Long Term Trends for the Arthur R. Marshall Loxahatchee National Wildlife Refuge

(Appendix B)

(1999 - 2015)

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Technical Oversight Committee

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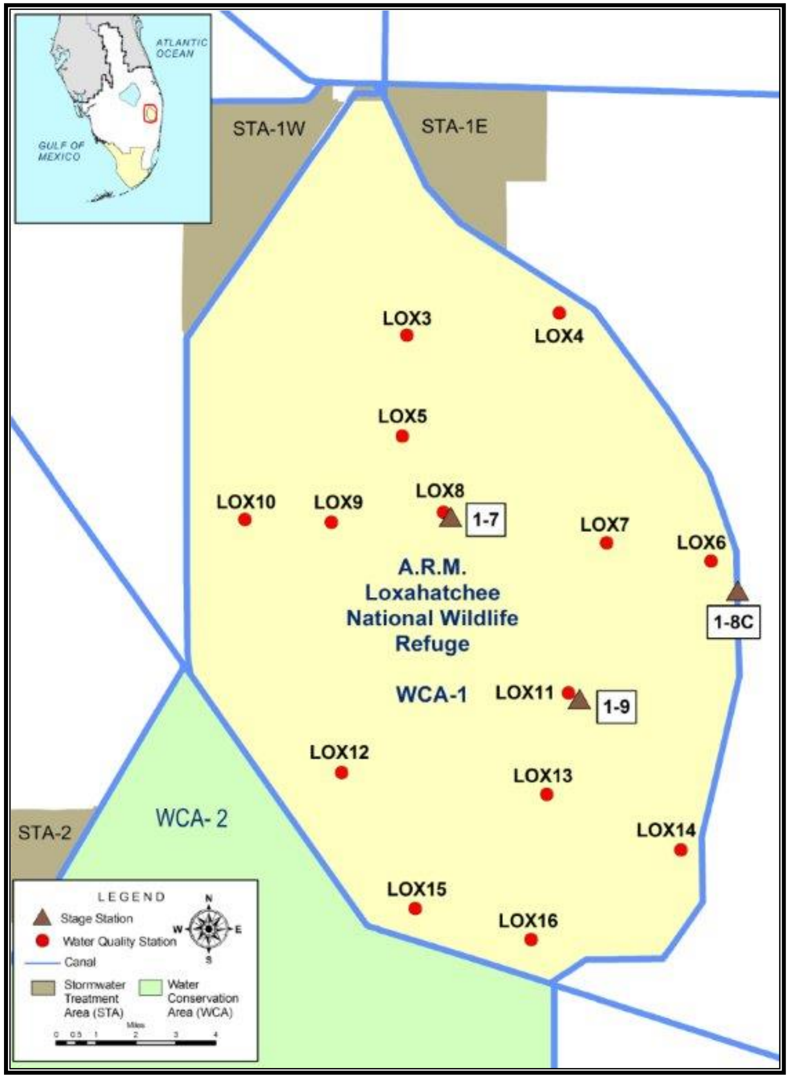
Long Term Trends for the A.R.M. Loxahatchee NWR

