Nonnative fish control and endangered fish monitoring in the lower/middle San Juan River

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San Juan River Recovery Implementation Program

Annual Meeting Meeting

May 13, 2015

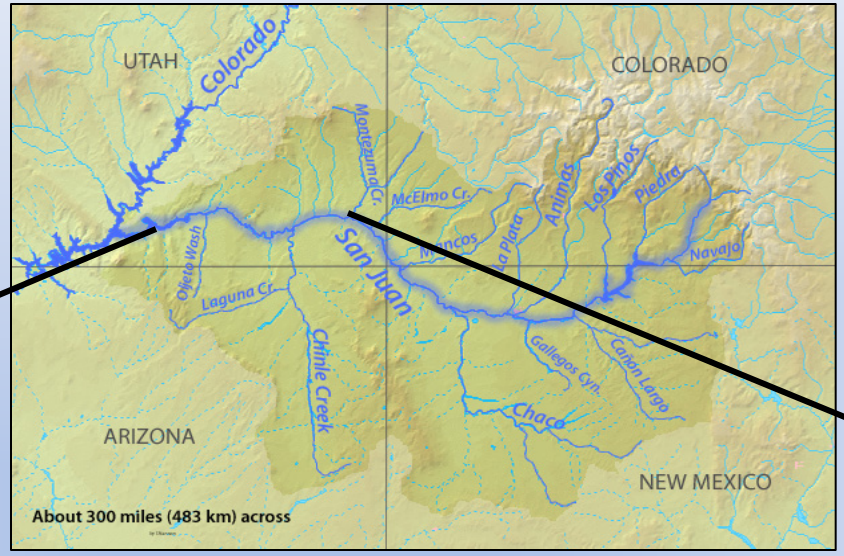
How this project relates to the Long Range Plan:

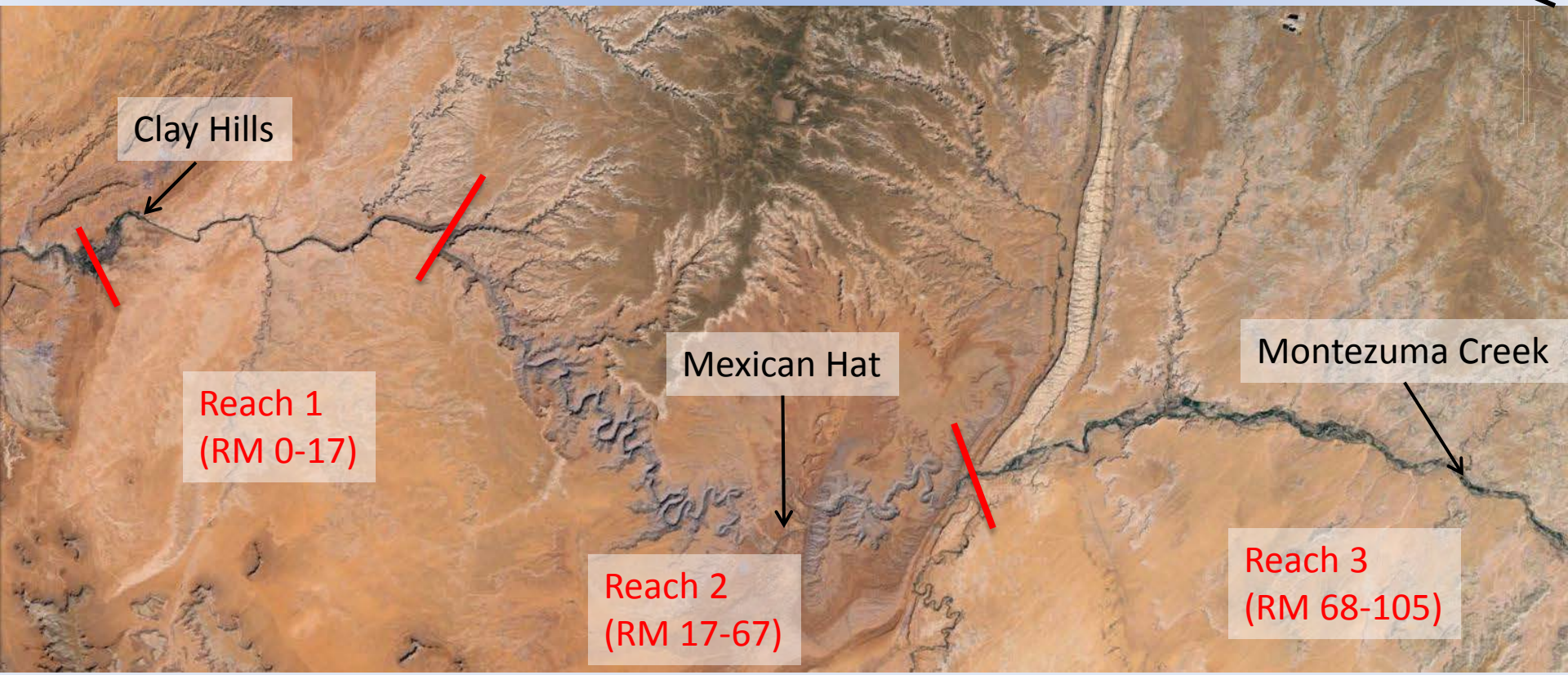
Element 3: *Management of Nonnative Aquatic Species*
Task 3.1.1.1: *Mechanically remove nonnative fish to achieve objectives.*

Element 4: *Monitoring and Evaluation of Fish and Habitat in Support of Recovery Actions*
Task 4.1.3.1: *Collect data on the endangered fish and native fish community during nonnative fish control activities to aid in tracking the presence, status and trends of endangered fish populations.*

Objectives

- Mechanically remove all large-bodied nonnative species
- Population estimates of channel catfish
- Monitor distribution and abundance of endangered fish
- Population estimates of Colorado pikeminnow (>150 mm)


UTAH
COLORADO
ARIZONA
NEW MEXICO
Colorado
San Juan
Montezuma Cr.
McElmo Cr.
Mancos
La Plata
Animas
Los Pinos
Piedra
Navajo
Chinle Creek
Laguna Cr.
Gallegos Cyn.
Chaco
Carson Largo
About 300 miles (483 km) across


Clay Hills
Reach 1
(RM 0-17)
Mexican Hat
Reach 2
(RM 17-67)
Montezuma Creek
Reach 3
(RM 68-105)

