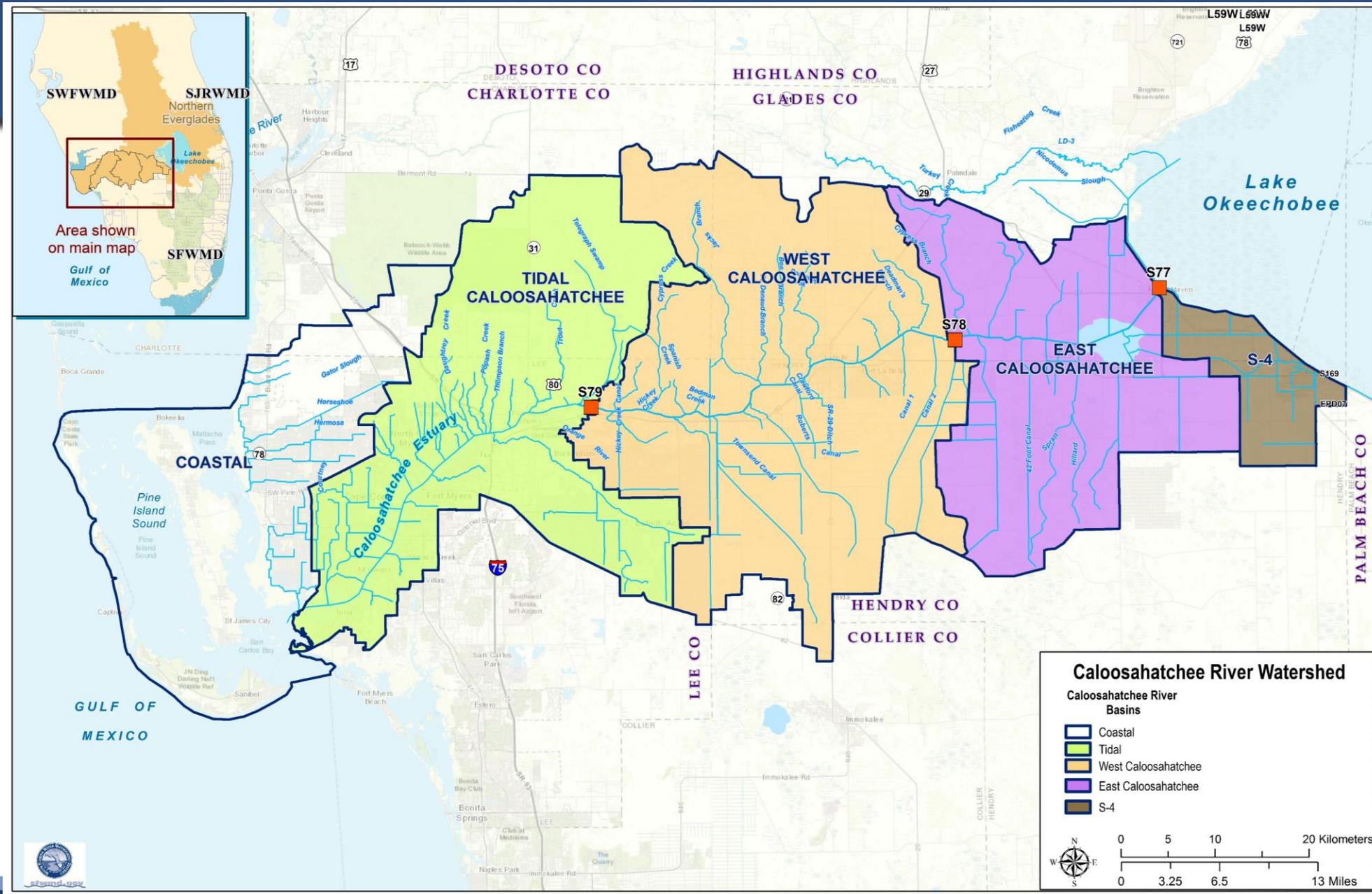
An aerial photograph showing a wide river flowing through a lush green wetland area. In the background, a city skyline is visible under a clear sky. The water is a deep blue-green color, and the surrounding land is covered in dense vegetation.

