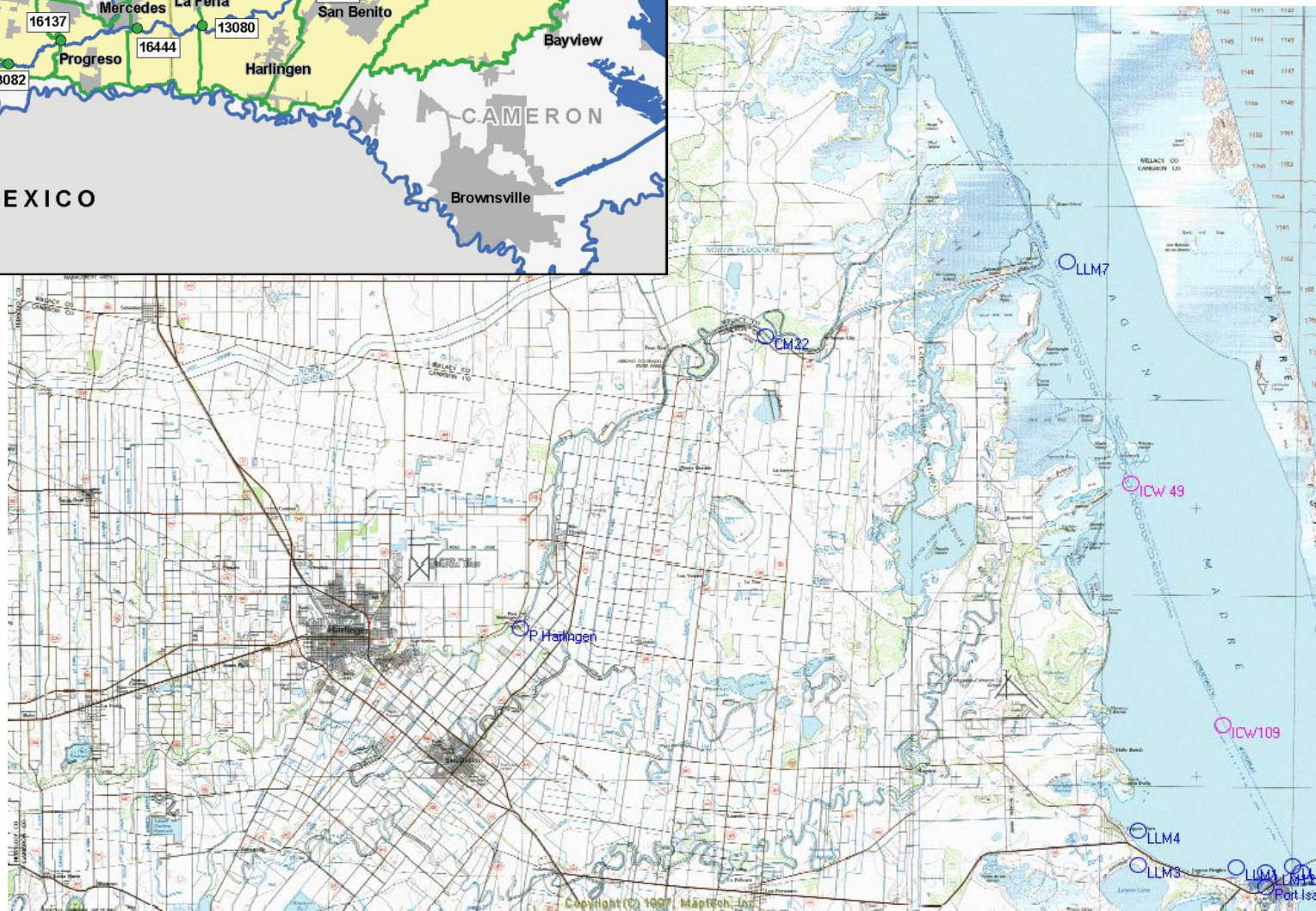
Arroyo Colorado Nutrient-Flow Relationships by Wetness and Season

