

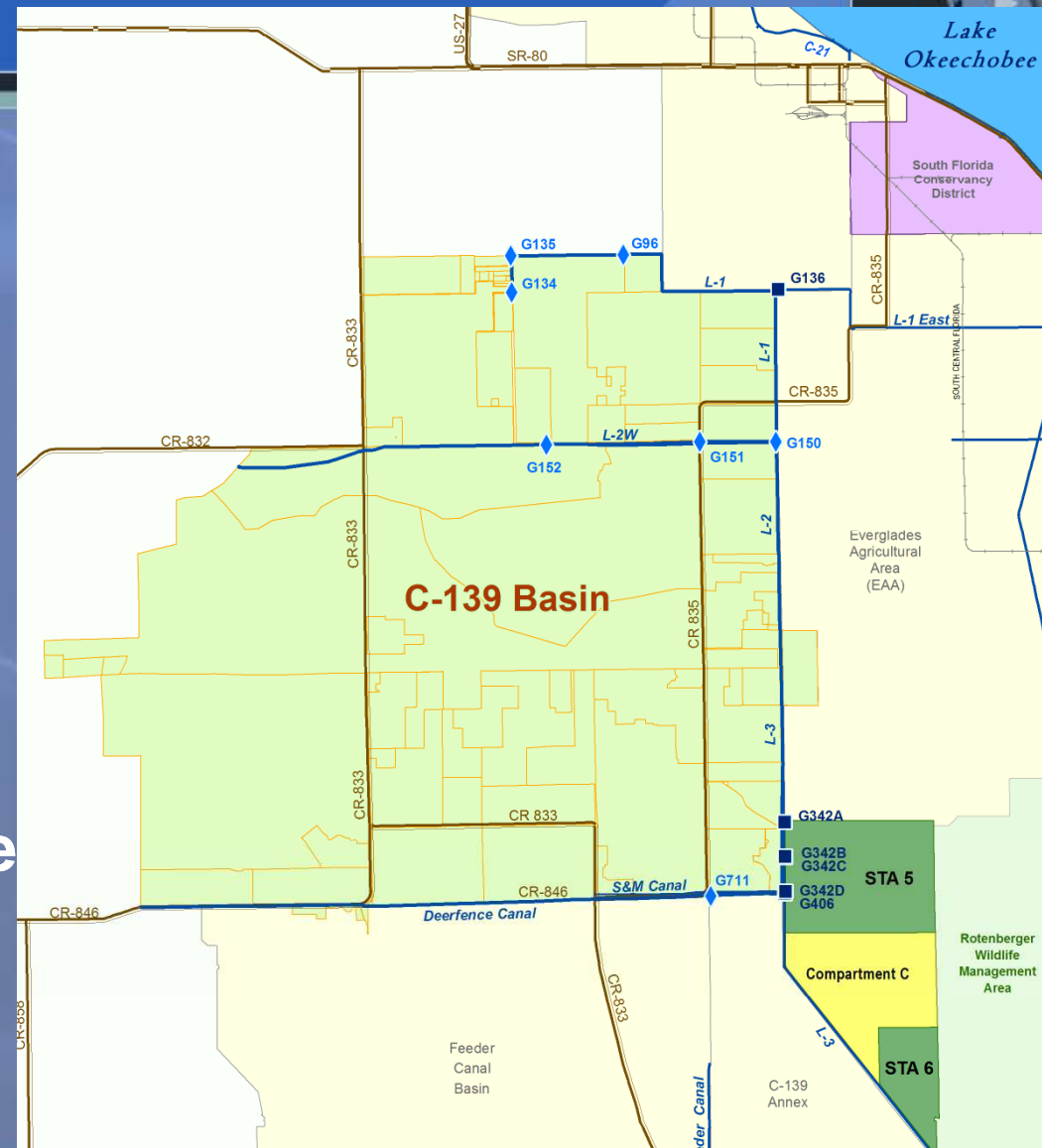
Quarterly Communications Meeting on the
Long-Term Plan for Achieving Water Quality Goals
for Everglades Protection Area Tributary Basins
August 22, 2012