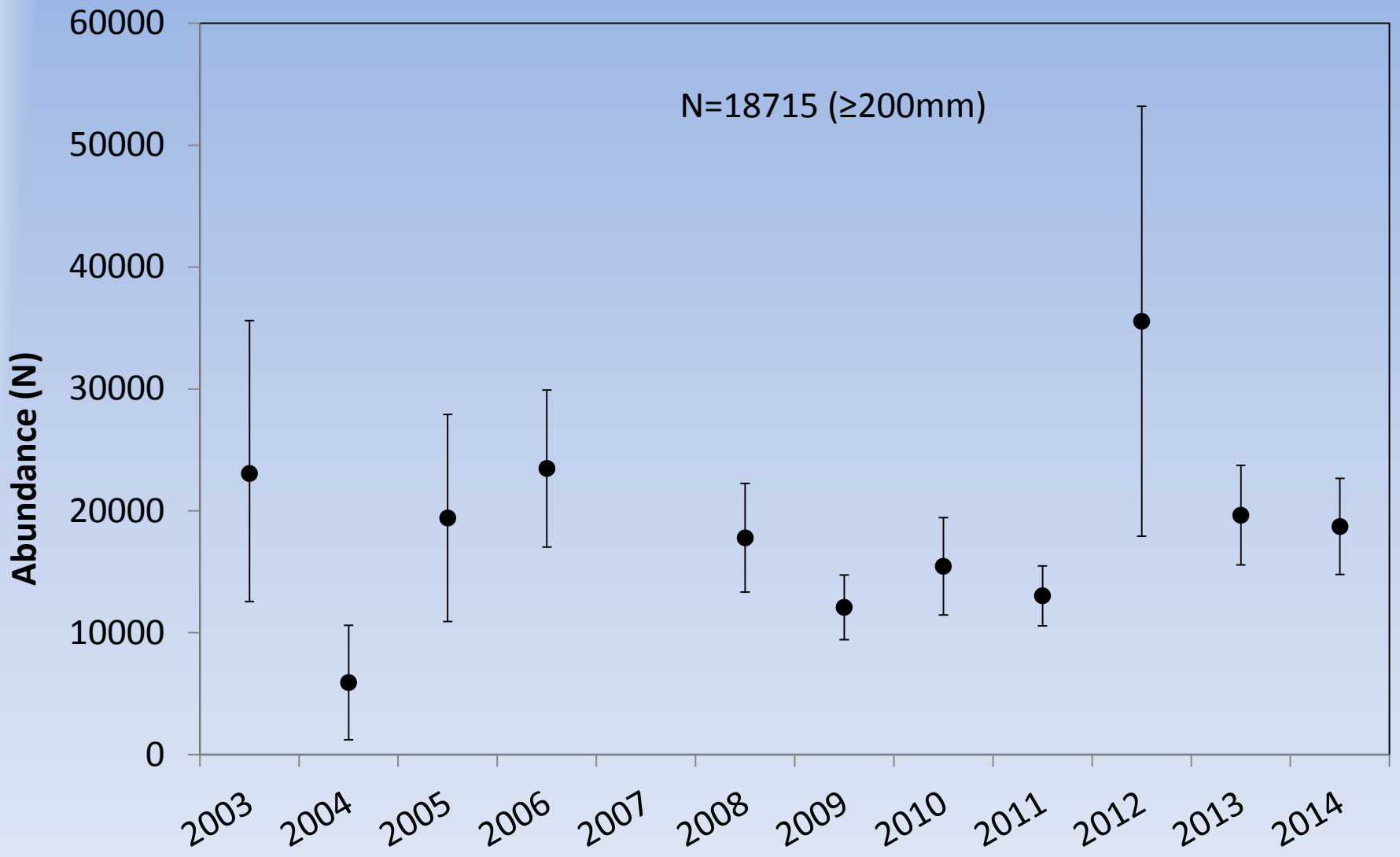
Methods

- Raft mounted electrofishing
- 9 passes in 2014
  - 1 marking pass/8 removals
  - Early March to Early November
  - Trips 1-4 and 9 (Lower Canyon)
  - Trips 5-8 (Middle Section)

