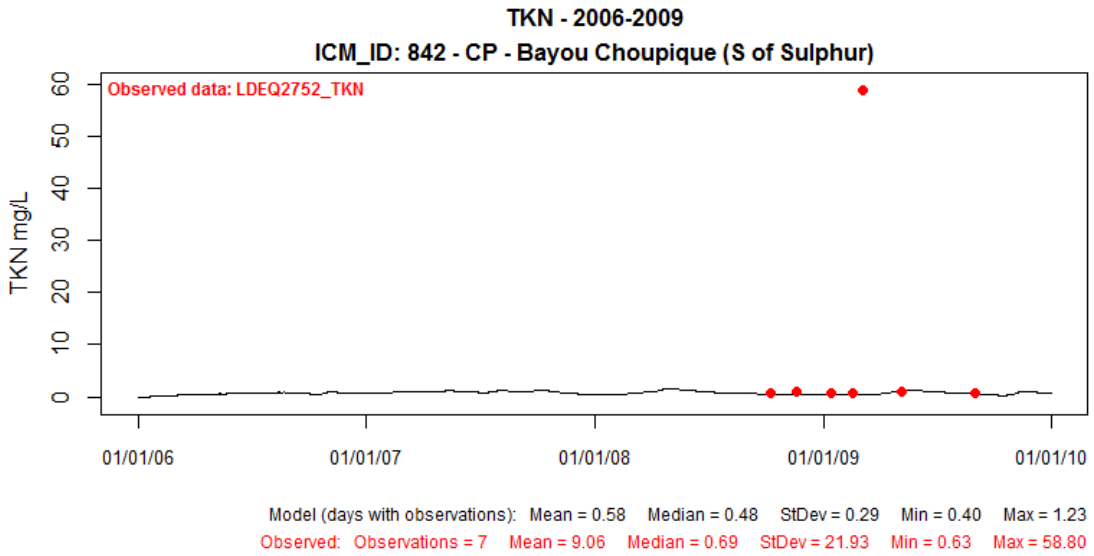


**Figure 252: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 842 (solid black line) Compared to Observed Data at LDEQ2752 for Validation Period, 2006-2009.**

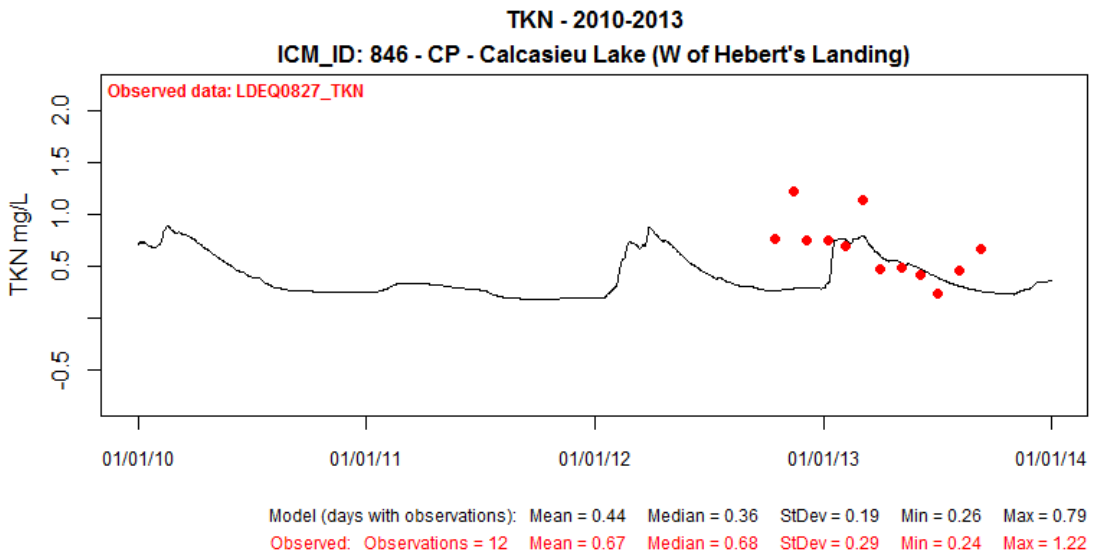


**Figure 253: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 846 (solid black line) Compared to Observed Data at LDEQ0827 for Calibration Period, 2010-2013.**

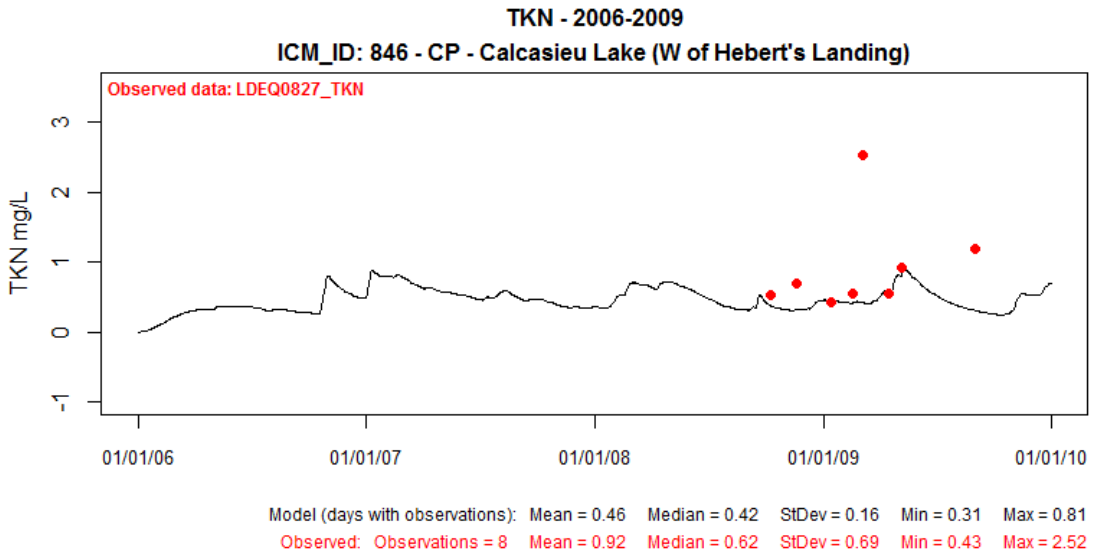


**Figure 254: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 846 (solid black line) Compared to Observed Data at LDEQ0827 for Validation Period, 2006-2009.**