**C-139 Basin Phosphorus
Source Control Performance**

Jonathan Madden, P.E.
Everglades Regulation Bureau, SFWMD

C-139 Basin

- Everglades Forever Act
- Chapter 40E-63, Part IV
C-139 Basin BMP Rule
 - Adopted Jan. 2002
 - 4 years out of compliance
 - Amended Nov. 2010
- Met TP load performance
4 out of last 5 years



WY12 C-139 Basin TP Load Performance Results

Goal: Maintain Historic Loads

Base Period Load

WY2012 Load

Target: 32 mtons

Observed: 15 mtons

Limit: 74 mtons

Meets Performance Goals

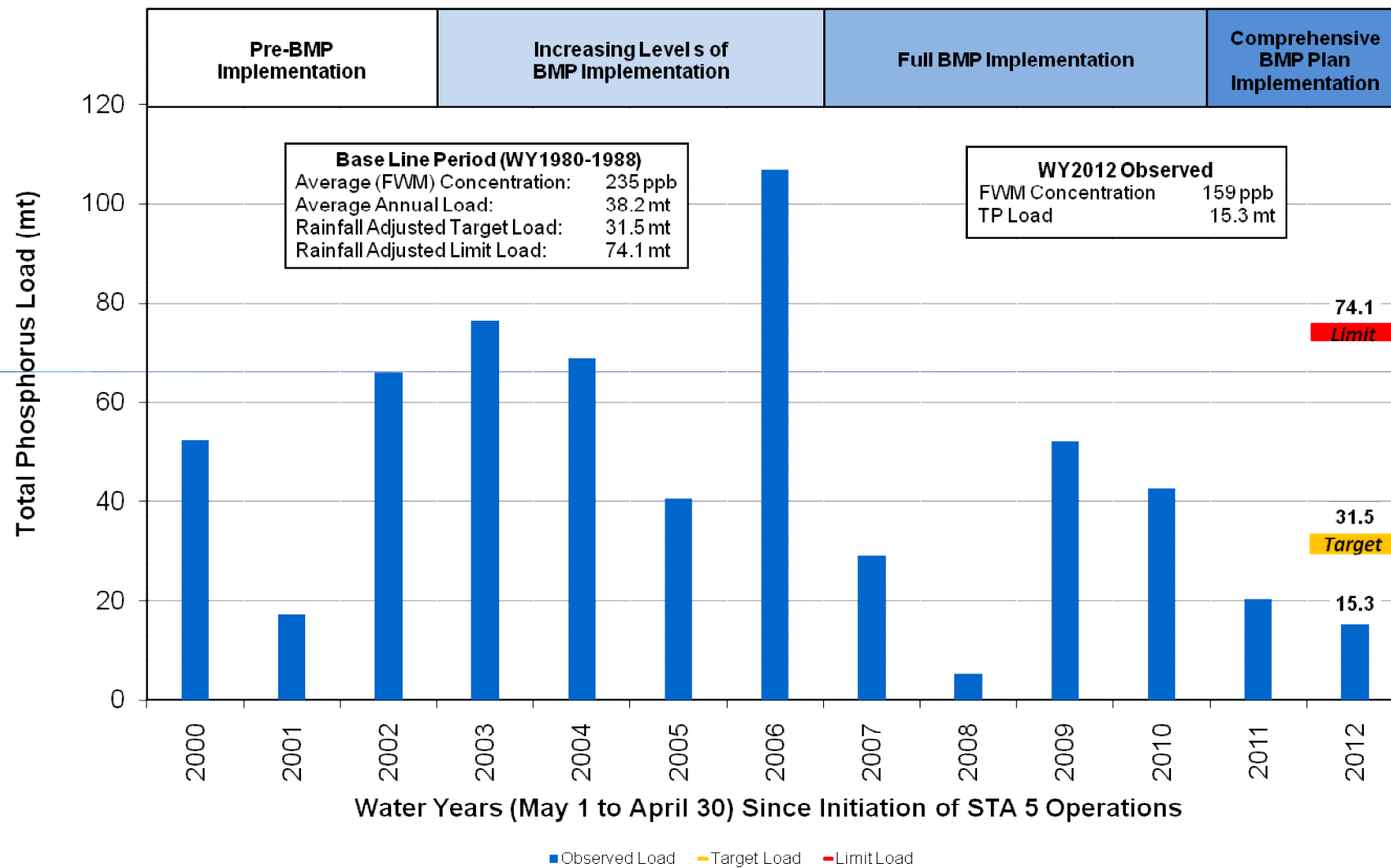
**Base Period
Concentration**

235 ppb

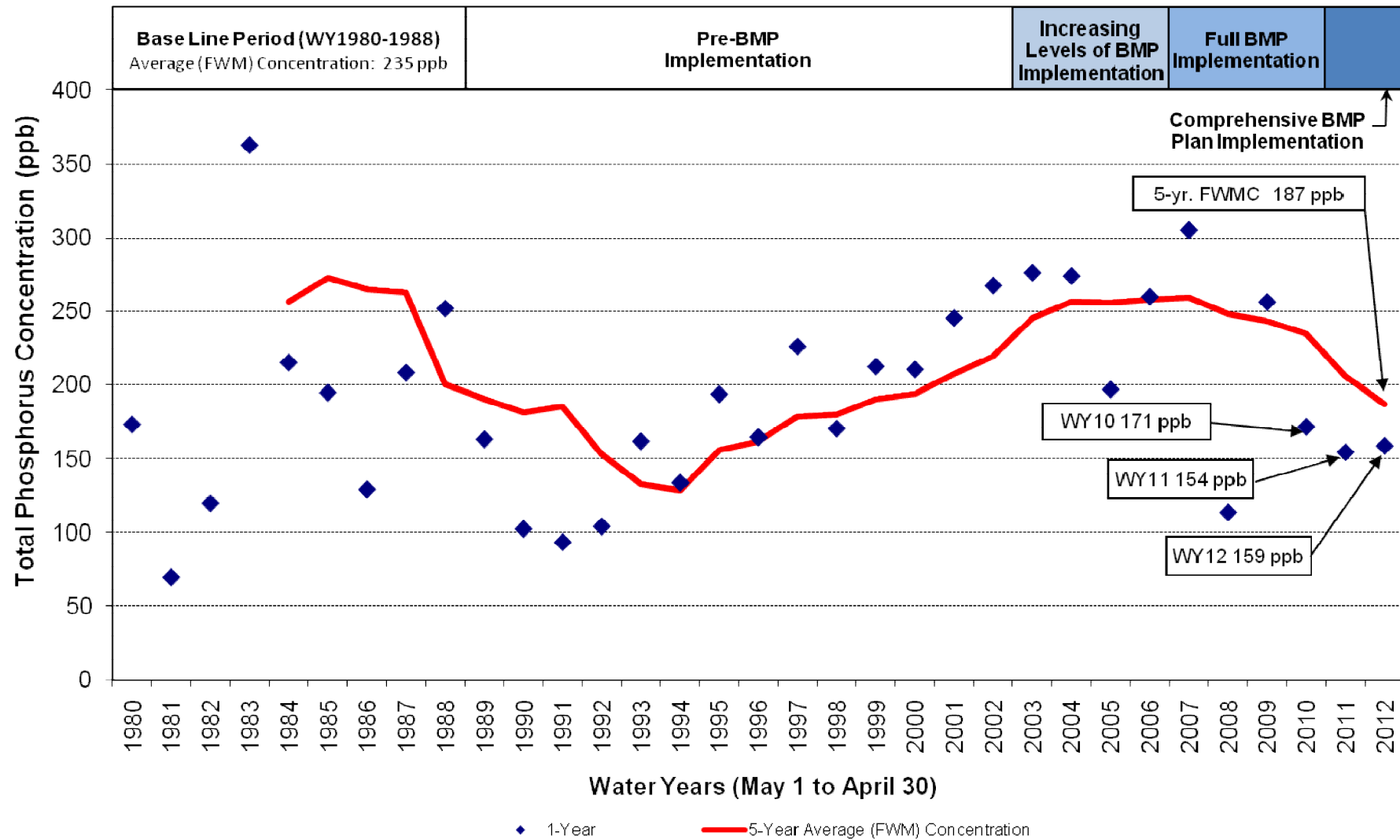
