

APPENDIX C

Scatterplots and Trend Data

Appendix C: Scatterplots and Trends

The data collected from MLS stations for the past six years are presented in this Appendix; also included in the scatterplots are historical data for Agua Hedionda Creek, Tecolote Creek, and Chollas Creek MLS. Sample concentrations that were below detection limits are shown as one-half the detection limit. Mann-Kendall Trend analysis, described in Section 3, was performed by MLS on all of the constituents. Sen's slope estimates are shown on the scatterplots for those constituents with less than 15% non-detect results for which the regression line was determined to be significantly different than a horizontal line. Summary trend results for significant trends are shown in the following table for these constituents. The scatterplots are presented by group as shown below.

Constituent	MLS Station	Significant	S	Critical Value	Sen's Slope Estimate
Surfactants (MBAS)	CC	decreasing	-152	112	*
Oil & Grease	TC	decreasing	-174	132	*
Conductivity	TJ	decreasing	-55	44	-198.4542
PH	SR	increasing	63	44	0.1033
Biochemical Oxygen Demand	SLR	increasing	50	44	*
	TC	decreasing	-123	122	-0.5819
Chemical Oxygen Demand	AH	increasing	133	80	9.7855
Turbidity	AH	increasing	137	76	24.2083
	CC	increasing	228	p=0.018	3.9301
	SDR	increasing	45	44	4.4227
	TJ	increasing	59	44	36.4609
Total Organic Carbon	TJ	increasing	41	34	9.2043
Total Dissolved Solids	CC	decreasing	-246	p=0.010	-6.3010
	TJ	decreasing	-51	44	-69.8936
Total Suspended Solids	AH	increasing	115	71	109.8470
	SDC	increasing	58	44	*
	SDR	increasing	45	44	7.8872
	TJ	increasing	67	44	248.4235
Ammonia	AH	increasing	106	80	0.0476
Nitrate	SDR	decreasing	-45	44	-0.0909
	SLR	increasing	51	44	0.3327
	TC	decreasing	-142	127	-0.0299
	TJ	increasing	47	44	0.2990
Nitrite	CC	increasing	140	117	*
Total Kjeldahl Nitrogen	SDC	increasing	80	44	0.4000
Dissolved Phosphorus	AH	increasing	89	80	0.0278
	SR	increasing	58	44	0.0371
Total Phosphorus	SDC	increasing	80	44	0.0312
Enterococci	SLR	increasing	53	44	0.1729
	SM	increasing	10	7	1.2246
	TC	increasing	65	55	0.0789
Fecal Coliform	AH	increasing	140	85	0.1362
	SLR	increasing	59	44	0.2183
	SM	decreasing	-7	7	-0.1282
	TJ	increasing	44	44	0.1478

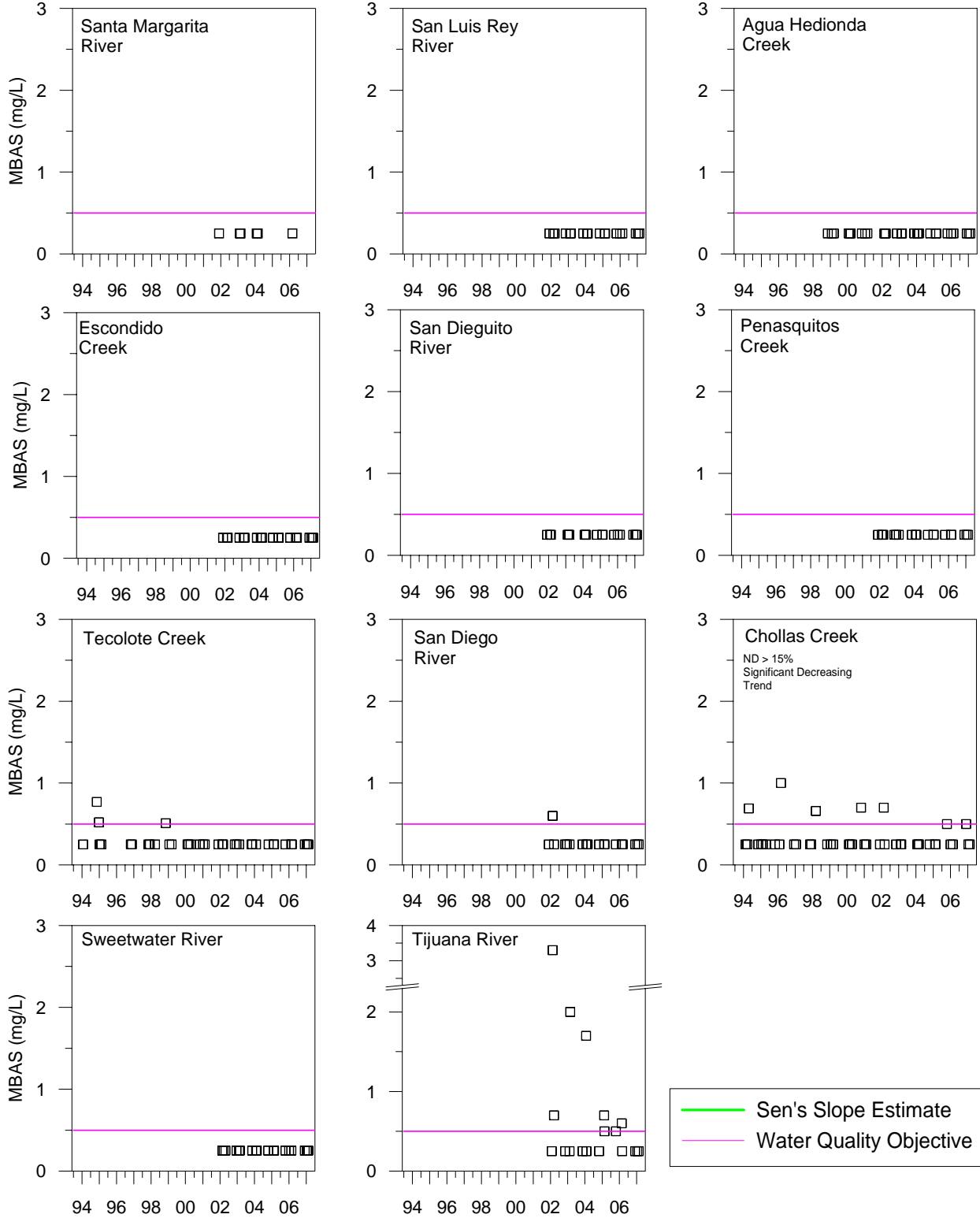
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Constituent	MLS Station	Significant	S	Critical Value	Sen's Slope Estimate
Total Coliform	AH	increasing	92	85	0.1003
	EC	increasing	50	44	0.1296
	SLR	increasing	66	44	0.3076
	SM	increasing	7	7	0.3302
	TJ	increasing	54	44	0.1397
Diazinon	AH	decreasing	-108	55	*
	CC	decreasing	-150	60	*
	EC	decreasing	-120	44	*
	TC	decreasing	-221	67	*
	TJ	decreasing	-57	44	-0.0638
Total Arsenic	TJ	increasing	45	44	0.0010
Total Copper	AH	increasing	108	76	*
	CC	increasing	144	142	0.0019
	EC	increasing	48	44	0.0016
Total Lead	AH	increasing	100	76	*
	TJ	increasing	52	44	0.0093
Total Nickel	AH	increasing	96	76	0.0008
	PC	increasing	74	44	*
	SDC	increasing	71	44	0.0005
Total Zinc	CC	increasing	177	142	0.0151
	EC	increasing	60	44	*
	TJ	increasing	69	44	0.0626
Dissolved Arsenic	AH	decreasing	-117	67	*
	SDR	decreasing	-51	44	*
	TJ	decreasing	-67	44	*
Dissolved Copper	SDR	decreasing	-67	44	*
Dissolved Nickel	TJ	decreasing	-73	44	-0.0030
Cerio Acute Survival	CC	decreasing	-57	44	-2.5788
Cerio Chronic Survival	CC	decreasing	-60	44	-0.3771
Cerio Reproduction	CC	decreasing	-55	44	-0.0328
Hyalella Acute Survival	AH	increasing	45	44	0.0024
	CC	increasing	59	44	0.0080
	TJ	increasing	57	44	0.0050
Selenastrum growth	SR	decreasing	-50	44	-38.6243

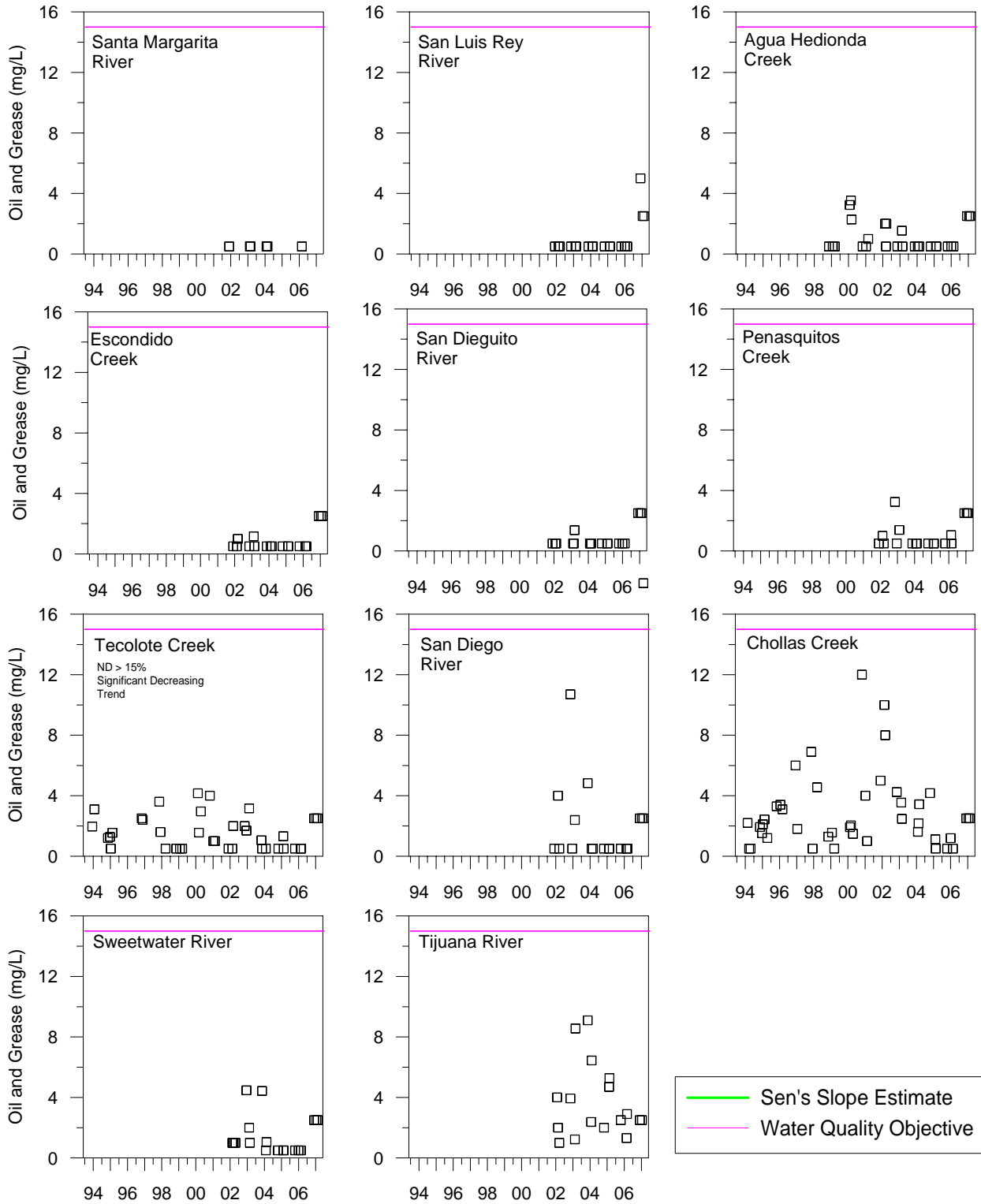
* Greater than 15% non-detect results, no Sen's slope estimate calculated
 If the sample size was greater than 40, a p-value was calculated (0.05 significance)