# Handouts Summarizing Information for Caloosahatchee River Watershed Protection Plan Meeting

September 2, 2020

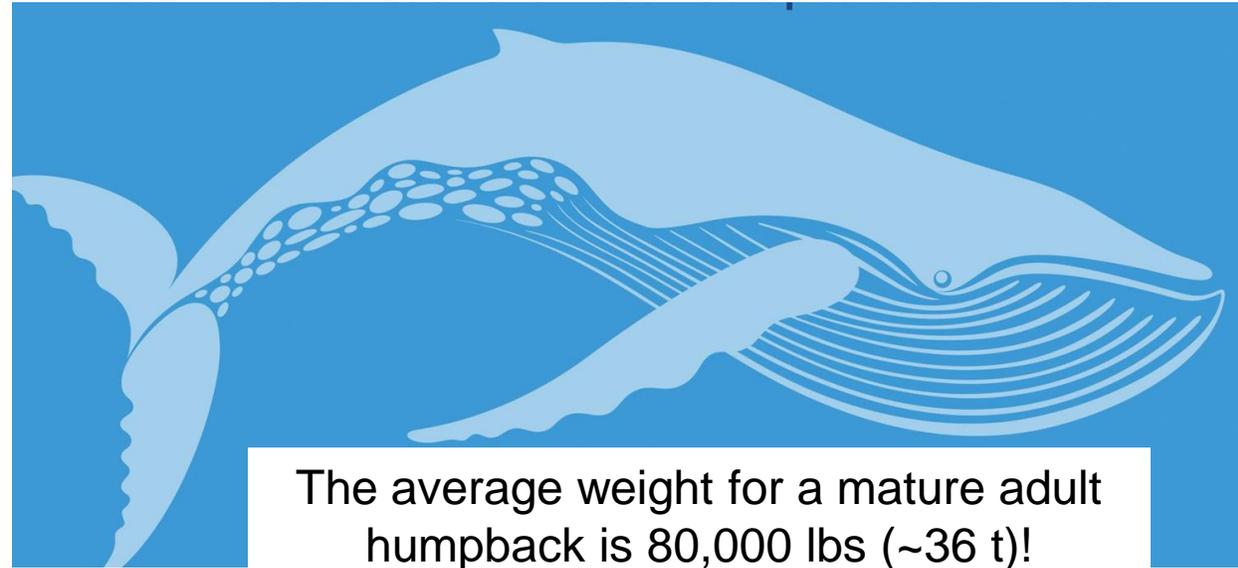
2 PM

Via Zoom



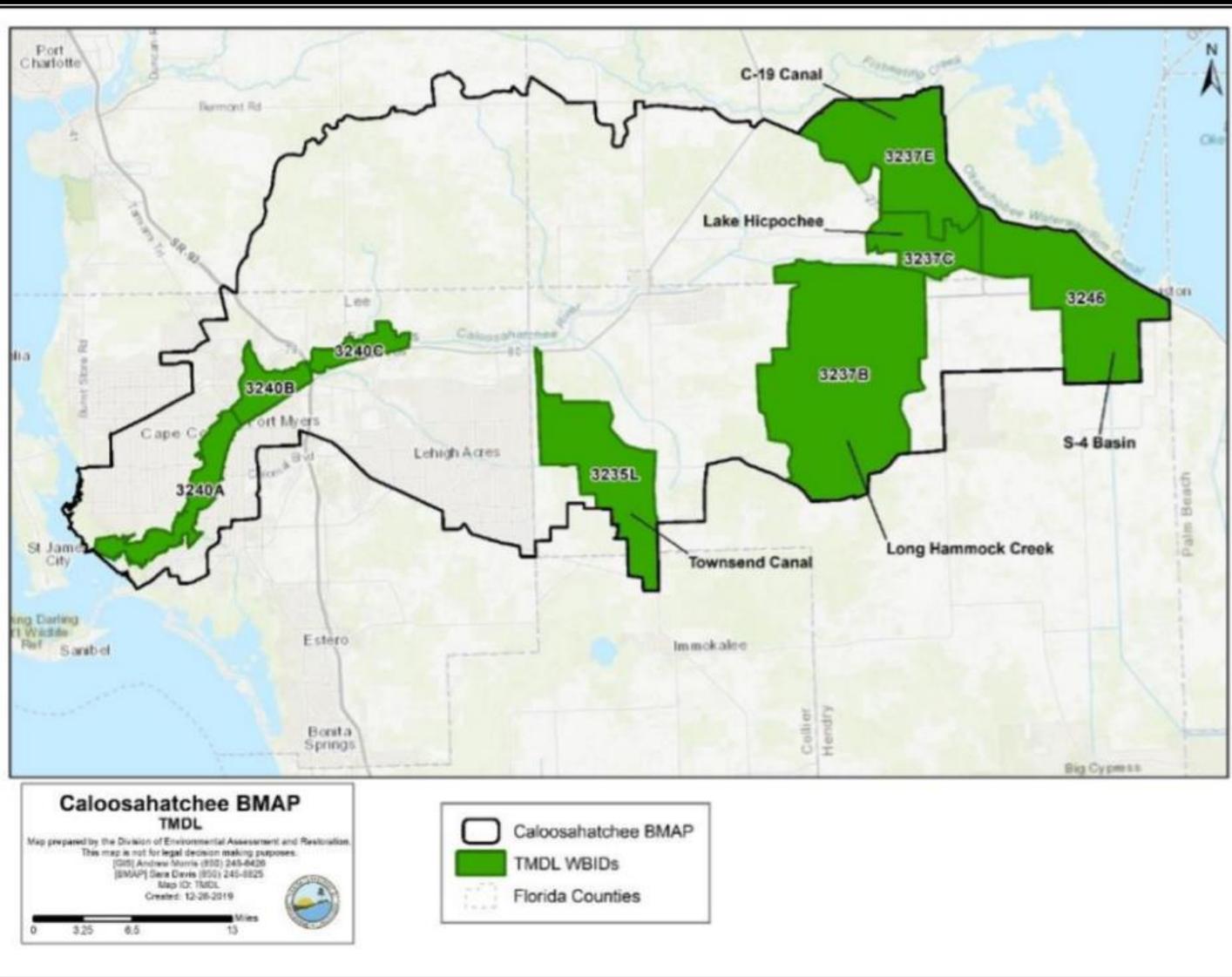
# Data Terminology

- Nutrient Load: The cumulative weight of a constituent transported (usually by stormwater) passed the point of measurement. Commonly expressed in pounds (lbs) or metric tons (t).
- Discharge Volume (acre-feet): Amount of water required to cover 1 acre of land to a depth of 1 foot.



- UAL: Unit Area Load is the nutrient load per acre of area
- FWMC: Flow Weighted Mean Concentration: Represents the average concentration of a constituent that passes through a structure relative to the total flow volume passing through.

# Caloosahatchee TMDLs





# WY2016 – 2020

## Contributing Area: Flow, TP, & TN

Contributing Areas of the Caloosahatchee River Watershed to the Caloosahatchee Estuary;  
annual flow volumes with TP and TN loads and FWMCs

	Lake	Caloosahatchee	Tidal Basins	Total	Caloosahatchee Basins <sup>a</sup>		
	Okeechobee	Basins <sup>a</sup>		Caloosahatchee	West Basin	East Basin	S-4 Basin
<b>Flow (ac-ft X 10<sup>3</sup>)</b>							
<b>*WY2016</b>	848.66	957.59	570.49	2,376.74	743.20	188.60	25.79
<b>WY2017</b>	1,010.07	929.40	392.76	2,332.23	732.96	162.58	33.86
<b>WY2018</b>	1,201.05	1,391.91	474.37	3,067.33	1,024.76	348.14	19.01