Wet years- 1991, 1995, 2002, 2003, 2007, 2008

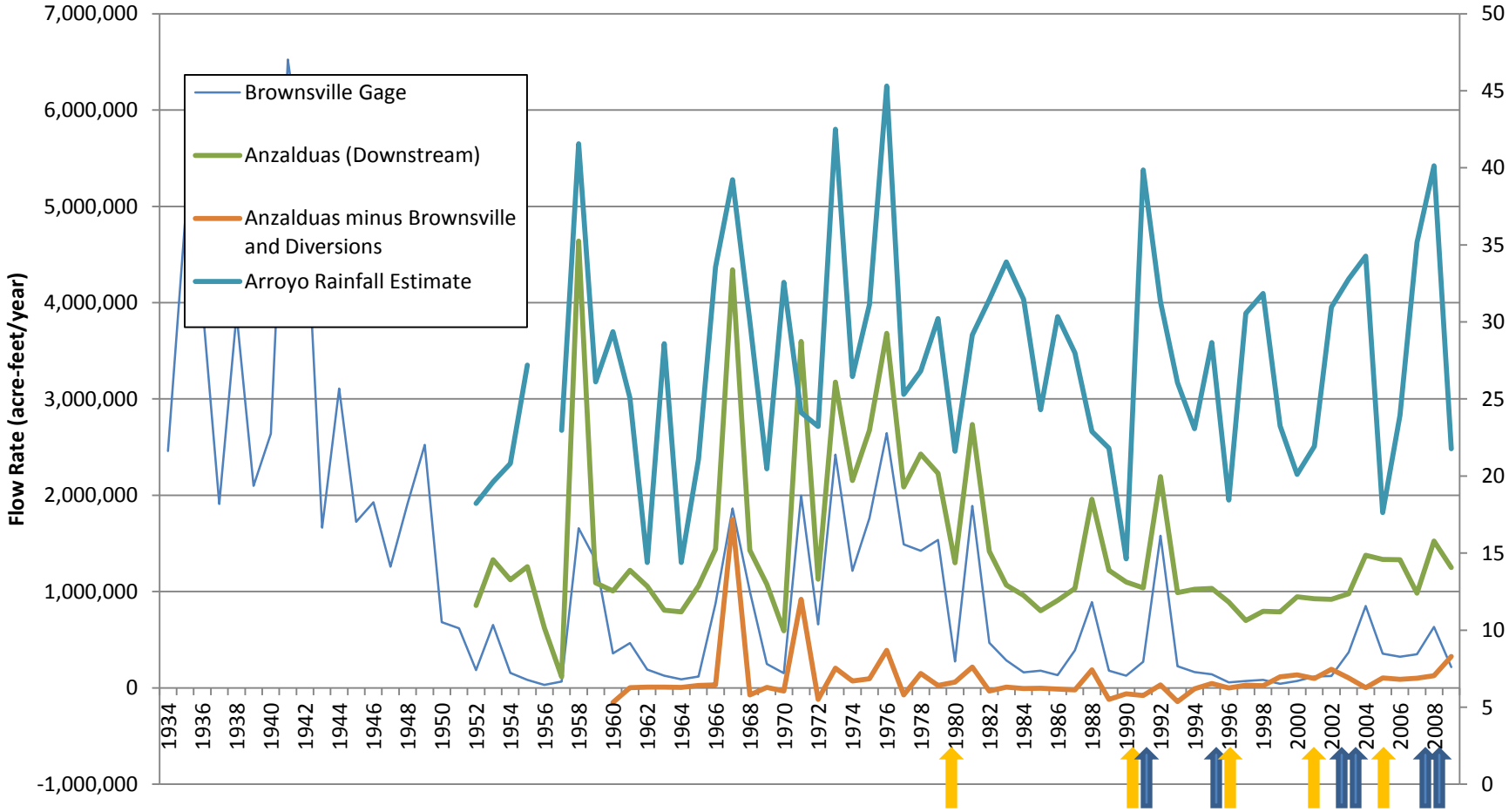
Dry years- 1980, 1990, 1996, 2001, 2005

Normal years- all others since 1977

Raymondville
HIDALGO
WILLACY
15548
15547
Arroyo City
15549
16151
15558
Rio Hondo
Abram-Perezville
McAllen
Harlingen
13074
Mission
San Juan
Pharr
Alamo
Donna
Weslaco
13079
San Benito
16131
Mercedes
La Feria
16137
13084
13080
Bayview
16444
Progreso
Hidalgo
Harlingen
13082
CAMERON
MEXICO
Brownsville