GENERAL CHEMISTRY

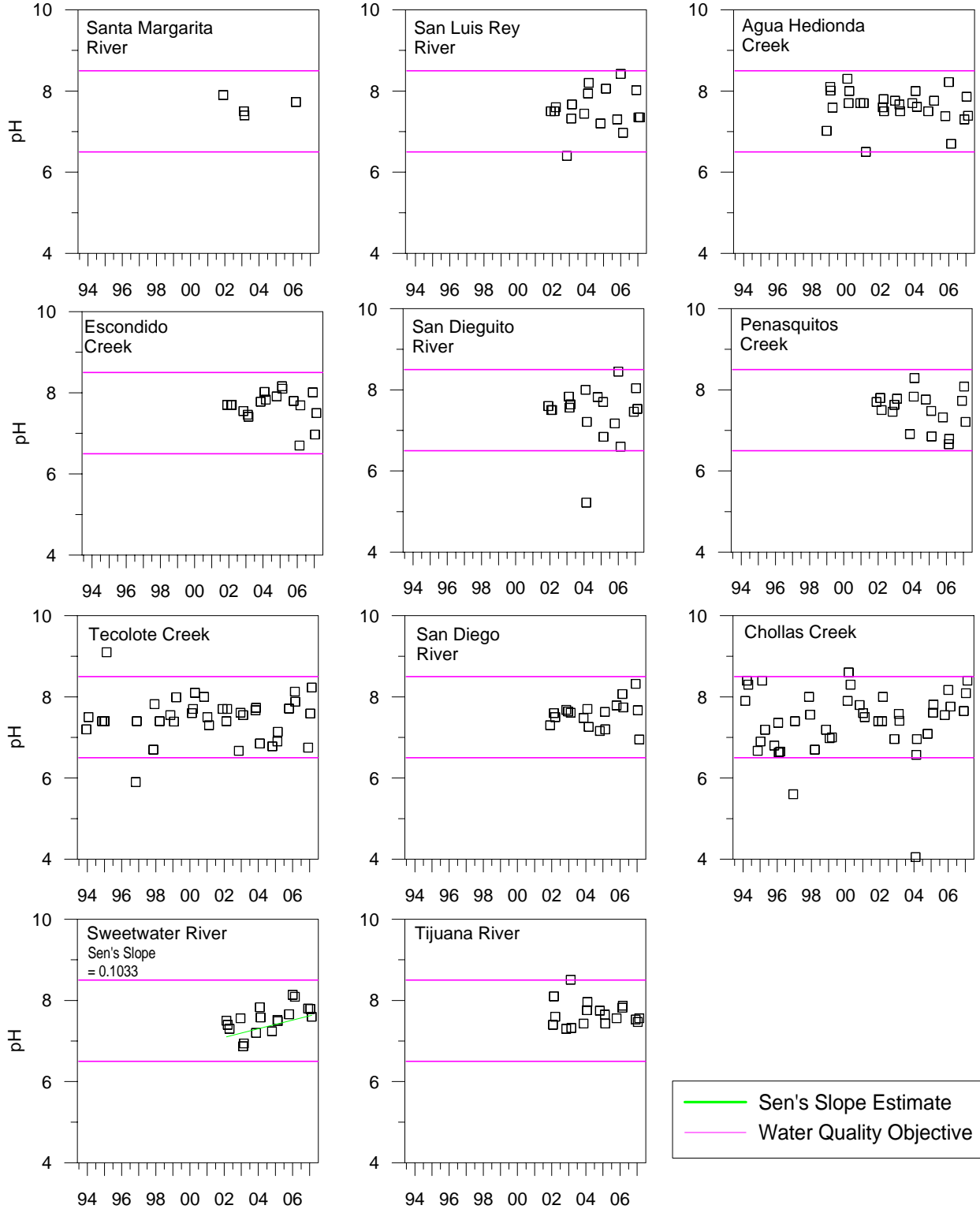
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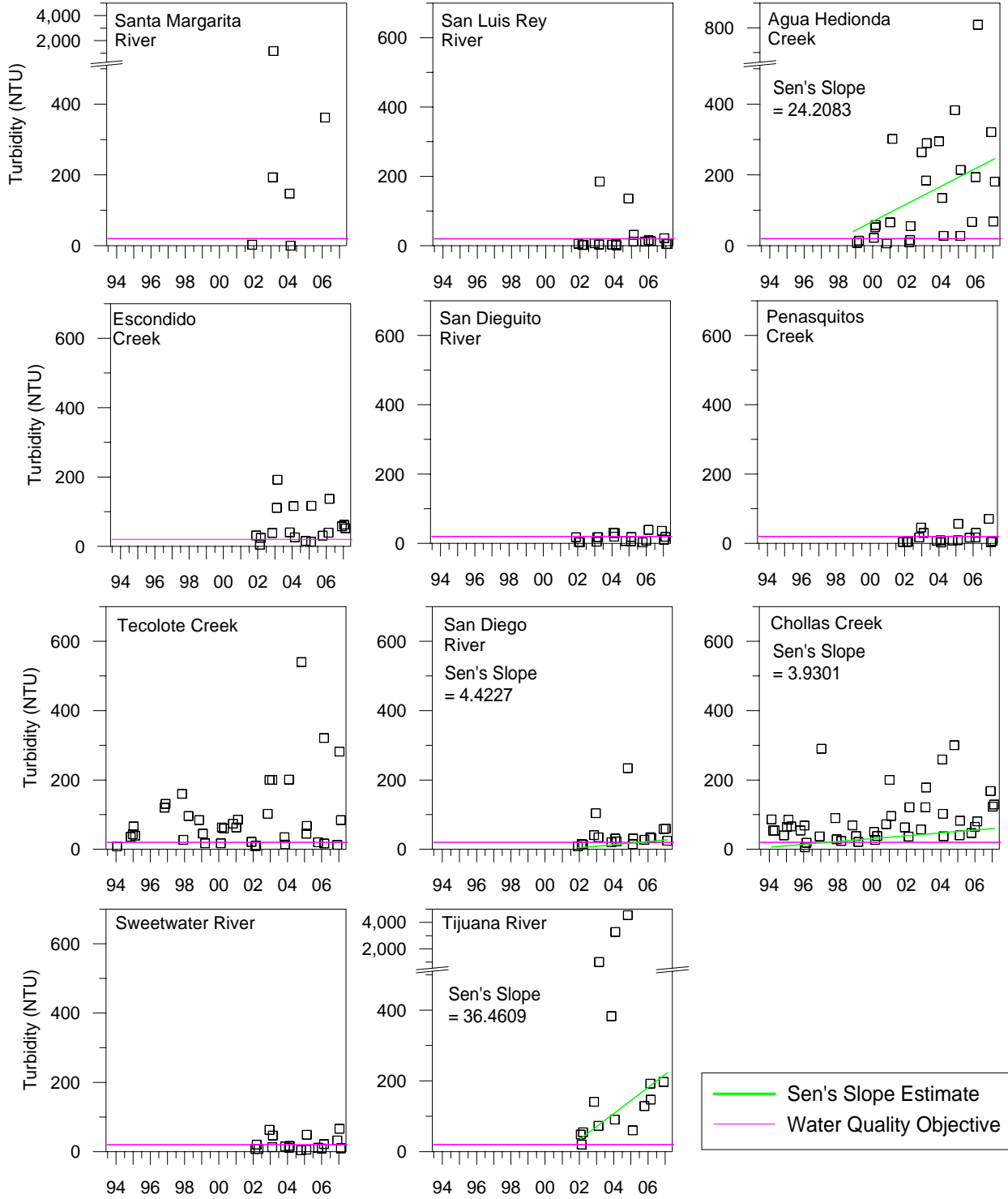
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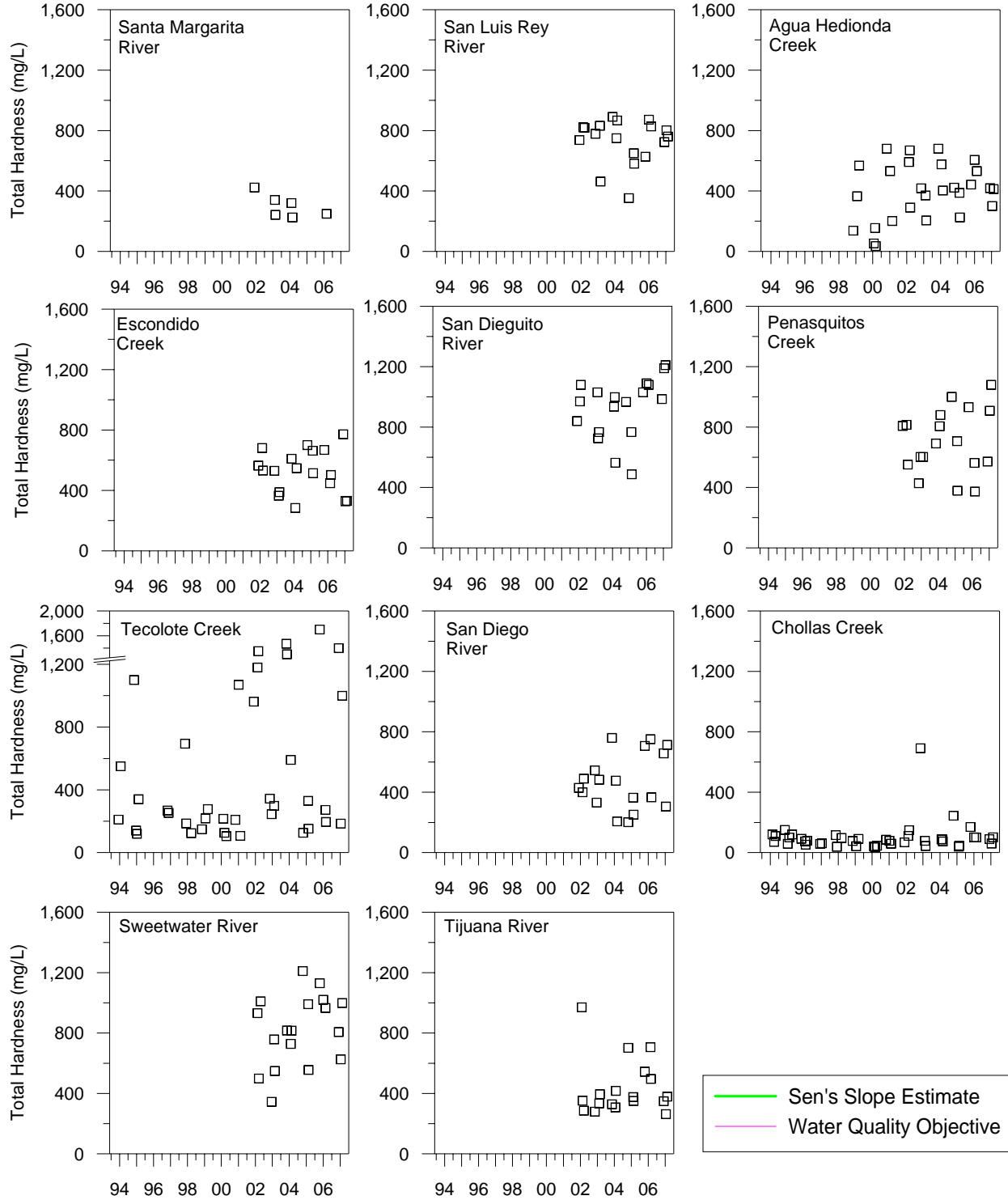
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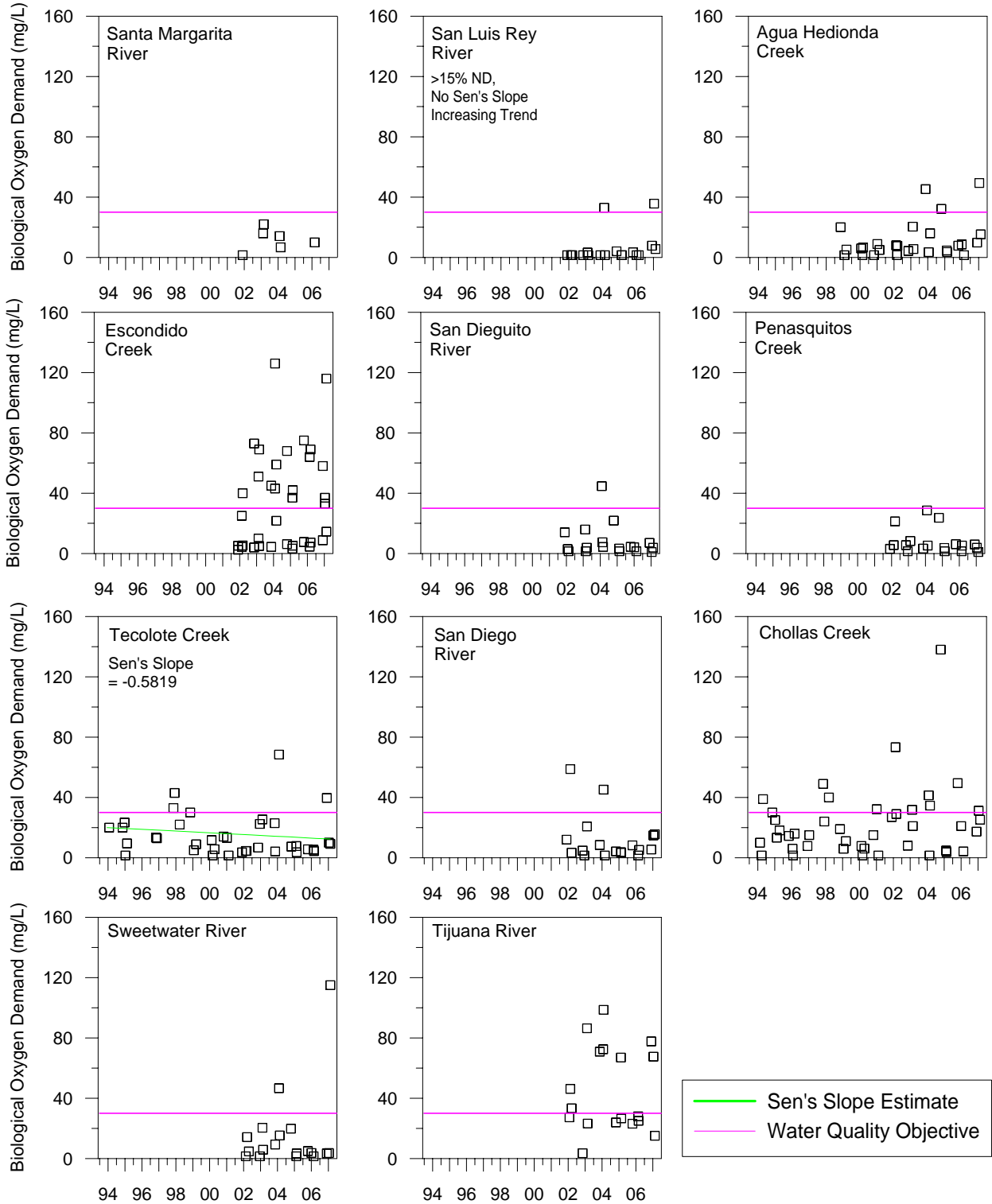
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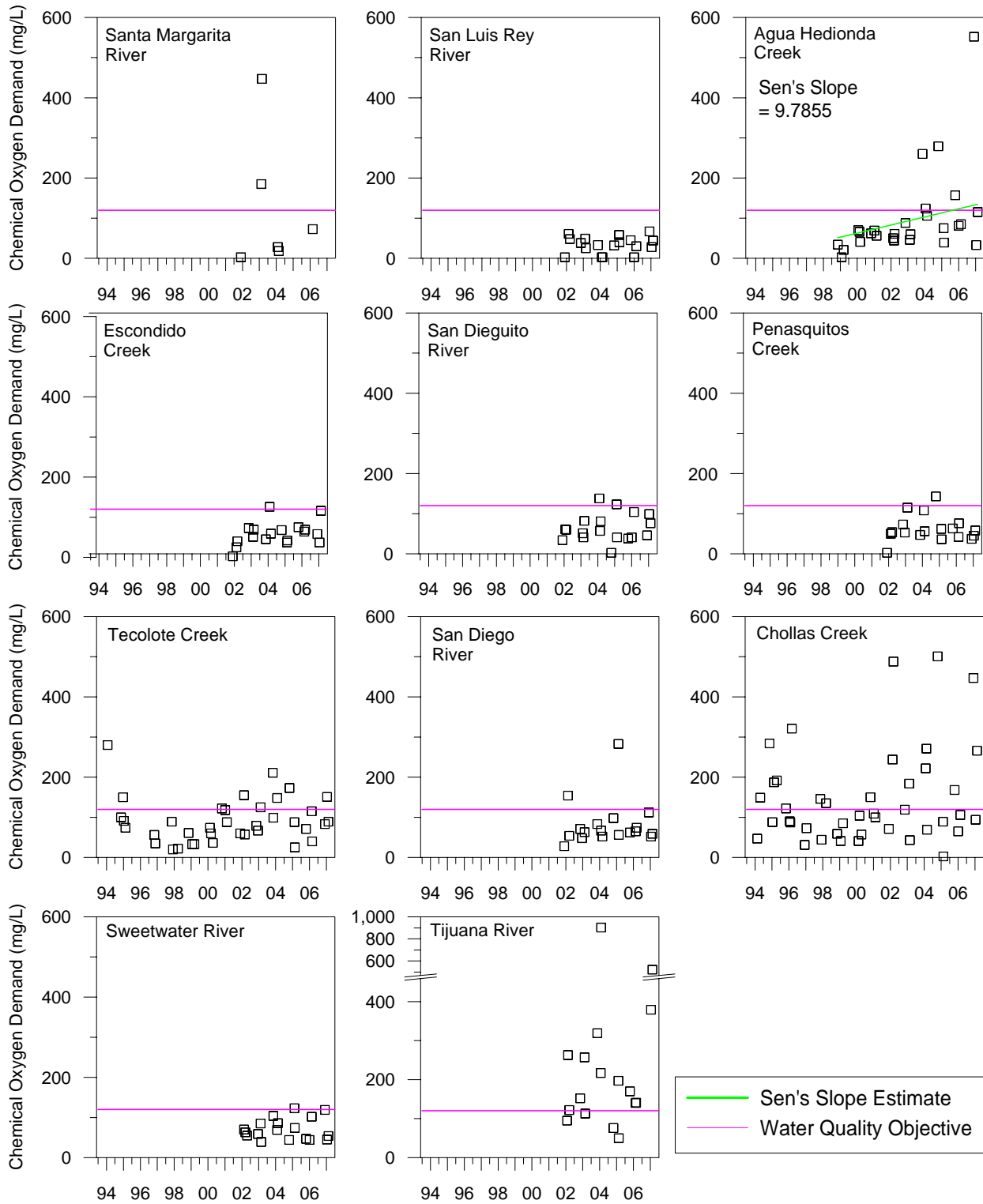
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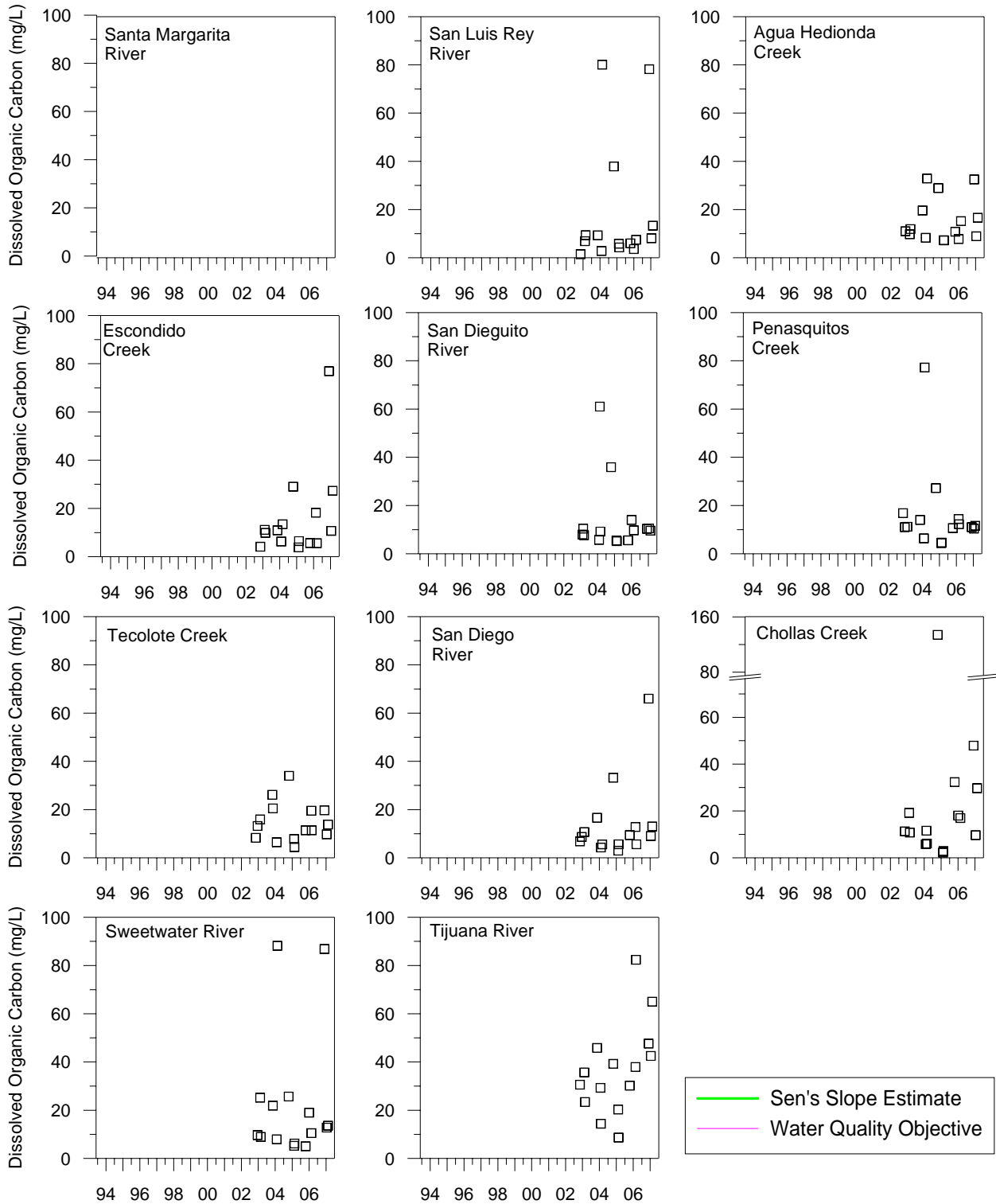
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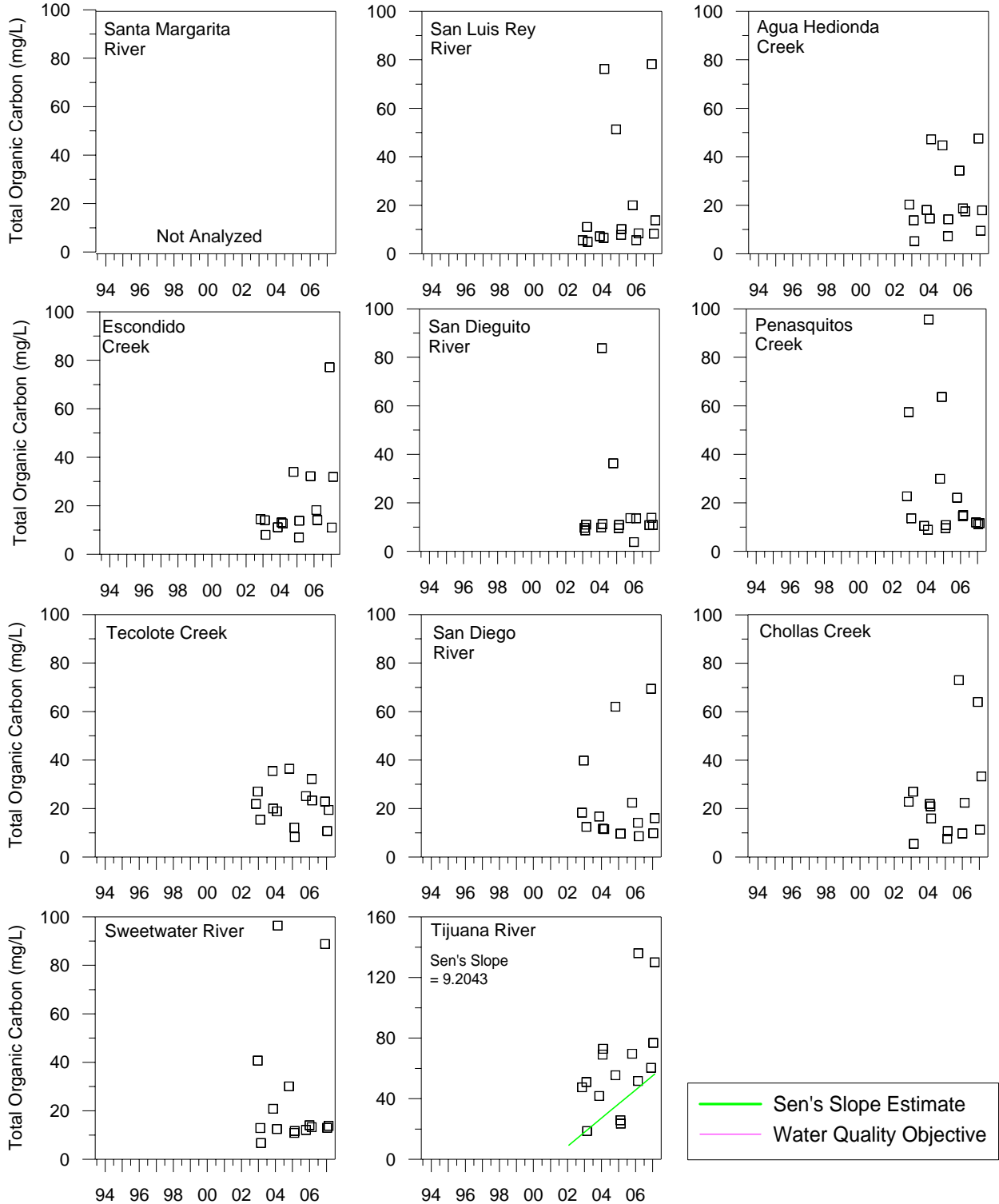
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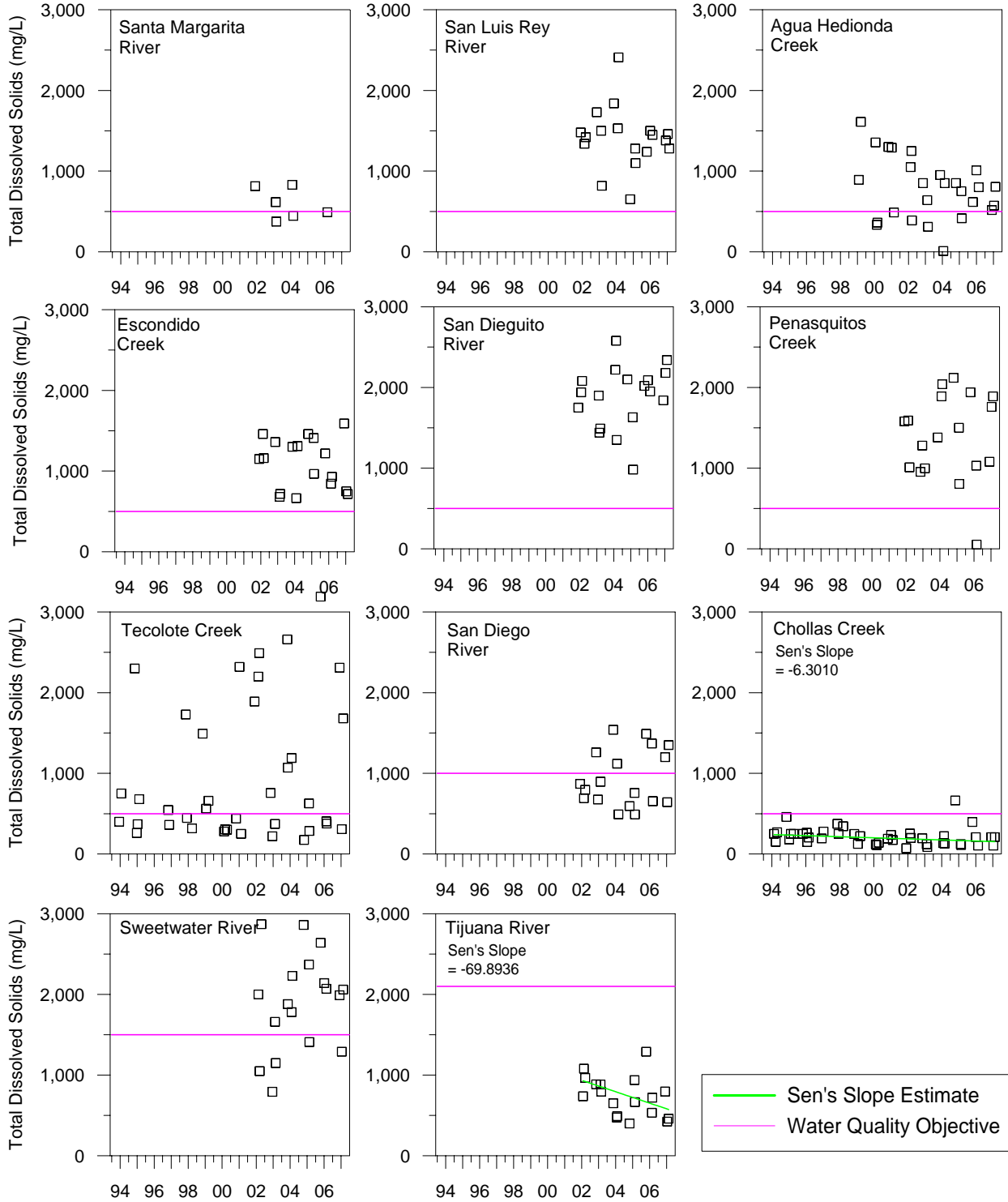
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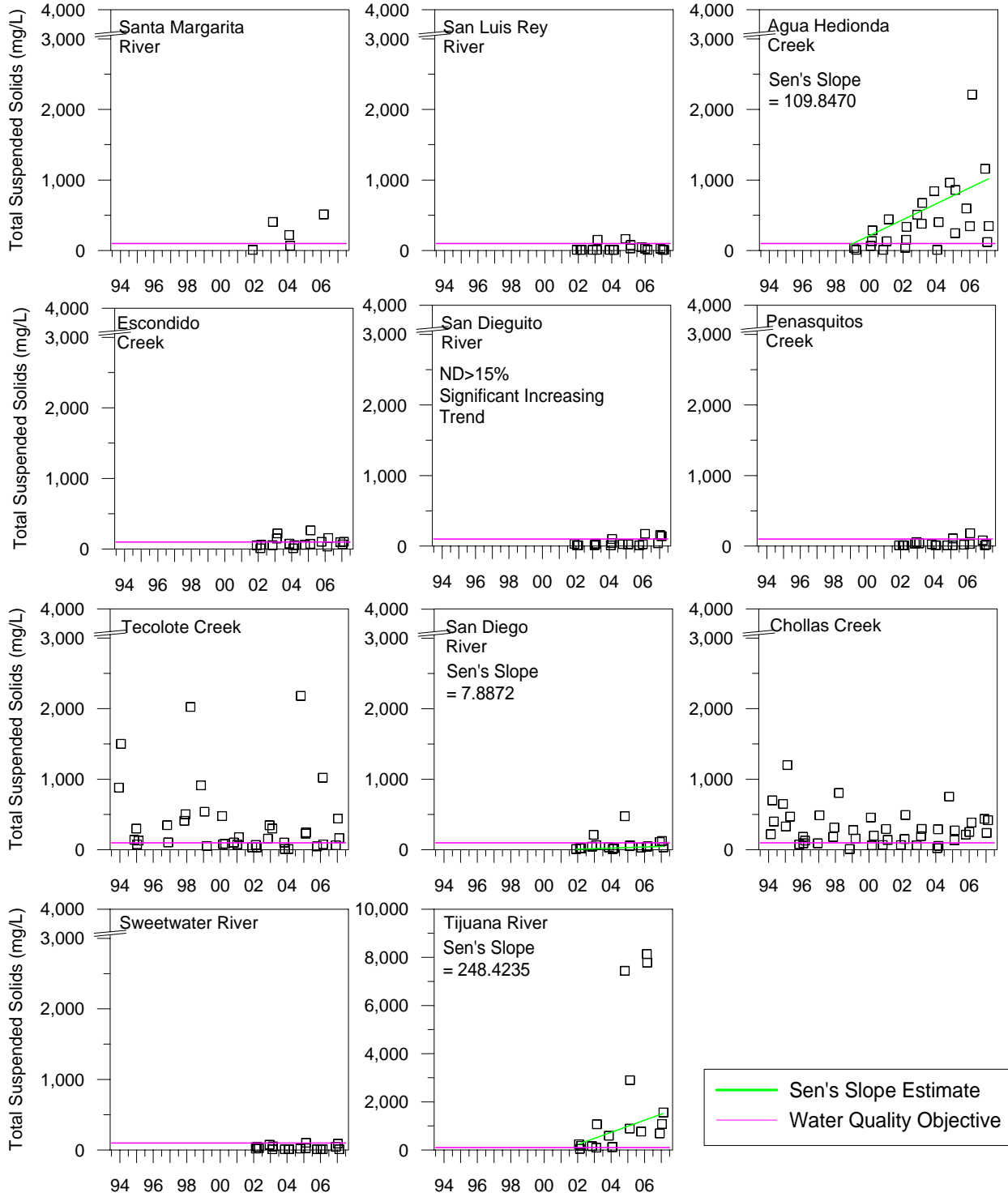
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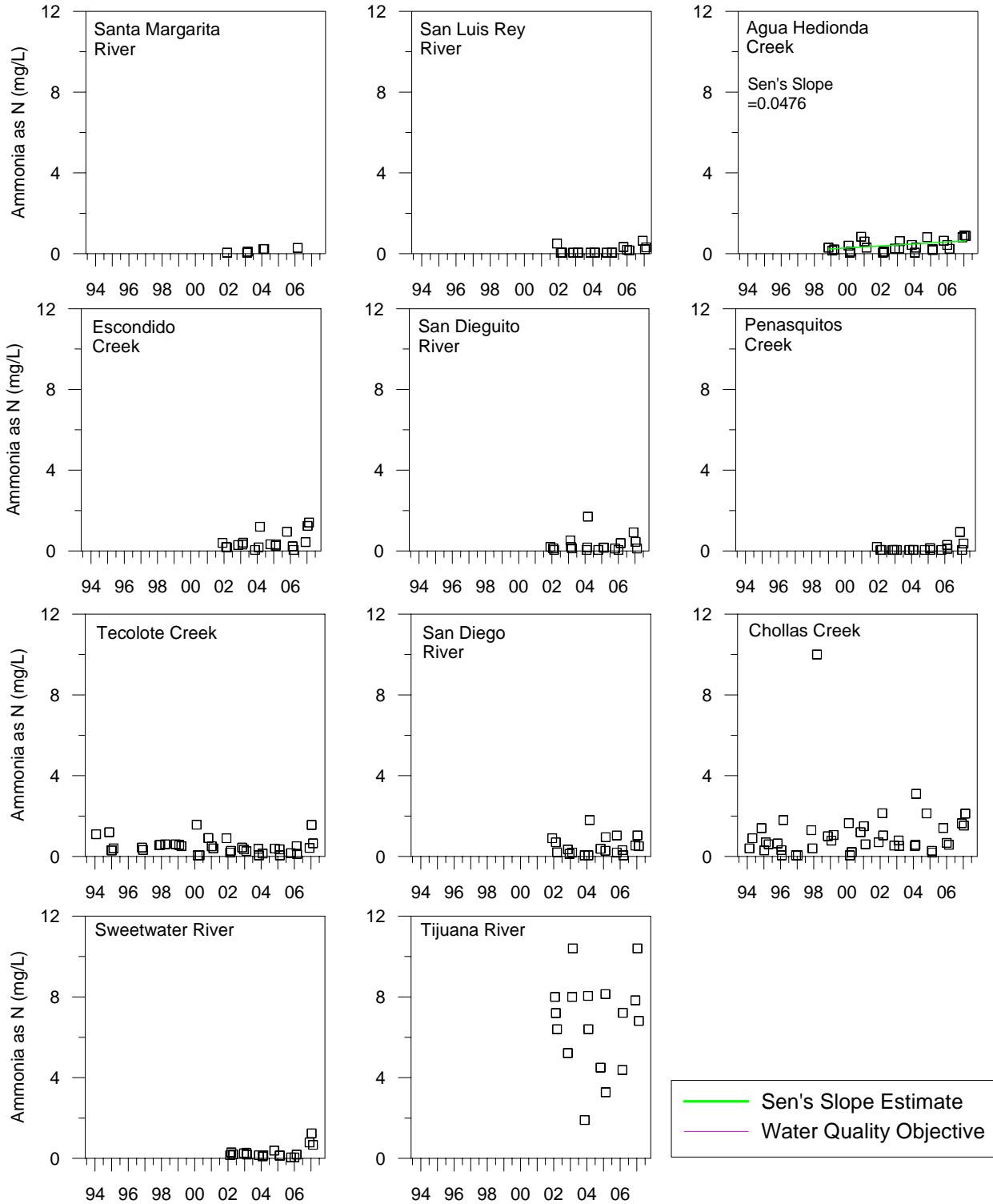