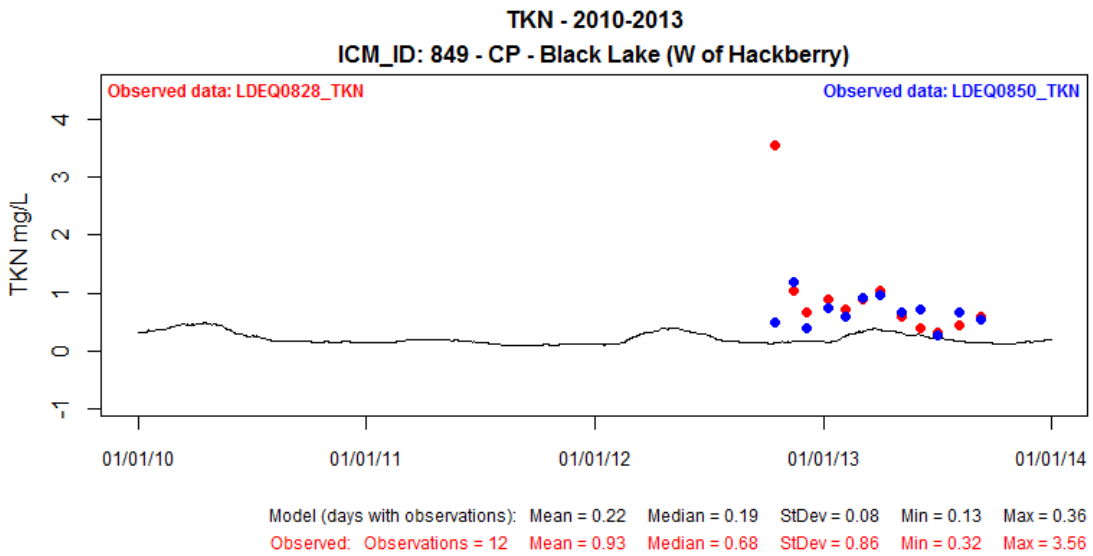


**Figure 255: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 849 (solid black line) Compared to Observed Data at LDEQ0828 for Calibration Period, 2010-2013.**

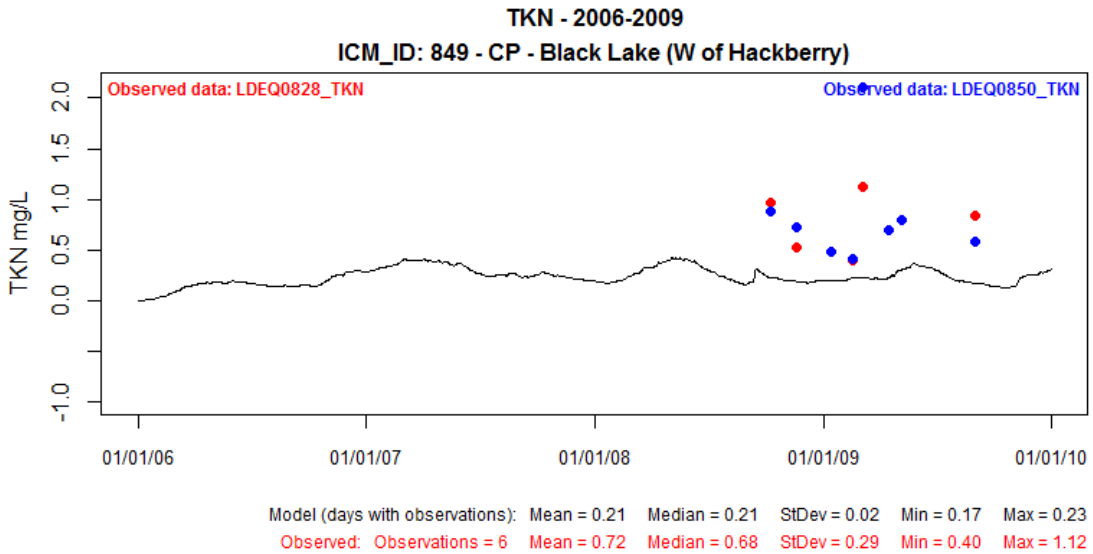


**Figure 256: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 849 (solid black line) Compared to Observed Data at LDEQ0828 for Validation Period, 2006-2009.**

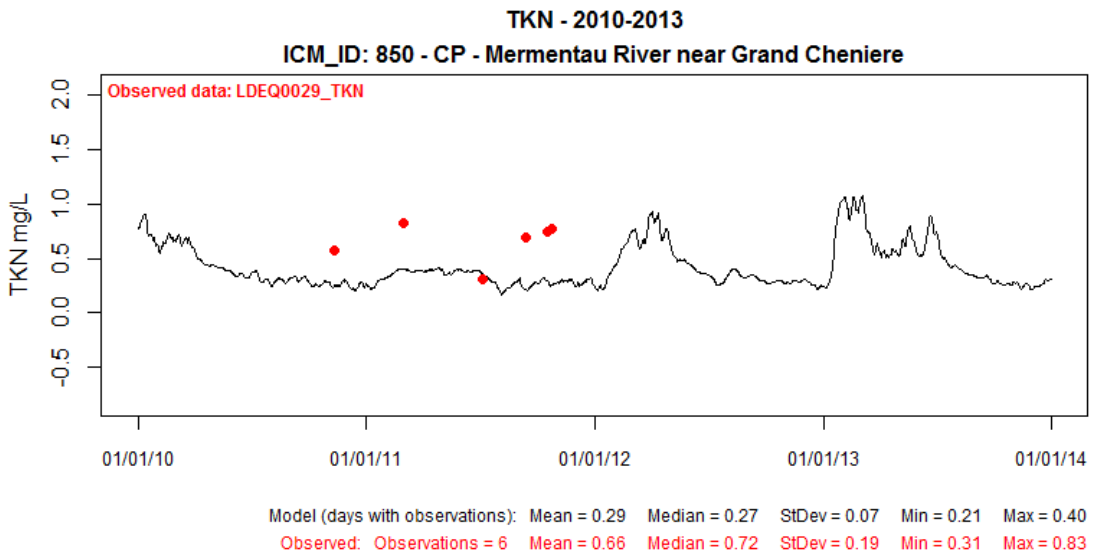


**Figure 257: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 850 (solid black line) Compared to Observed Data at LDEQ0029 for Calibration Period, 2010-2013.**

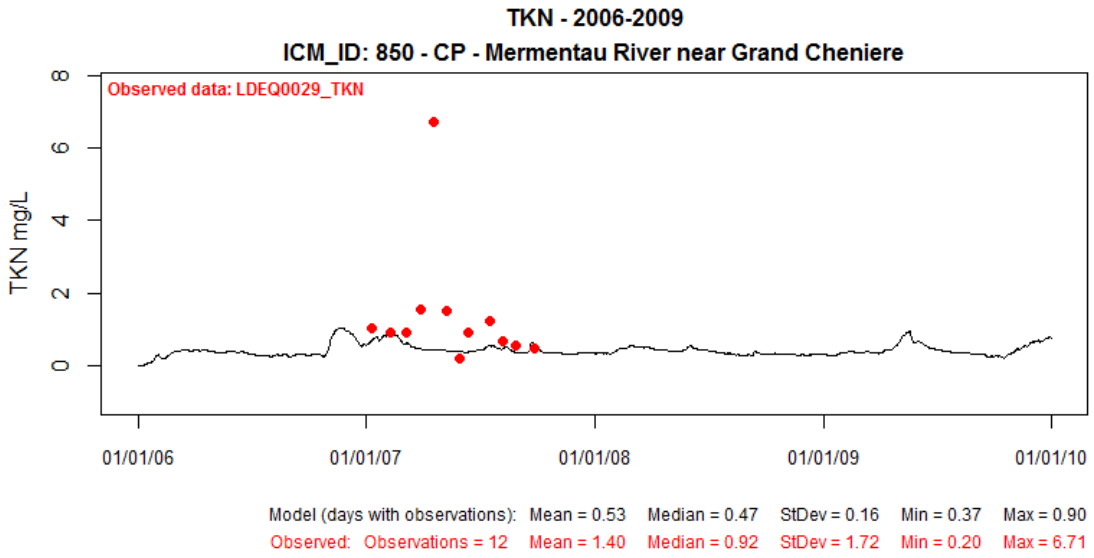


**Figure 258: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 850 (solid black line) Compared to Observed Data at LDEQ0029 for Validation Period, 2006-2009.**