**WY2012
Concentration**

159 ppb

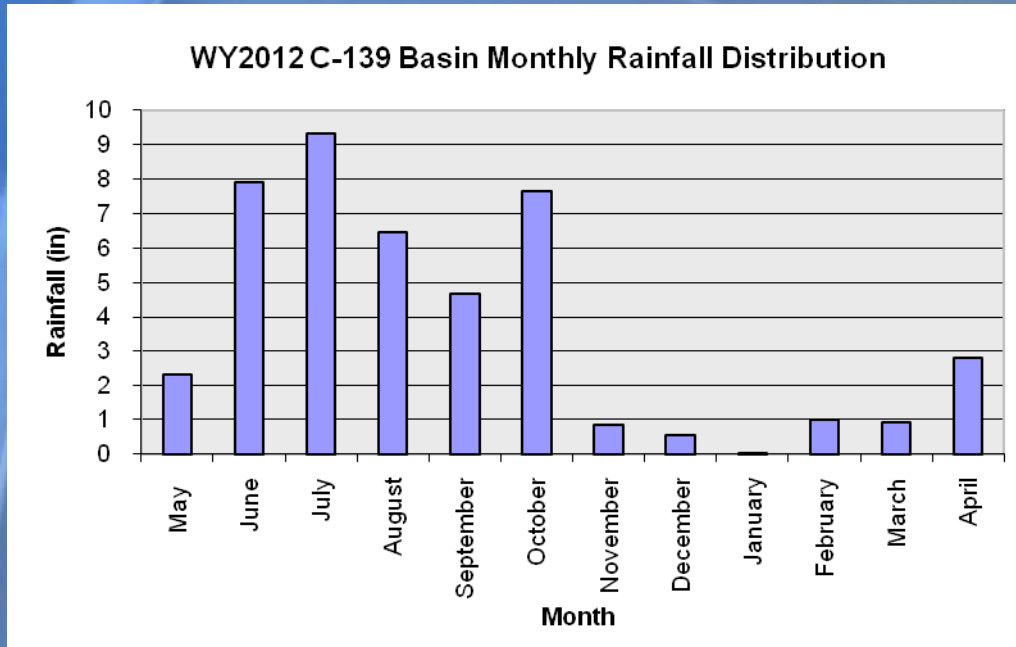
C-139 Basin TP Load Performance



C-139 Basin TP Concentration Results



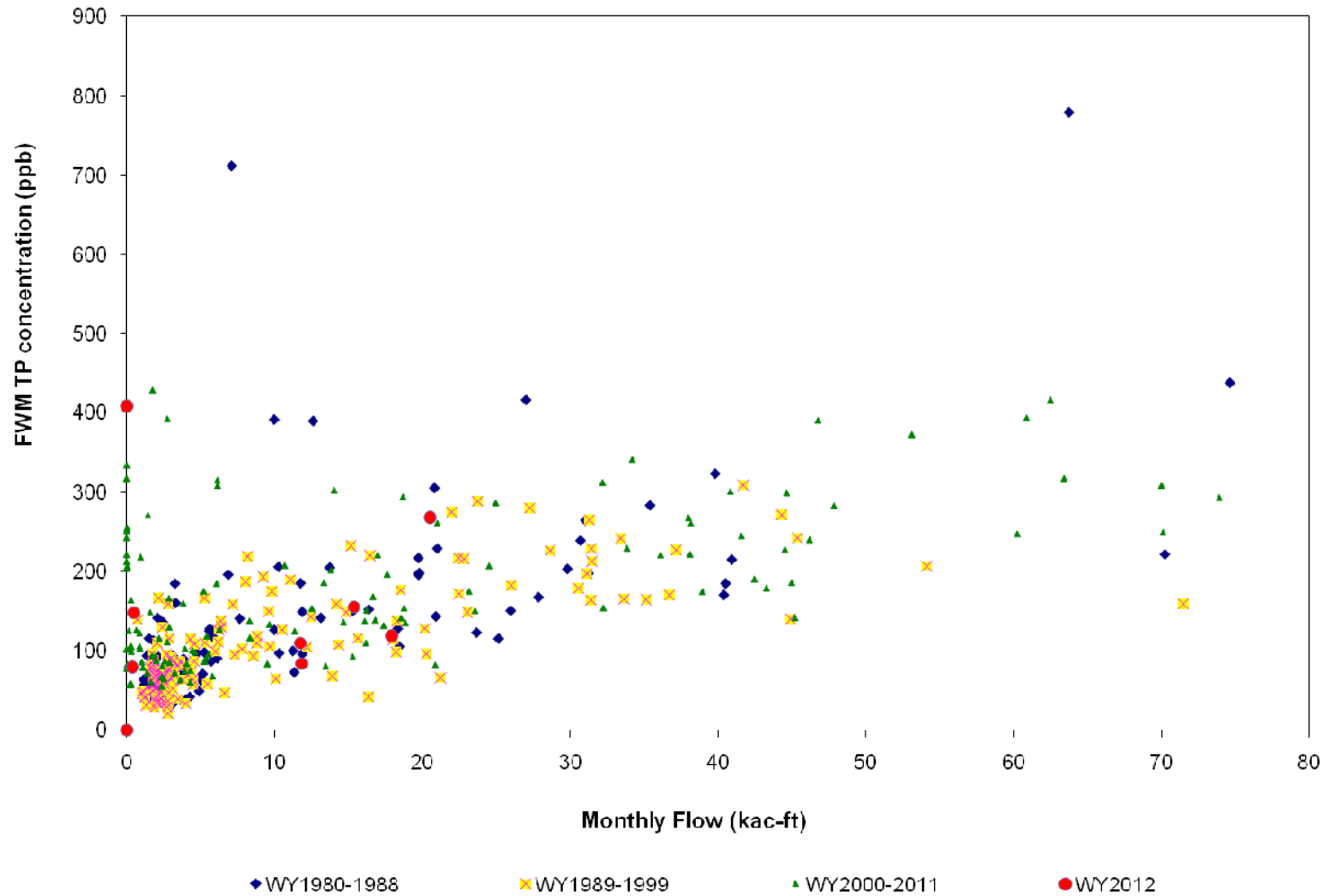
C-139 Basin Monthly Rainfall Distribution



<u>Month</u>	<u>Rainfall (in)</u>
May	2.34 in
June	7.91 in
July	9.32 in
August	6.48 in
September	4.68 in
October	7.63 in
November	0.83 in
December	0.54 in
January	0.03 in
February	0.98 in
March	0.91 in
April	2.82 in
Total Rainfall	44.47 in

- 5 inches below average annual rainfall
- 99% of load July through November
- No discharge after December 20, 2011