<b>WY2019</b>	760.54	998.16	472.45	2,231.15	730.02	224.73	43.41
<b>WY2020</b>	170.29	729.29	349.84	1,249.42	524.75	184.80	19.75
<b>5-Yr Avg.<sup>b</sup></b>	798.12	1,001.27	451.98	2,251.37	751.14	221.77	28.36
<b>5-Yr %<sup>c</sup></b>	35%	44%	20%	100%	75%	22%	3%
<b>WY1997-WY2020</b>	611.05	879.05	261.34	1,751.44	616.59	233.74	28.72
<b>TP load (t)</b>							
<b>*WY2016</b>	106.22	139.68	55.77	301.67	100.11	32.28	7.28
<b>WY2017</b>	103.93	175.12	38.38	317.43	106.08	57.03	12.01
<b>WY2018</b>	194.73	372.78	75.55	643.06	218.35	149.21	5.22
<b>WY2019</b>	131.18	217.09	64.60	412.87	148.00	52.31	16.78
<b>WY2020</b>	18.04	142.20	37.33	197.57	107.74	28.29	6.17
<b>5-Yr Avg.<sup>b</sup></b>	110.82	209.37	54.33	374.52	136.06	63.82	9.49
<b>5-Yr %<sup>c</sup></b>	30%	56%	15%	100%	65%	30%	5%
<b>WY1997-WY2020</b>	73.35	177.54	32.70	283.59	116.33	55.39	5.81
<b>TP flow-weighted mean concentration (FWMC, mg/L)</b>							
<b>*WY2016</b>	0.101	0.118	0.079	0.103	0.109	0.139	0.229
<b>WY2017</b>	0.083	0.153	0.079	0.110	0.117	0.284	0.288
<b>WY2018</b>	0.131	0.217	0.129	0.170	0.173	0.347	0.223
<b>WY2019</b>	0.140	0.176	0.111	0.150	0.164	0.189	0.313
<b>WY2020</b>	0.086	0.158	0.087	0.128	0.166	0.124	0.253
<b>5-Yr Avg.<sup>b</sup></b>	0.108	0.164	0.097	0.132	0.146	0.217	0.261
<b>5-Yr FWMC<sup>d</sup></b>	0.113	0.170	0.097	0.135	0.147	0.233	0.271
<b>WY1997-WY2020</b>	0.097	0.164	0.101	0.131	0.153	0.192	0.164