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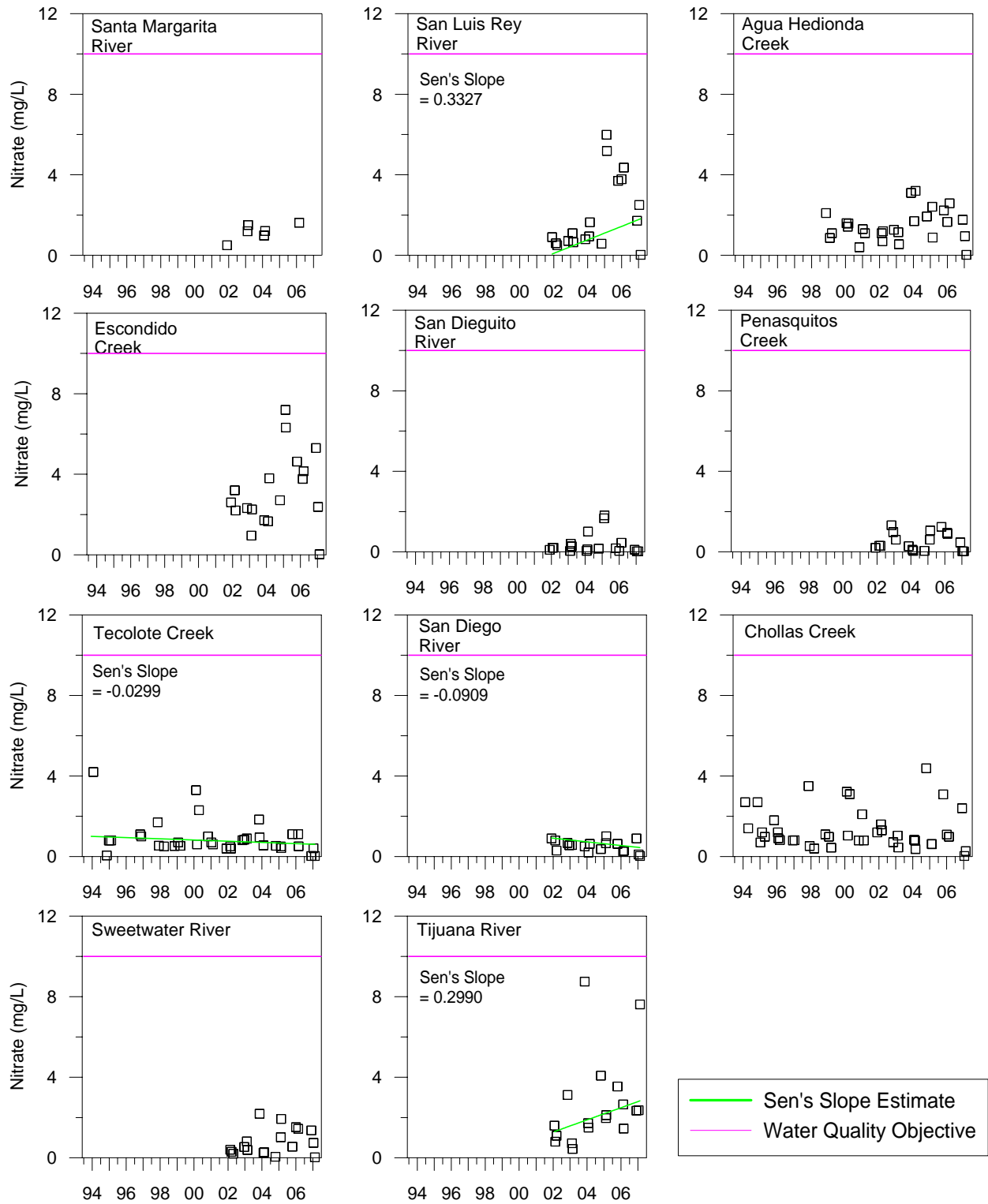


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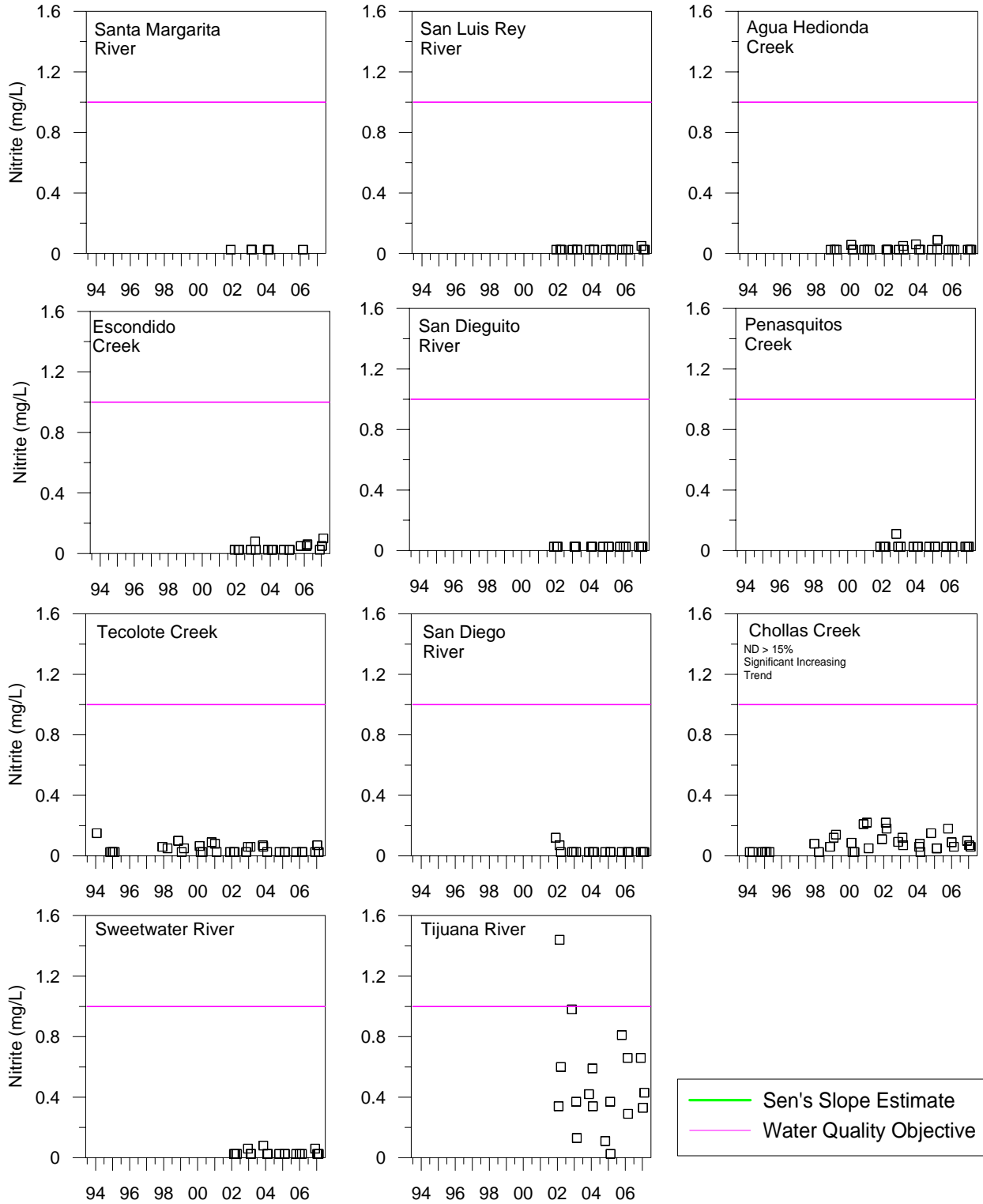
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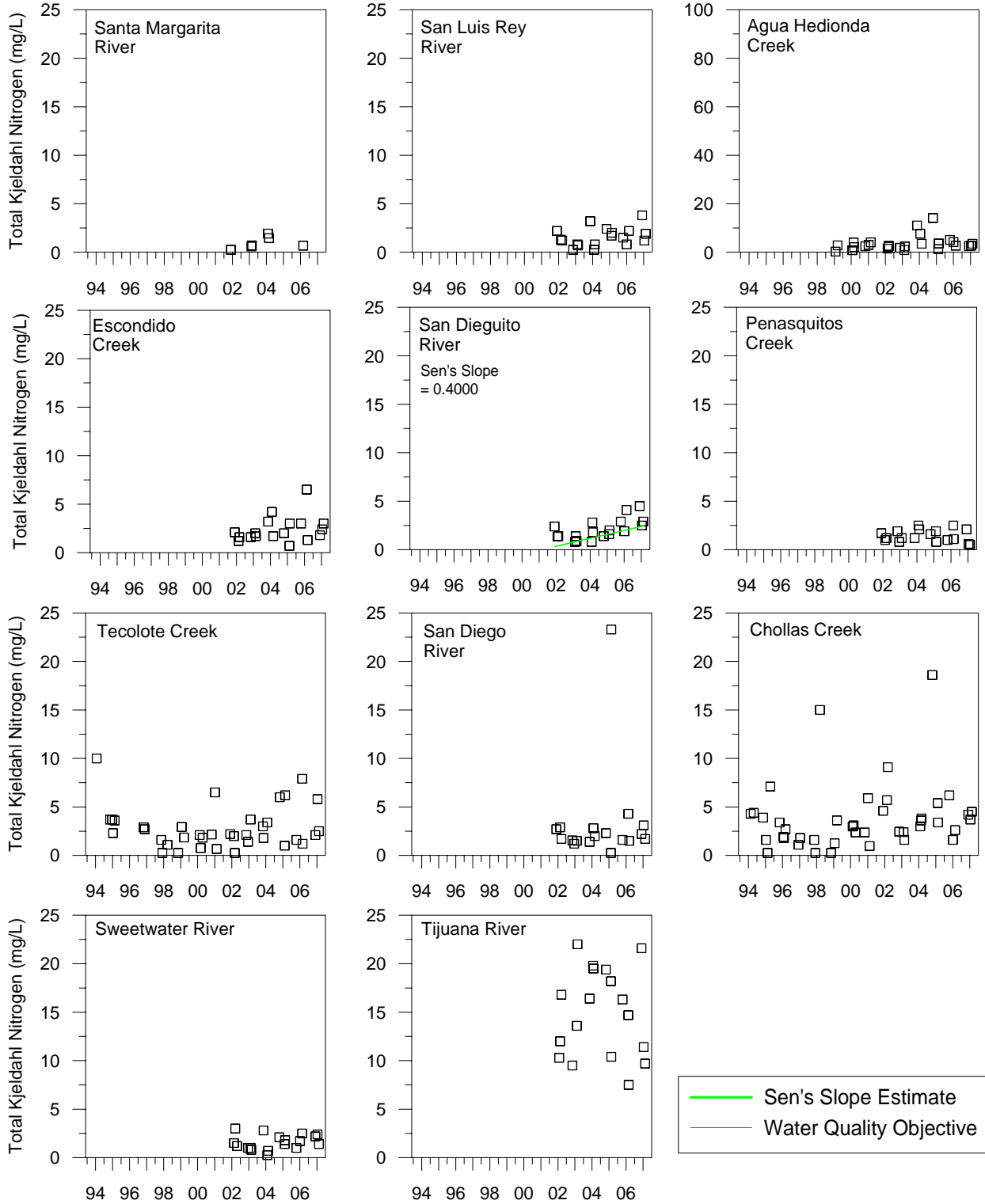
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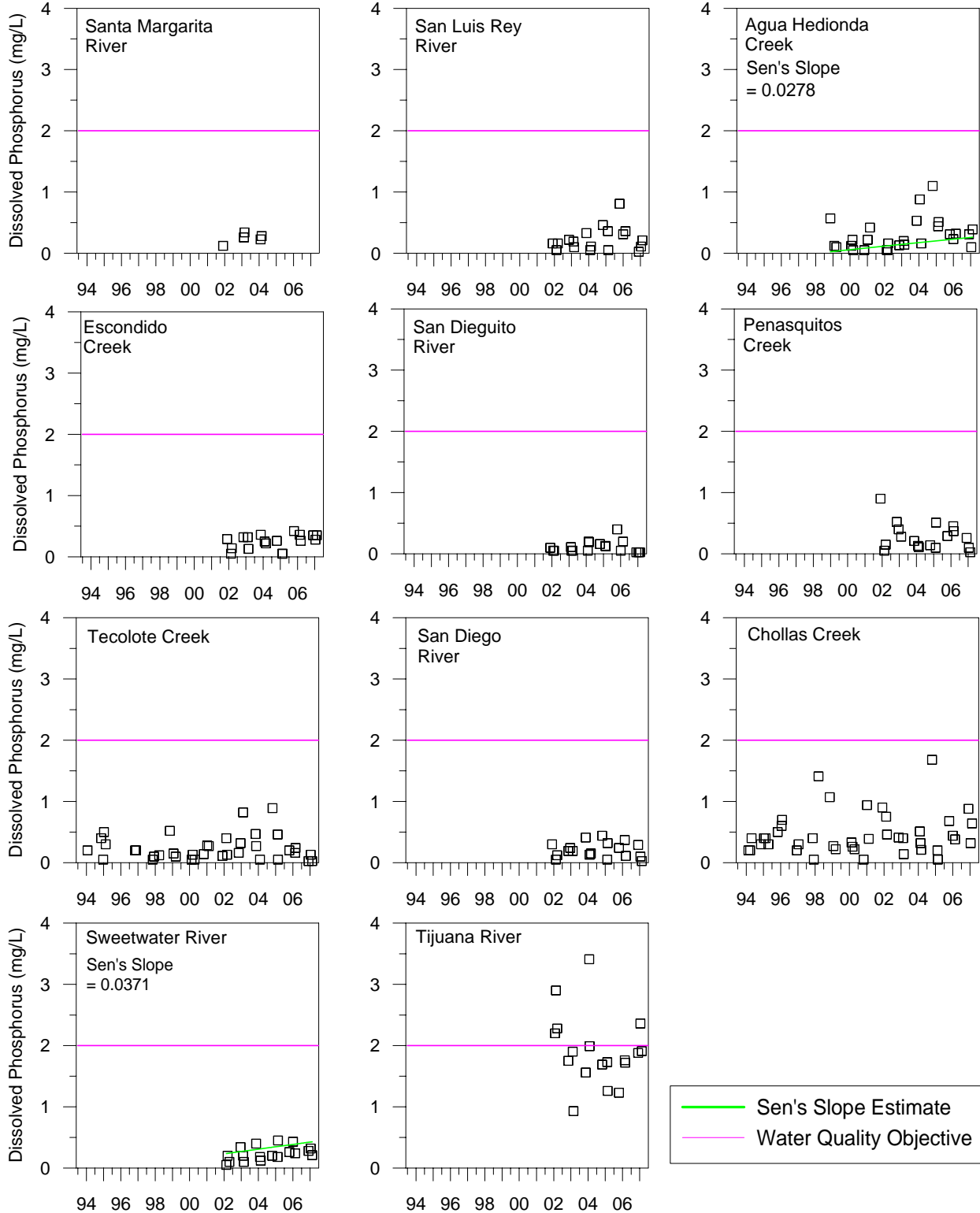
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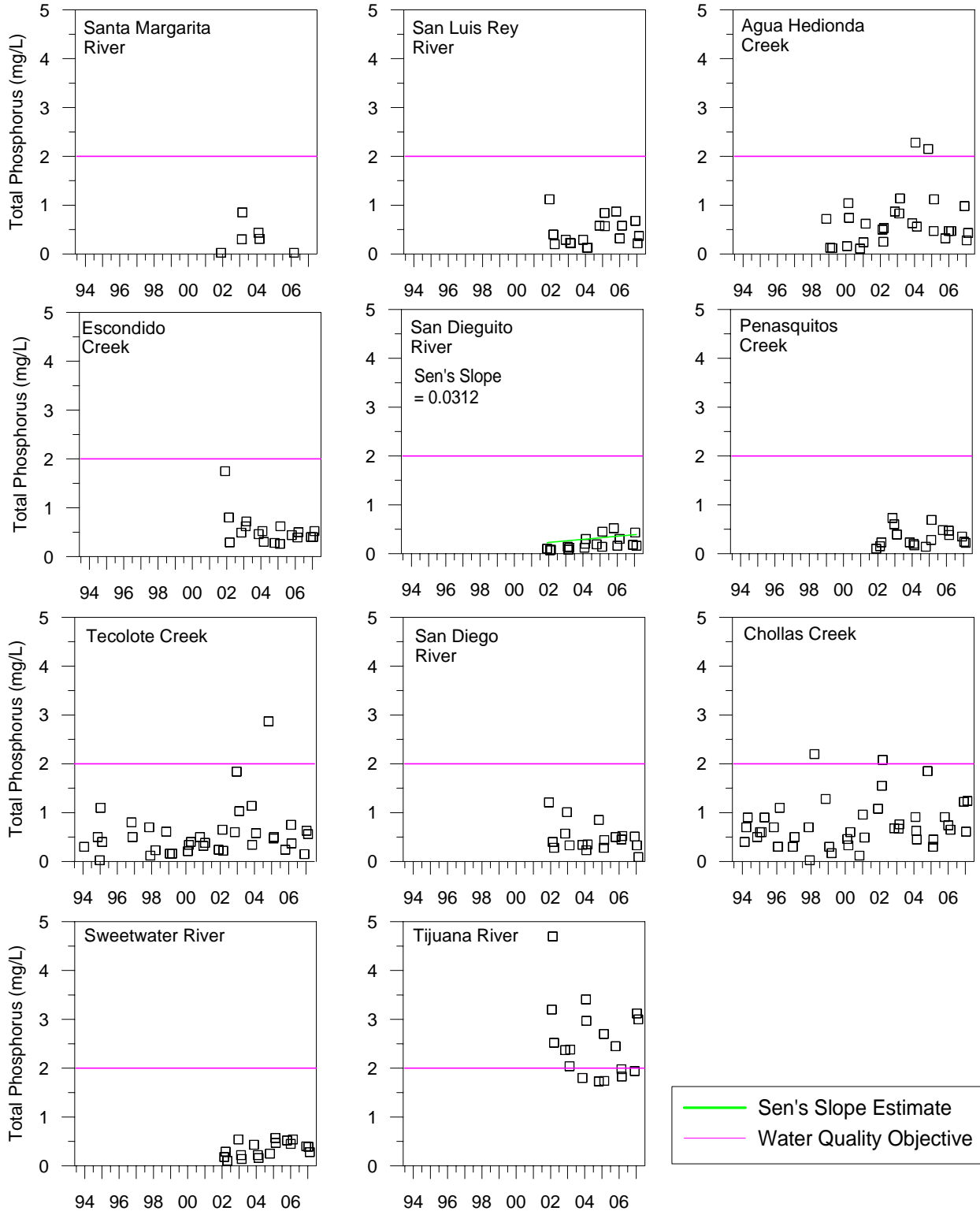
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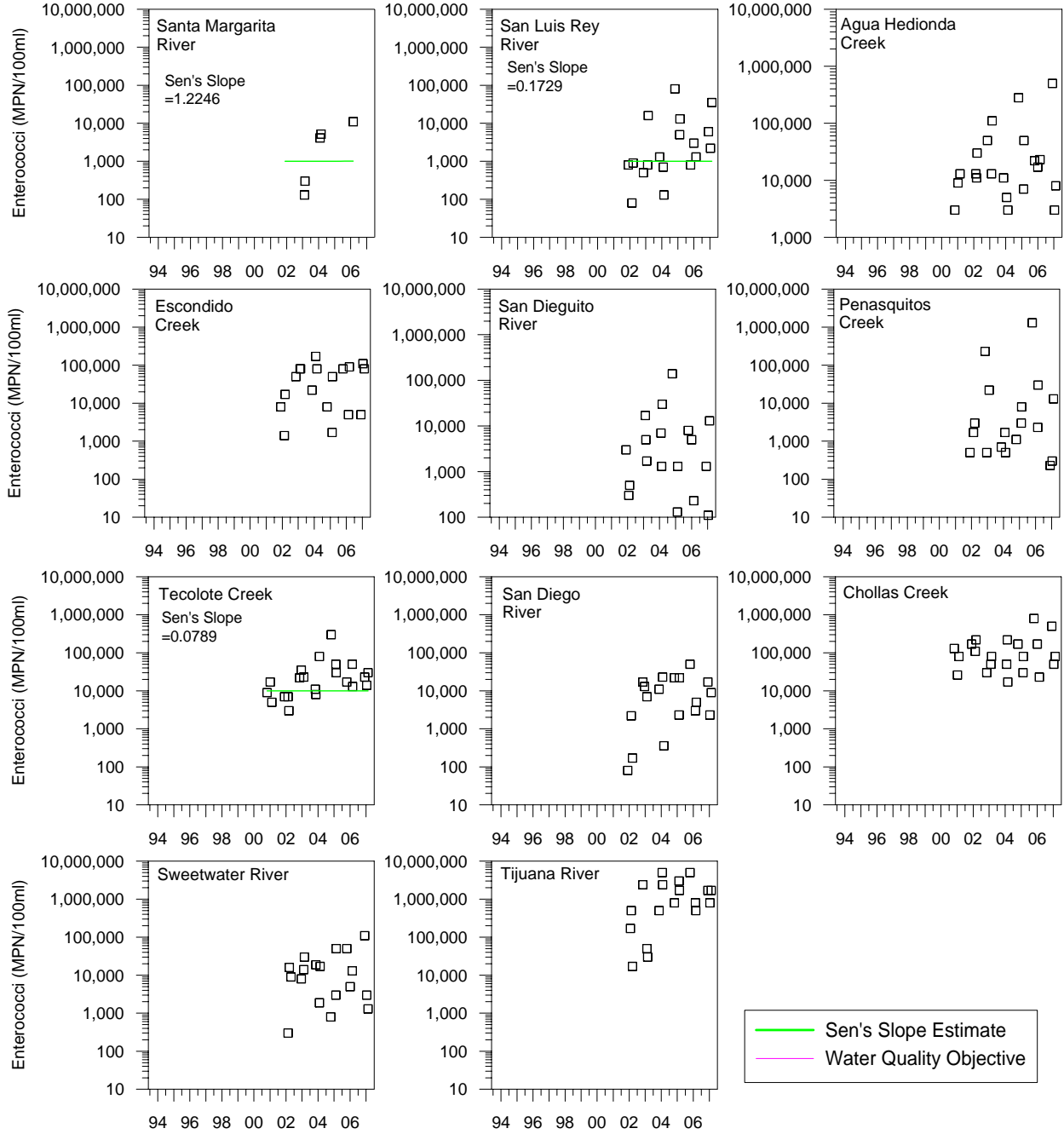