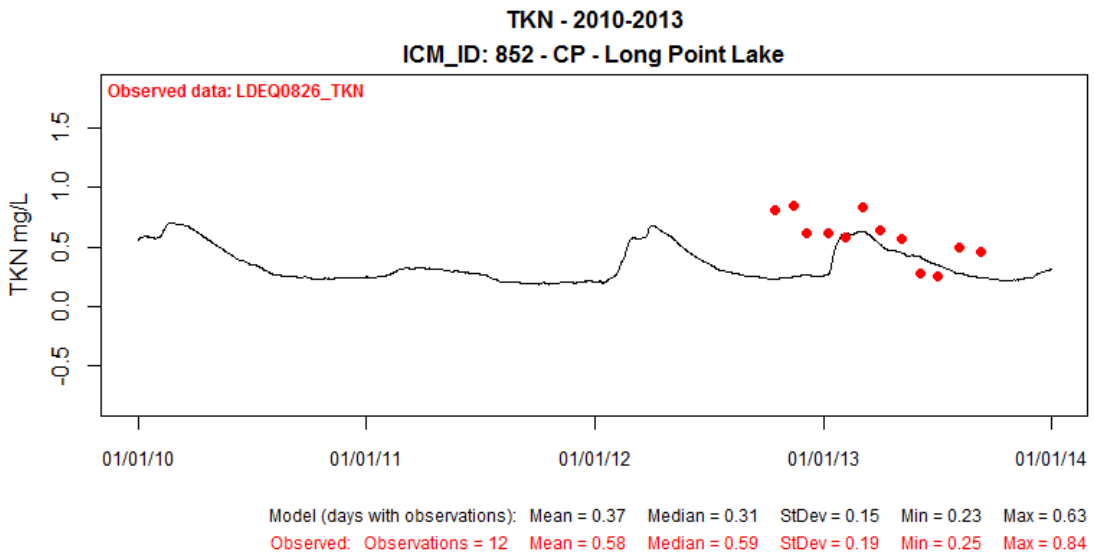


**Figure 259: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 852 (solid black line) Compared to Observed Data at LDEQ0826 for Calibration Period, 2010-2013.**

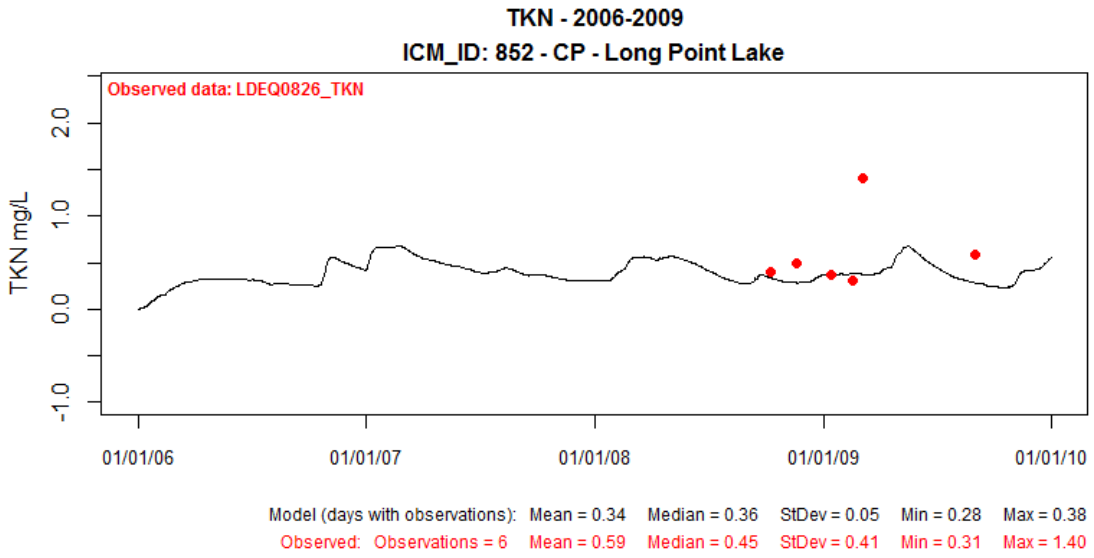


**Figure 260: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 852 (solid black line) Compared to Observed Data at LDEQ0826 for Validation Period, 2006-2009.**

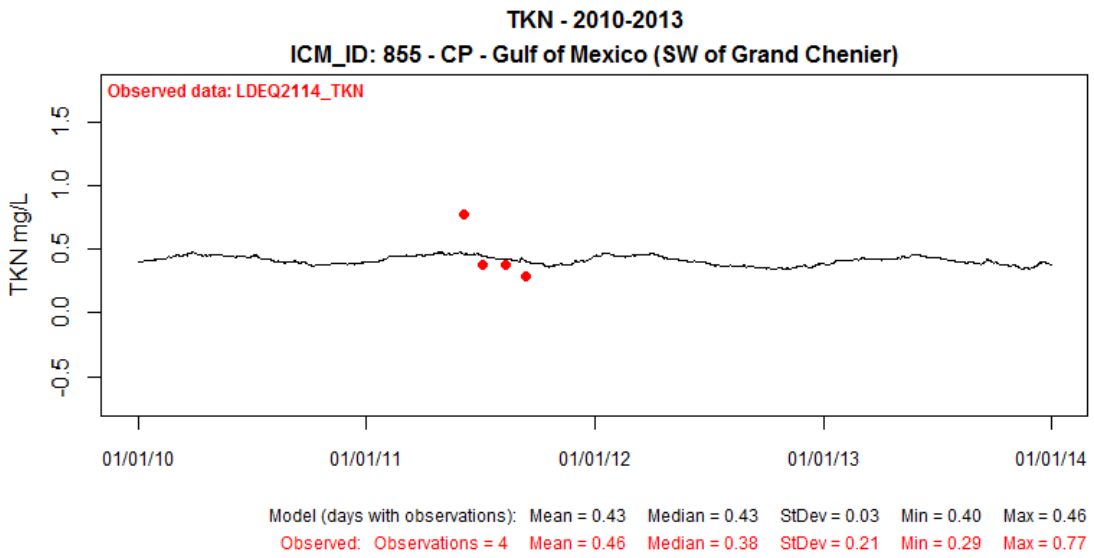


**Figure 261: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 855 (solid black line) Compared to Observed Data at LDEQ2114 for Calibration Period, 2010-2013.**