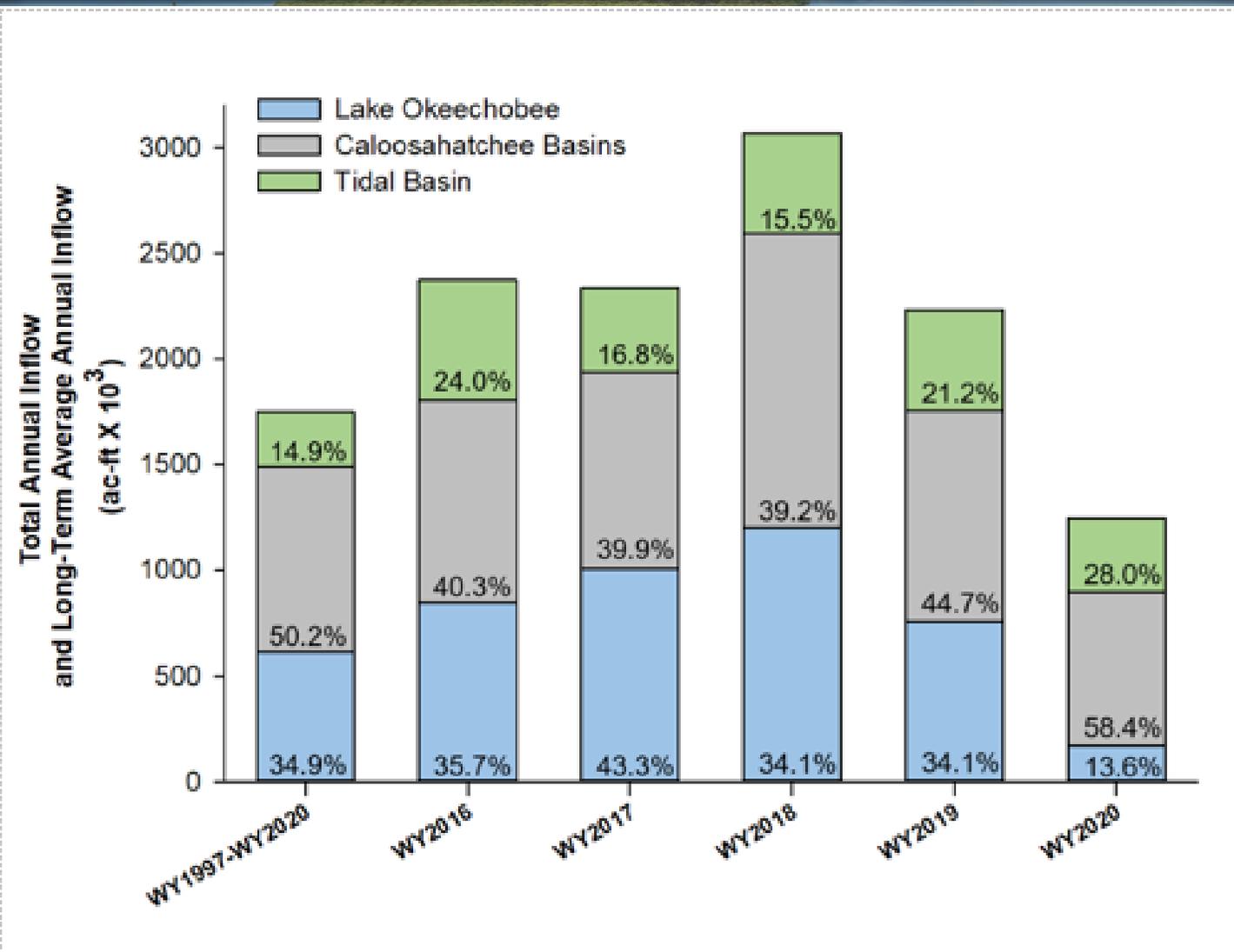
<sup>a</sup> Caloosahatchee Basins = West, East and S-4 Basins; <sup>b</sup> 5-Yr Avg. = arithmetic mean of annual data; <sup>c</sup> 5-Yr% = % of Total Caloosahatchee from Lake Okeechobee, Caloosahatchee Basins and Tidal Basins and % of Caloosahatchee Basins from West, East and S-4 Basins; <sup>d</sup> 5-Yr FWMC is the overall FWMC for the 5-Year period (calculated from 5-year load and 5-year flow).  
\* WY2016 deviates from previously reported values published in SFER 2017-SFER 2019, these deviations are less than 0.4%.