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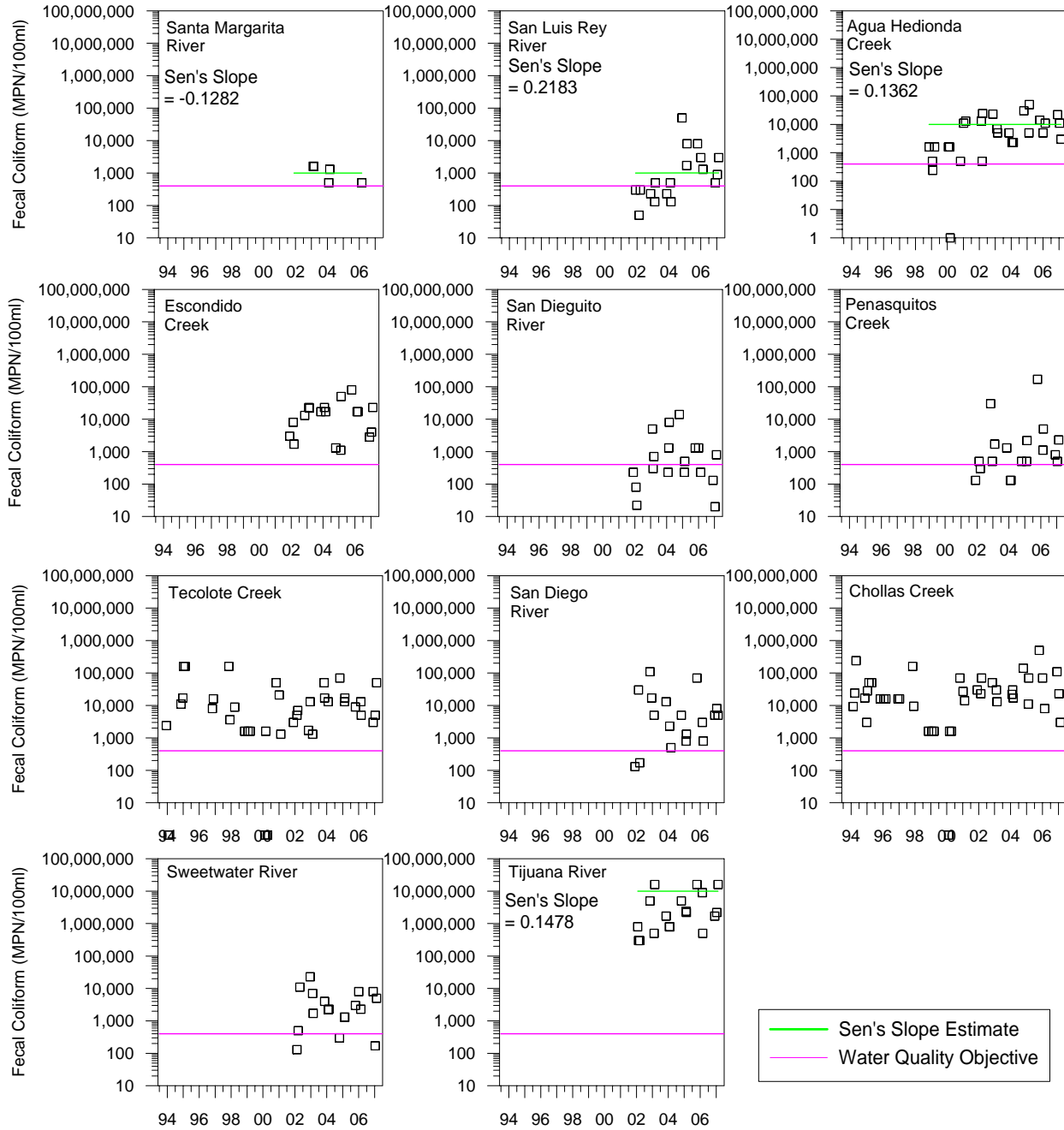


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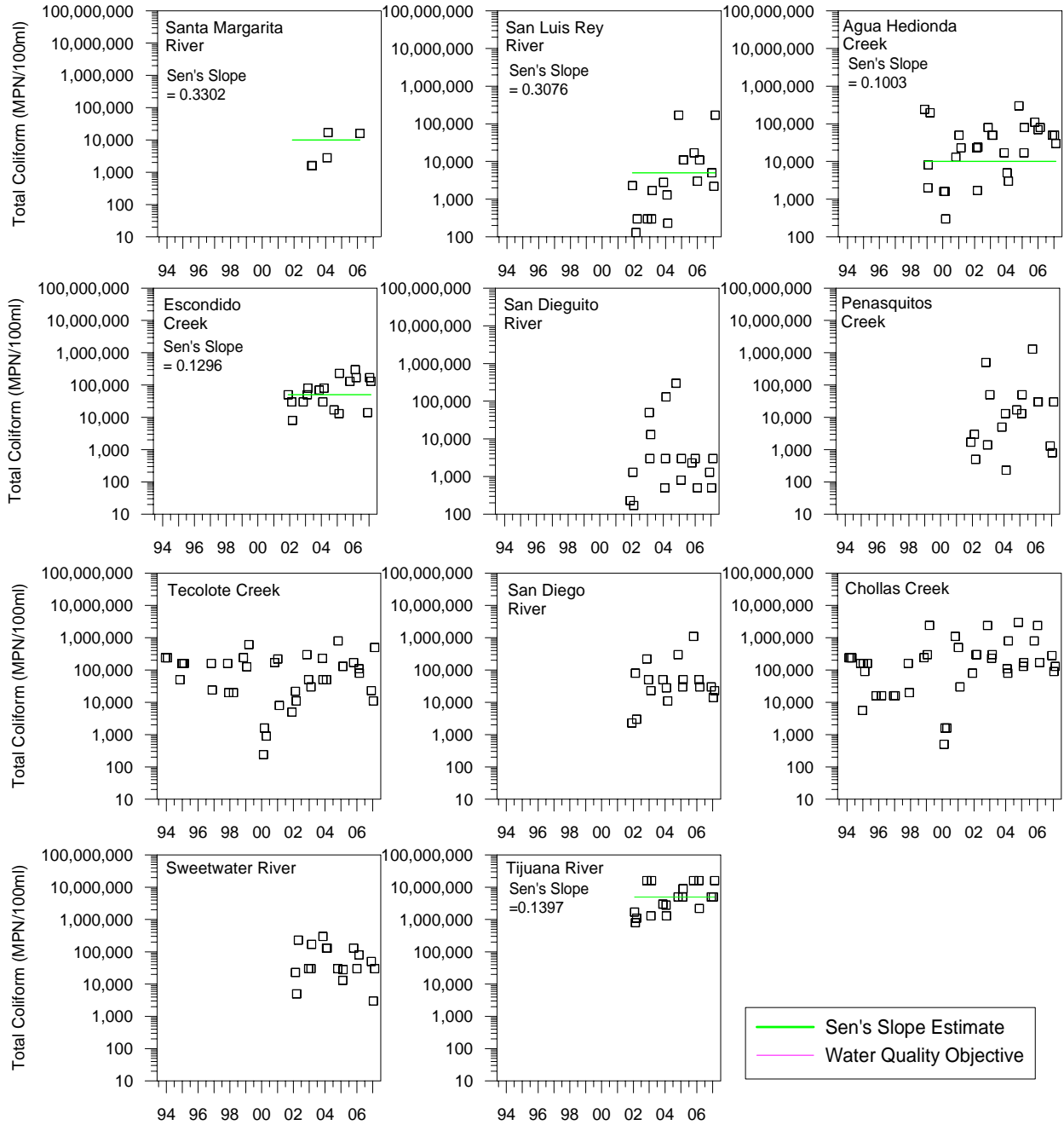
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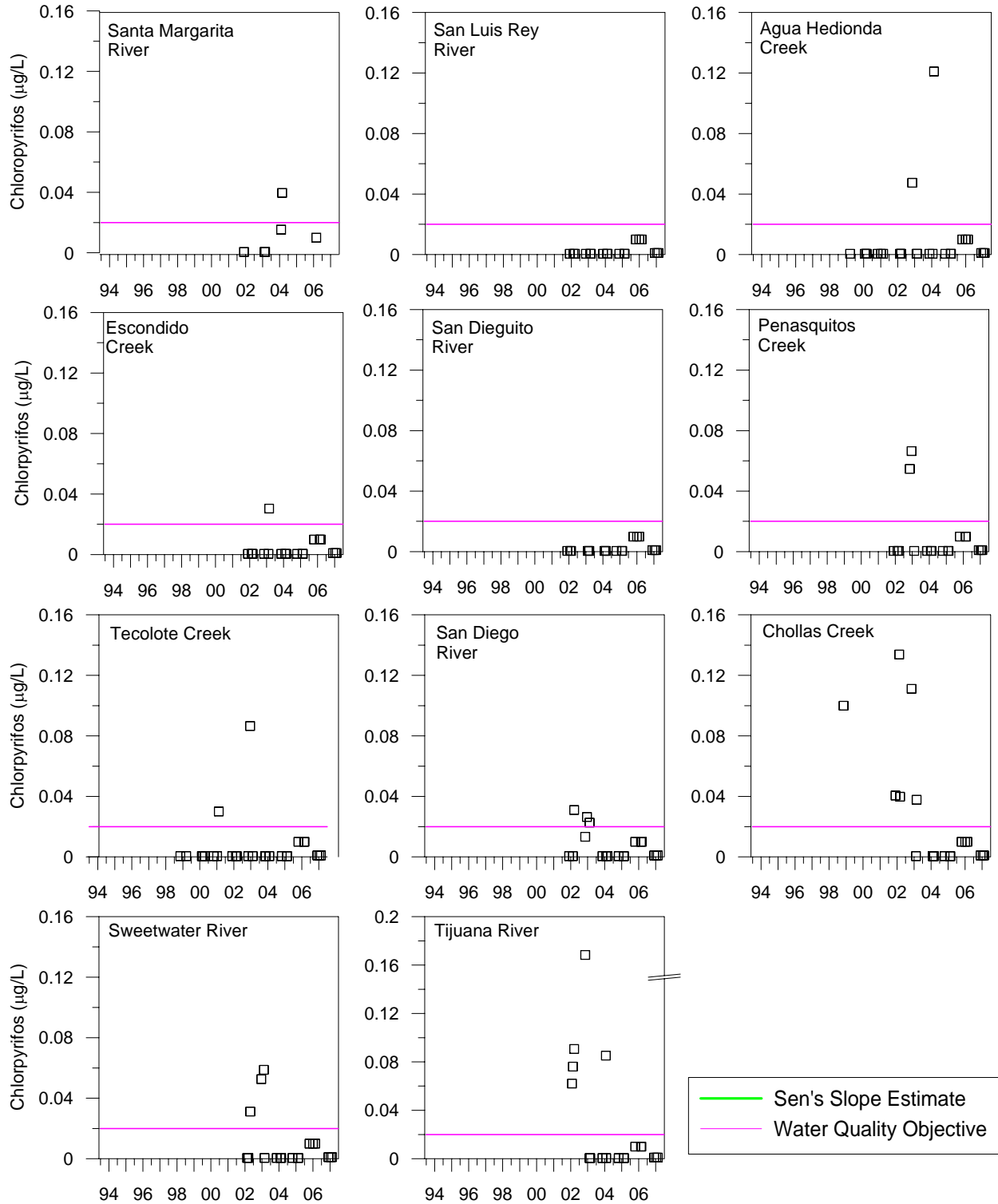


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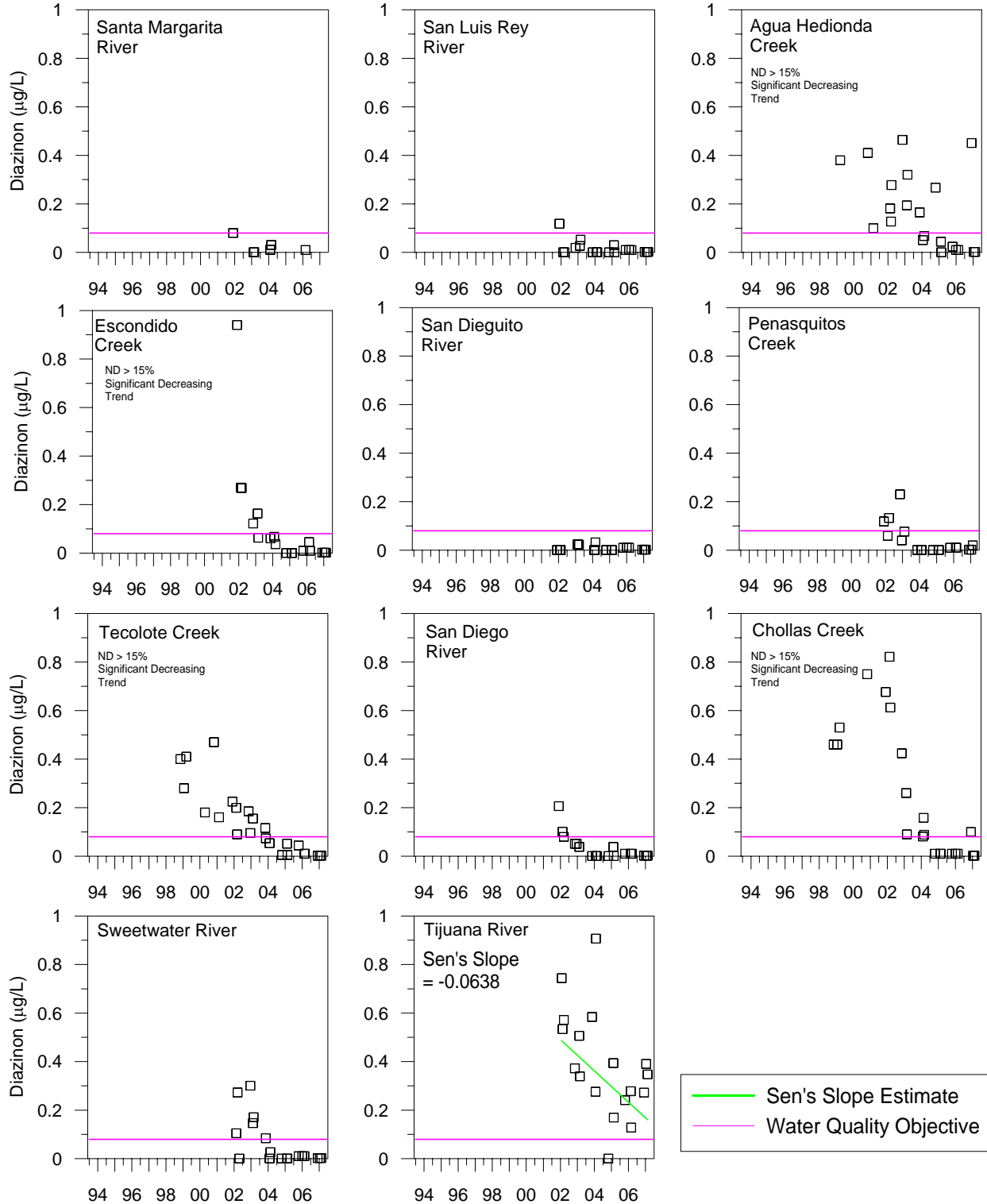