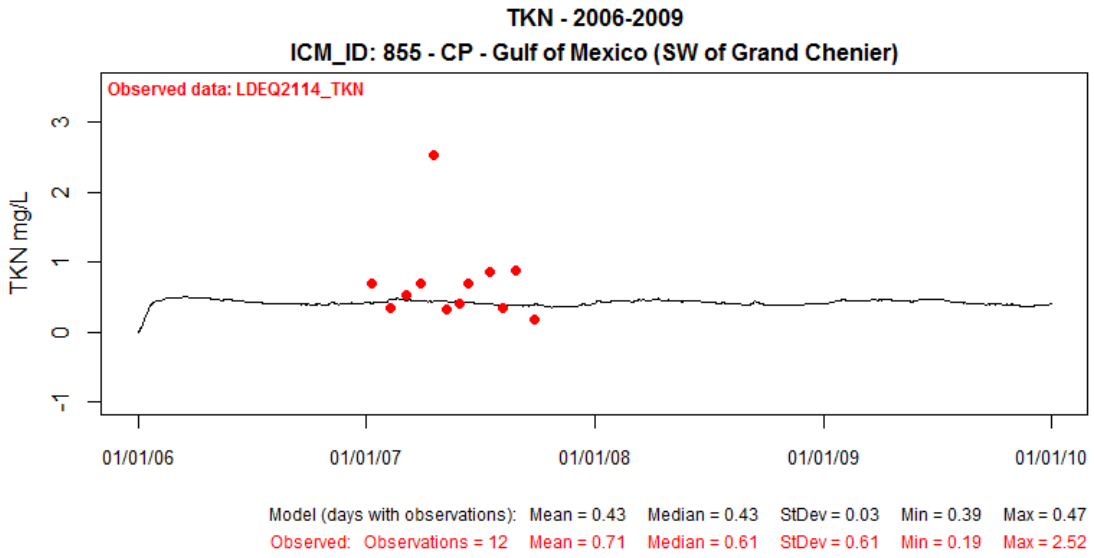


**Figure 262: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 855 (solid black line) Compared to Observed Data at LDEQ2114 for Validation Period, 2006-2009.**

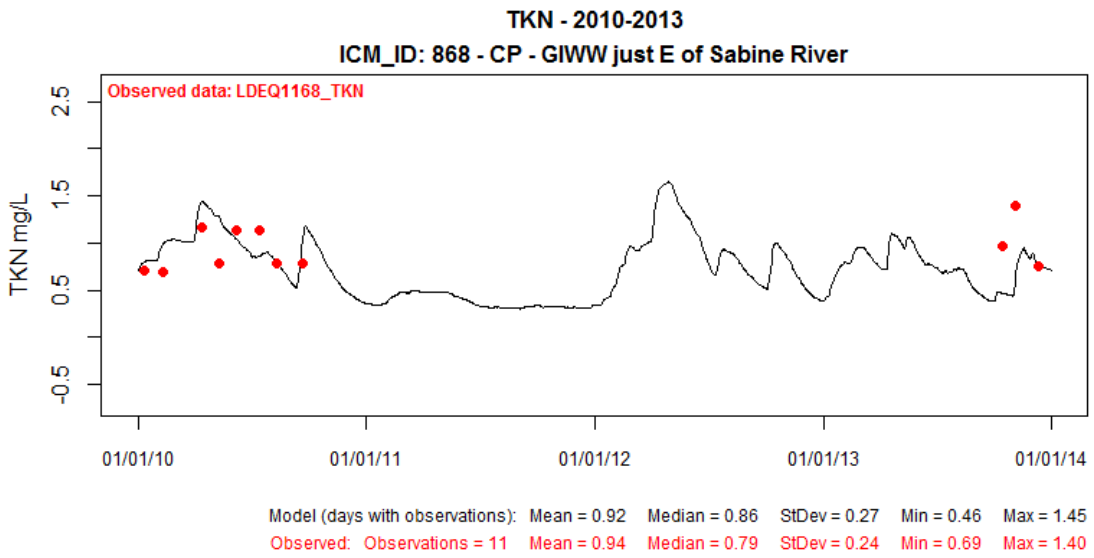


**Figure 263: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 868 (solid black line) Compared to Observed Data at LDEQ1168 for Calibration Period, 2010-2013.**

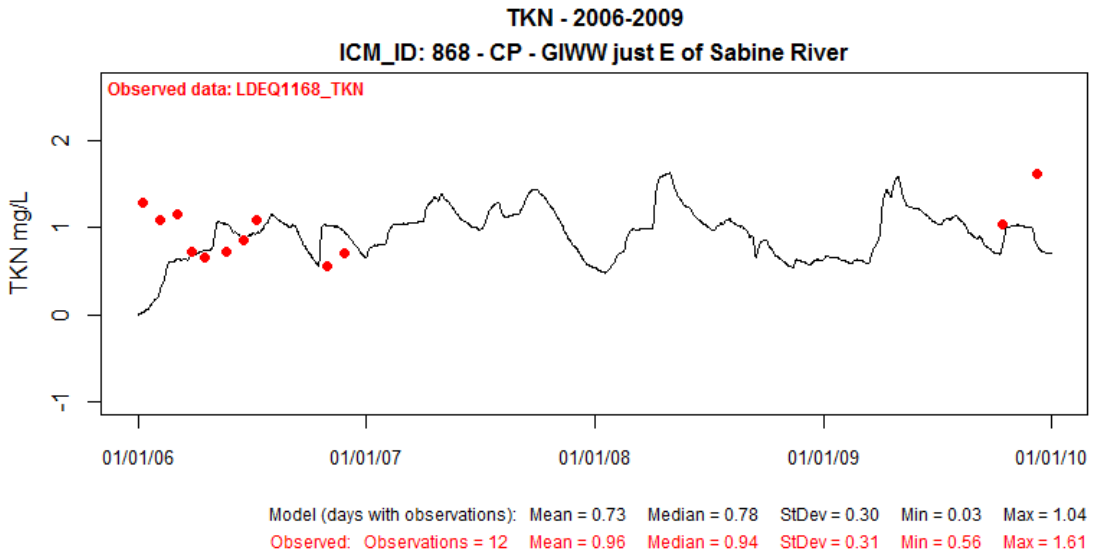


**Figure 264: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 868 (solid black line) Compared to Observed Data at LDEQ1168 for Validation Period, 2006-2009.**

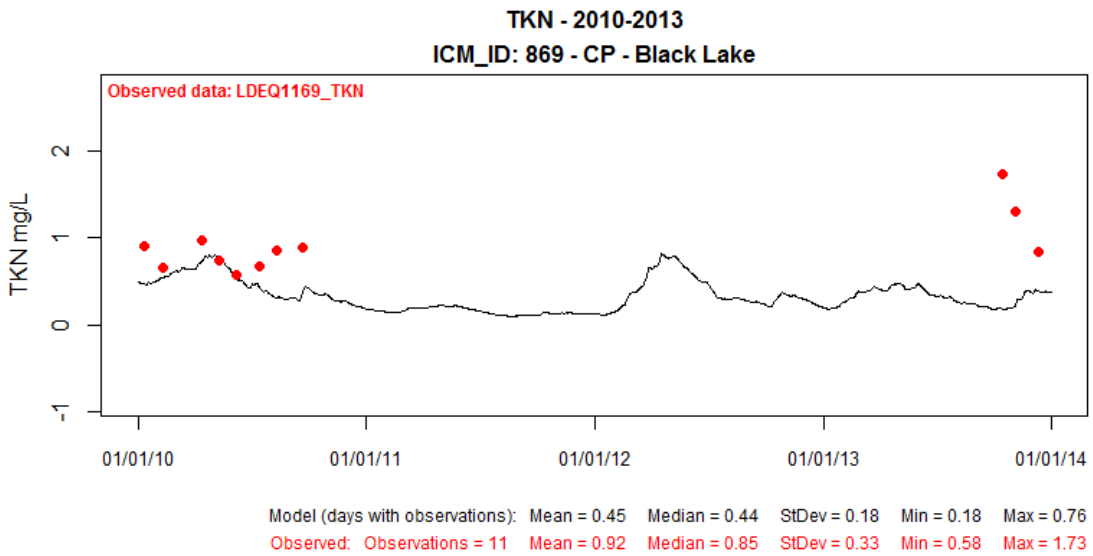


**Figure 265: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 869 (solid black line) Compared to Observed Data at LDEQ1169 for Calibration Period, 2010-2013.**