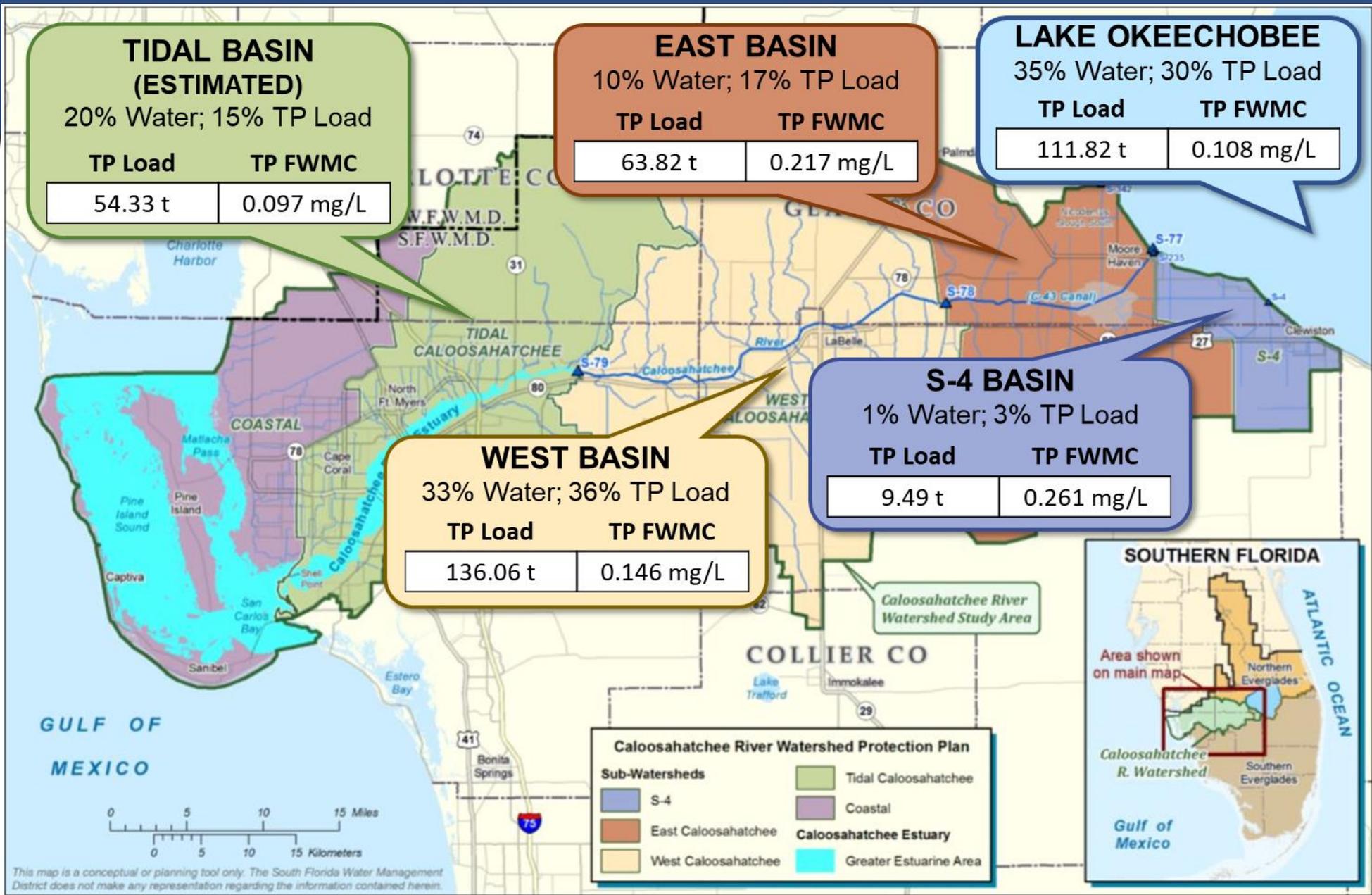
Contributing Areas of the Caloosahatchee River Watershed to the Caloosahatchee Estuary;  
annual flow volumes with TP and TN loads and FWMCs

