

National Biological Assessment
and Criteria Workshop

Advancing State and Tribal Programs



Coeur d'Alene, Idaho
31 March – 4 April, 2003

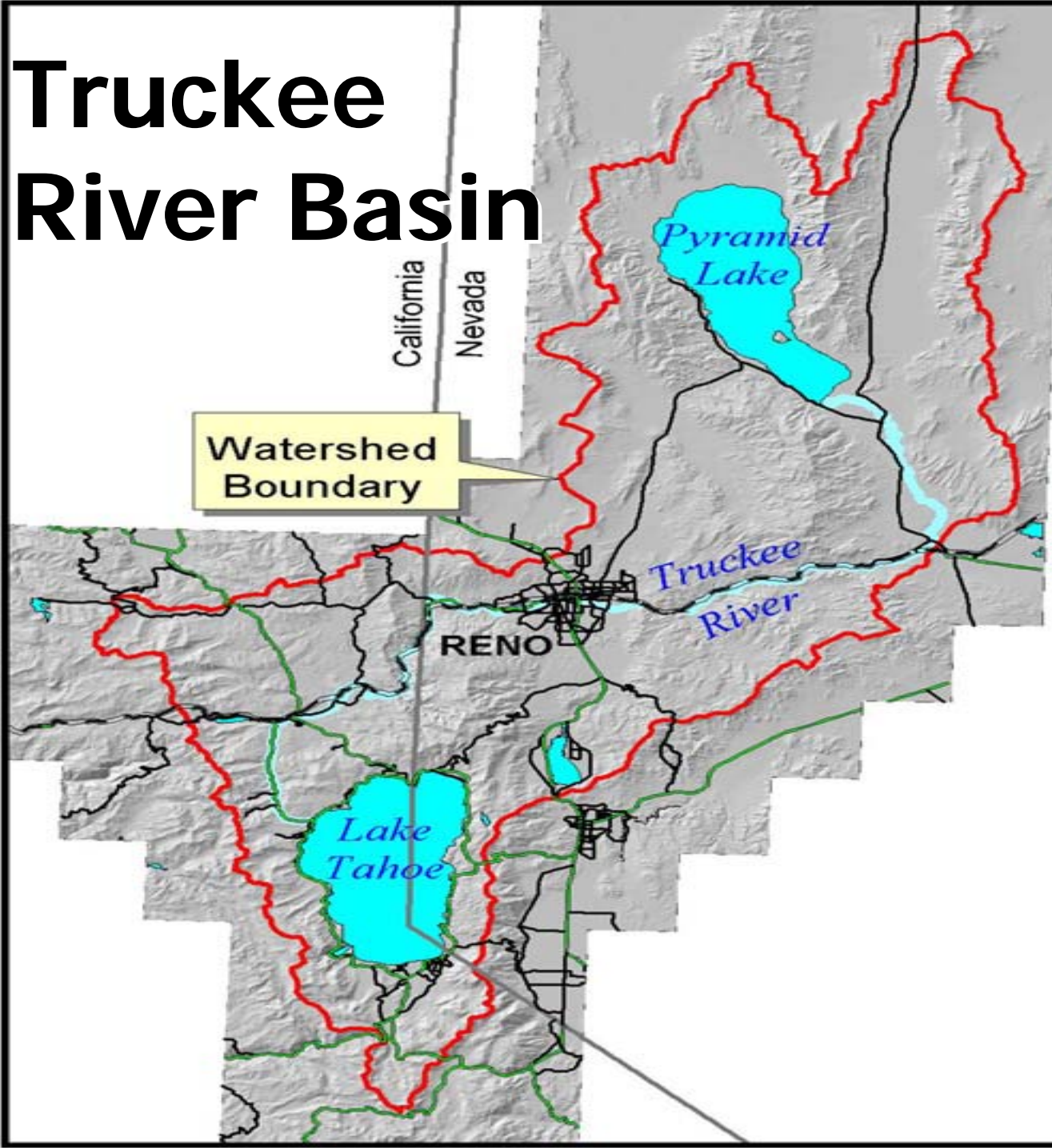
TRIBE 101

*Pyramid Lake
Paiute Tribe:
Bioassessment Program
Technical Issues*

Presented by

Daniel Mosley, Pyramid Lake Paiute Tribe

Truckee River Basin



Pyramid Lake



Pyramid Lake



5/7/1999

Truckee River



2001 10 9

Stone Mother



5/7/1999

CUI – UI (Kwee-wee)