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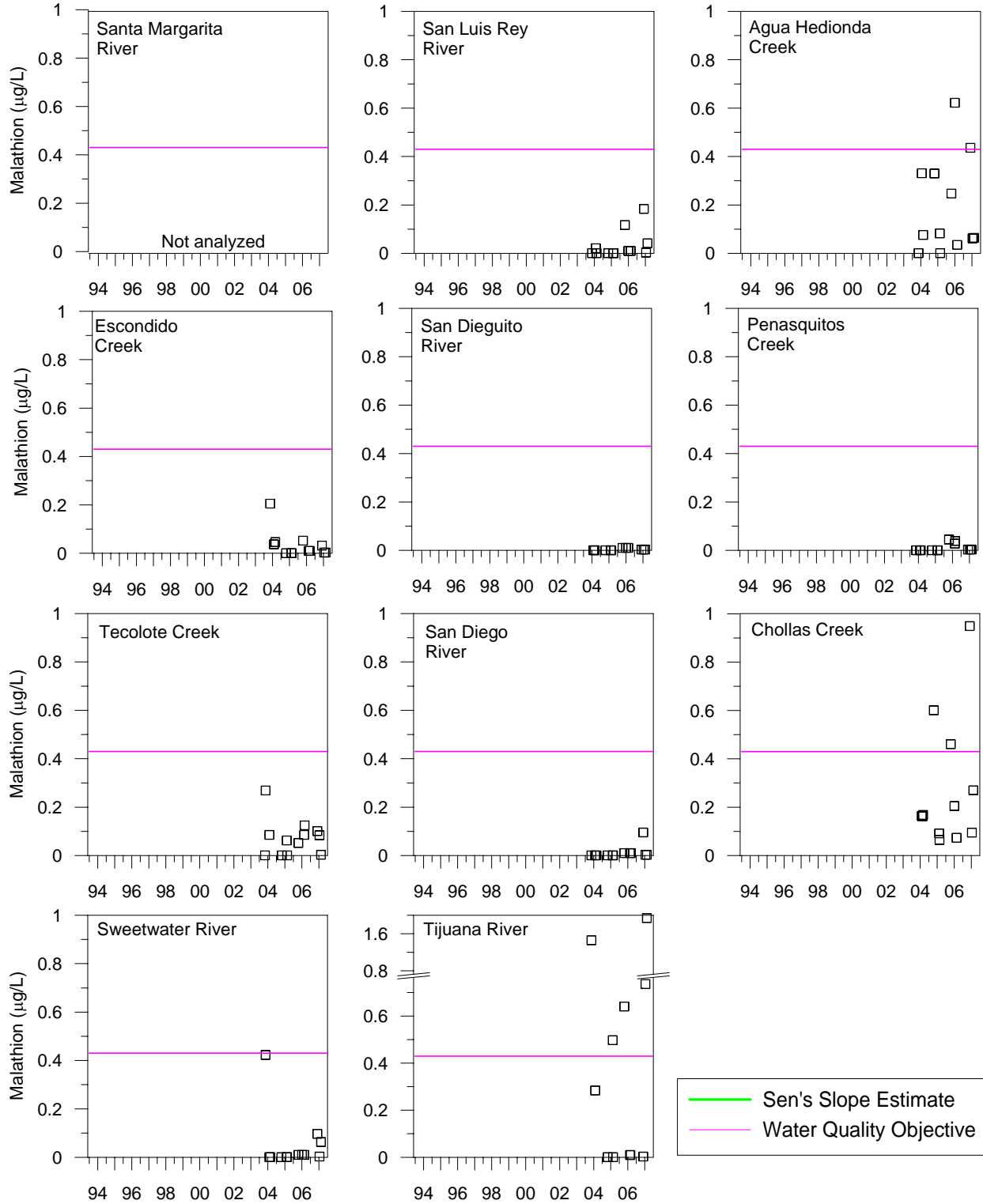
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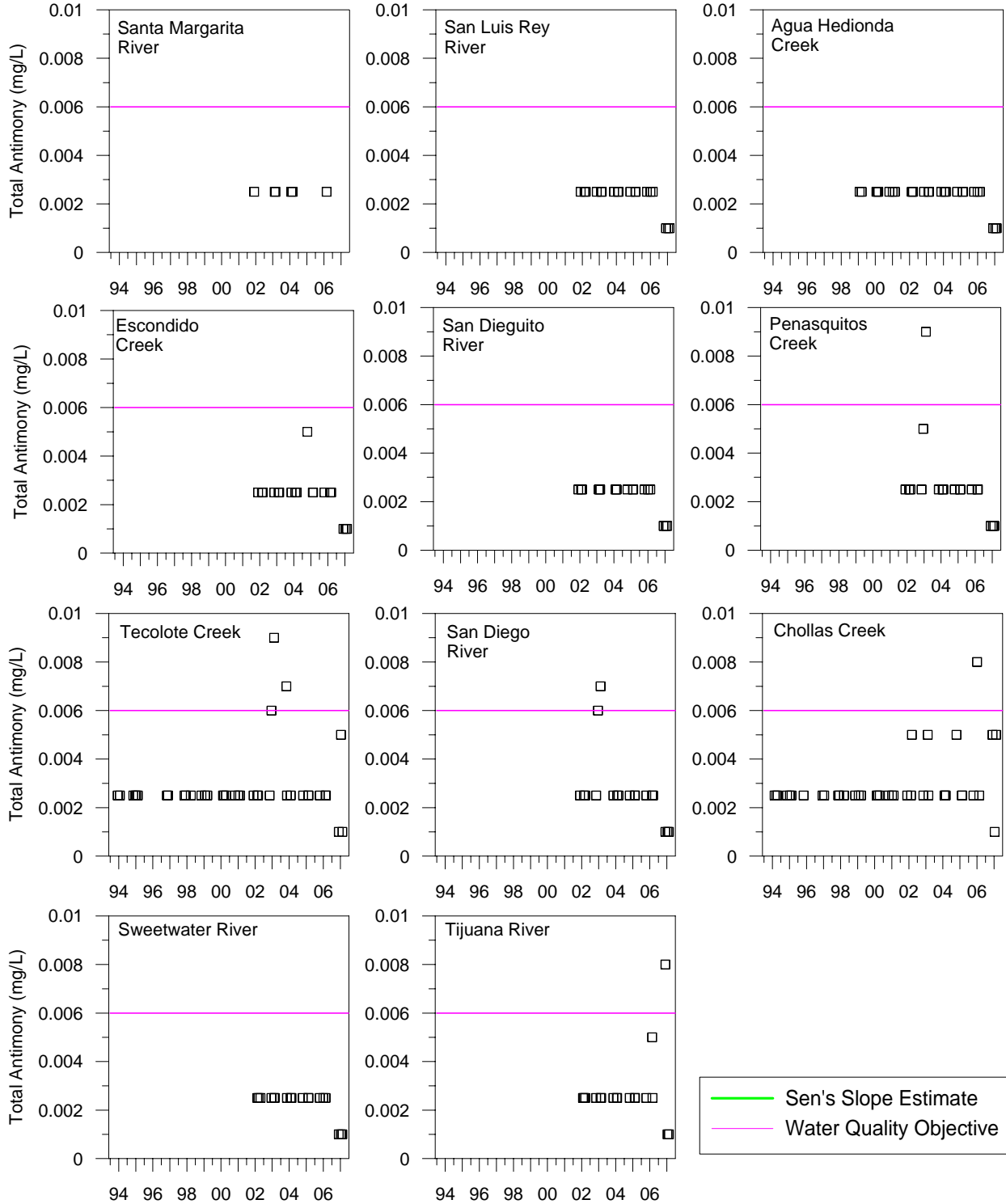


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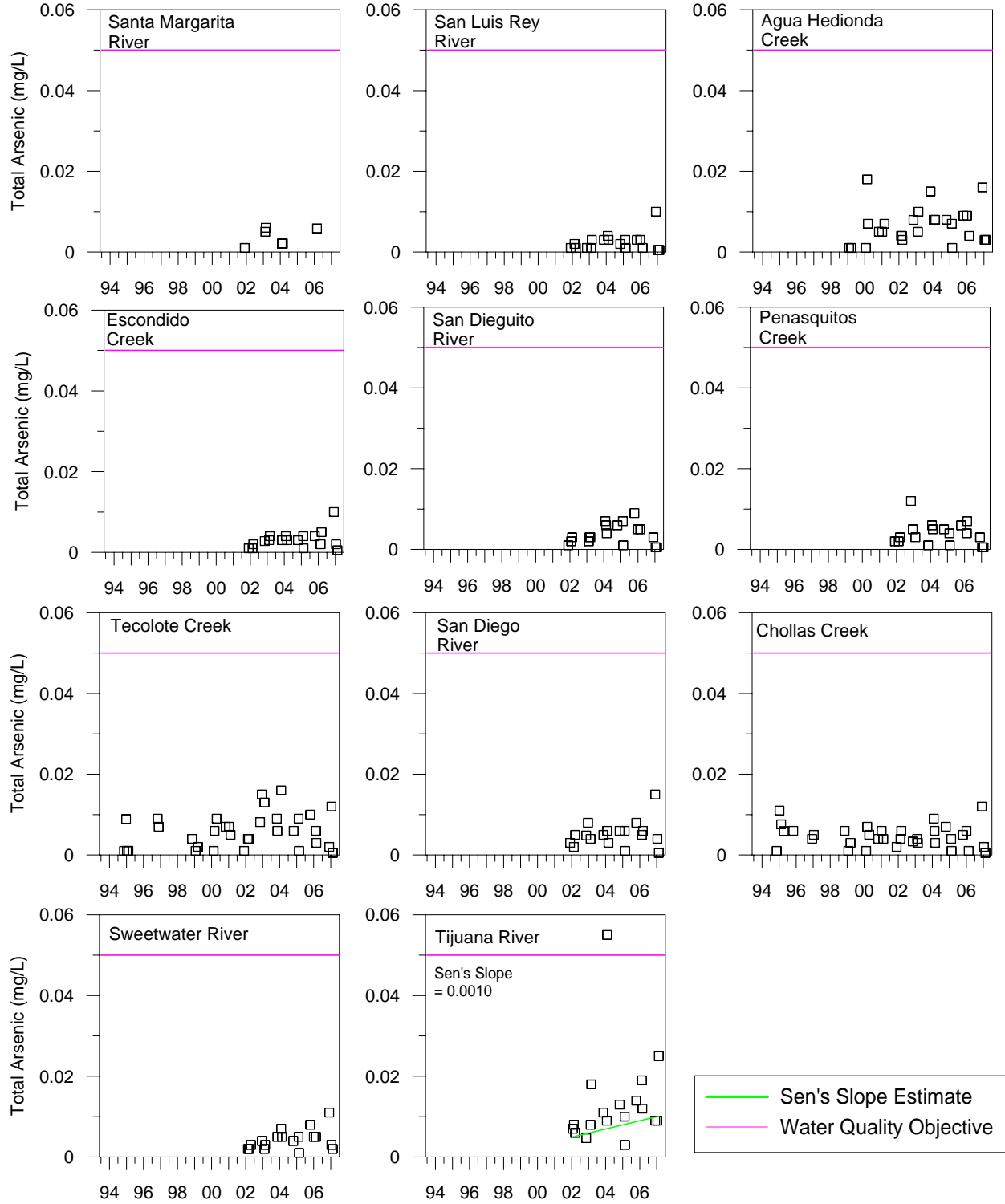