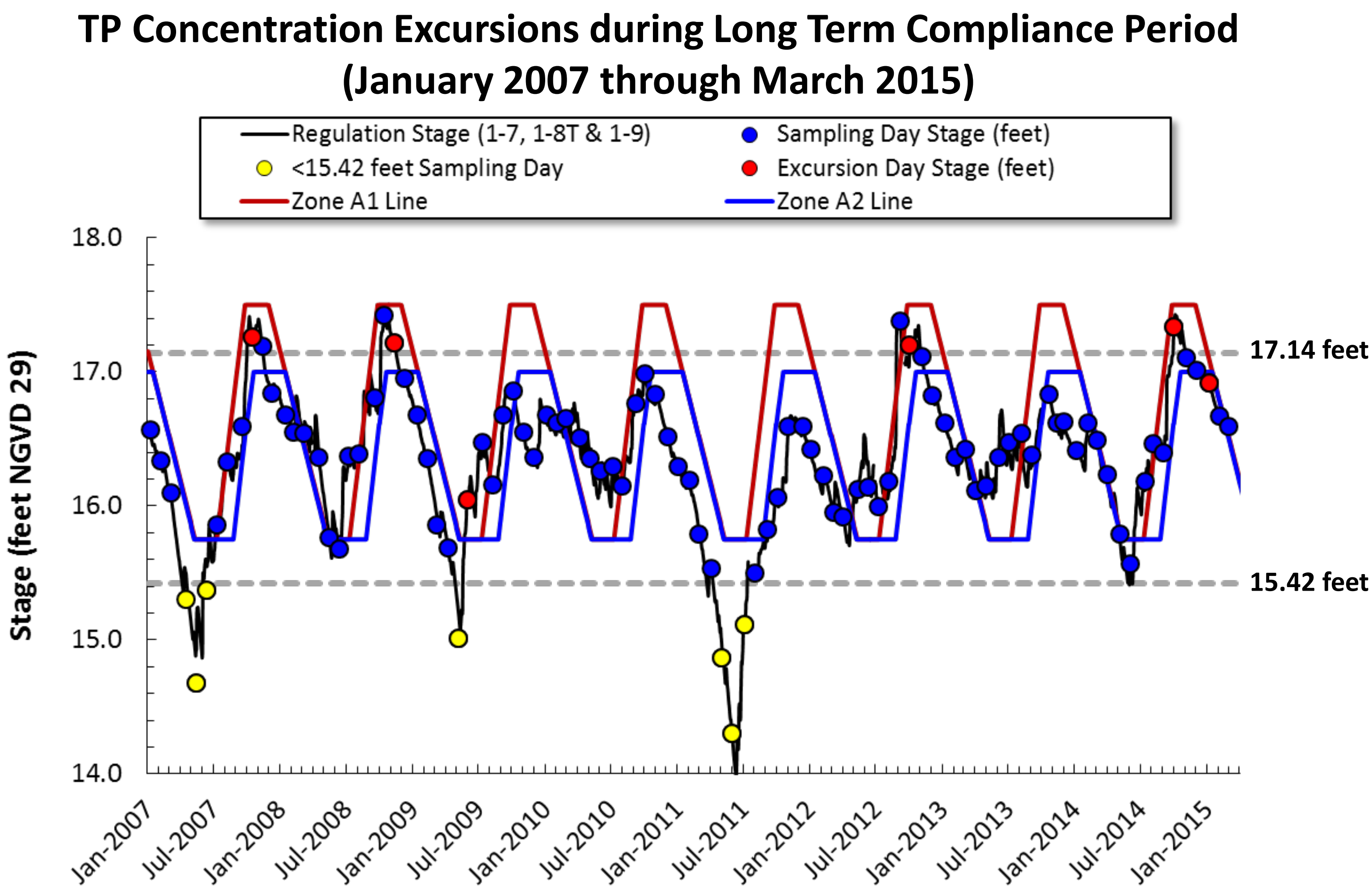


Consent Decree - long term concentration expectation (Appendix B, page B-3)