Lahontan Cutthroat Trout



27 pounder

Biocriteria

■ WQCP: Narrative Standards

– Species Composition

Communities and populations of aquatic biota, including invertebrate, vertebrate and plant species, shall not be degraded as a result of point source or nonpoint source discharge. This applies to transient as well as cumulative conditions. Short-term variances from these objectives may be allowed for actions that are being taken to fulfill statutory requirements under Tribal law or the federal Endangered Species Act.

Reference Sites



6/22/1999

Reference Condition Process



- 1981 LTR comprehensive survey
- 1989 Began using EPA RBP protocols
- 1998 Began attending workshops/ trainings,
and developing working relationships
with other agencies
- 2002 Began evaluating LTR BMI data

Biotic Index Values

0.0 – 3.5	Excellent (Pristine water)
3.5 – 4.5	Very Good Water Quality
4.5 – 5.5	Good WQ (some pollution)
5.5 – 7.0	Fair (Moderately polluted)
7.0 – 8.0	Poor (seriously polluted)
8.5 – 10.0	Very Poor (extremely polluted waters)

Identifying Stressors:

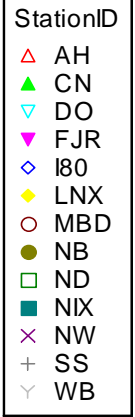
- **Point source:** Waste Water Treatment Plant
- **Nonpoint sources:** North-Tahoe Drain, Steamboat Creek, urban storm water runoff, and Irrigation return flows back into the river.
- **Exotic species:** Non-native salmonids, like Rainbow trout, compete and hybridize with native Lahontan Cutthroat trout (LCT). Brown and Rainbow trout are more aggressive, and effectively compete with LCT. Tall Whitetop, purpleloose strife, and the aquatic Eurasian watermilfoil are competing with native plants.

Year	Sampling Method	Counting Method
1981	Surber	Total
1982-1988	NO DATA	
1989	Surber	Total
1990	Surber	Total
1991	NO DATA	
1992	Kicknet	Estimated
1993	Kicknet	Estimated
1994	Surber	Presence/Absence
1995	Surber	Presence/Absence
1996	Surber	Total
1997	NO DATA	
1998	NO DATA	
1999	Surber	Total
2000	Surber	Total