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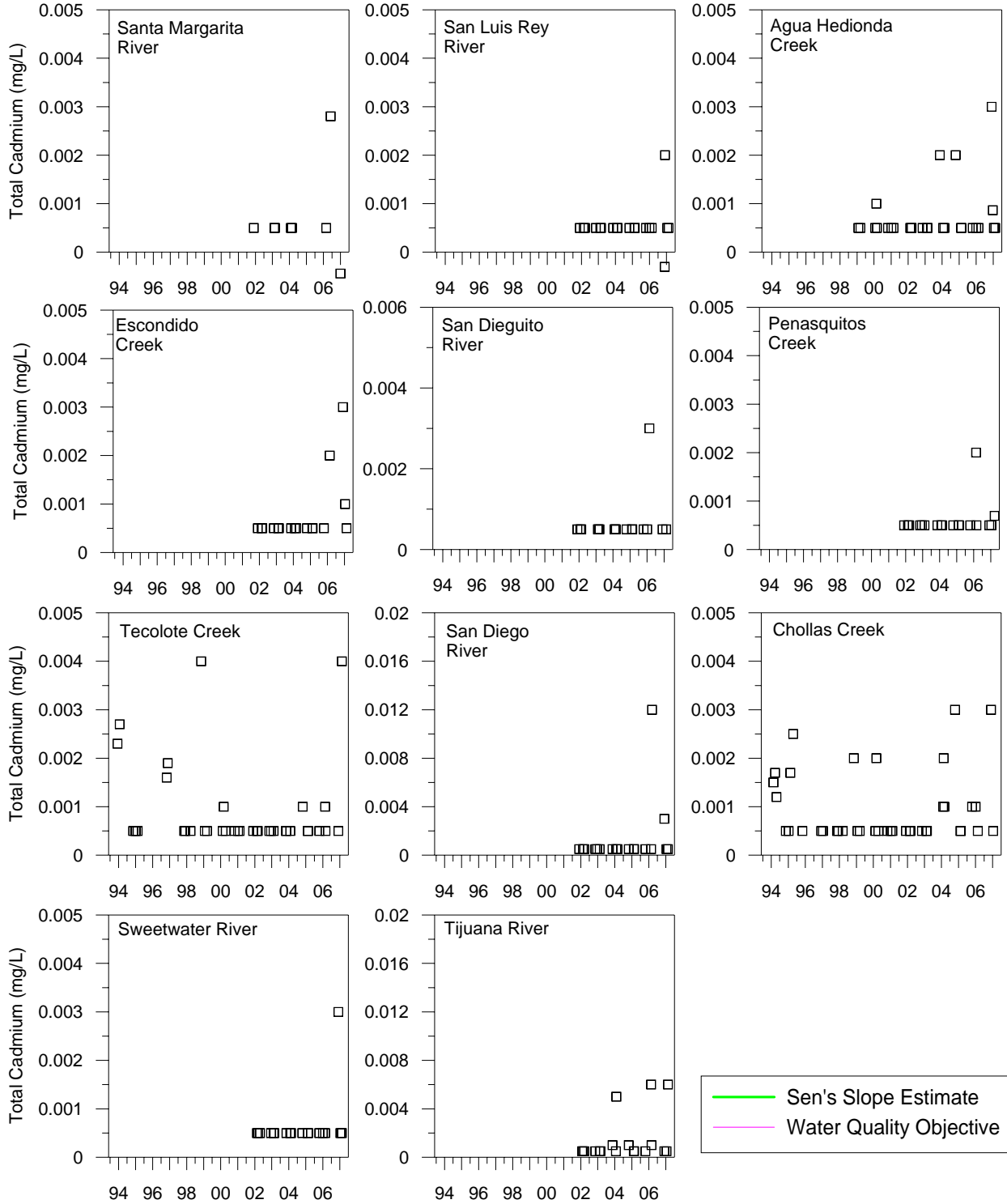
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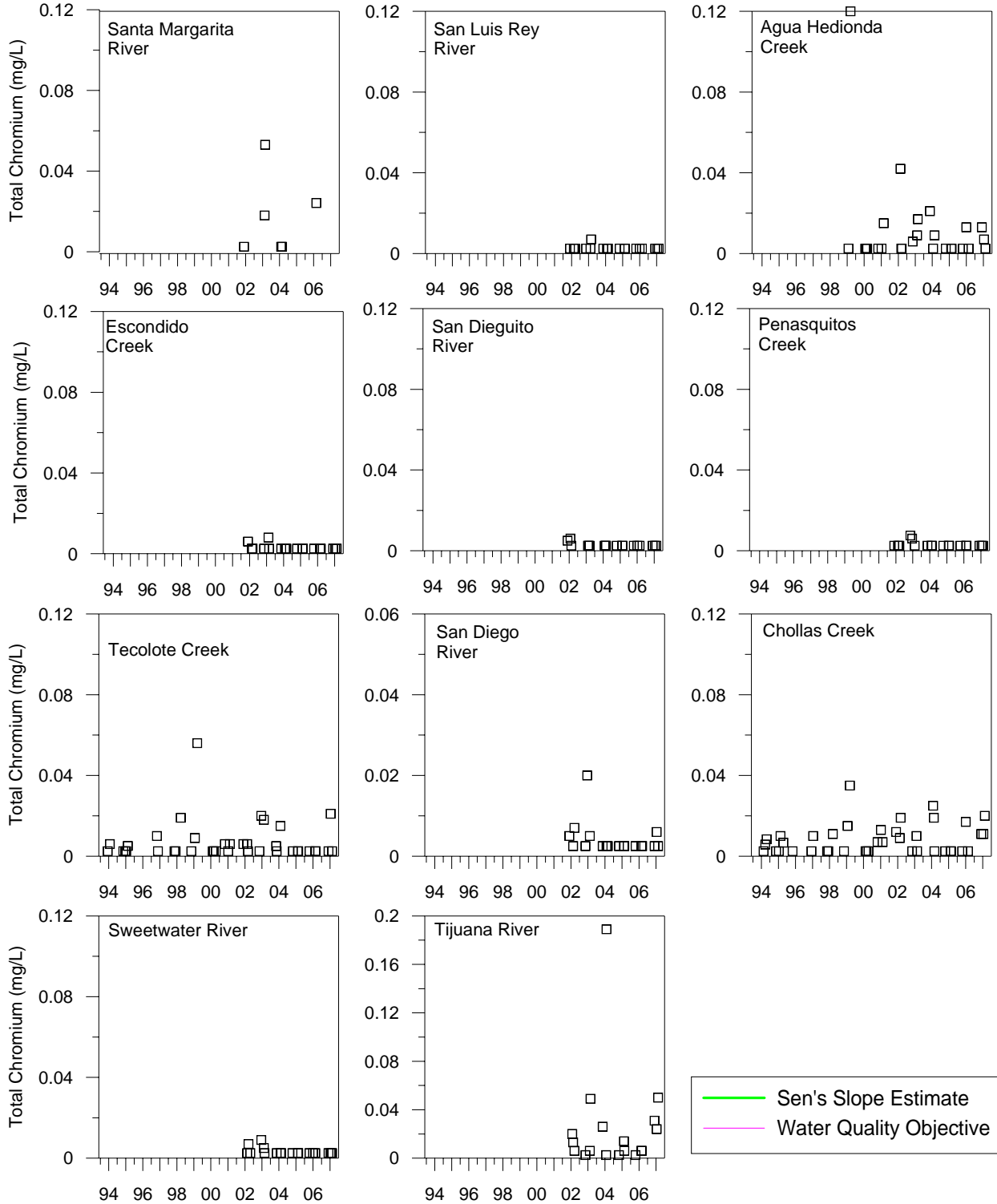
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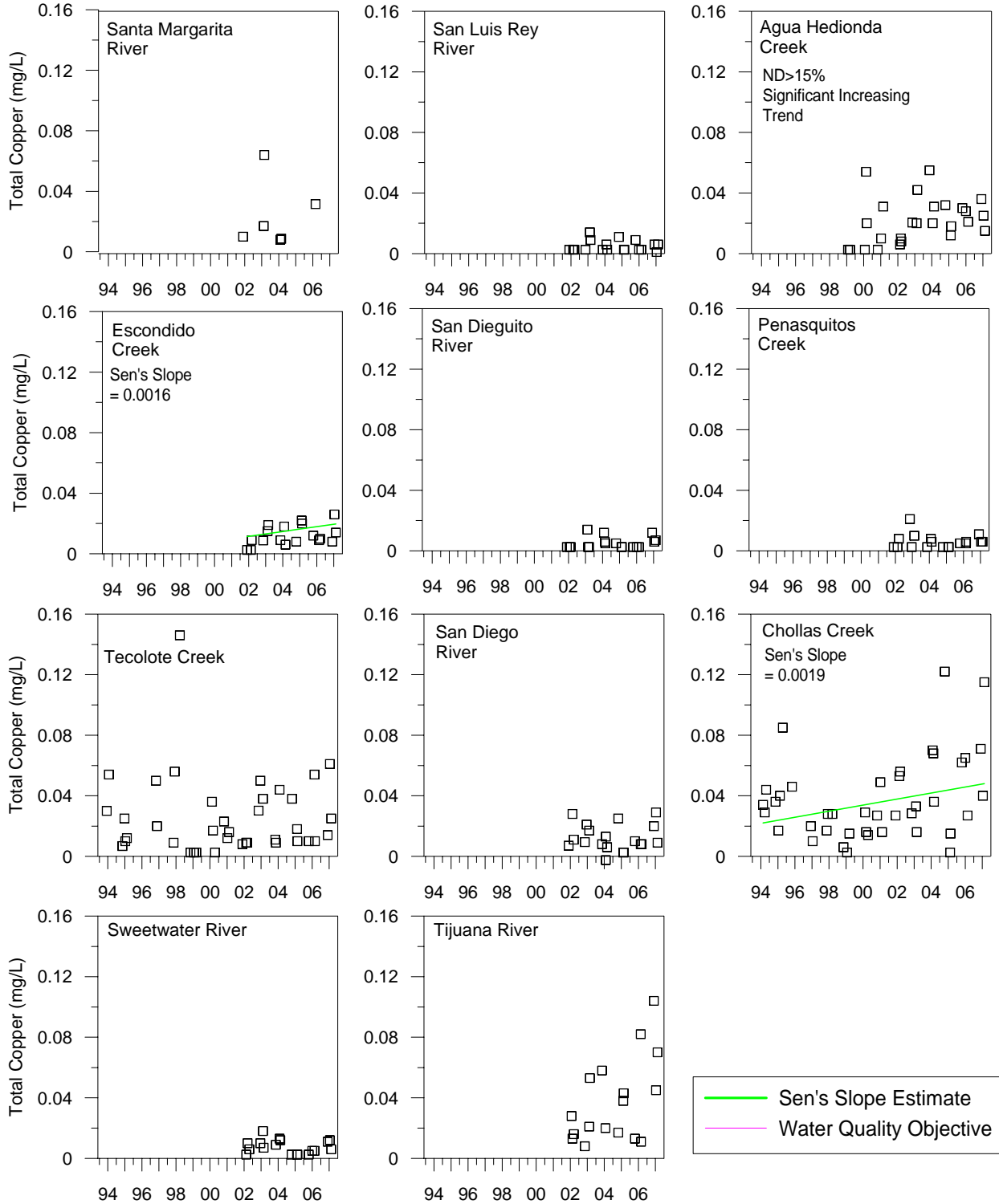
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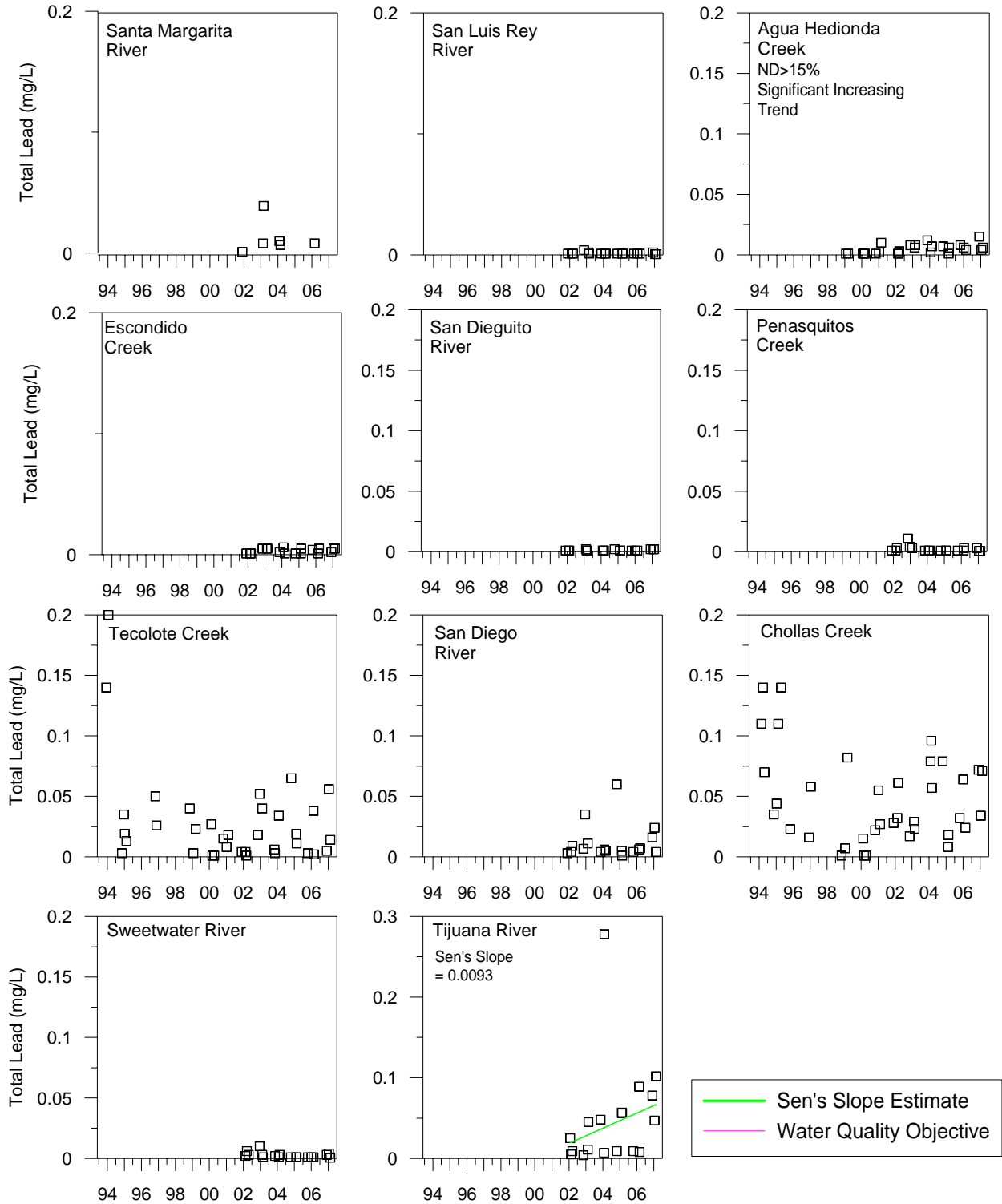
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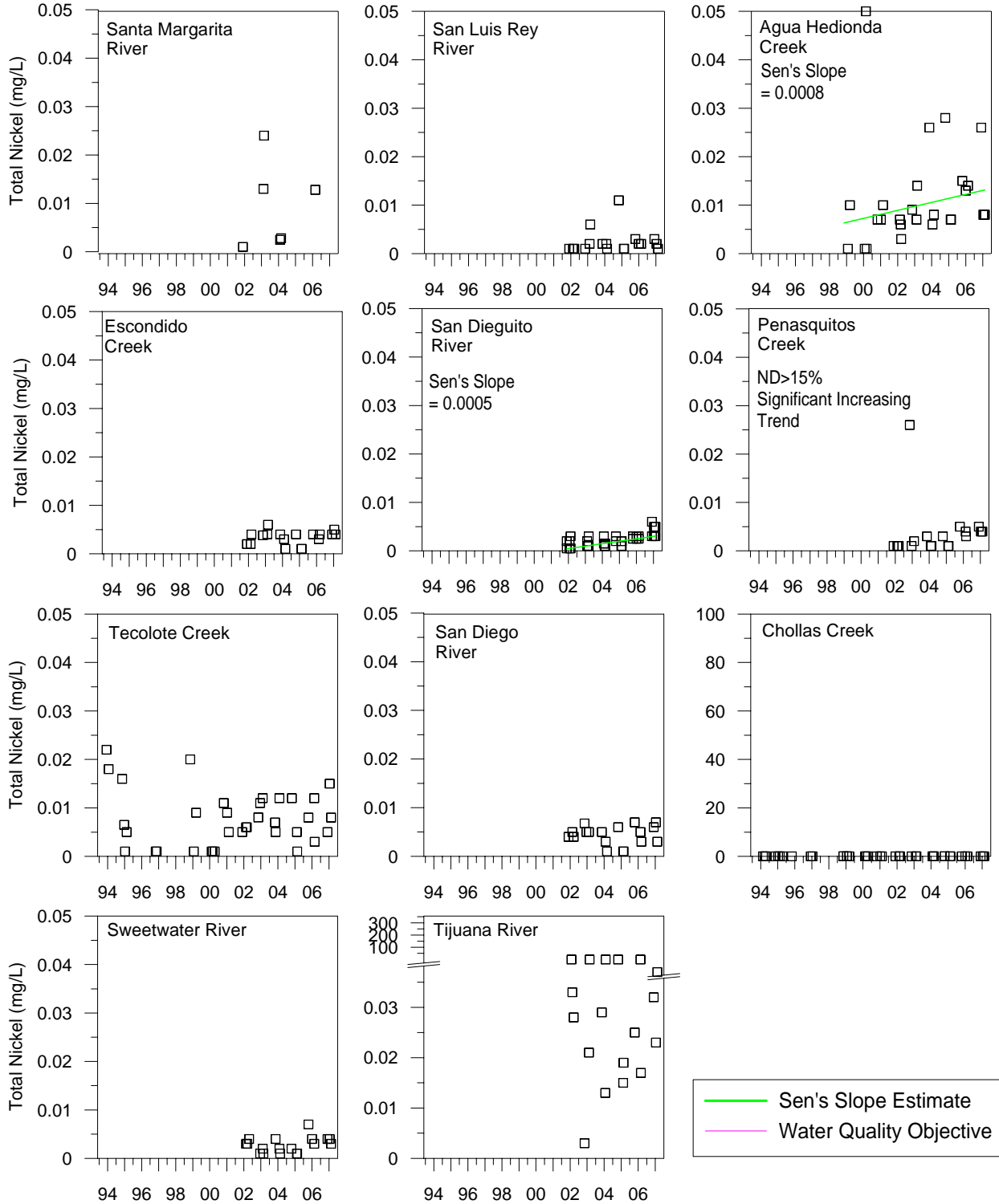
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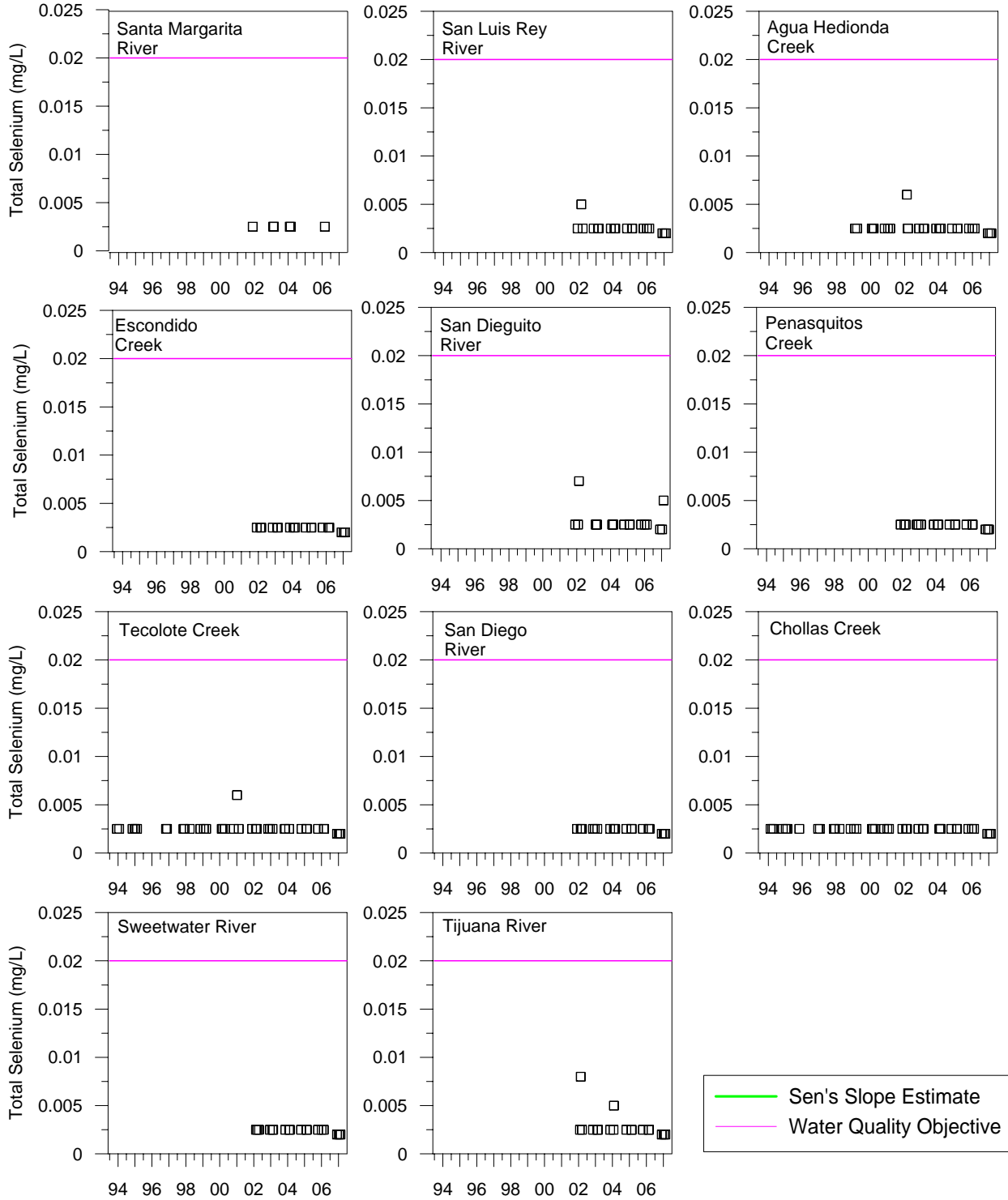
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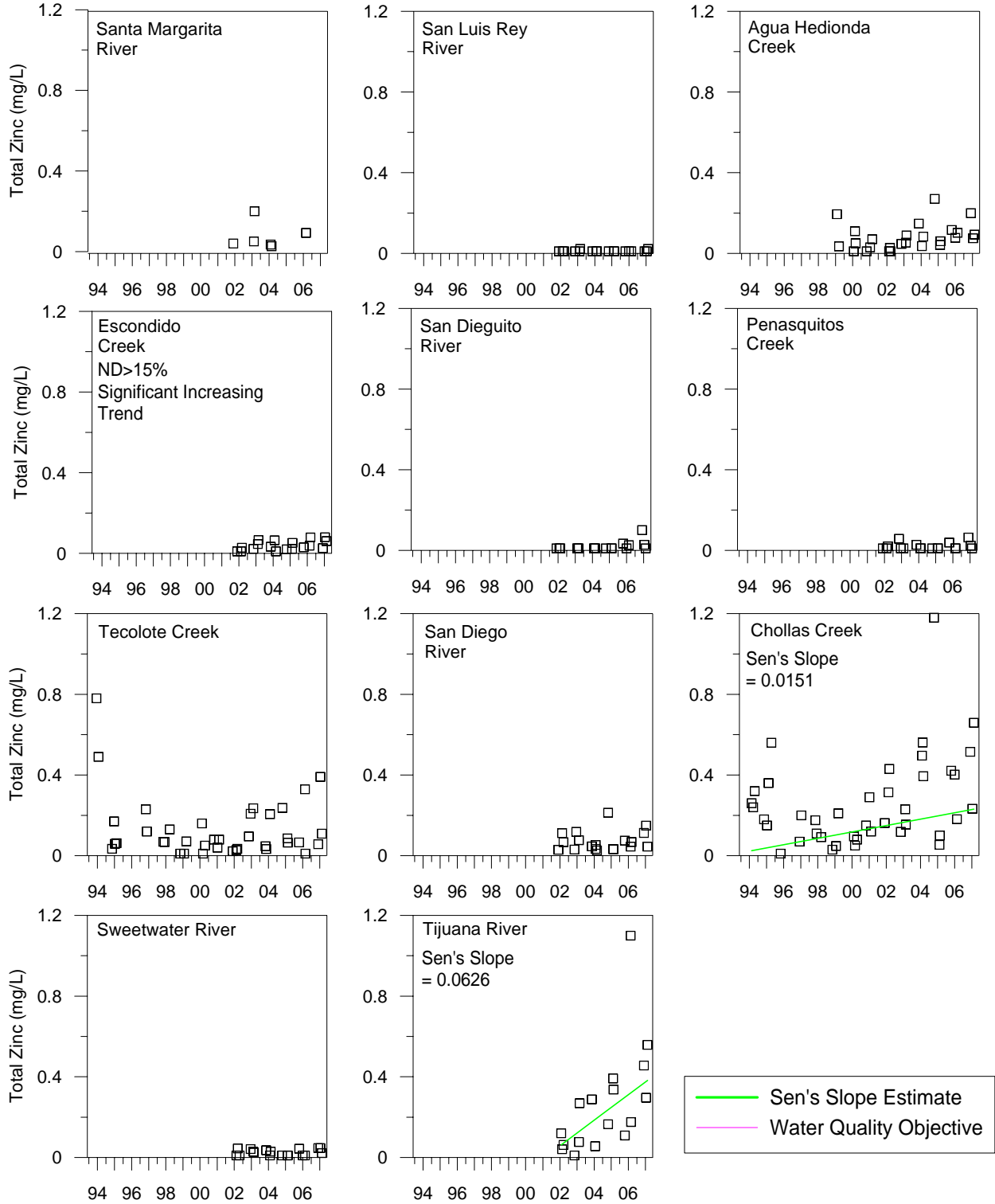
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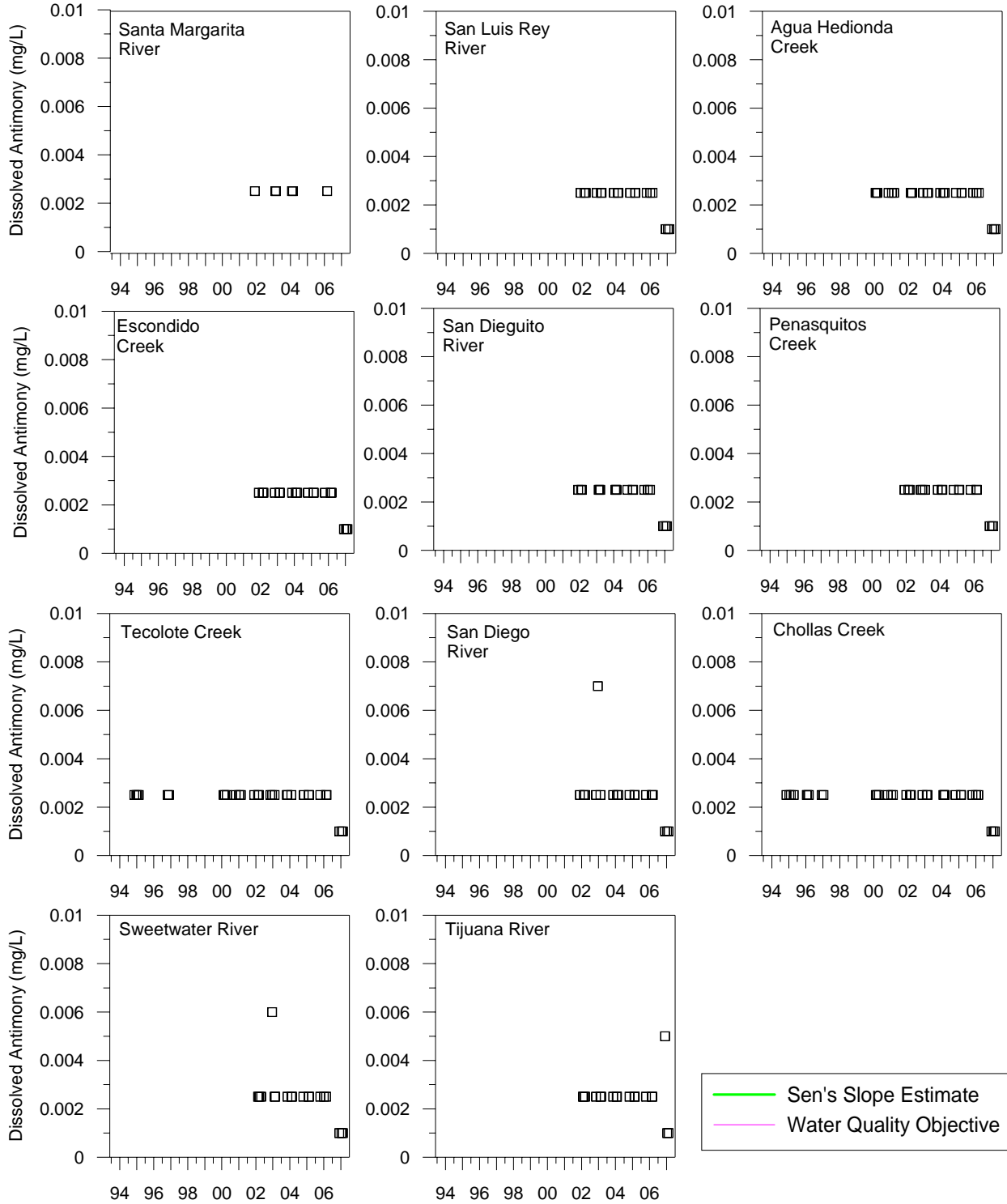