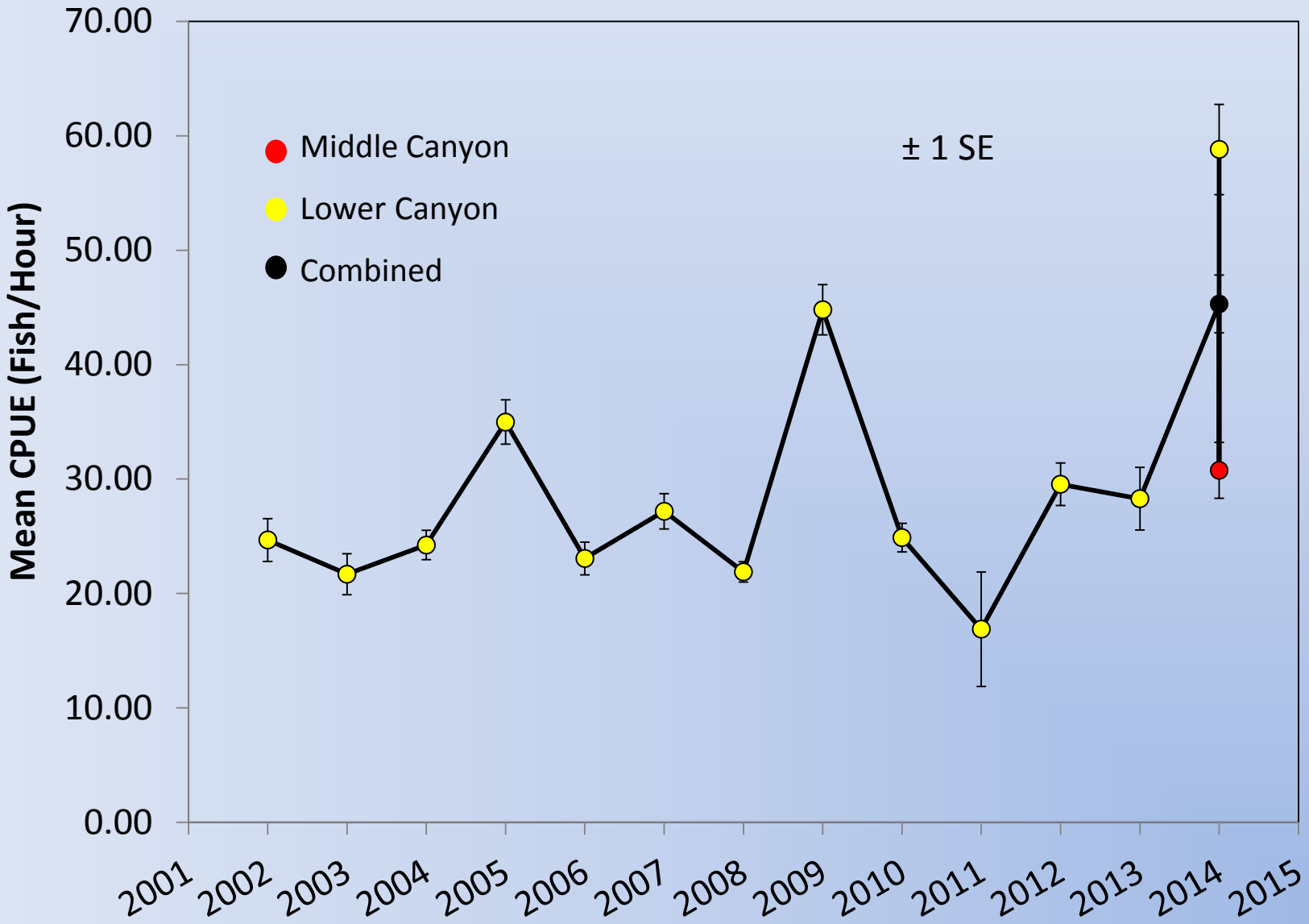
Catch Composition 2014

	3/3-3/7	3/14-3/18	3/25-3/29	4/15-4/18	7/2-7/6	7/26-7/30	8/6-8/10	8/18-8/22	11/3-11/7	Grand Total
Black Bullhead	7	5	4	1	5	4	6	8	1	**41**
Bluehead Sucker										**0**
Brown Trout				1						**1**
Channel Catfish	752	2239	2365	875	1665	712	635	867	1755	**11865**
Common Carp					2	2	1	2	5	**12**
Colorado Pikeminnow	28	41	53	26	90	57	98	58	5	**456**
Flannelmouth Sucker	1	1		1	3	4	3	13		**26**
Largemouth Bass					1					**1**
Rainbow Trout					1					**1**
Razorback Sucker	12	4	16	6	2	6	8	7	35	**96**
Smallmouth Bass						1			1	**2**
White Sucker						1	1			**2**
Yellow Bullhead						1				**1**
Grand Total	**800**	**2290**	**2438**	**910**	**1769**	**788**	**752**	**955**	**1802**	**12504**