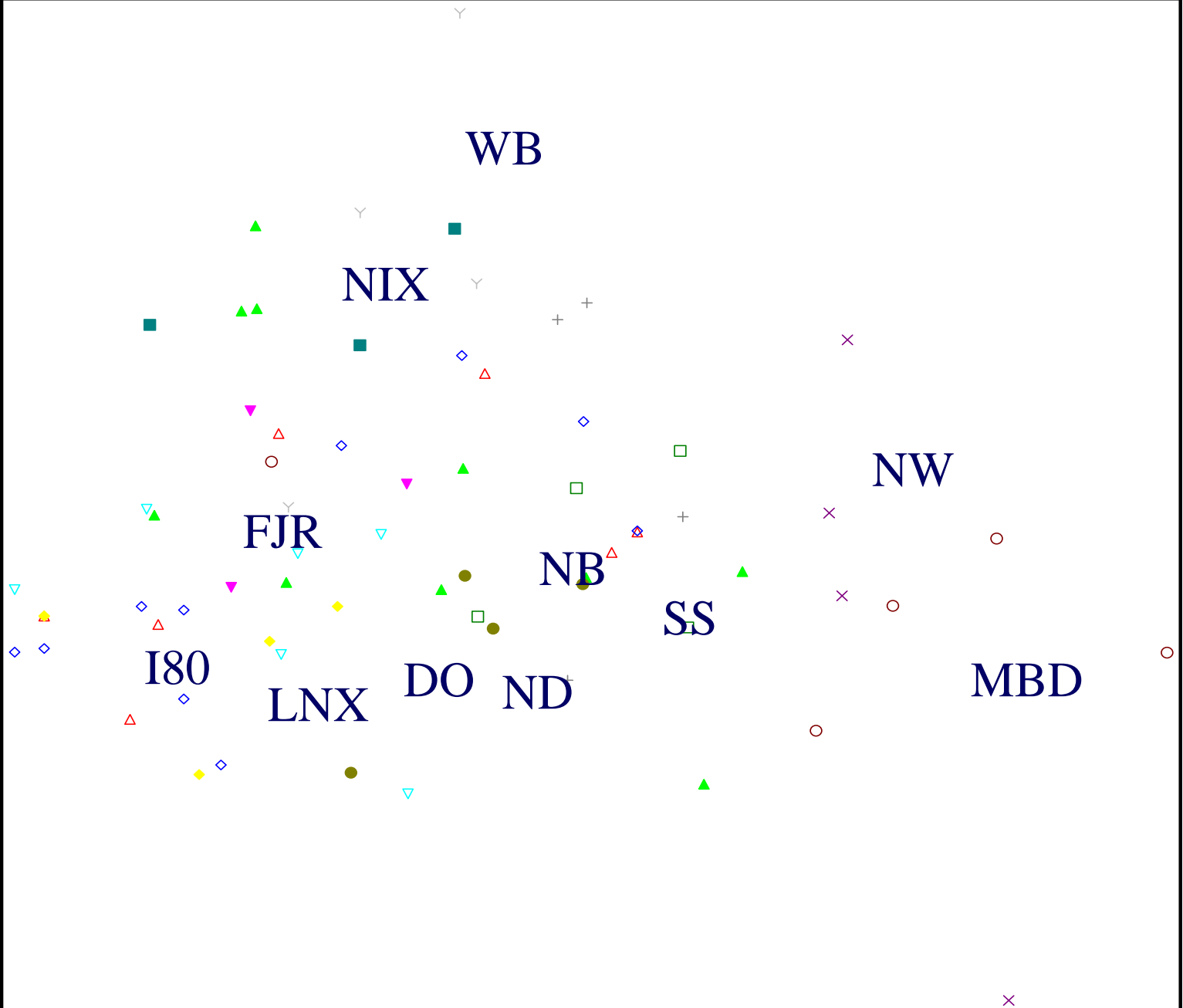
NMDS

Axis 3

Axis 2



Scattered
AH
CN



The PLPT Biological Index consists of 4 core metrics:

Taxa Richness

Percent EPT Individuals

Percent Tolerant Individuals

Percent Dominant Taxon

Approximate Upstream Distance (miles) from MBD	Station ID	Year							Average
		1981	1989	1990	1996	1999	2000	2001*	
22.5	I80	63.6			39.3	43.6	47.0	51.2	48.9
20	WB		18.7	35.8	46.5				33.7
19	AH				47.0	51.2			49.1
17.5	FJR	52.8	25.1				59.4	51.2	47.1
14.5	SS				47.3				47.3
11.5	NW		38.9		80.8				59.9
10.5	DO	60.5	39.0	59.3		52.7	45.9	*	51.5
8	CN	34.2		50.5	51.7	45.5	47.9	*	45.9
6.5	ND				40.1				40.1
5	LNx	73.8		35.3		55.1	54.1	*	54.6
3.5	NB		28.3		63.3				45.8
2	NIX	71.0		45.4		57.6	50.1	*	56.1
0	MBD	58.2	16.3	44.7	45.5	25.6			38.1
Average		59.2	27.7	45.2	51.3	47.3	50.7	51.2	47.5

*Only 2 of 6 sites for 2001 had been processed and ready for this analysis.