LLM7
CM22
ICW 49
P Harlingen
ICW109
LLM4
LLM3
Port Isa

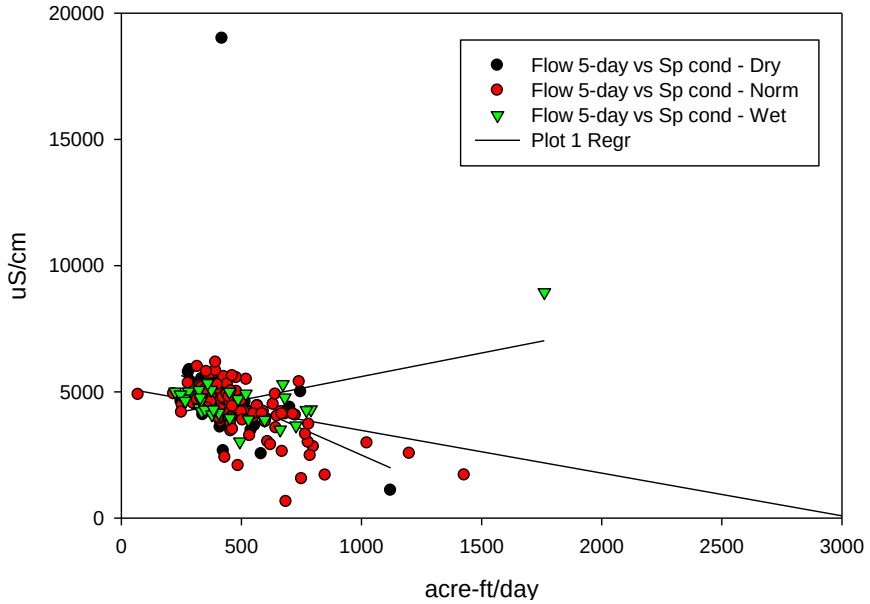
Annual Gage Flow Analysis



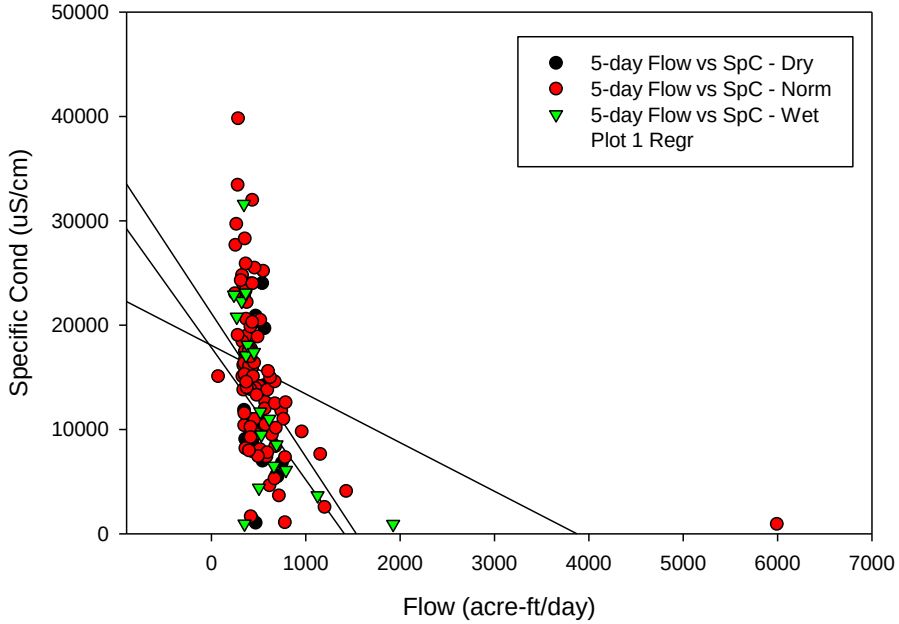
Dry Wet