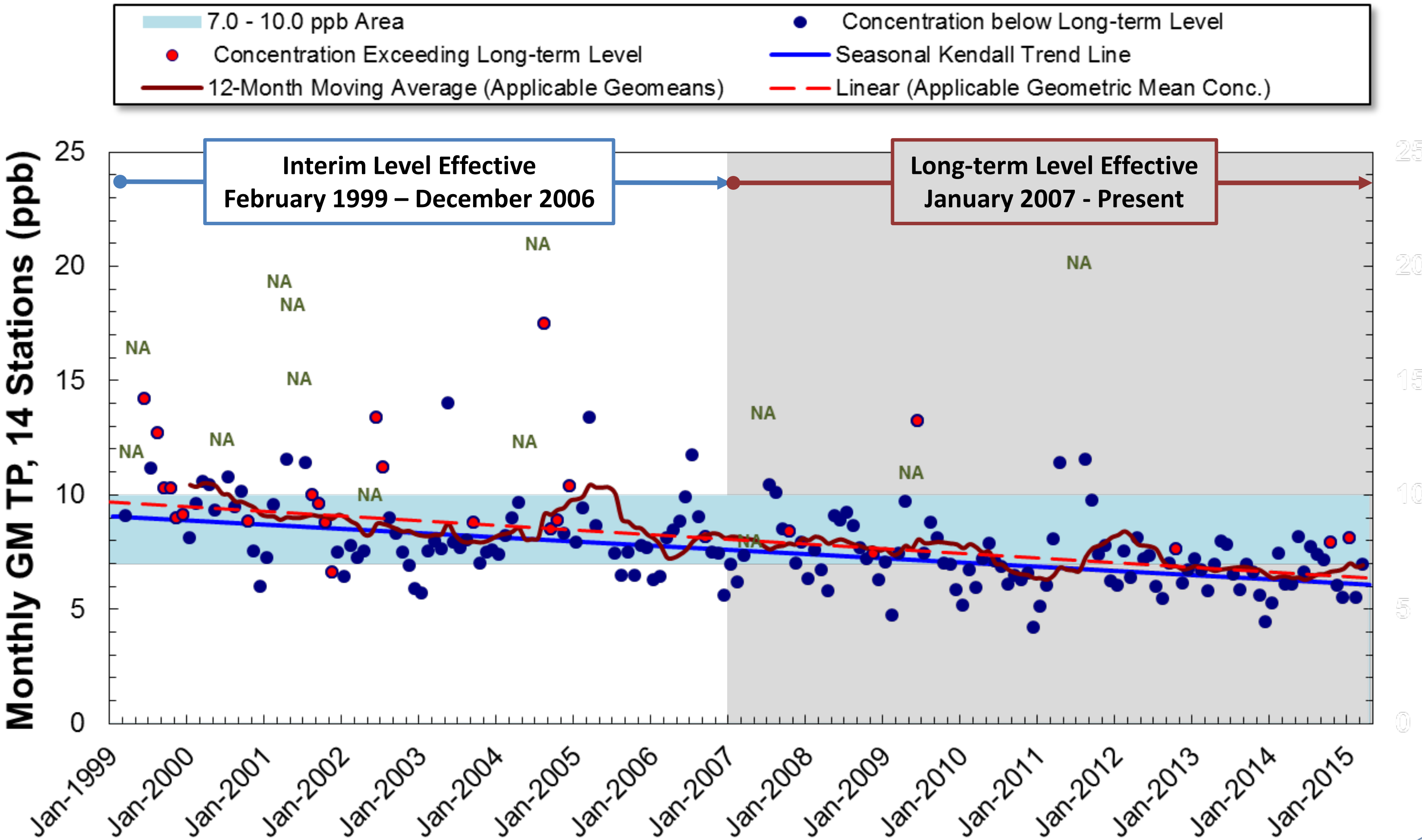
- “The long term concentration levels will apply to all 14 stations.”
- “Compliance with the concentrations levels is expected to provide a long term average 14 station interior marsh concentration of approximately 7 ppb.”