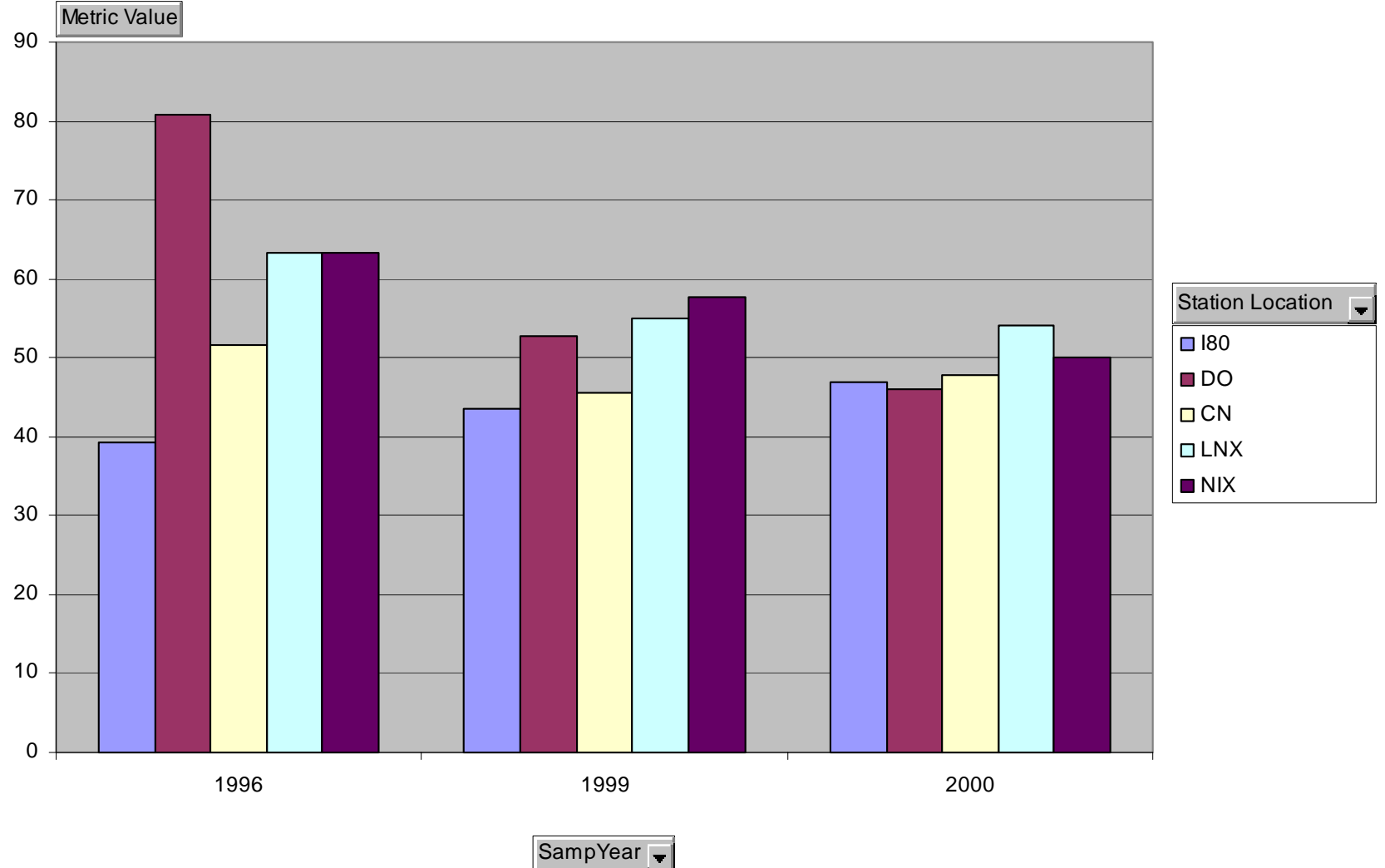
BOLD sites are sites that will be part of the future sampling scheme.