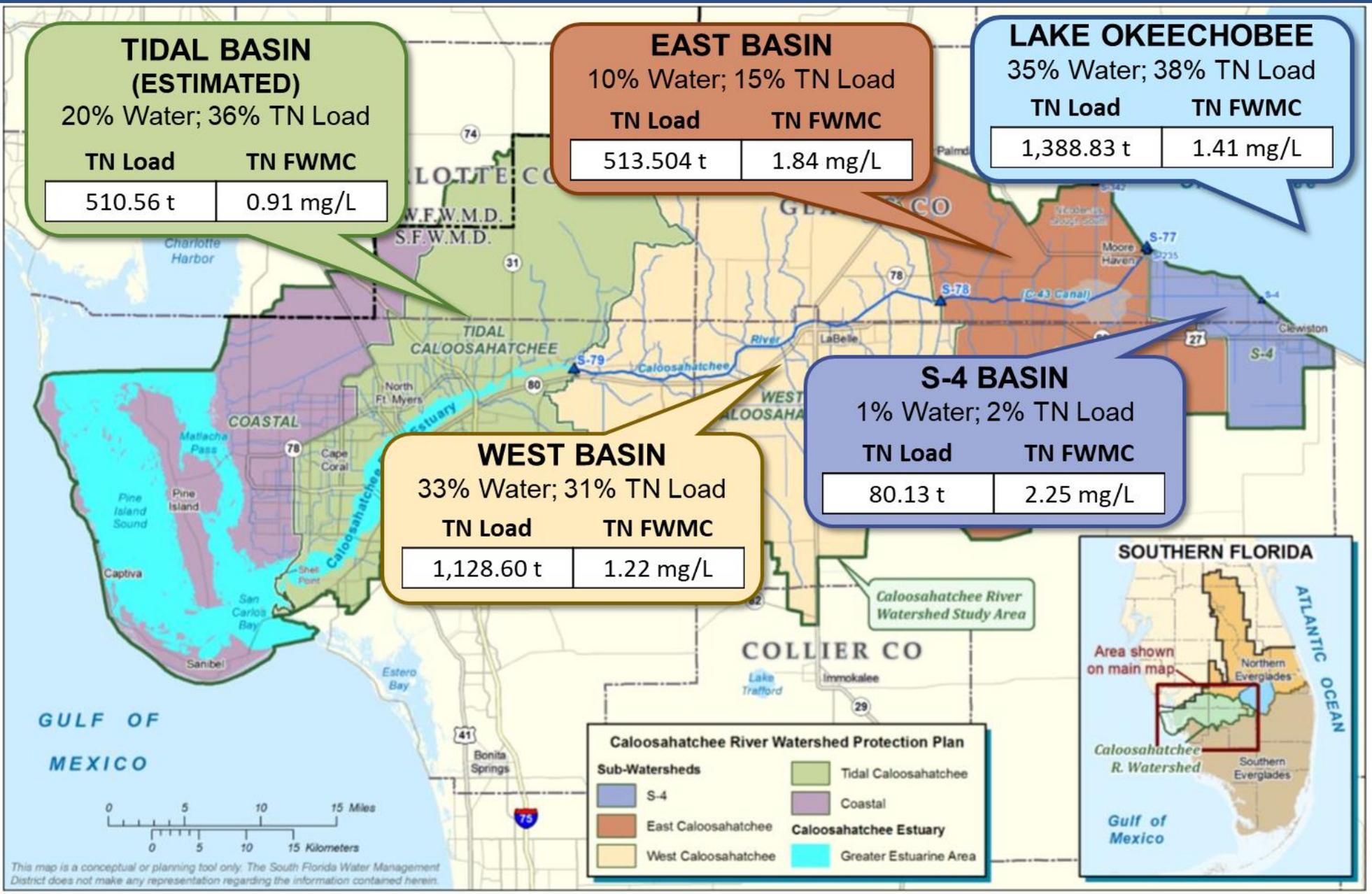
	Lake	Caloosahatchee	Tidal Basins	Total	Caloosahatchee Basins <sup>a</sup>		
	Okeechobee	Basins <sup>a</sup>		Caloosahatchee	West Basin	East Basin	S-4 Basin
<b>TN load (t)</b>							
<b>*WY2016</b>	1,594.33	1,344.86	627.33	3,566.52	913.74	362.00	69.11
<b>WY2017</b>	1,559.24	1,464.68	392.94	3,416.86	931.93	429.74	103.01
<b>WY2018</b>	2,115.18	2,641.36	572.50	5,329.04	1,673.35	921.85	46.15
<b>WY2019</b>	1,386.35	1,852.22	572.27	3,810.84	1,222.32	502.77	127.13
<b>WY2020</b>	289.04	1,308.10	387.74	1,984.88	901.67	351.16	55.27
<b>5-Yr Avg.<sup>b</sup></b>	1,388.83	1,722.24	510.56	3,621.63	1,128.60	513.50	80.13
<b>5-Yr %<sup>c</sup></b>	38%	48%	14%	100%	66%	30%	5%
<b>WY1997-WY2020</b>	1070.17	1547.20	300.41	2917.78	990.08	479.86	77.26
<b>TN flow-weighted mean concentration (FWMC, mg/L)</b>							
<b>*WY2016</b>	1.52	1.14	0.89	1.22	1.00	1.56	2.17
<b>WY2017</b>	1.25	1.28	0.81	1.19	1.03	2.14	2.47
<b>WY2018</b>	1.43	1.54	0.98	1.41	1.32	2.15	1.97
<b>WY2019</b>	1.48	1.50	0.98	1.38	1.36	1.81	2.37
<b>WY2020</b>	1.38	1.45	0.90	1.29	1.39	1.54	2.27
<b>5-Yr Avg.<sup>b</sup></b>	1.41	1.38	0.91	1.30	1.22	1.84	2.25
<b>5-Yr FWMC</b>	1.41	1.39	0.92	1.30	1.22	1.88	2.29
<b>WY1997-WY2020</b>	1.42	1.43	0.93	1.35	1.30	1.66	2.18