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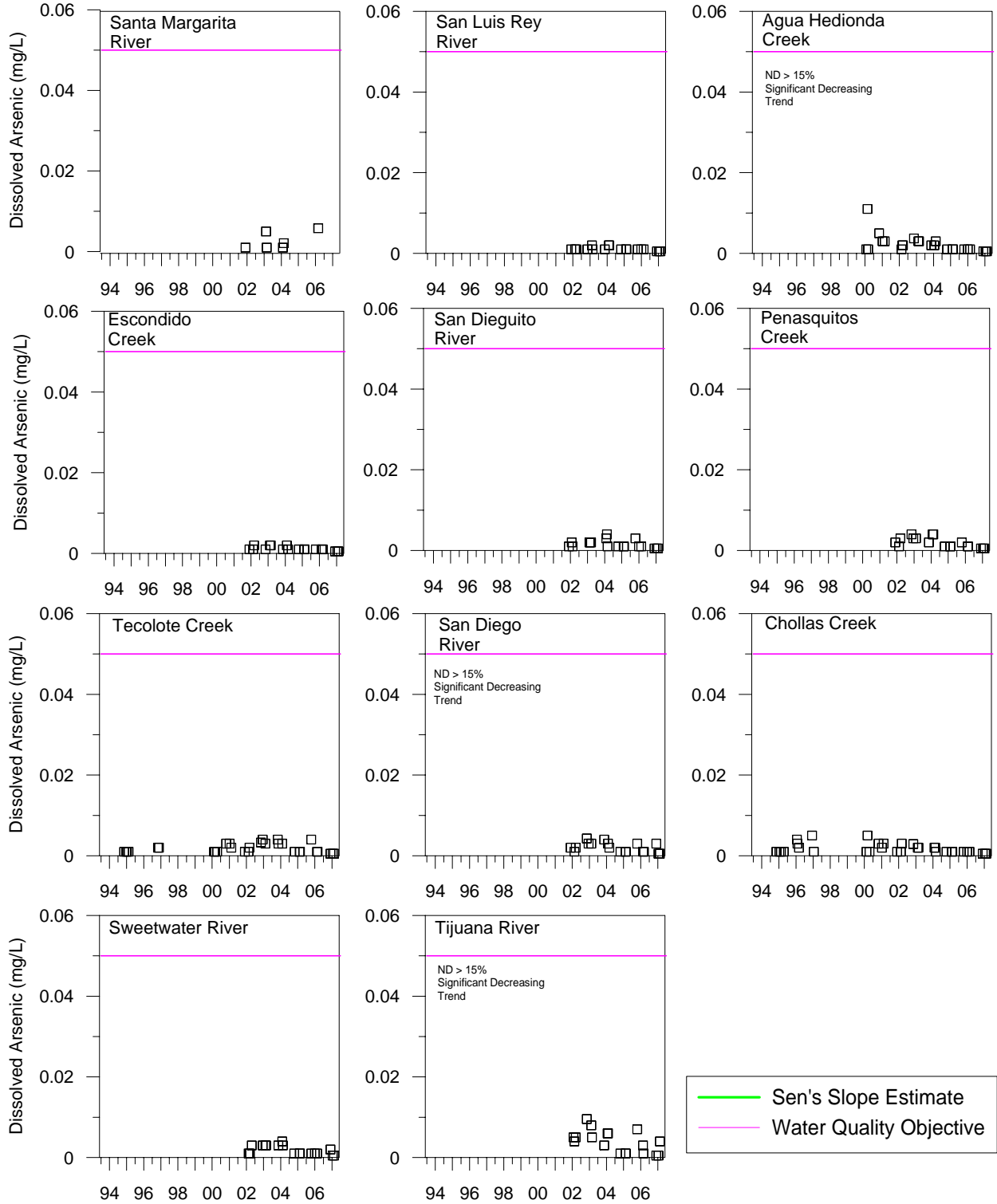


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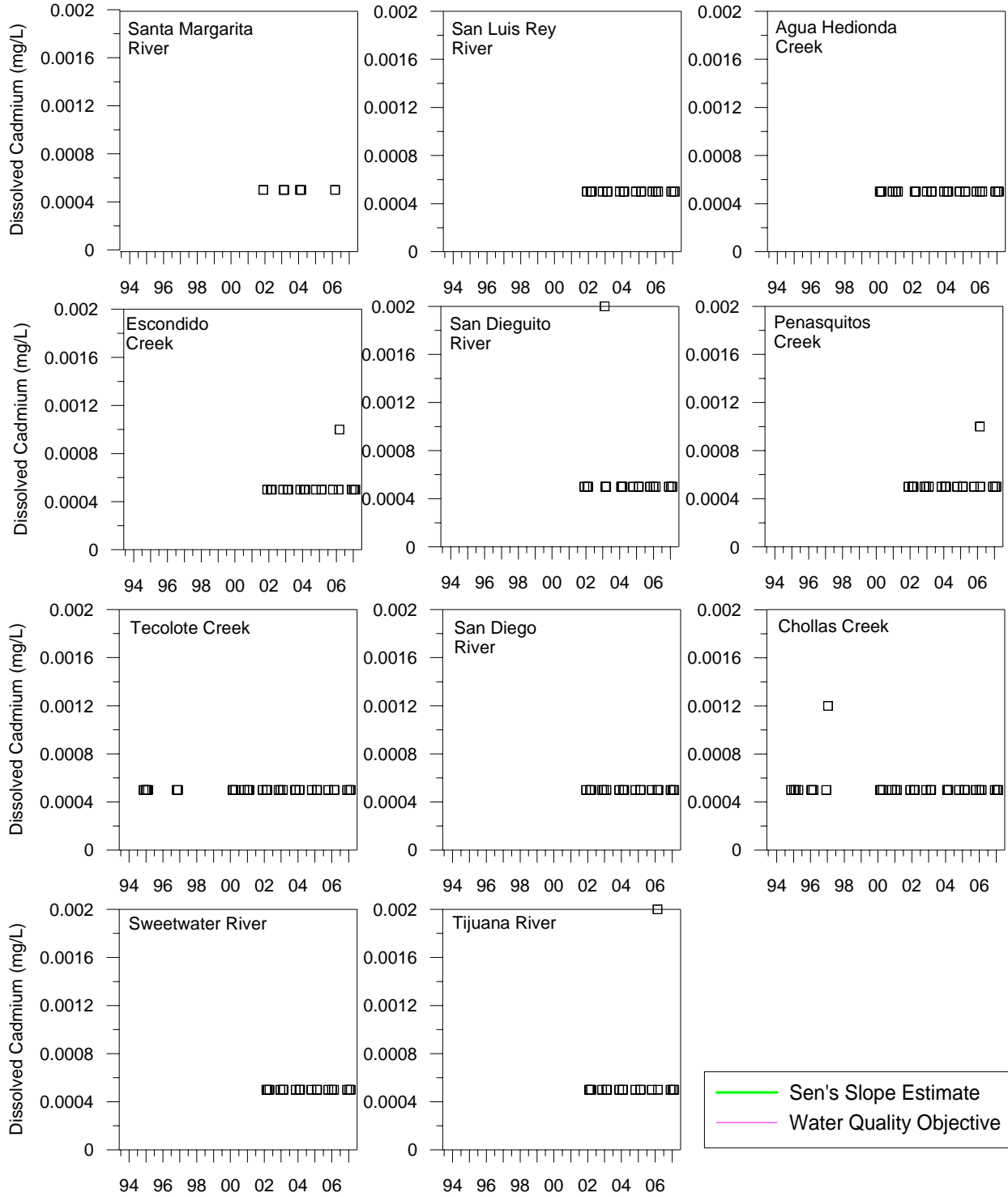
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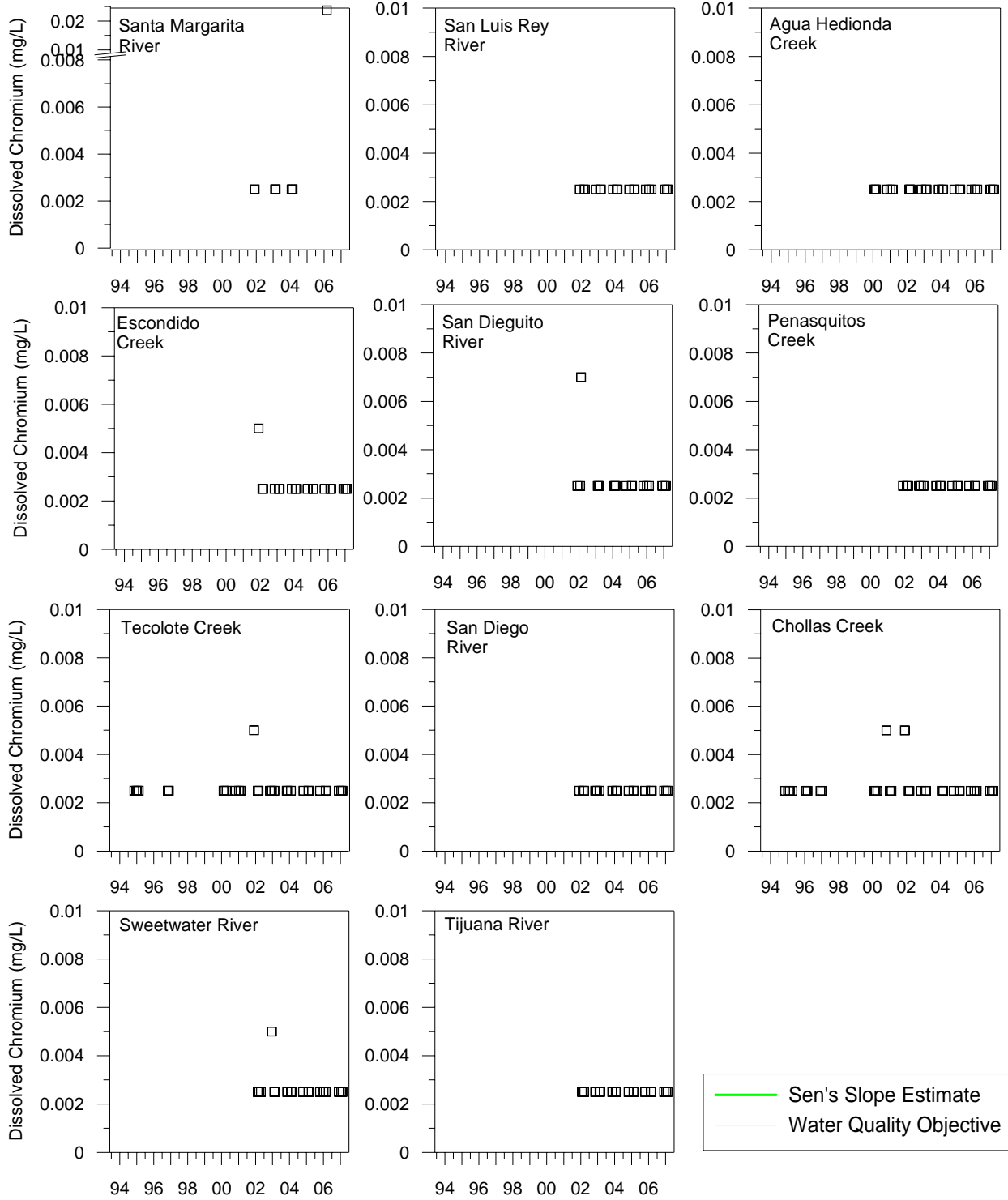
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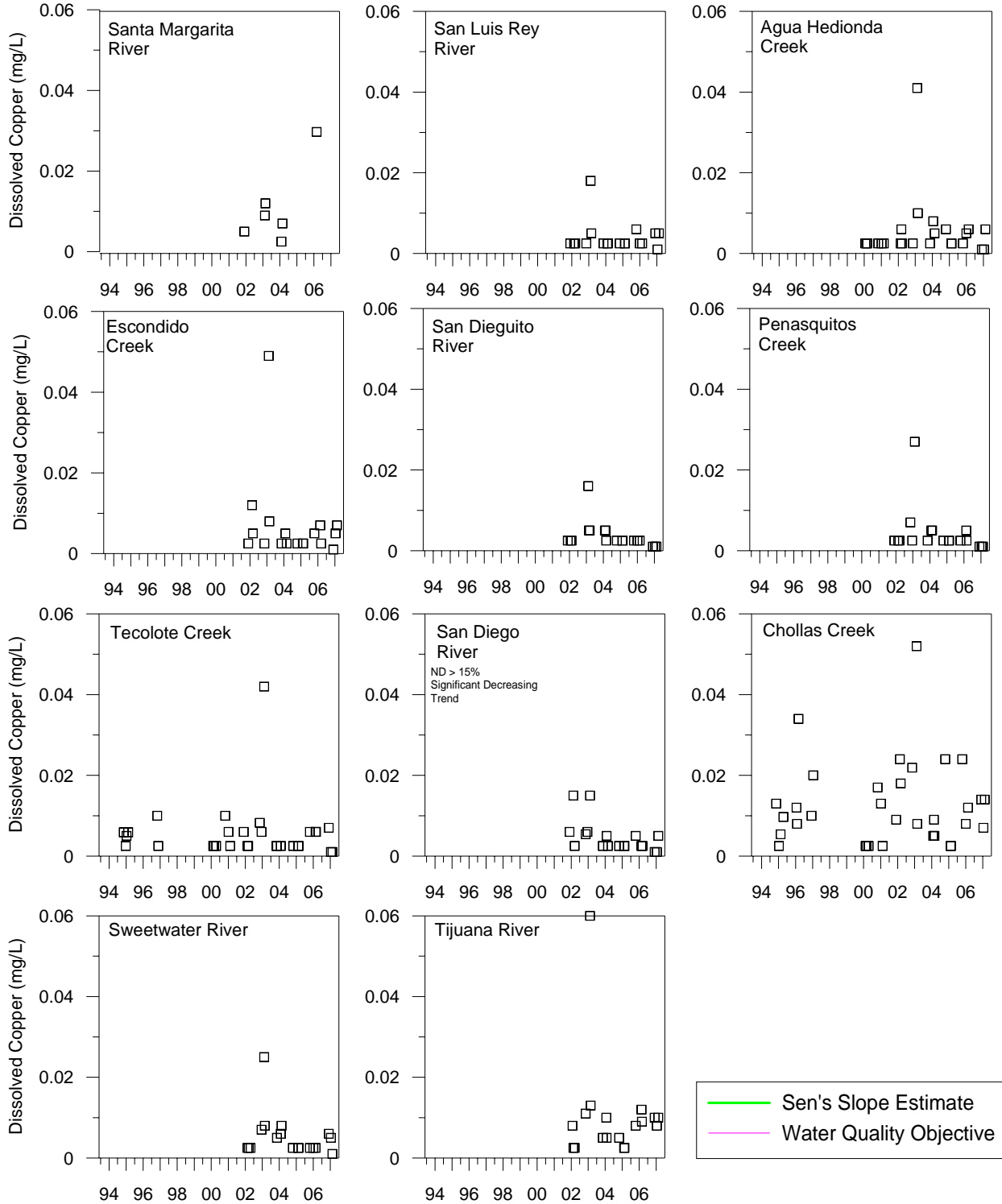
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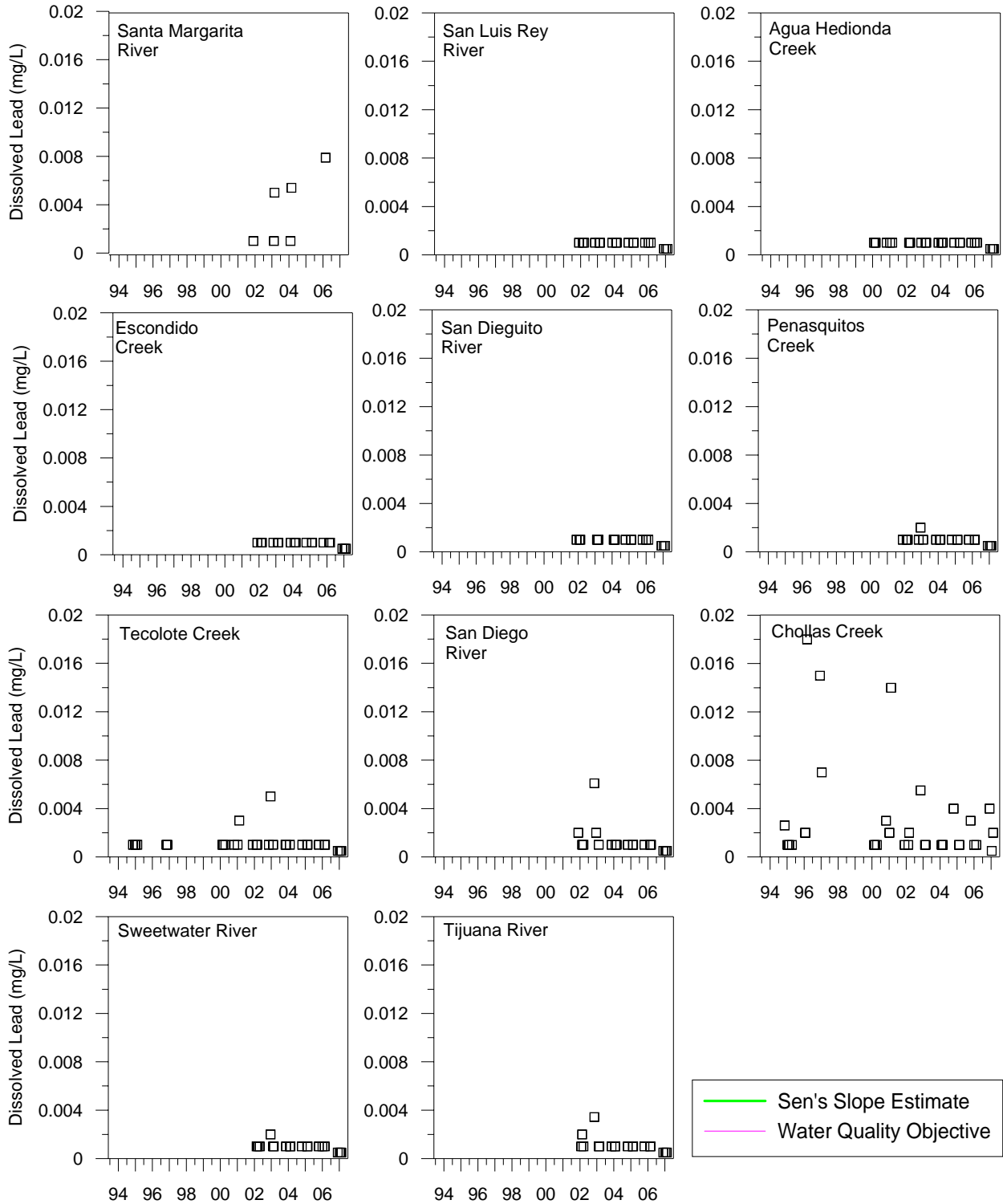
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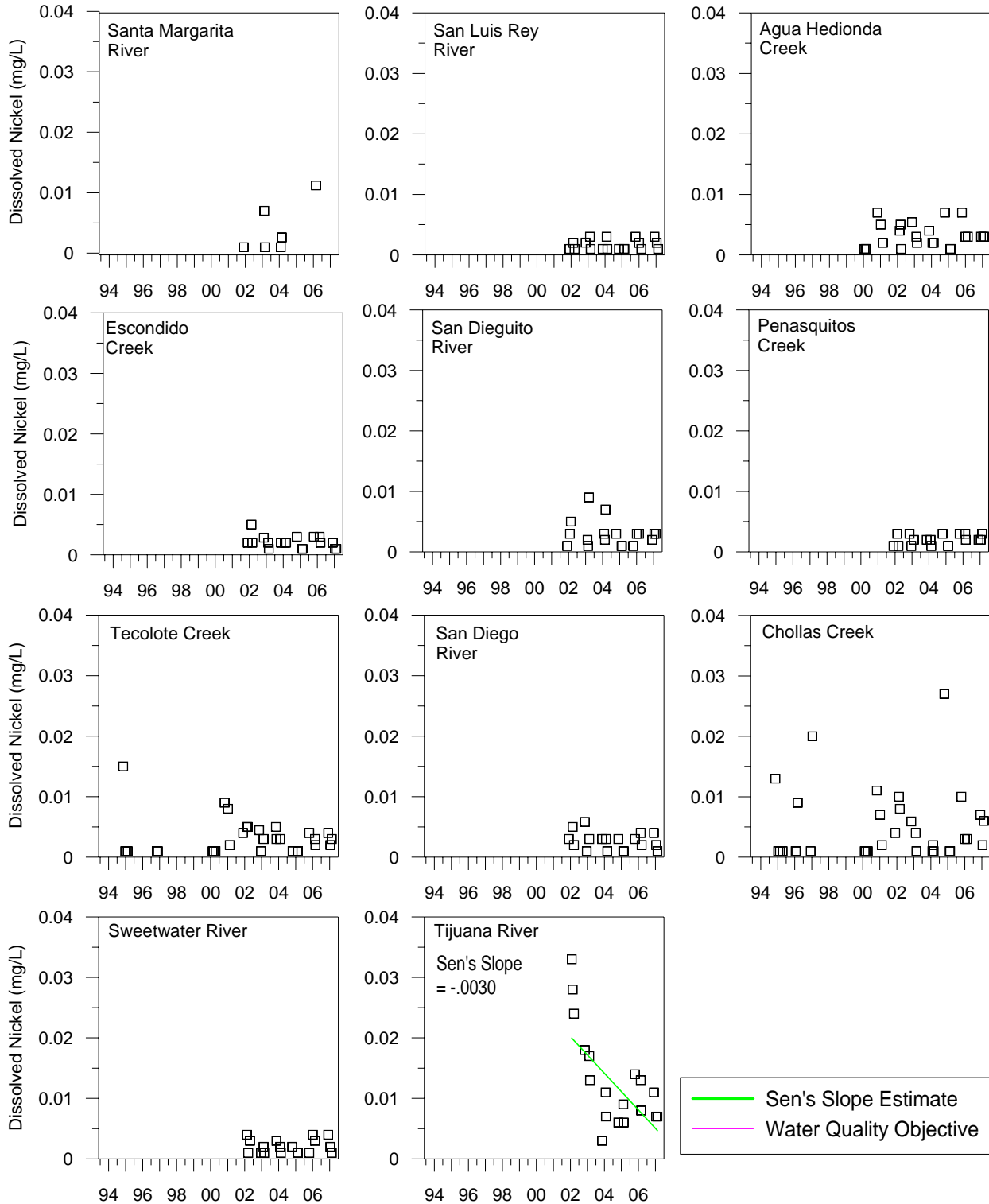
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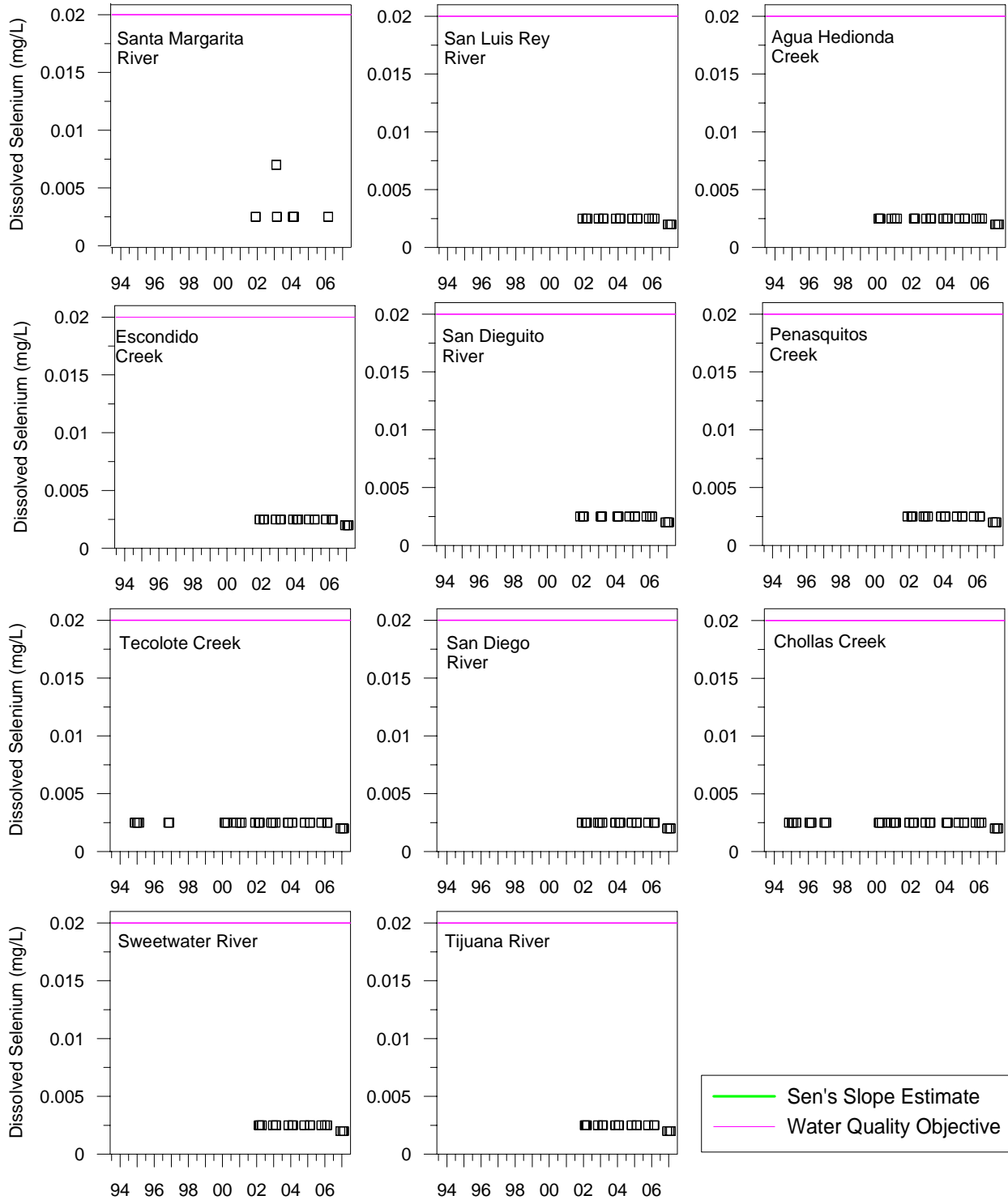
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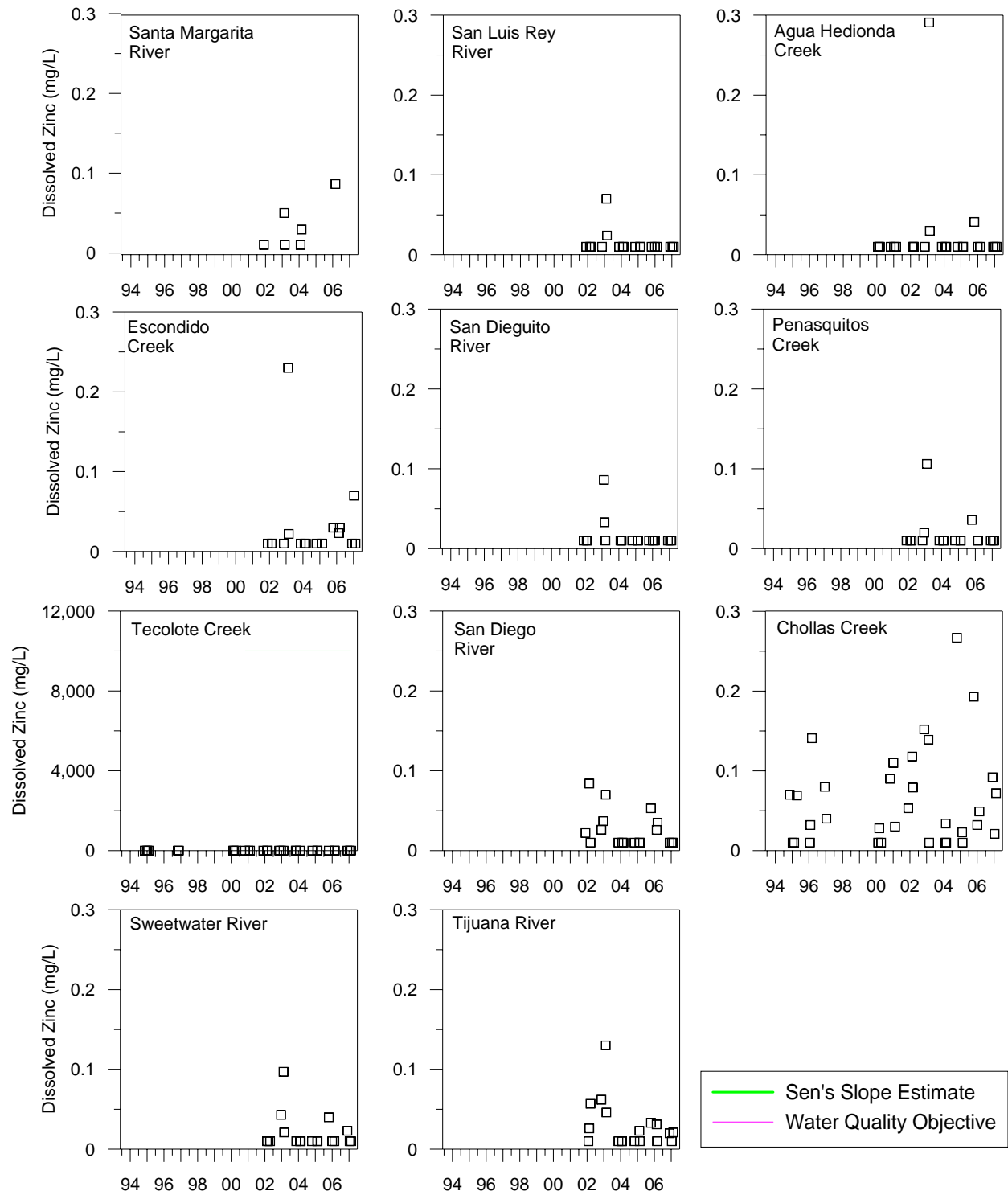
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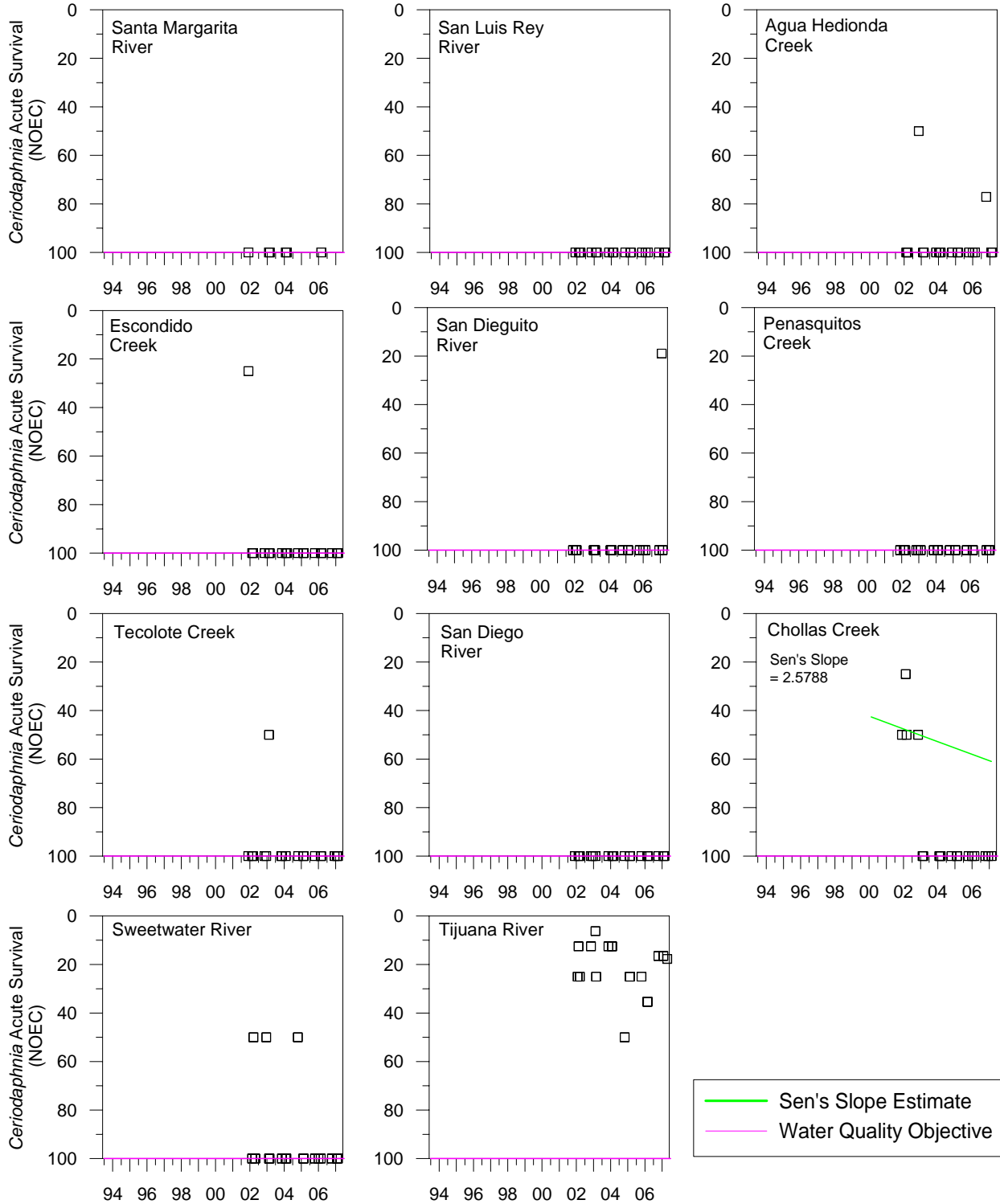