PLPT Biological Index Score and Narrative Rating

100-80	Excellent	69-60	Good	49-40	Poor
79-70	Very Good	59-50	Fair	39-0	Very Poor

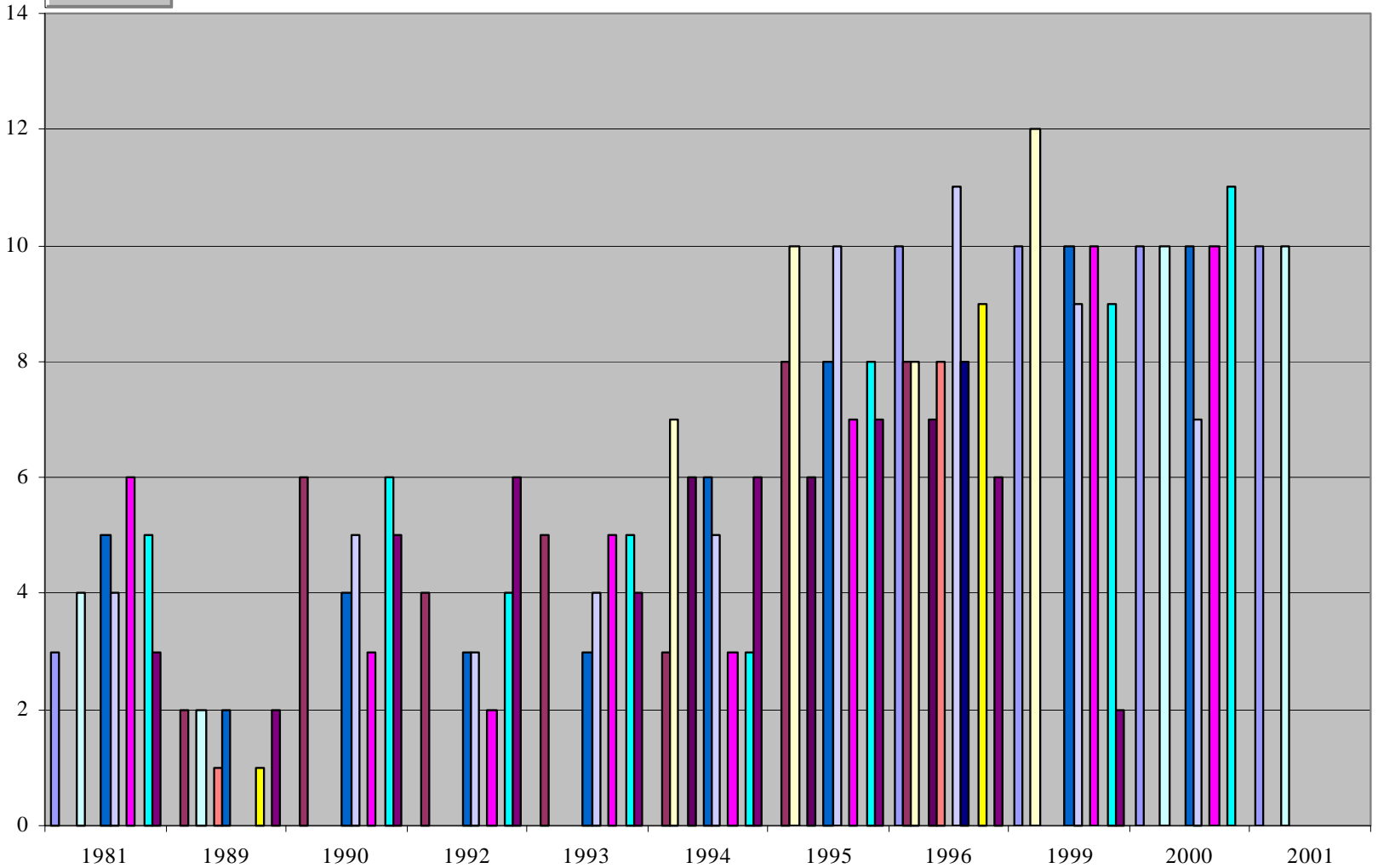
Spatial and Temporal Trends

MetricName PLPT Bio Index



MetricName EPTTax

Metric Value



StationID

- I80
- WB
- AH
- FJR
- SS
- NW
- DO
- CN
- ND
- LNX
- NB
- NIX
- MBD

Samp Year

Taxa Frequency

Lower Truckee River (Dry/Wet YRS.)