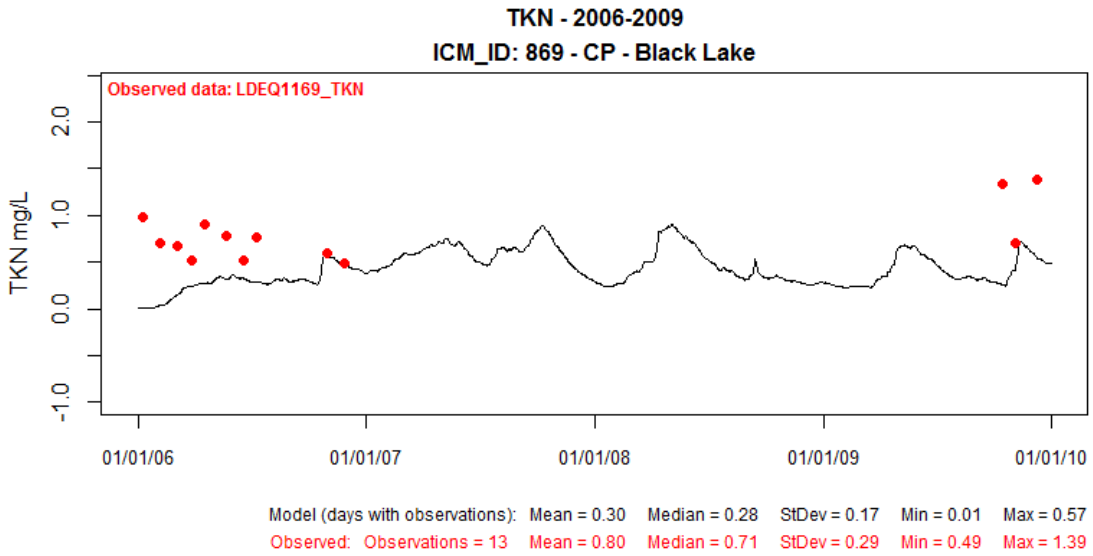


**Figure 266: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 869 (solid black line) Compared to Observed Data at LDEQ1169 for Validation Period, 2006-2009.**

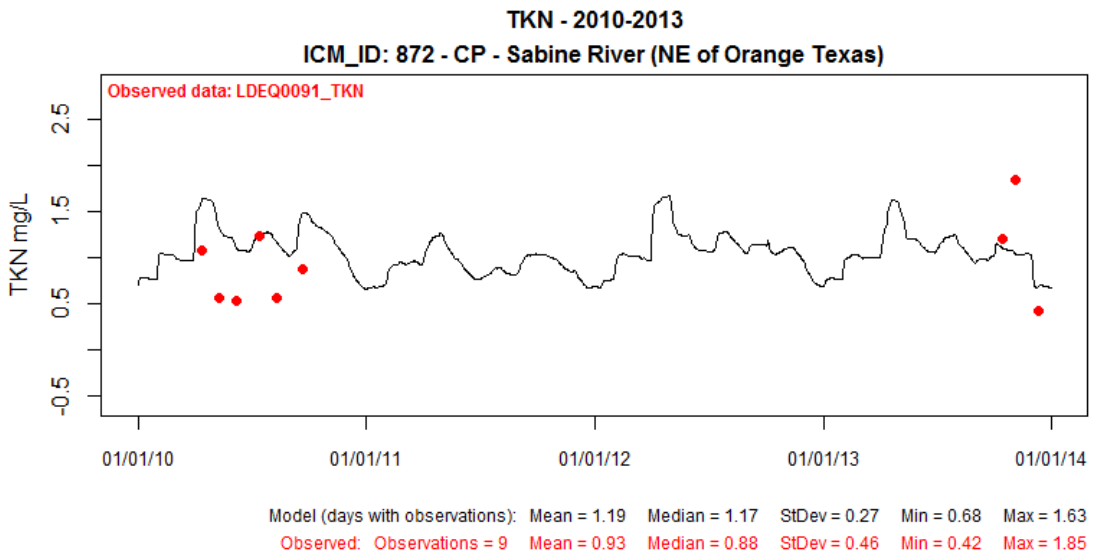


**Figure 267: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 872 (solid black line) Compared to Observed Data at LDEQ0091 for Calibration Period, 2010-2013.**

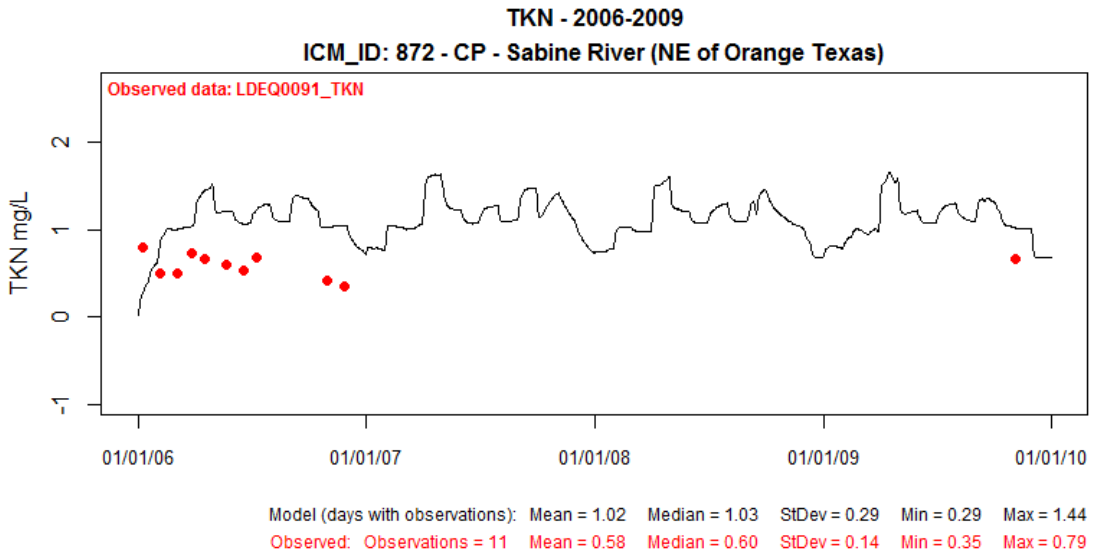


**Figure 268: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 872 (solid black line) Compared to Observed Data at LDEQ0091 for Validation Period, 2006-2009.**