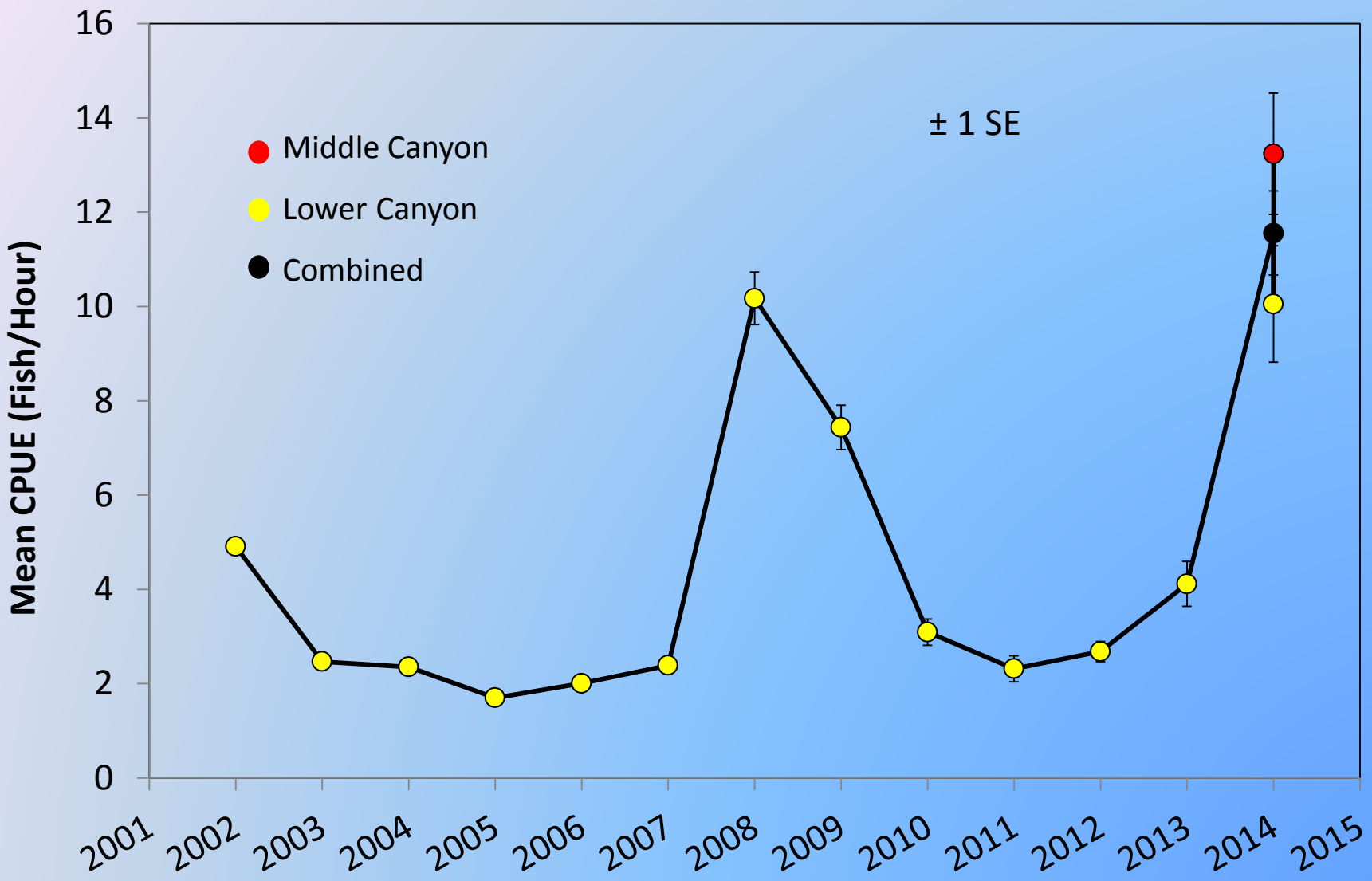
Channel Catfish Population Estimate



Channel Catfish Catch Rates



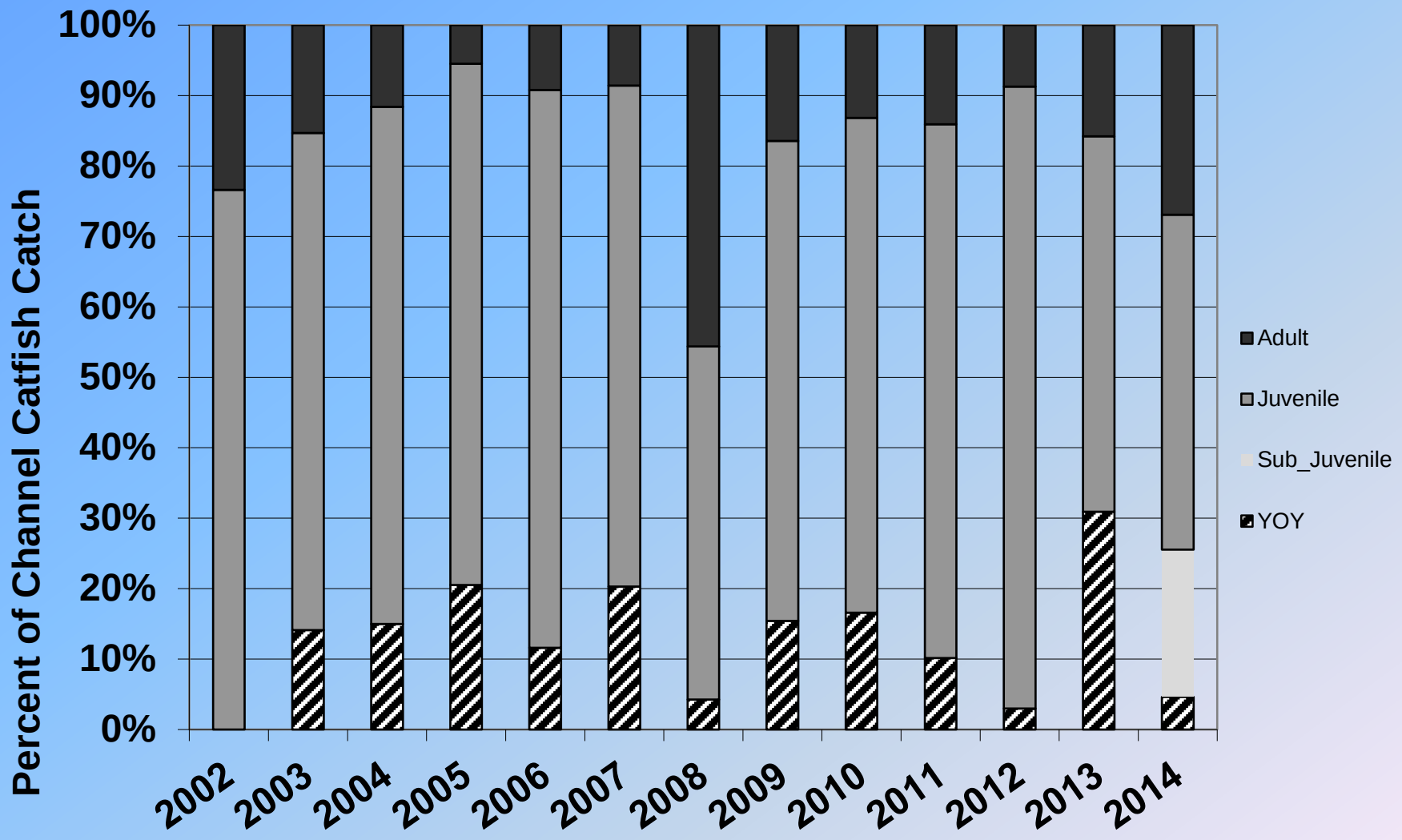
Adult Channel Catfish Catch Rate



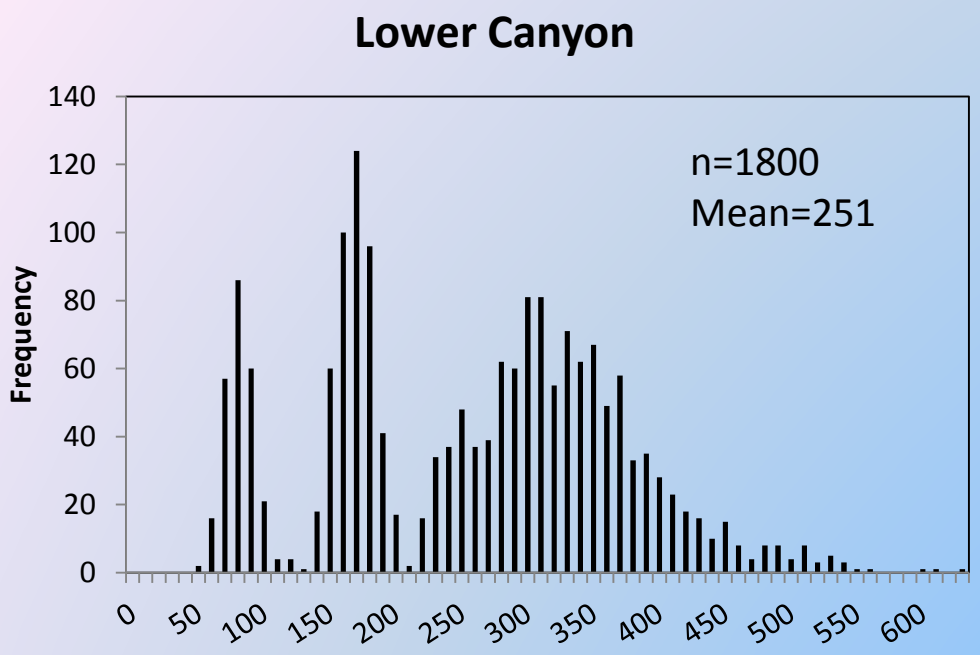