C-139 Basin Monthly Flow & TP Data

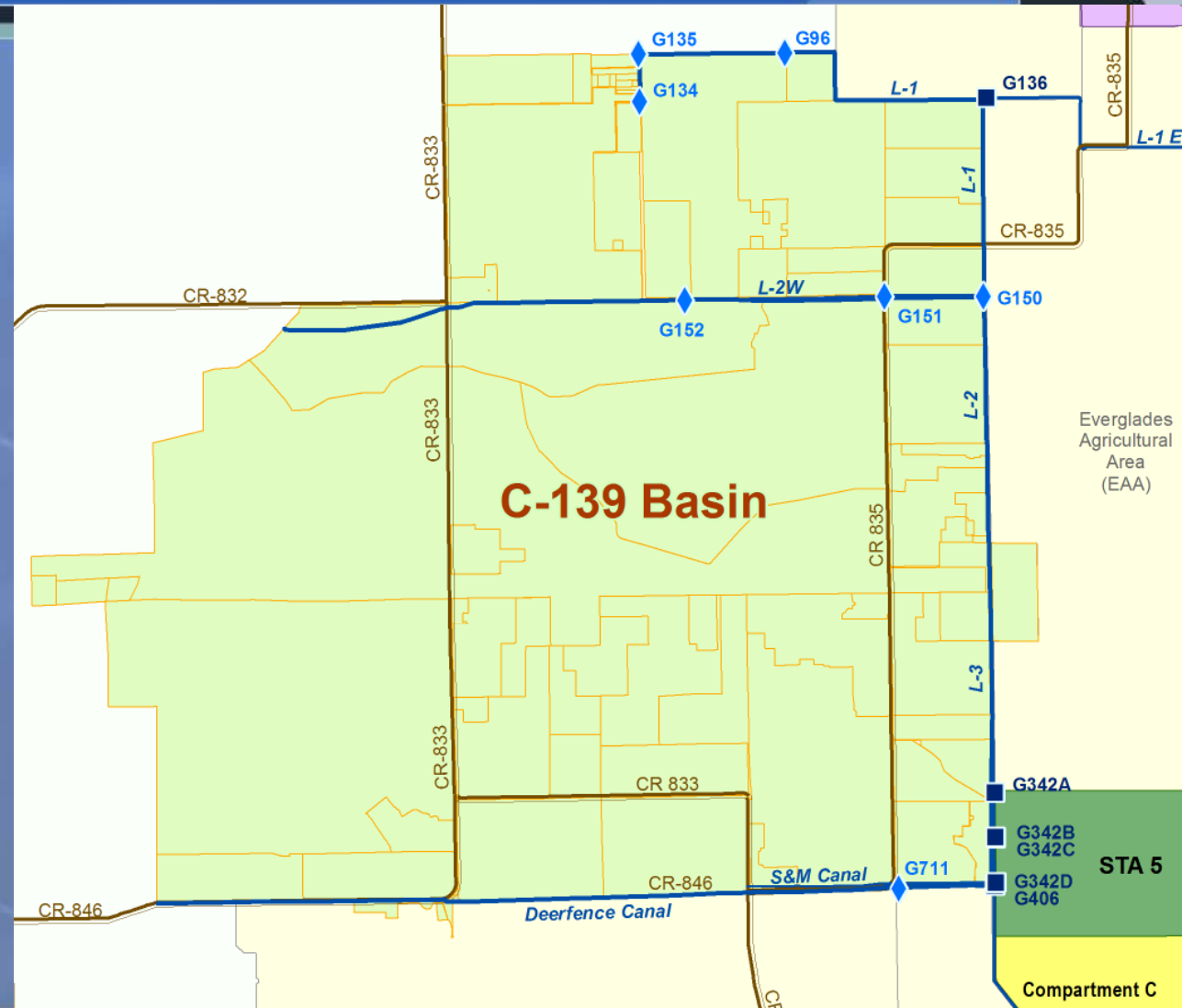


District Structures and Canals

Measured at:

- G-136
- G-342A
- G-342B
- G-342C
- G-342D
- G-406

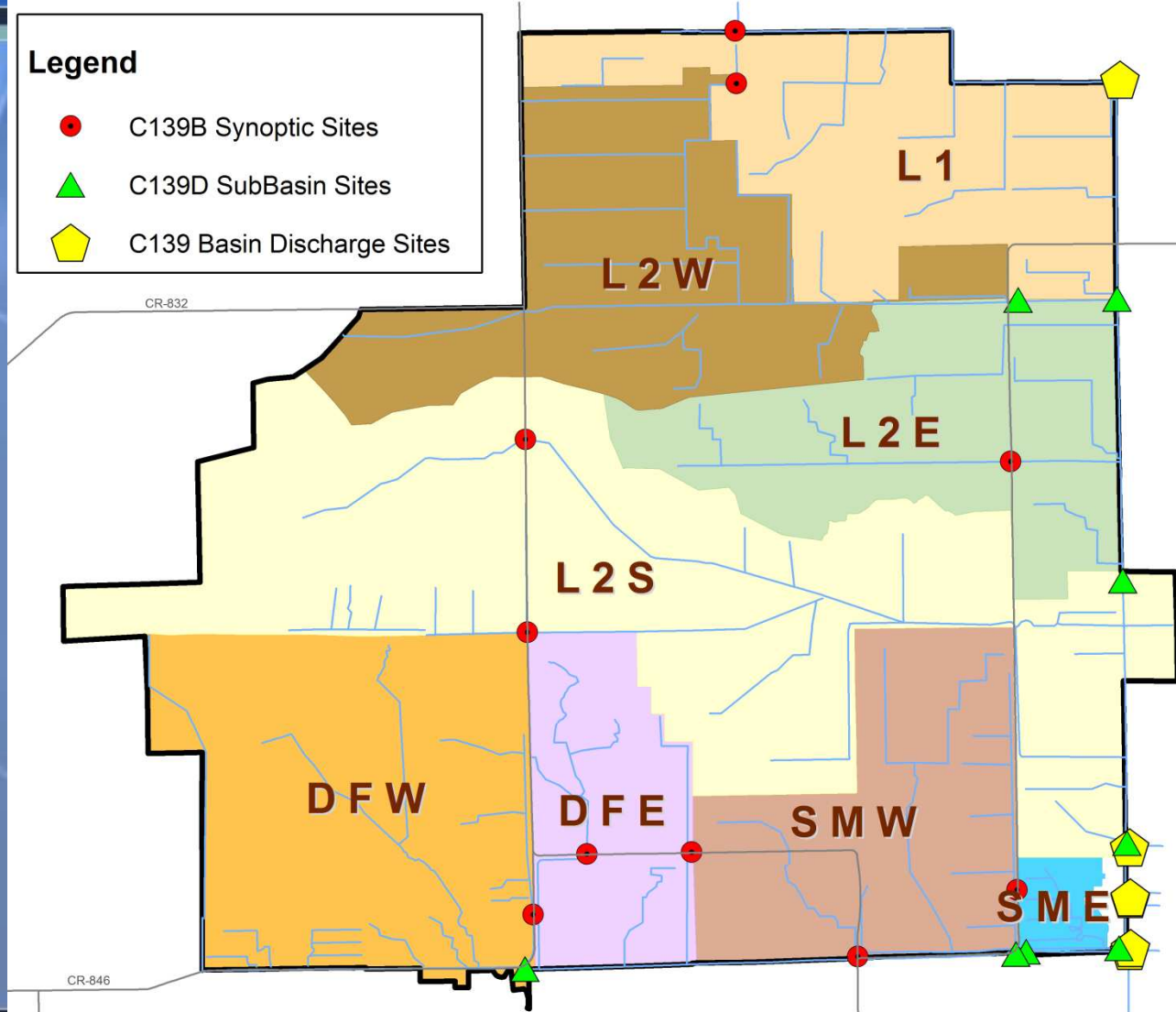
(Appendix B2,
Chapter 40E-63, F.A.C.)



Structure TP Load, Flow, and Concentration

Source	TP Load (mt)	Flow (kac-ft)	TP FWM Concentration (ppb)
C-139 Basin to EAA			
G-136 Total	3.2	17.8	145
C-139 Basin to STA-5/6			
G-342A	2.8	12.6	178
G-342B	1.4	10.4	111
G-342C	1.2	9.2	108
G-342D	3.8	15.3	199
G-406	2.9	12.9	184
STA-5/6 Total	12.1	60.4	163
C-139 Basin			
Basin Total	15.3	78.2	159

Upstream Monitoring Sites



Upstream Synoptic and Sub-basin Data

- Water quality data available in DBHYDRO and summarized by report (SWET, Dec. 2011)
- WY12 Sub-basin data not used for current or future performance determination
- Additional flow data validation being finalized prior to reporting all sub-basin unit area loads
- None of the primary or secondary sub-basins exceeded the Target UAL of 0.41 lbs/acre

C-139 Basin TP Results Summary

- Annual TP load targets are rainfall adjusted
- C-139 TP load performance encouraging
- Concentration trends leveled and declined
- Temporal and spatial data evaluation provide focus for continued BMP improvement
- Sub-basin monitoring results will focus activities if basin is out of compliance in the future



Questions?