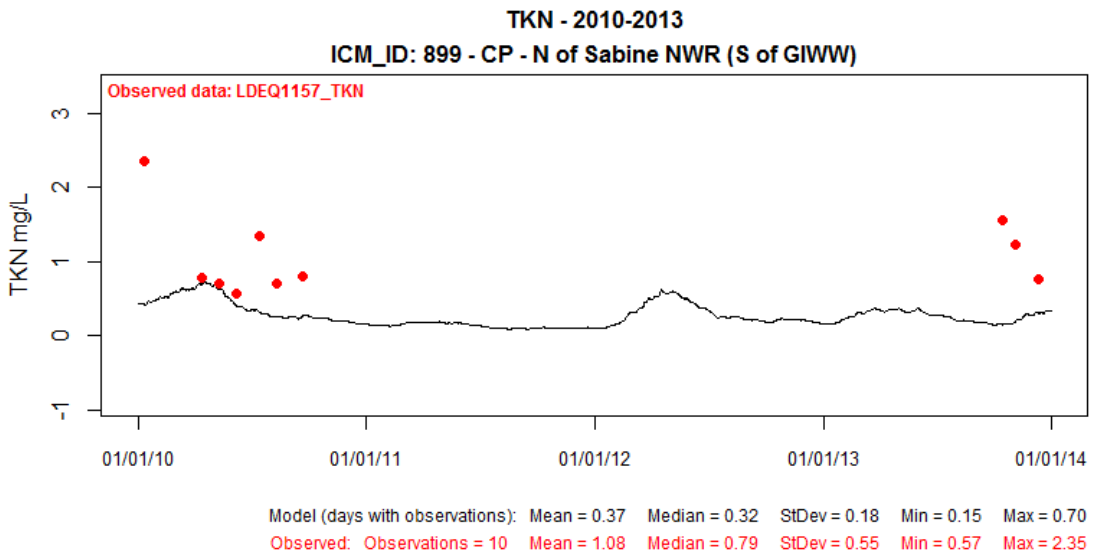


**Figure 269: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 899 (solid black line) Compared to Observed Data at LDEQ1157 for Calibration Period, 2010-2013.**

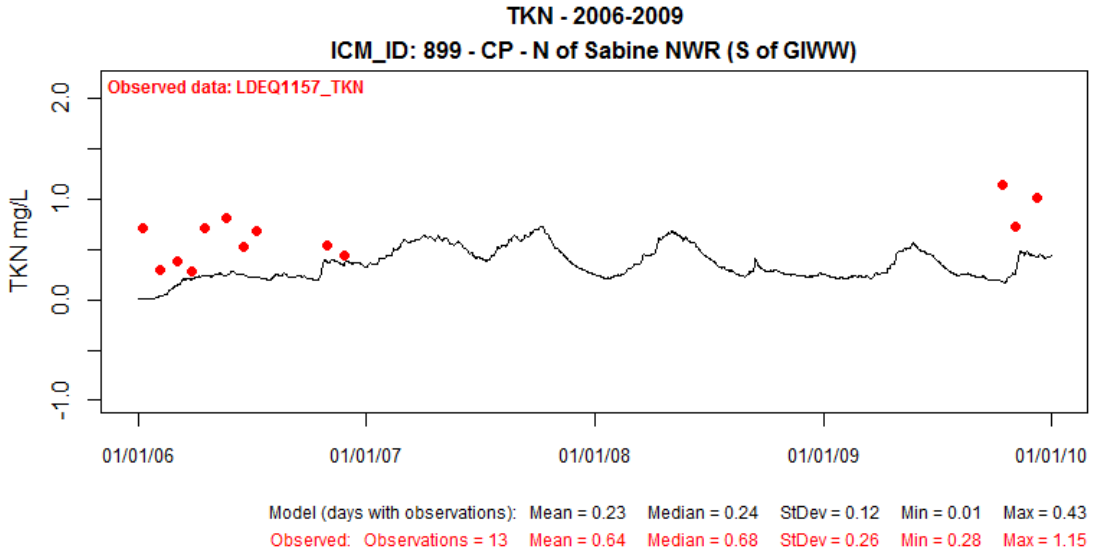


**Figure 270: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 899 (solid black line) Compared to Observed Data at LDEQ1157 for Validation Period, 2006-2009.**

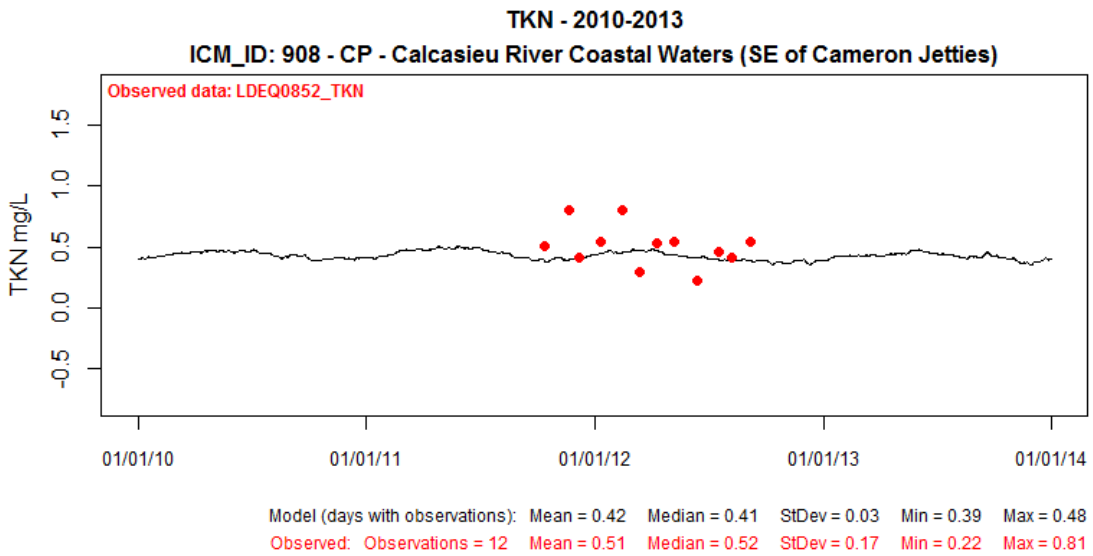


**Figure 271: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 908 (solid black line) Compared to Observed Data at LDEQ0852 for Calibration Period, 2010-2013.**