Exploitation Rate

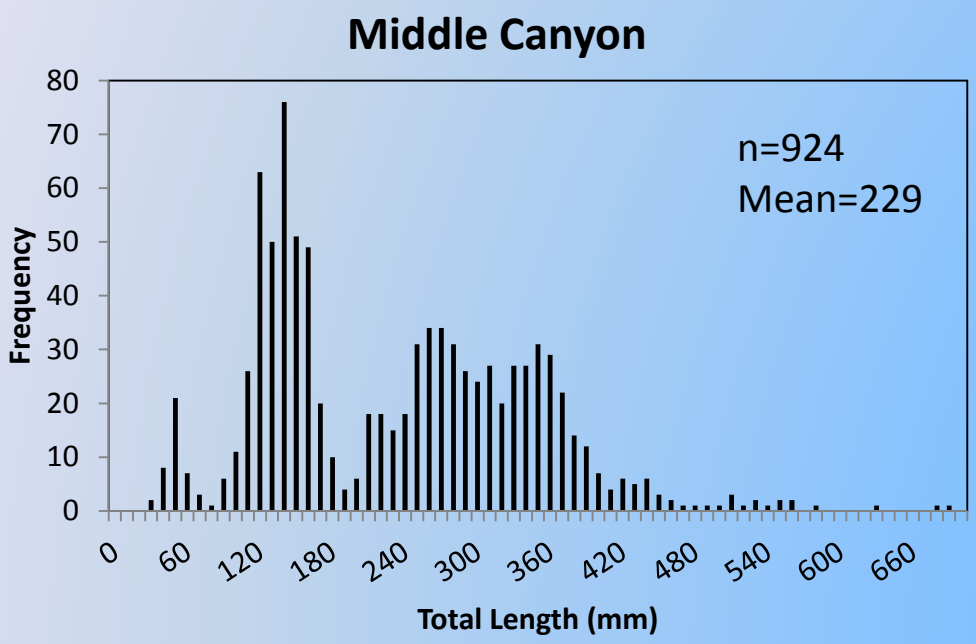
Trip	200-299	300-399	400-499	500-599	Total
Number Tagged	239	317	65	12	633
Number Recaptured	12	42	15	3	72
Exploitation by size class	**5.0%**	**13.2%**	**23.1%**	**25.0%**	**11.4%**