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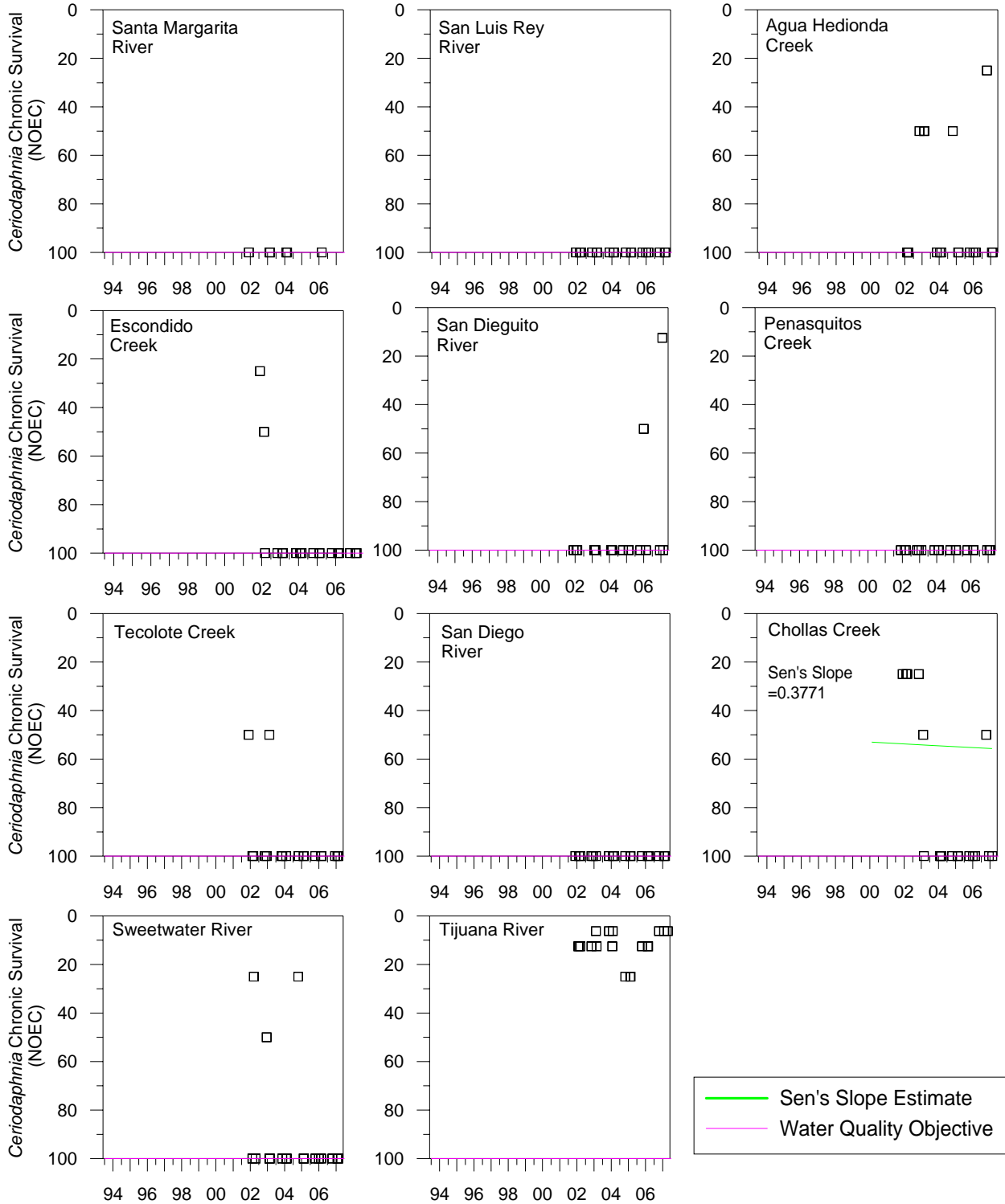


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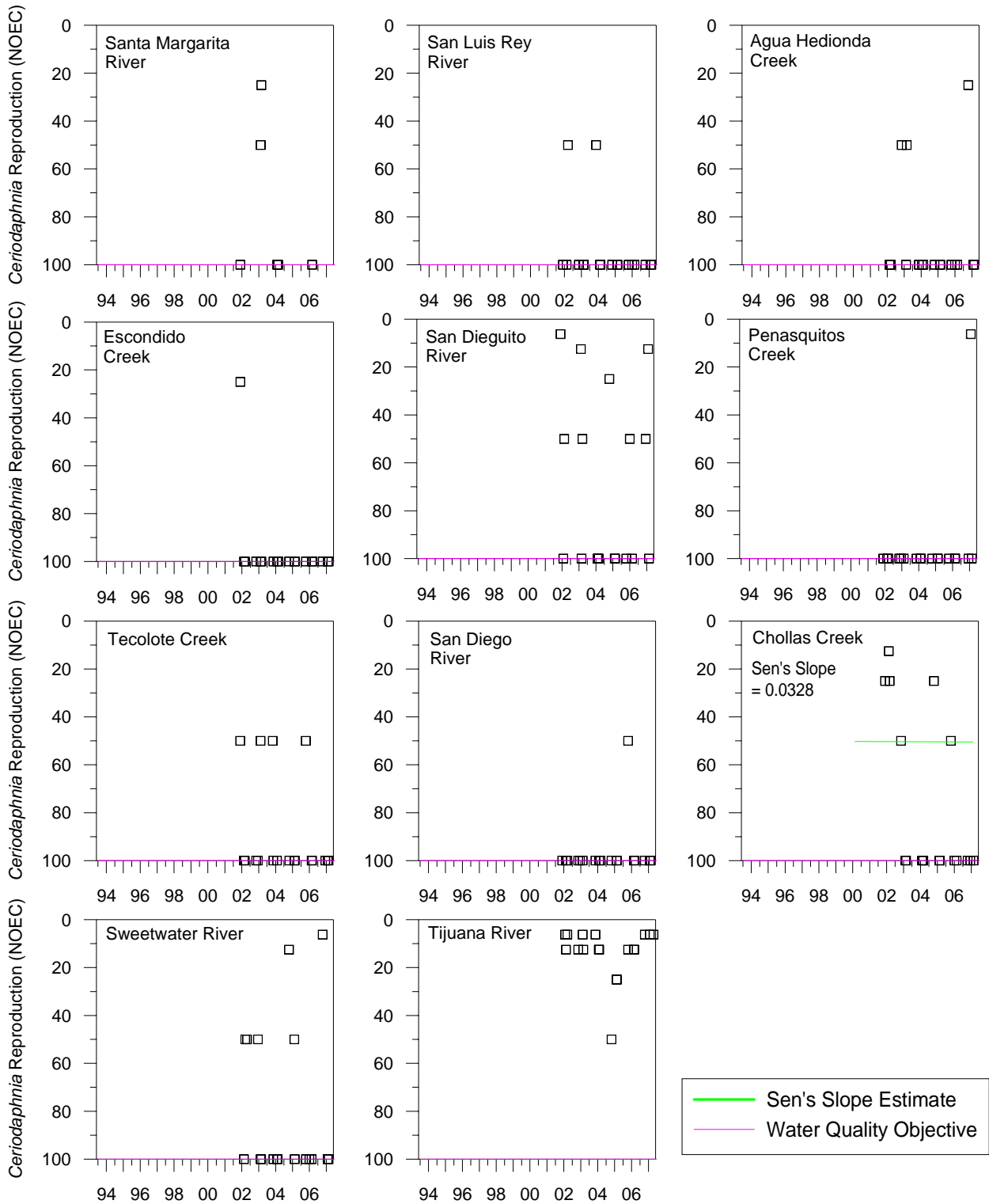
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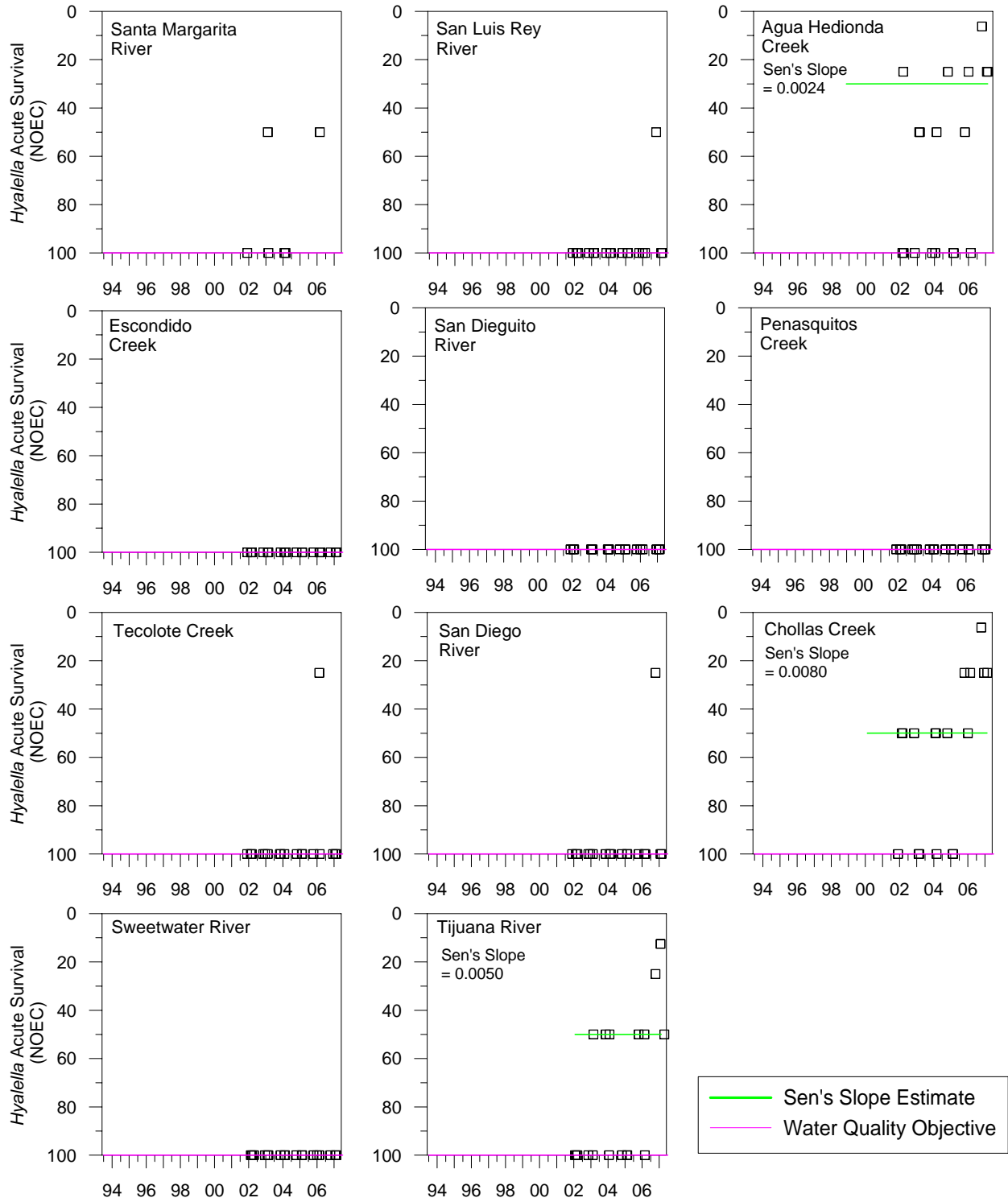
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