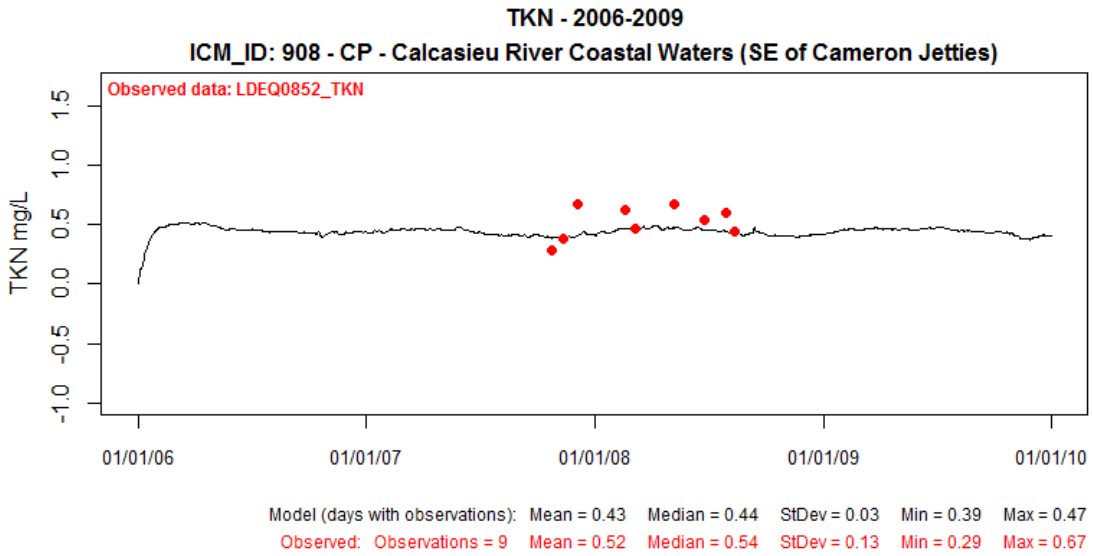


**Figure 272: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 908 (solid black line) Compared to Observed Data at LDEQ0852 for Validation Period, 2006-2009.**

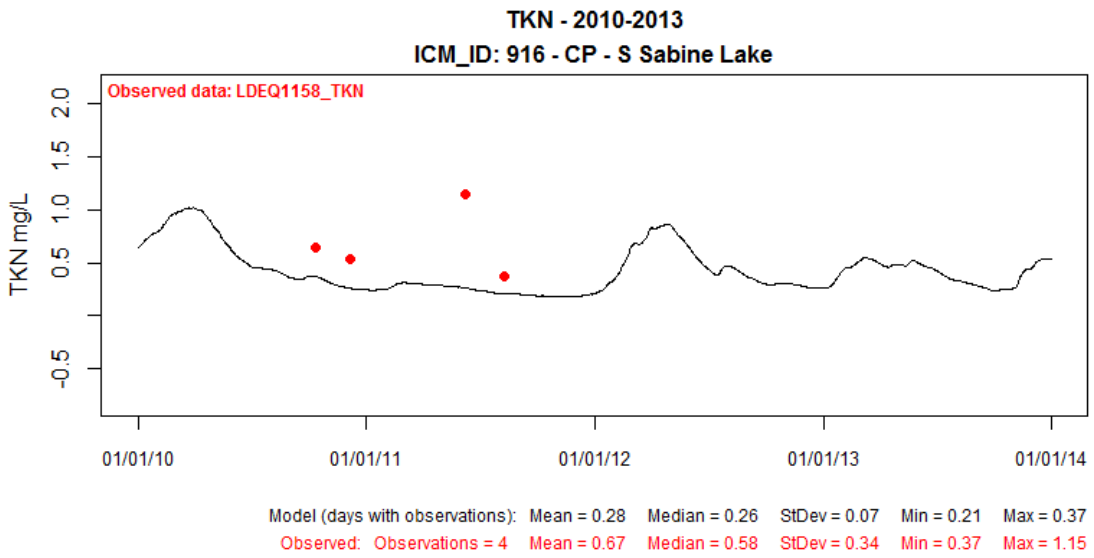


**Figure 273: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 916 (solid black line) Compared to Observed Data at LDEQ1158 for Calibration Period, 2010-2013.**

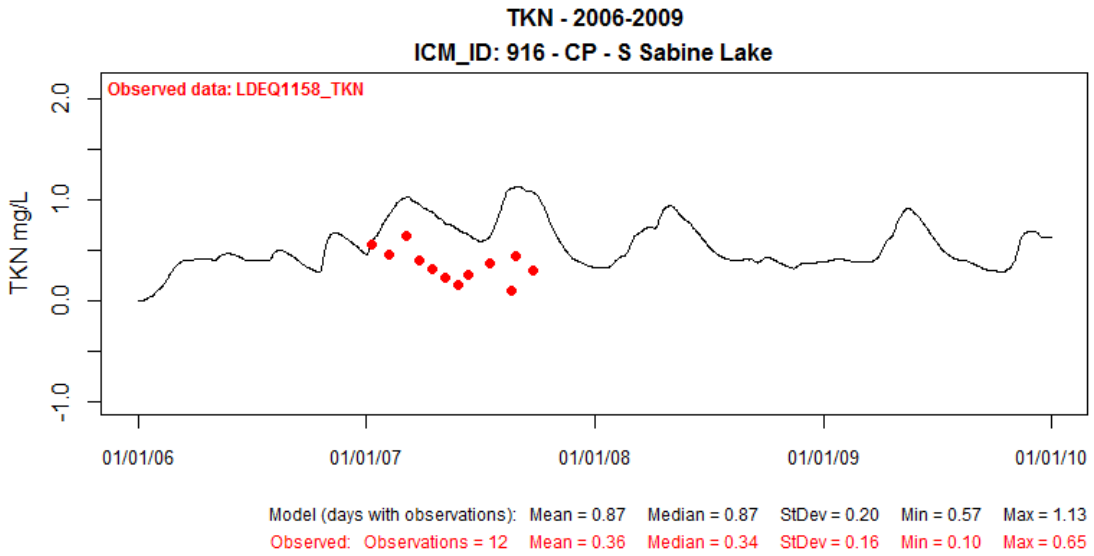


**Figure 274: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 916 (solid black line) Compared to Observed Data at LDEQ1158 for Validation Period, 2006-2009.**

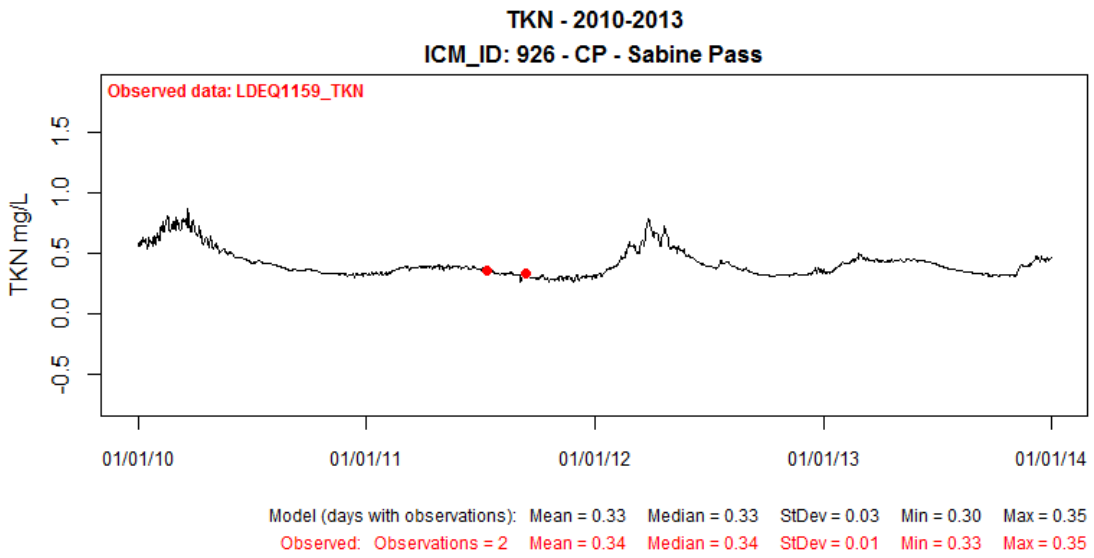


**Figure 275: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 926 (solid black line) Compared to Observed Data at LDEQ1159 for Calibration Period, 2010-2013.**