<sup>a</sup> Caloosahatchee Basins = West, East and S-4 Basins; <sup>b</sup> 5-Yr Avg. = arithmetic mean of annual data; <sup>c</sup> 5-Yr% = % of Total Caloosahatchee from Lake Okeechobee, Caloosahatchee Basins and Tidal Basins and % of Caloosahatchee Basins from West, East and S-4 Basins; <sup>d</sup> 5-Yr FWMC is the overall FWMC for the 5-Year period (calculated from 5-year load and 5-year flow).  
\* WY2016 deviates from previously reported values published in SFER 2017-SFER 2019, these deviations are less than 0.4%.

# Relative Flow Contributions



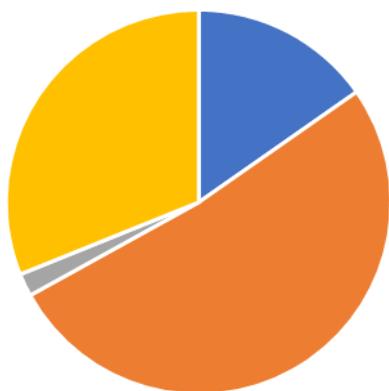




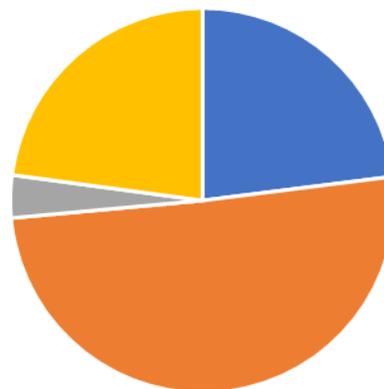
5-Year Average (WY2016 - 2020)

	Flow (ac-ft x 10 <sup>3</sup> )	TP (mt)	TP FWM (mg/L)	TP UAL (lbs/ac)	TN (mt)	TN FWM (mg/L)	TN UAL (lbs/ac)	Area
West	751.14	136.06	0.147	0.856	1128.6	1.22	7.1	350115
East	221.77	63.82	0.233	0.689	513.5	1.88	5.542	204093
Tidal Basins	451.98	54.33	0.097	0.482	510.56	0.92	4.529	248298
S-4	28.36	9.49	0.271	0.496	80.13	2.29	4.187	42155

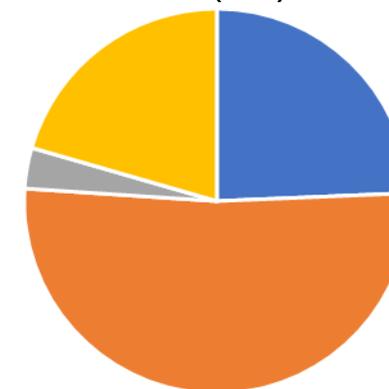
Flow (ac-ft)



TN (mt)



TP (mt)



West

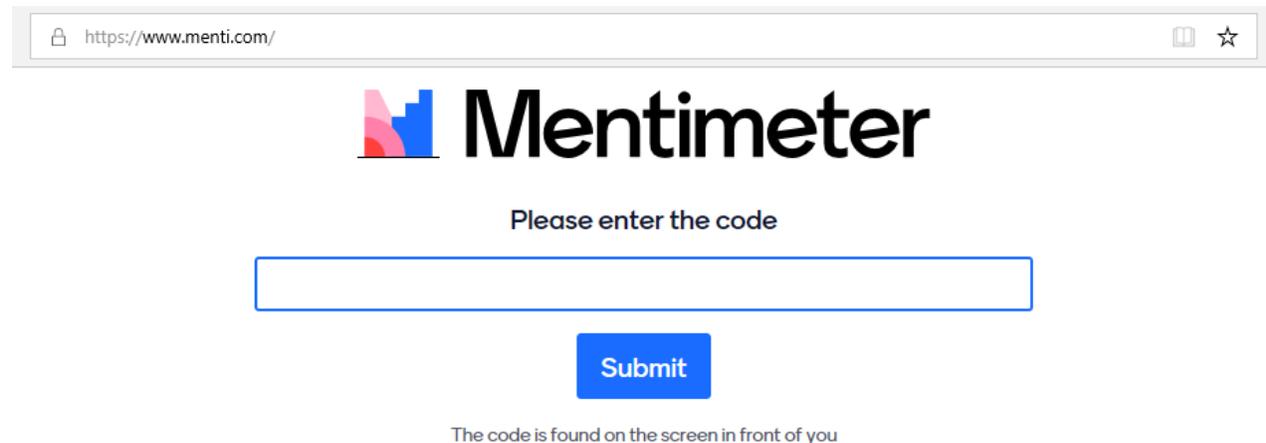
East

Tidal

S-4

# Interactive Survey Instructions

- Step 1: Open a new internet browser on your computer or smart phone (such as Internet Explorer, Safari, Google, or Edge). To view all public input leave the Zoom meeting window open. We will be coming back to the Zoom Meeting for Q&A.
- Step 2: Type the web address, Menti.com and hit enter.
- Step 3: Enter the code in the box on your screen and click “Submit” – code will be provided at the September 2, 2020 workshop



The screenshot shows a web browser window with the address bar containing "https://www.menti.com/". The main content area features the Menti logo, the text "Please enter the code", a text input field, and a blue "Submit" button. Below the button, it says "The code is found on the screen in front of you".