

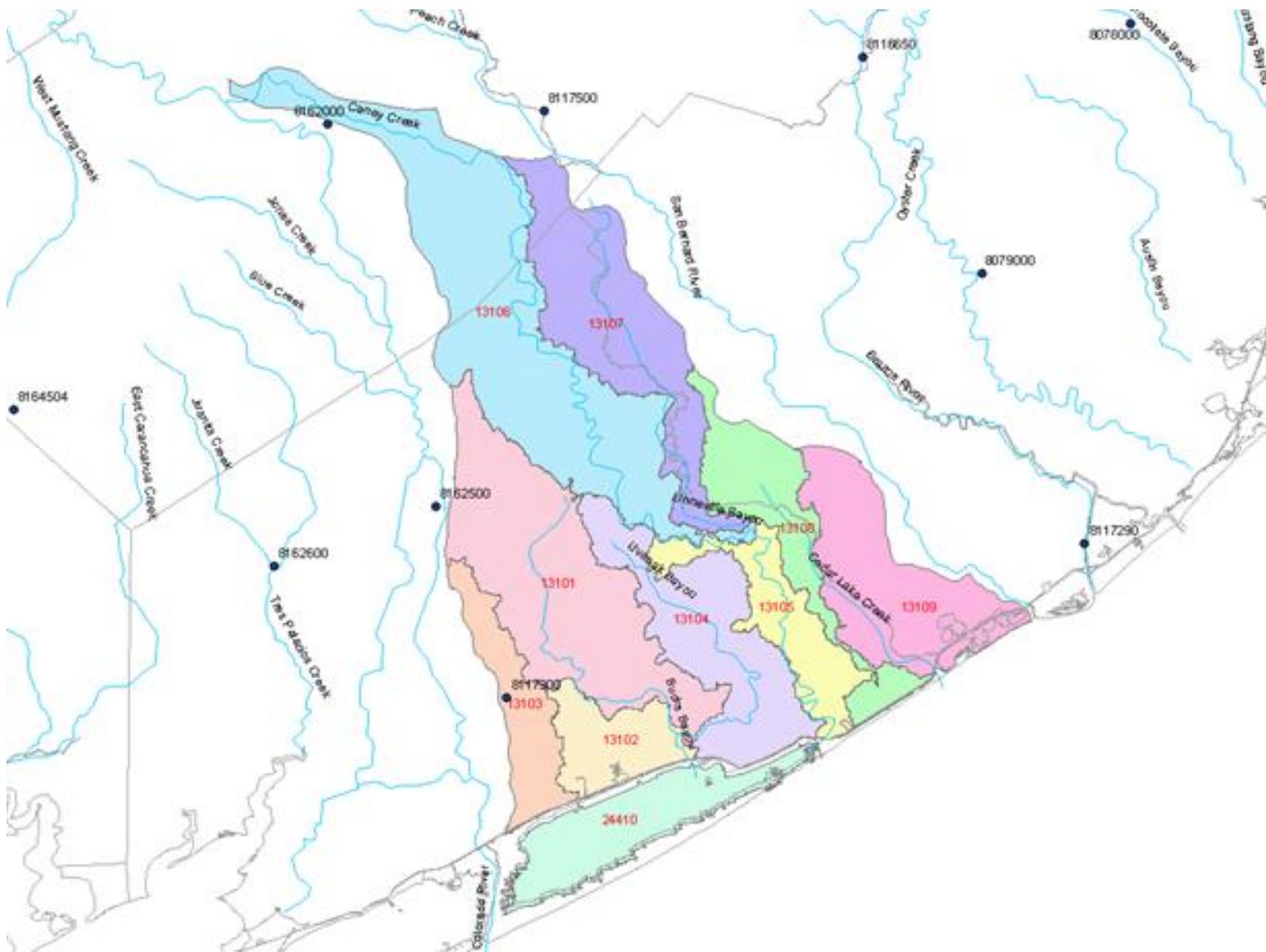
East Matagorda Bay Freshwater Inflows

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Survey of Oyster Bottoms in Matagorda Bay, Texas (Moore, 1907)

“The oysters on the beds above Dog Island Reef were, at the time of the survey, practically valueless, except for steaming, owing to the freshness of the water.”