Consent Decree - long term compliance to be met by December 31, 2006 (Appendix B, page B-4)

Long Term Trends for the A.R.M. Loxahatchee NWR



Long Term Trends for the A.R.M. Loxahatchee NWR (February 1999 through March 2015)



NA = Represents geometric mean TP when mean stage <15.42 ft

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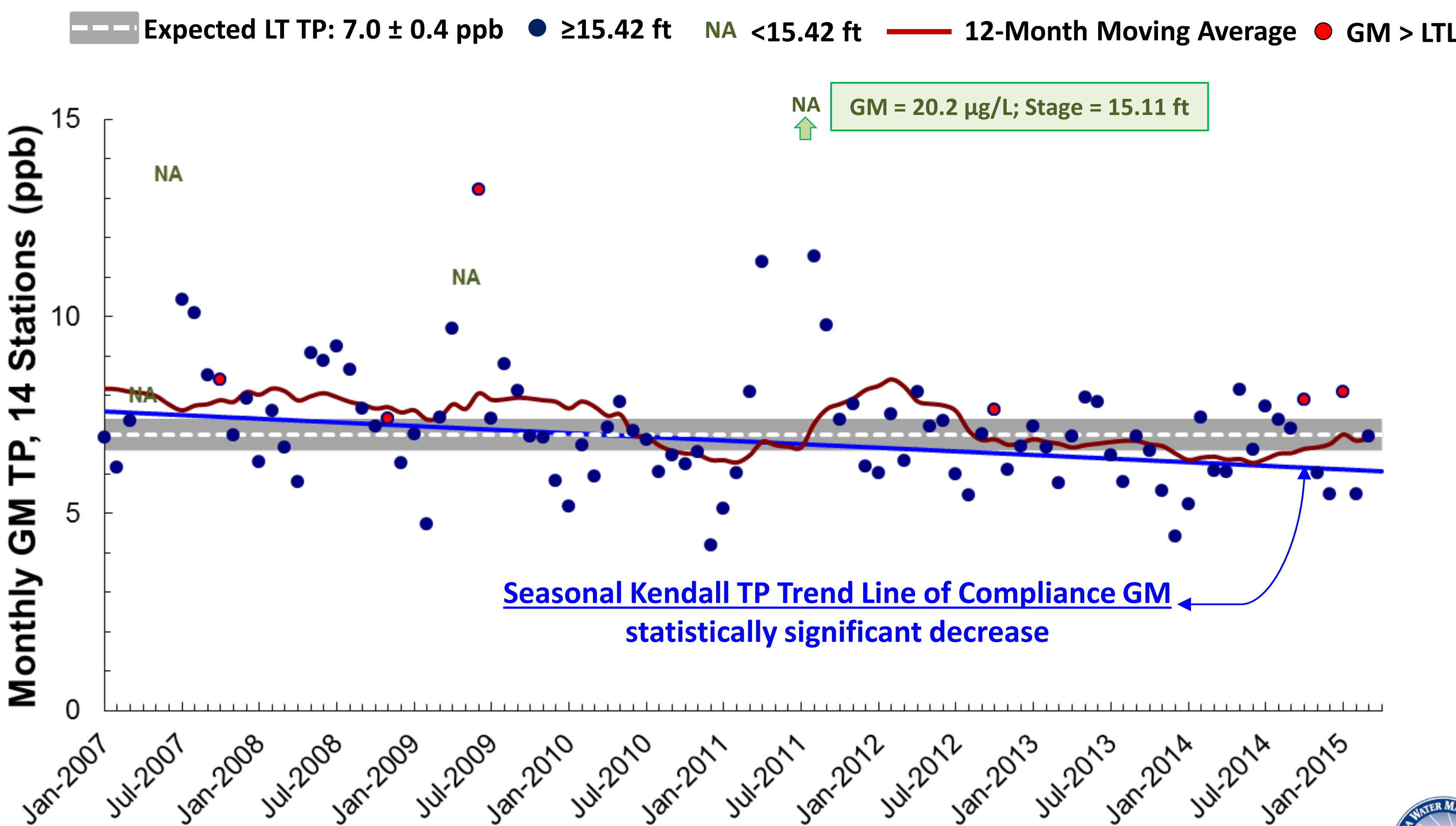
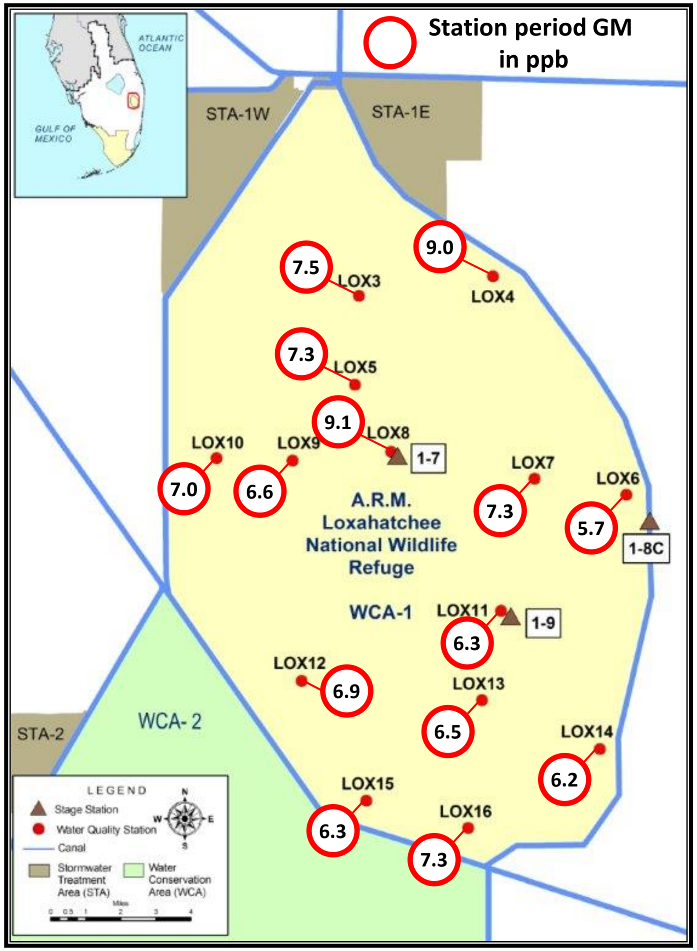
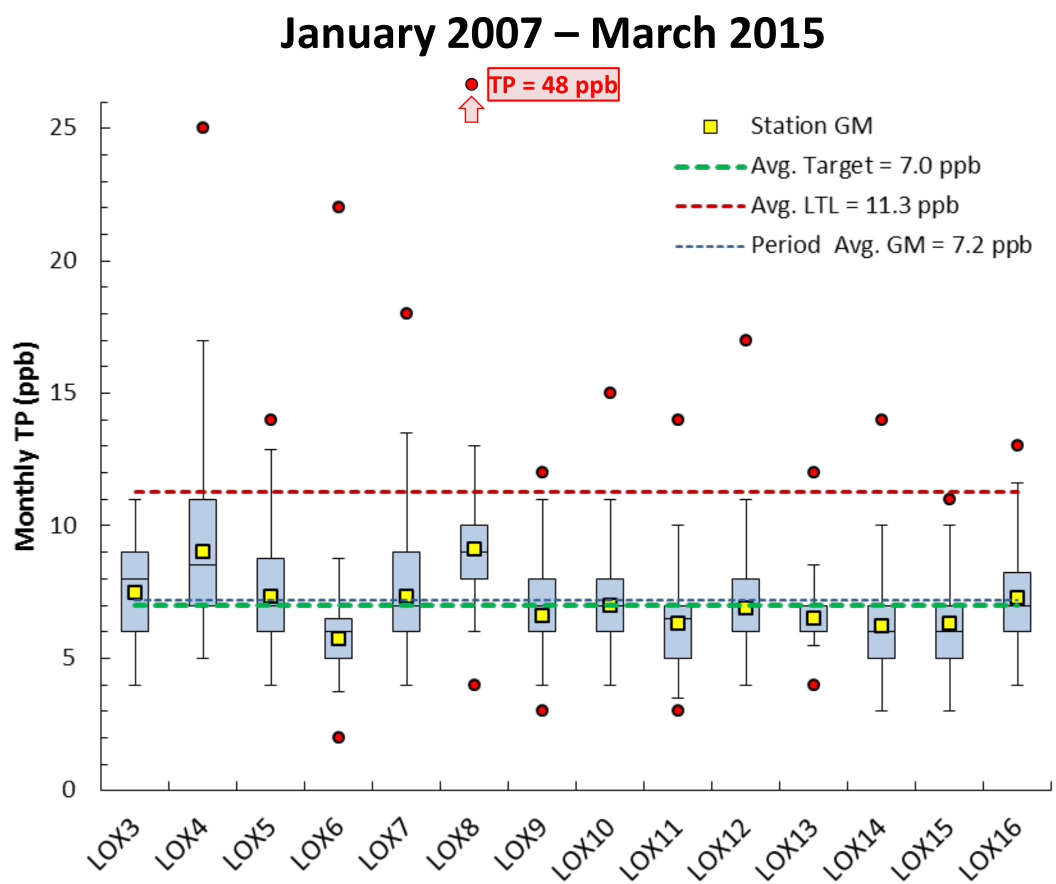
Long Term Trends for the A.R.M. Loxahatchee NWR