Courtesy of Jude Benavides

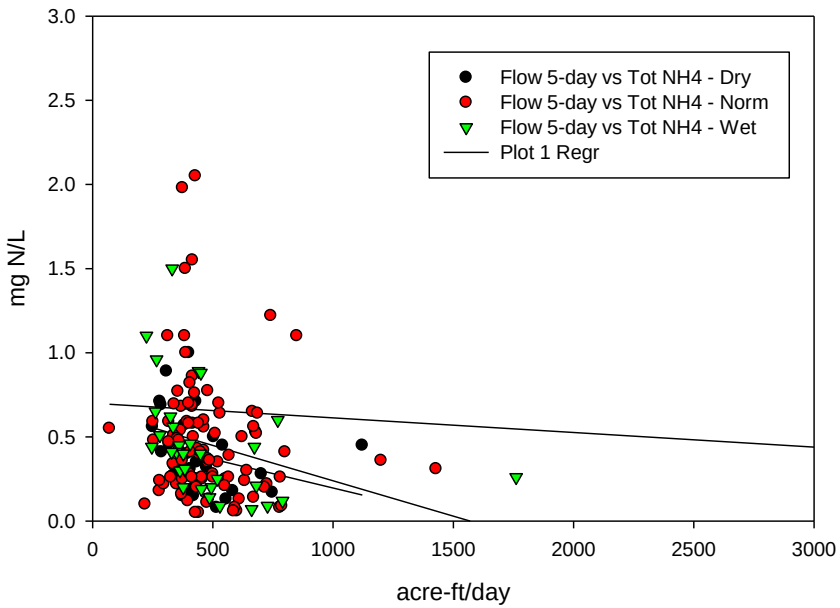
Port Harlingen, Specfic Conductivity



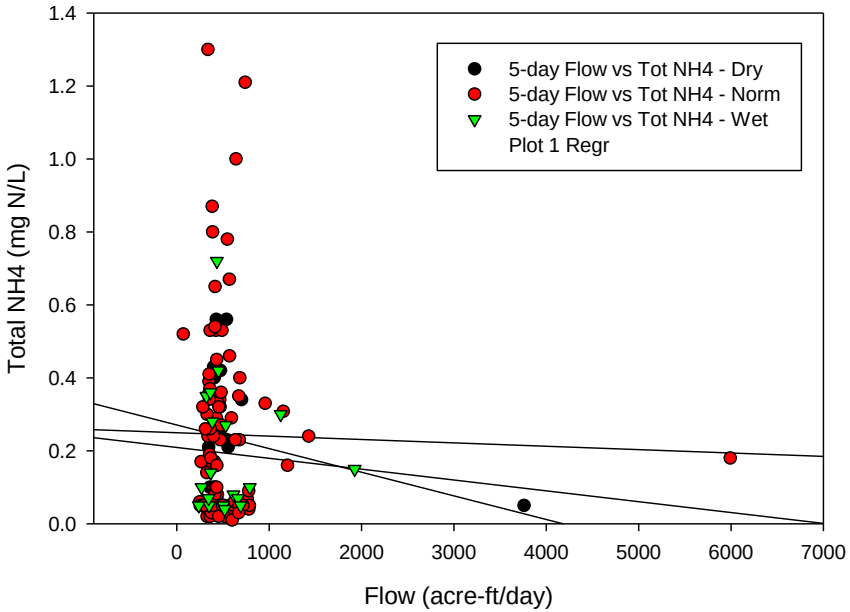
CM 22, 5-day Avg Flow vs Specific Conductivity