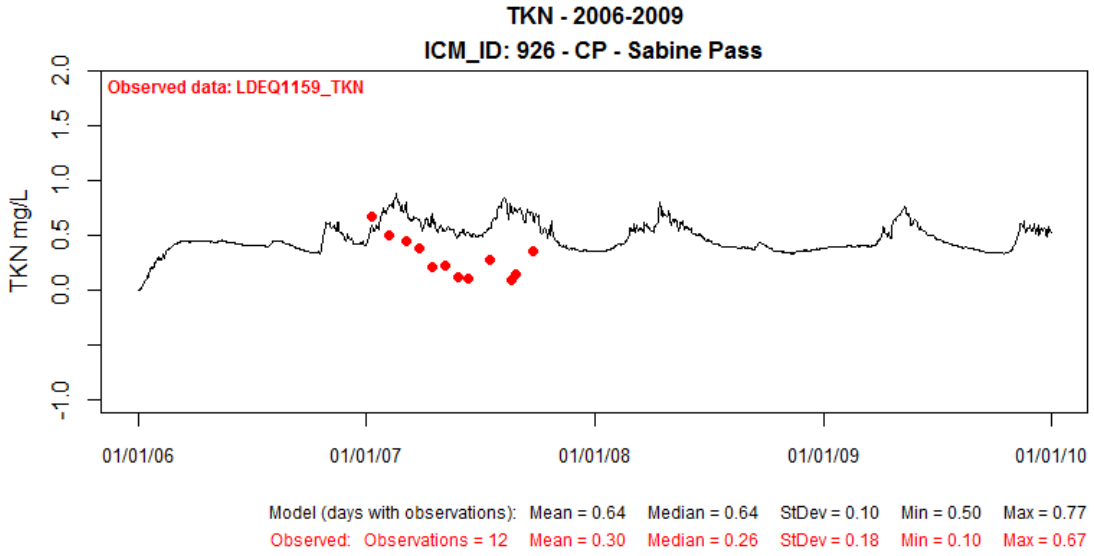


**Figure 276: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 926 (solid black line) Compared to Observed Data at LDEQ1159 for Validation Period, 2006-2009.**

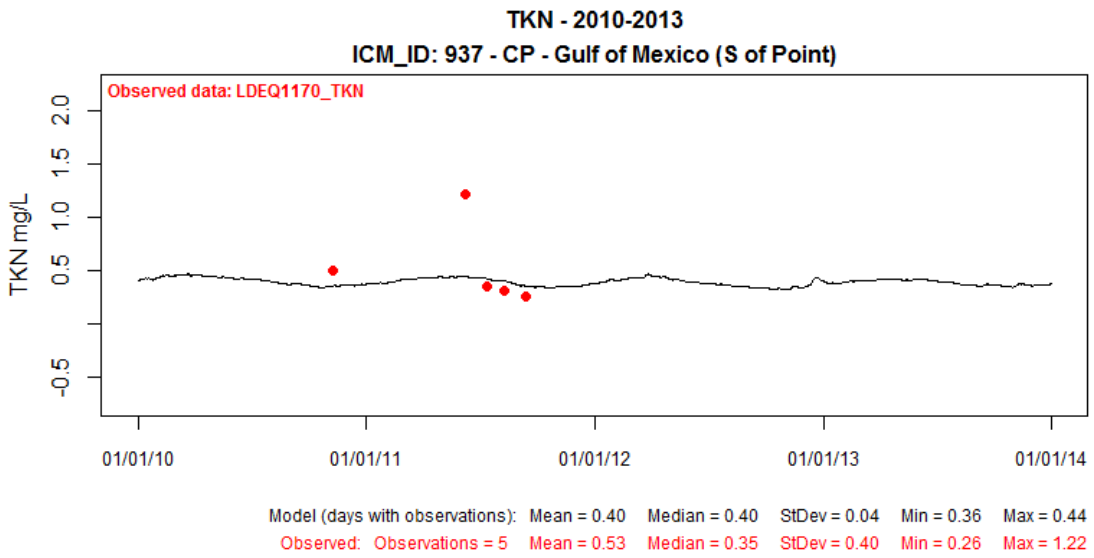


**Figure 277: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 937 (solid black line) Compared to Observed Data at LDEQ1170 for Calibration Period, 2010-2013.**

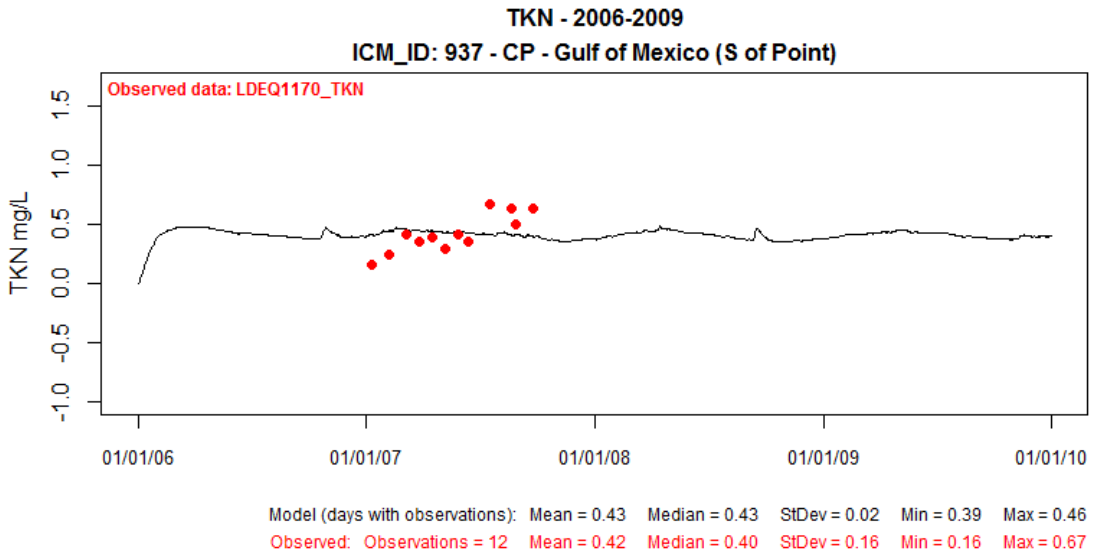


**Figure 278: Modeled Total Kjeldahl Nitrogen (TKN) at ICM Compartment 937 (solid black line) Compared to Observed Data at LDEQ1170 for Validation Period, 2006-2009.**