Percent Catch by Age Class

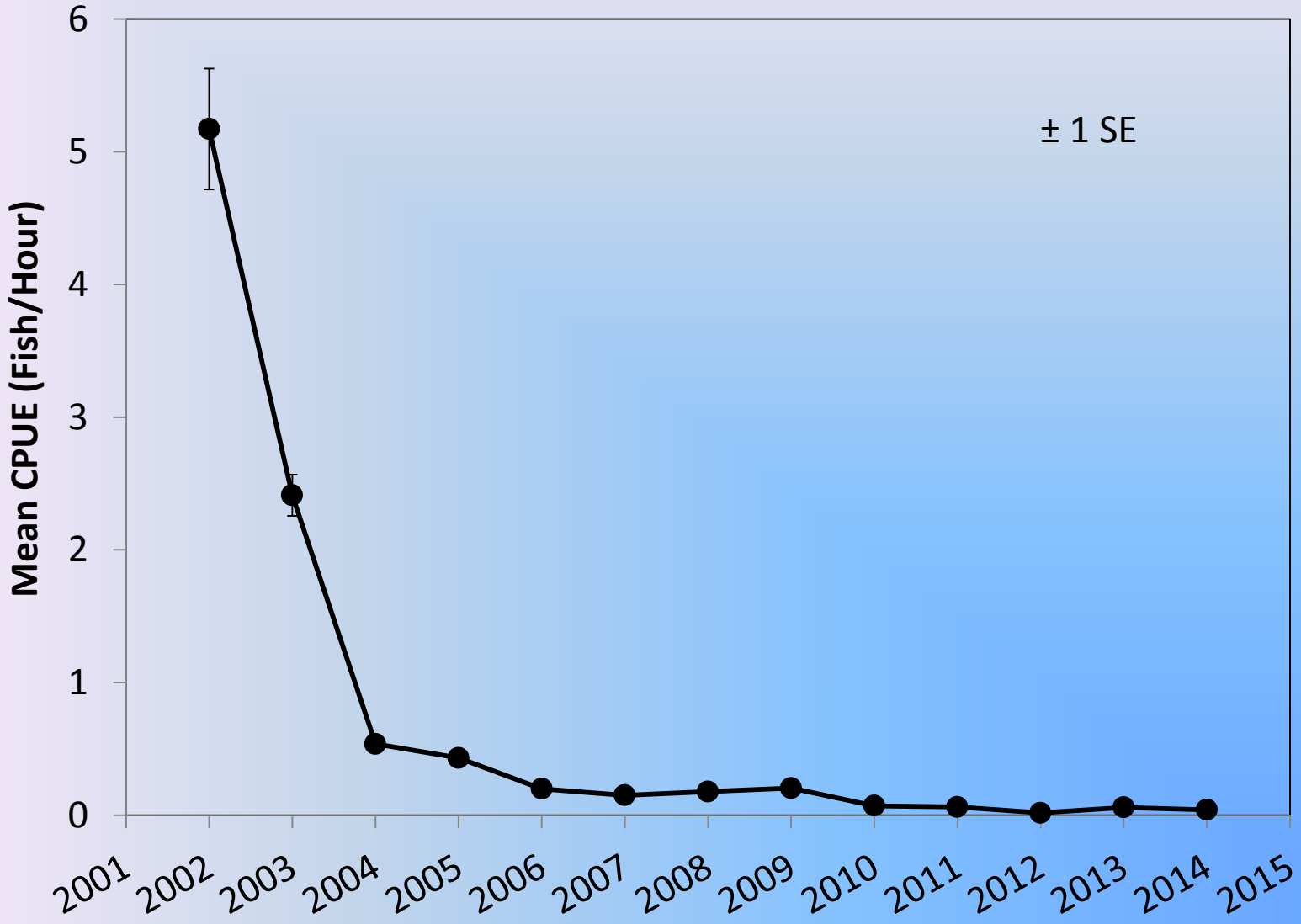


Channel Catfish Length Frequency

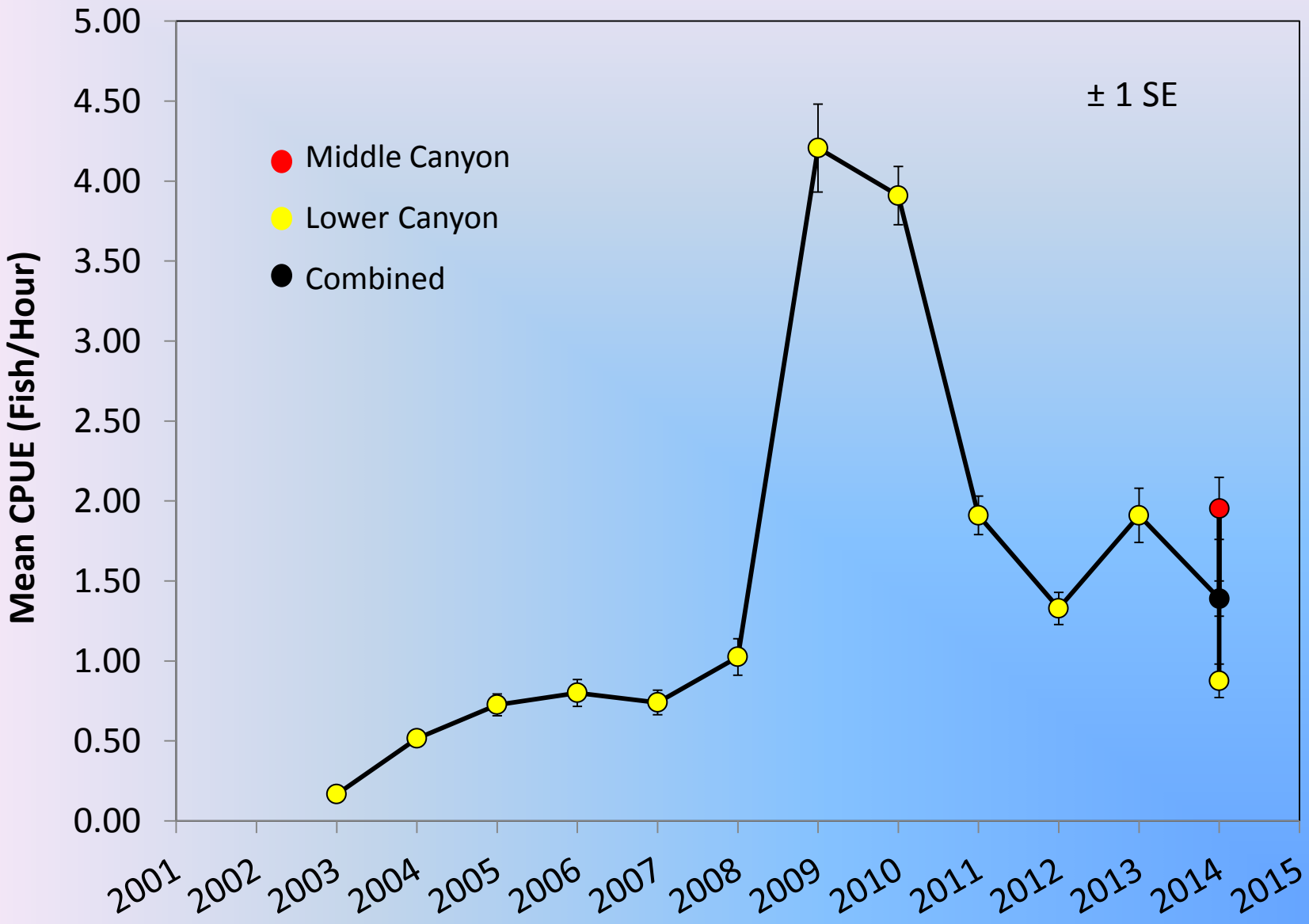




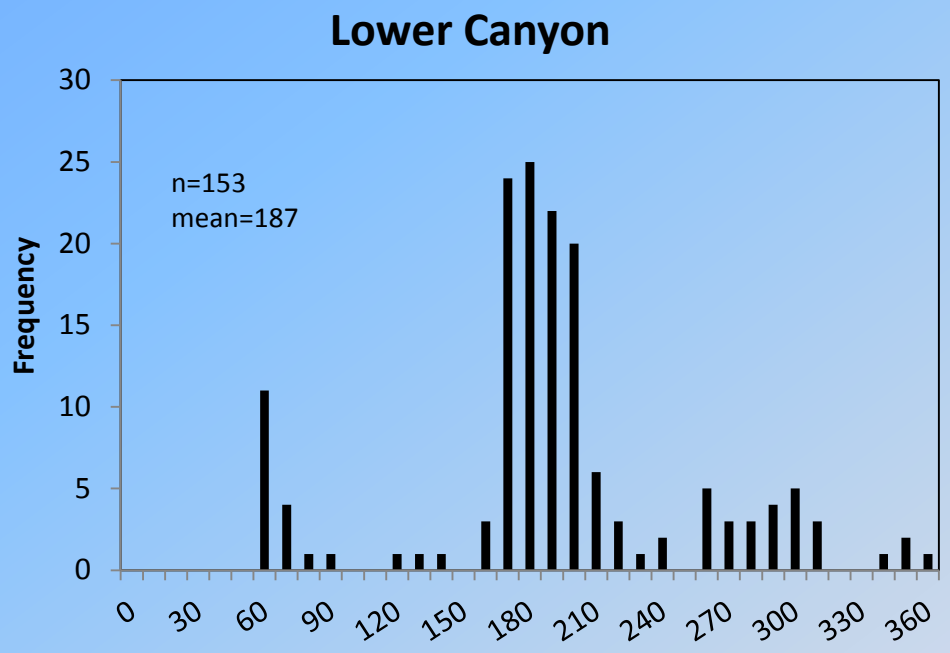
Common Carp Catch rates

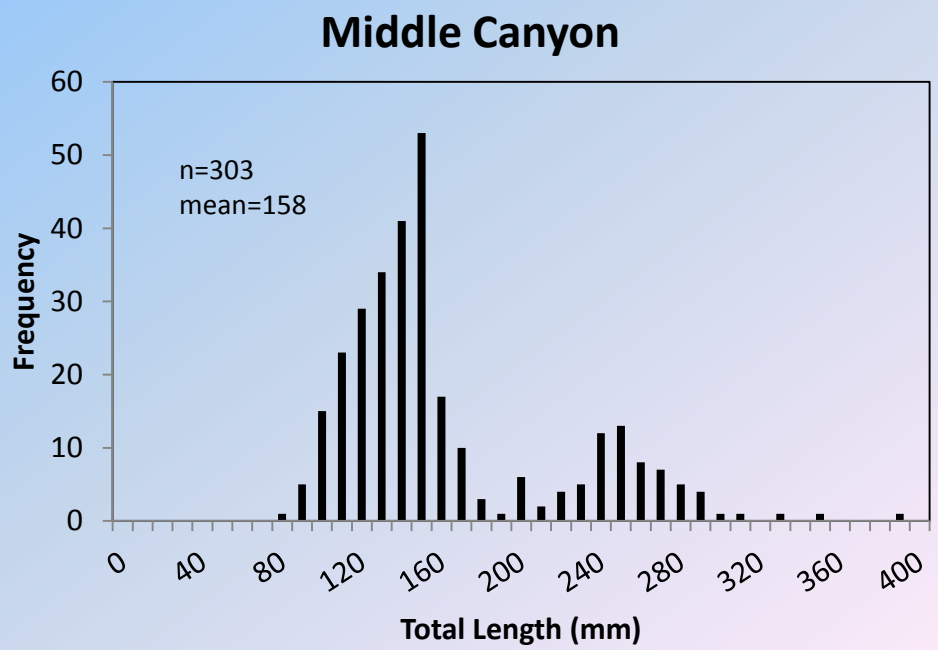


Colorado Pikeminnow Catch Rates

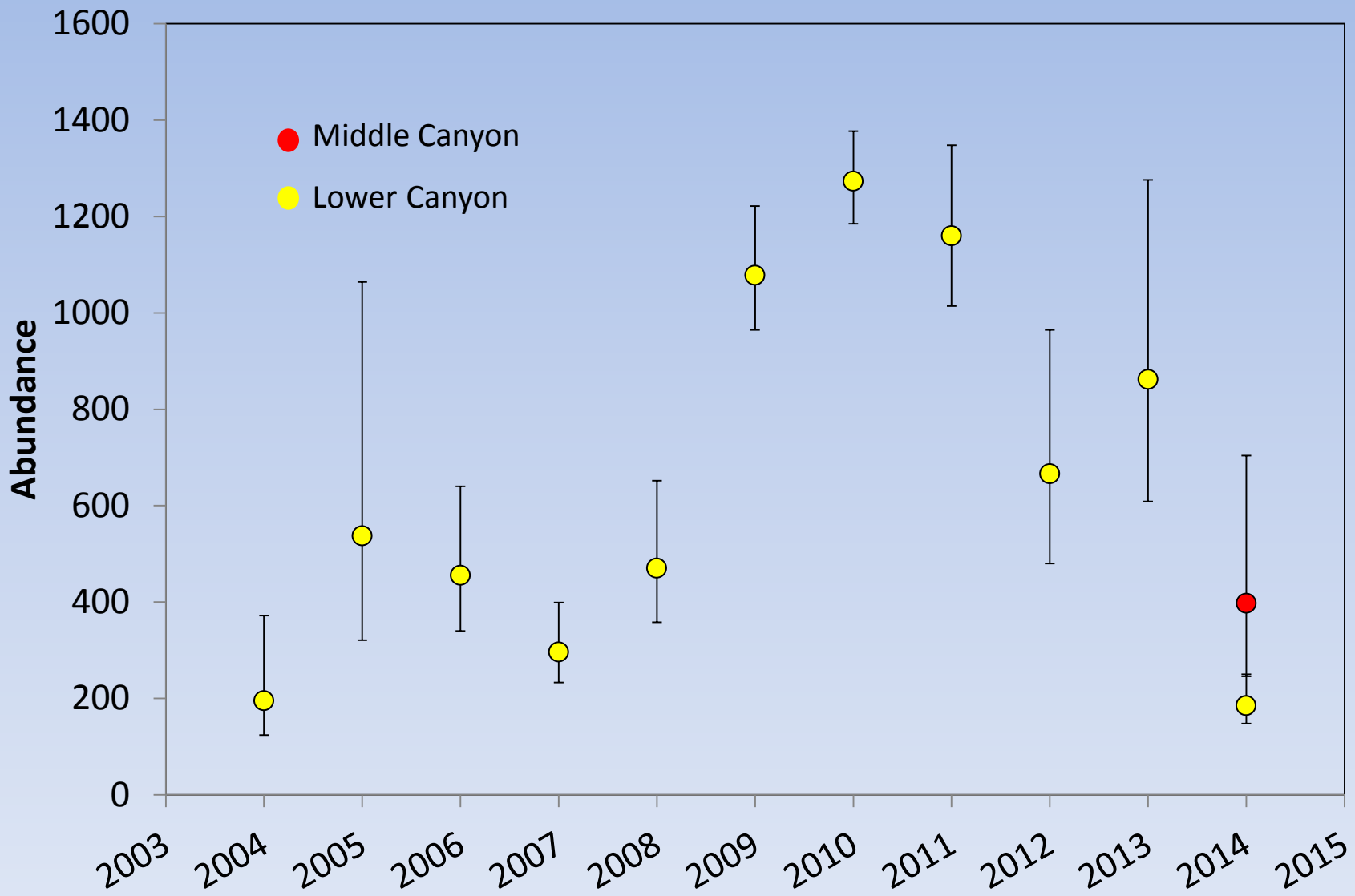