TP Concentration Trend during Long Term Compliance Period
(January 2007 through March 2015)



Long Term Trends for the A.R.M. Loxahatchee NWR





Compliance with these concentrations (i.e., long term concentration levels) is expected to provide a long term average 14 station interior marsh concentration of approximately 7 ppb (Settlement Agreement, 1991, Appendix B, Page B-3).

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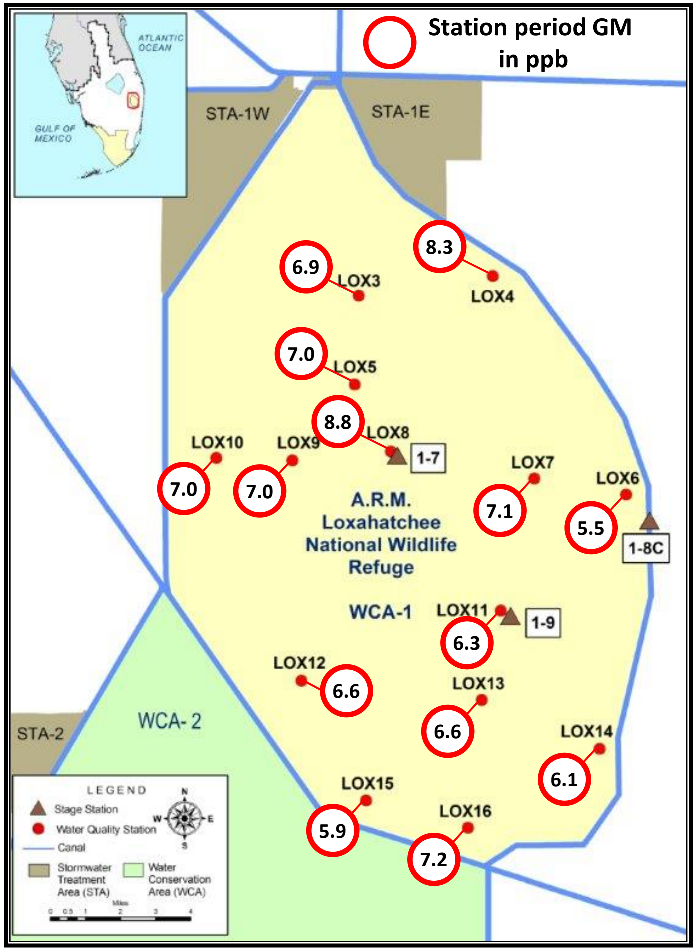
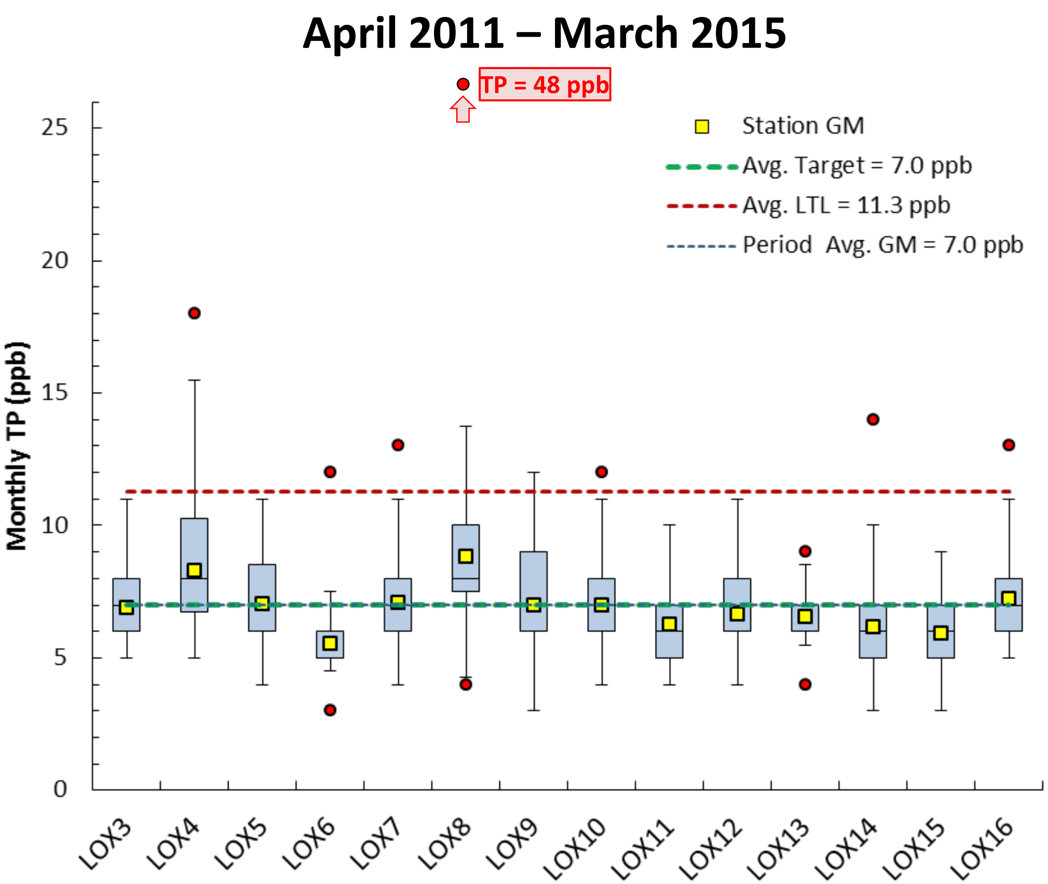
Long Term Trends for the A.R.M. Loxahatchee NWR





Compliance with these concentrations (i.e., long term concentration levels) is expected to provide a long term average 14 station interior marsh concentration of approximately 7 ppb (Settlement Agreement, 1991, Appendix B, Page B-3).

Long Term Trends for the A.R.M. Loxahatchee NWR

Long Term trend observations

- Downward trend in the average TP concentration for LNWR continued through 2015 (last 3 years at ~ 7ppb)
- ~3 ppb drop in concentration from 1999 (~10 ppb) to 2015 (~7ppb)
- Seasonal fluctuations are expected in interior marsh concentrations
- Since 2007 (long-term limit effective):
  - 6 excursions observed or ~ 6% of monthly GM period of record
  - 5 out of the 6 excursions are within ~1 ppb of the expected long-term average concentration of 7 ppb.

Consent Decree implications?

Questions?