Major Conclusions

Ecosystem changed, but healthy

No measurements of freshwater into bay

Comparing Instream and Freshwater Inflow Regimes: Base Flows

LONG-TERM VOLUME CALCULATION of BASEFLOW RECOMMENDATIONS						
		Base Flow, cfs	Days per Season	Volume, ac-ft per season	Long-Term % Attainment	Long-Term Avg Contribution, ac-ft per season
HIGH	Winter	1,350	90	240,995	25	60,249
	Spring	1,590	122	384,759	25	96,190
	Summer	840	62	103,301	25	25,825
	Fall	1,080	91	194,938	25	48,735
MEDIUM	Winter	776	90	138,528	50	69,264
	Spring	895	122	216,578	50	108,289
	Summer	610	62	75,016	50	37,508
	Fall	706	91	127,432	50	63,716
LOW	Winter	498	90	88,900	20	17,780
	Spring	513	122	124,139	20	24,828
	Summer	419	62	51,527	20	10,305
	Fall	483	91	87,181	20	17,436
SUB	Winter	285	90	50,877	5	2,544
	Spring	46	122	11,131	5	557
	Summer	16	62	1,986	5	99
	Fall	210	91	37,905	5	1,895
ALL BASE	Winter				100	149,837
	Spring				100	229,863
	Summer				100	73,738
	Fall				100	131,782
	Annual					585,220

Comparing Instream and Freshwater Inflow Regimes: Seasonal Pulses

LONG-TERM VOLUME CALCULATION of SEASONAL PULSE RECOMMENDATIONS						
		Days per Event	Volume per Event, ac-ft	Number of Events per Season	Long-Term % Attainment	Long-Term Avg Contribution, ac-ft per season
2 per Season	Winter	3	71,126	2	50	71,126
	Spring	4	59,214	2	50	59,214
	Summer	0	0	2	50	0
	Fall	3	16,276	2	50	16,276
1 per Season	Winter	7	10,482	1	50	5,241
	Spring	8	202,690	1	50	101,345
	Summer	3	5,066	1	50	2,533
	Fall	6	75,391	1	50	37,695
BASE + SEASONAL PULSE	Winter					216,014
	Spring					376,295
	Summer					74,340
	Fall					177,764
	Annual					844,414

Comparing Instream and Freshwater Inflow Regimes: Annual Pulses

LONG-TERM VOLUME CALCULATION of ANNUAL PULSE RECOMMENDATION						
		Days per Event	Volume per Event, ac-ft	Number of Events per Year	Long-Term % Attainment	Long-Term Avg Contribution, ac-ft per year
ANNUALS	1 per Yr	12	311,404	1.0	50	155,702
	1 per 2 Yrs	18	612,879	0.5	75	229,830
	1 per 5 Yrs	23	1,025,002	0.2	100	205,000
BASE + SEASONAL PULSE + ANNUAL PULSE						1,434,946

Comparing Instream and Freshwater Inflow Regimes: With Replacement

LONG-TERM VOLUME CALCULATION including SEASONAL PULSE RECOMMENDATIONS				LONG-TERM VOLUME CALCULATION including ANNUAL PULSE RECOMMENDATION			
		Long-Term Avg Contribution With Replacement,	Long-Term Avg Contribution Without Replacement,			Long-Term Avg Contribution With Replacement, ac-ft per year	Long-Term Avg Contribution Without Replacement ac-ft per year
BASE + SEASONAL PULSE	Winter	204,229	264,278	BASE + SEASONAL PULSE + ANNUAL PULSE	1,374,074	1,778,565	
	Spring	393,681	497,817				
	Summer	72,090	71,514				
	Fall	185,453	209,313				
	Annual	855,453	1,042,922				