Colorado Pikeminnow Length Frequency

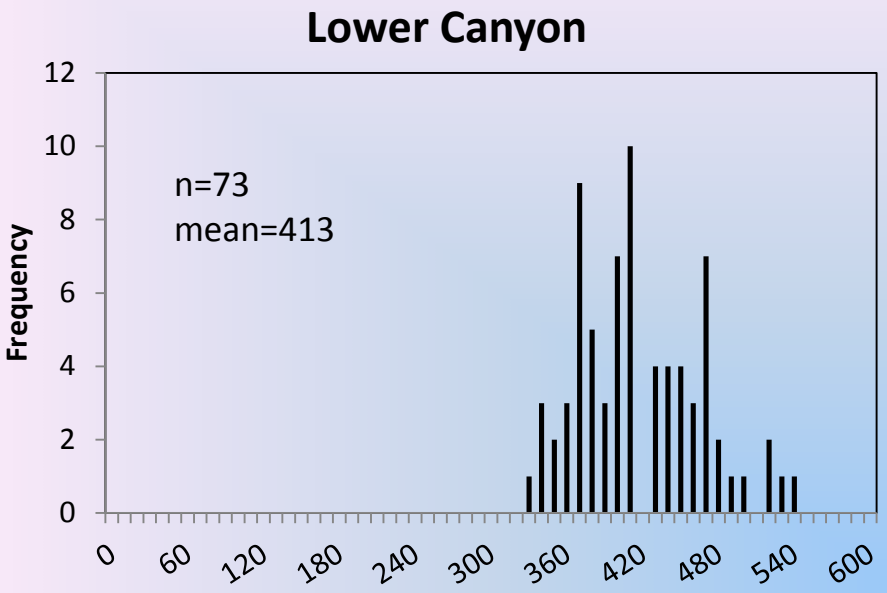


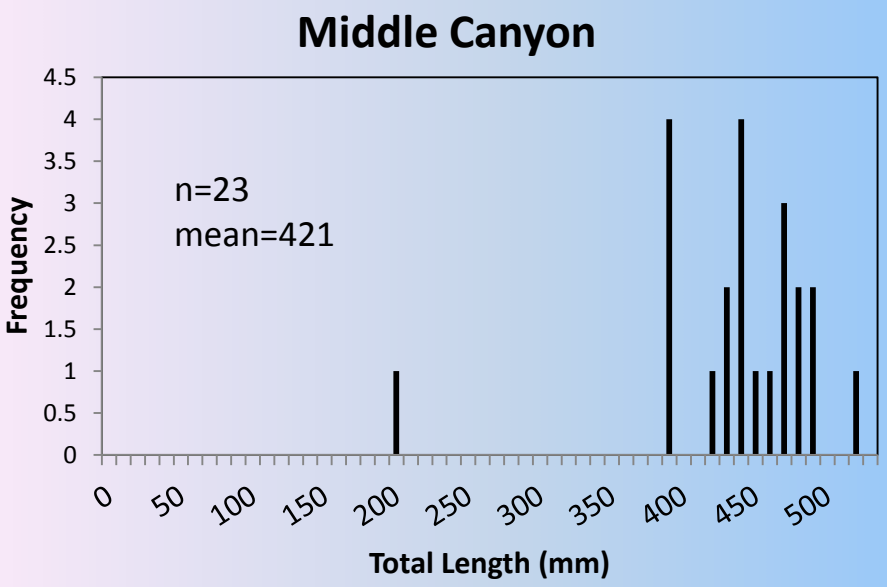


Colorado Pikeminnow Abundance

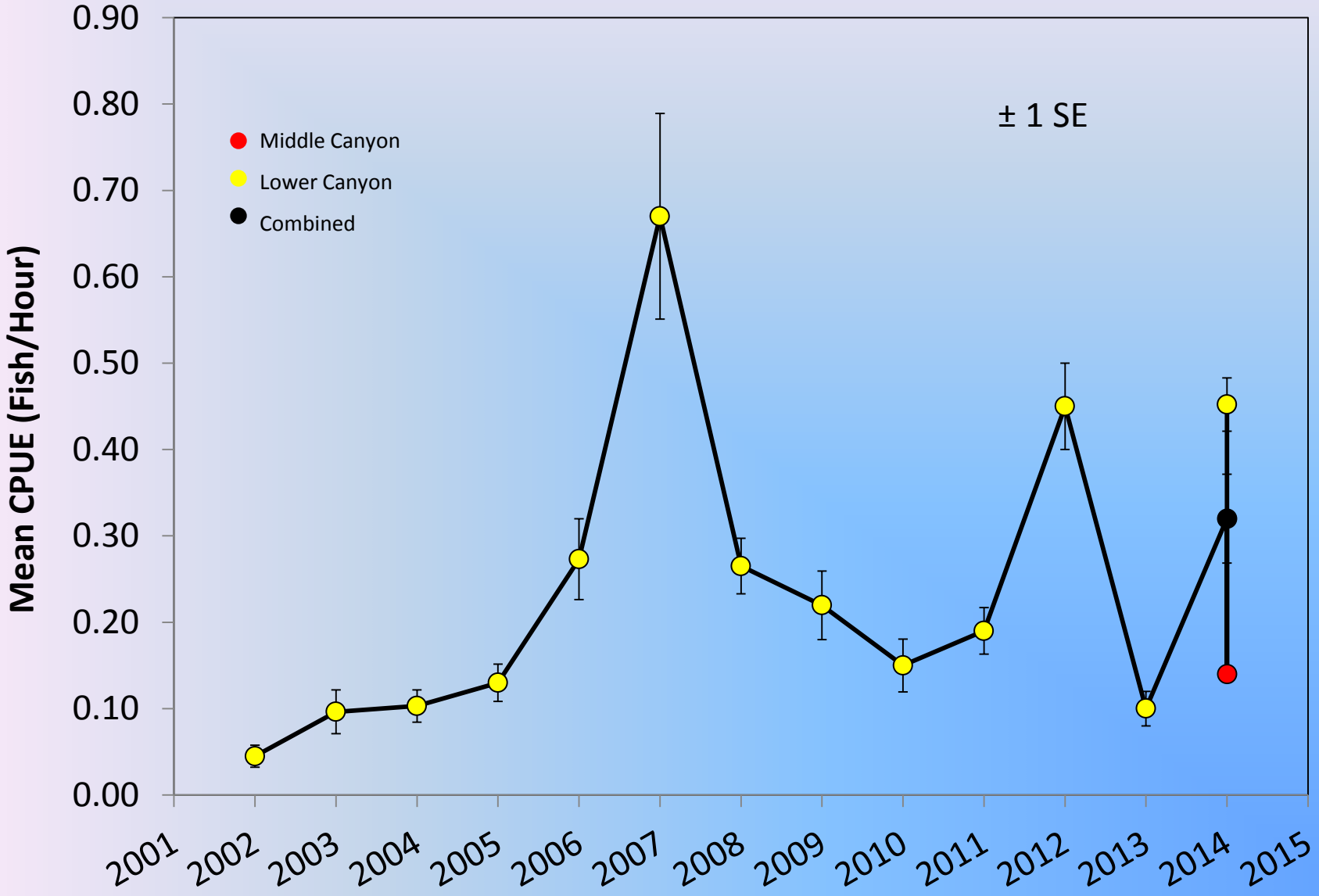


Razorback Sucker Length Frequency





Razorback Sucker Catch Rates



Conclusions

- Channel catfish population has remained stable
- Increase in channel catfish catch rates due to shifting effort
- Decrease in Colorado pikeminnow population estimates due to change in sampling
- Stable razorback sucker catch rates

Recommendations

- Continue the shifted effort to maximize channel catfish catch rates
- Conduct movement analysis/study on channel catfish

Questions?