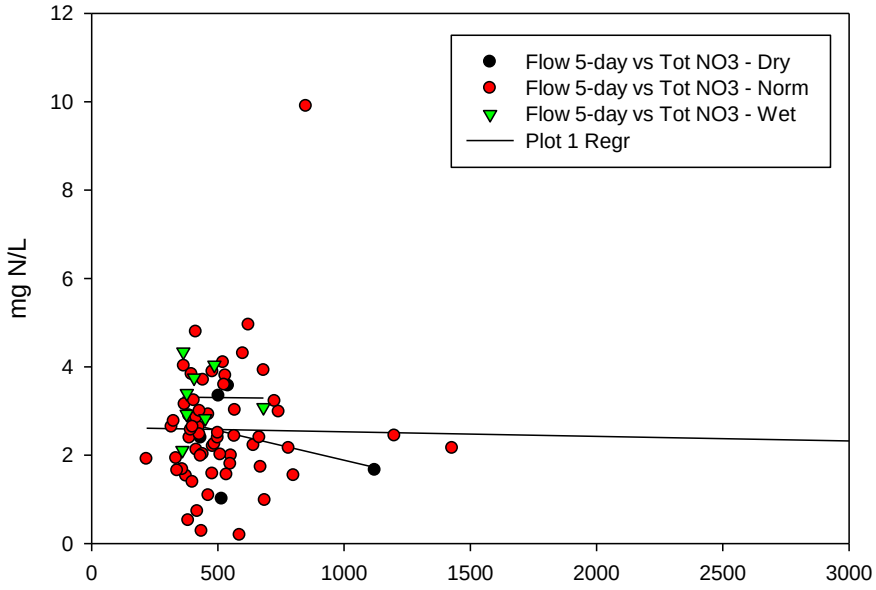
Port Harlingen,Total NH4



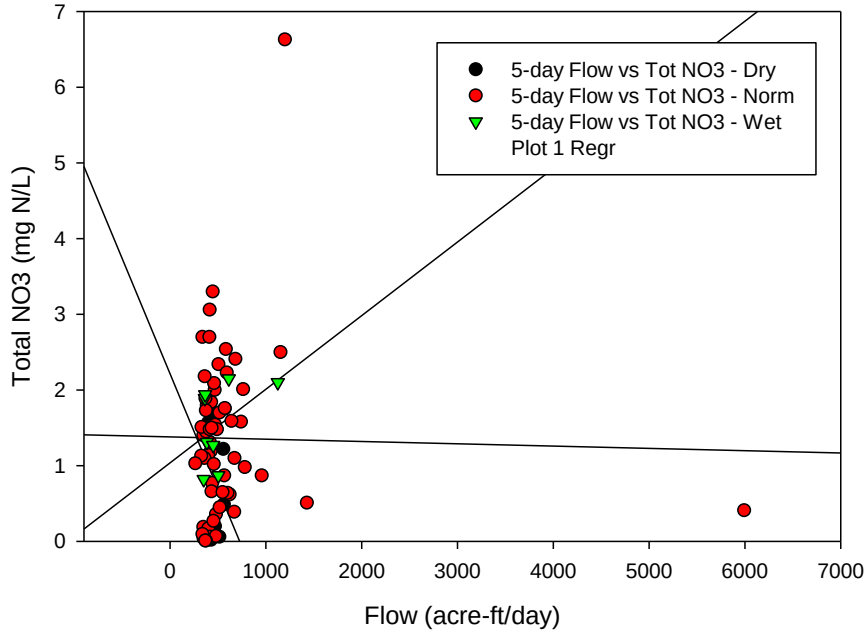
CM 22, 5-day Avg Flow vs Total NH4



Port Harlingen, Total NO3



CM 22, 5-day Avg Flow vs Total NO3



Nutrient Loading Rates to LLM

	Flow 5-day			Avg	SD	Avg	SD	Avg
Port Harl	avg	DIN	TP	DIN Load	DIN Load	P Load	P Load	Load N/P ratio
	acre-ft/day	n	n	kg/day	kg/day	kg/day	kg/day	molar
Winter	427.5	38	11	1379.8	1961.7	496.0	347.2	6.4
Spring	569.4	46	7	1319.0	1578.9	923.9	1093.9	3.3
Summer	446.8	46	10	990.0	1935.3	344.5	77.6	6.6
Fall	548.3	31	8	957.0	1045.0	715.5	736.5	3.1

	Flow 5-day			Avg	SD	Avg	SD	Avg
CM22	avg	DIN	TP	DIN Load	DIN Load	P Load	P Load	Load N/P ratio
	acre-ft/day	n	n	kg/day	kg/day	kg/day	kg/day	molar
Winter	433.8	17	7	1202.6	516.5	219.3	47.6	12.5
Spring	564.7	21	7	1820.2	2063.8	259.2	40.6	16.1
Summer	641.8	23	12	665.4	1057.8	342.3	654.2	4.4
Fall	599.6	16	8	803.9	464.2	318.0	262.4	5.8