



Summary of 2009 Mechanical Removal Project

	RBT	JNT	CRP	FHA	BK	CCF	HBC	FMS	BHS	SPD	RSH	FR
Control	1125 932	2						14				
1A	444	4	5	44	1			12				
1B	215	1	1	51	5		36	53	18			
2A	214	1	9	40	7		36	53	26			
3A	169	3	5	33	1		27	31	9	5		
3B	100	1	5	66	7		25	41	15	1		
4A	150	2	3	30	2		21	41	13	1		
5A	135	0	1	35	2		19	68	17	3		
5B	73	1	6	72	2		23	43	22	3		1
6A	124	1	8	28	0		23	53	22	3		
6B							23	53	26	4		

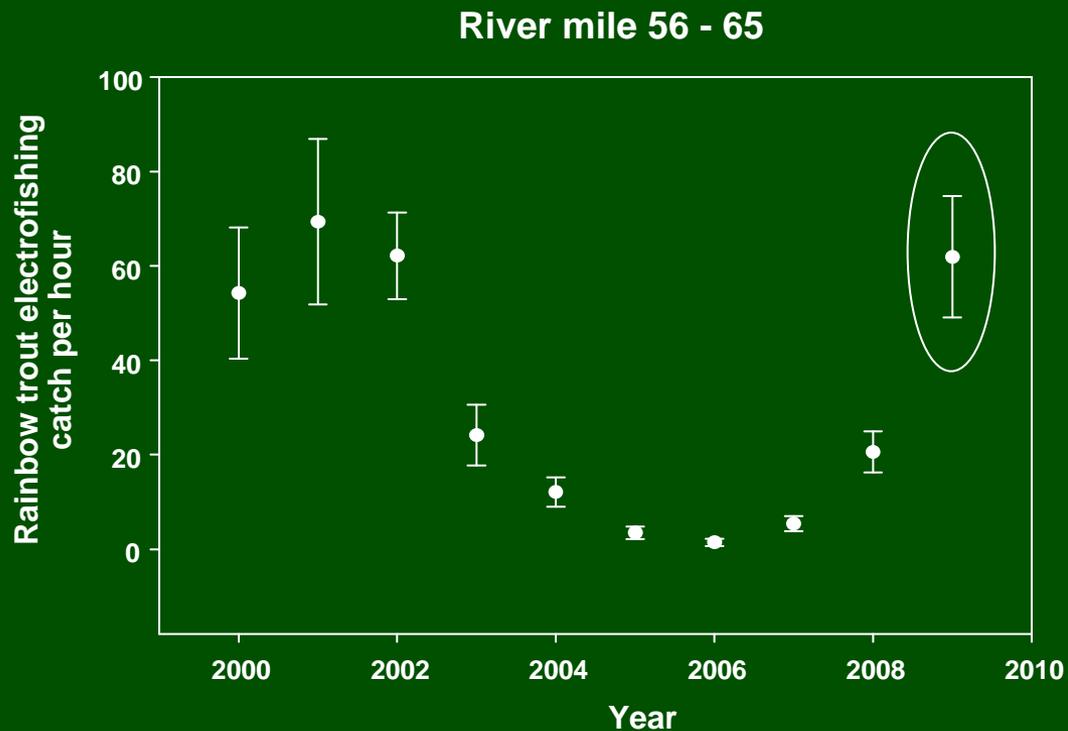
**A.S. Makinster, C. Nelson, and W.R. Persons,
 Arizona Game and Fish Department, Research Branch
 And
 L. Coggins, USGS Grand Canyon Monitoring and
 Research Center**

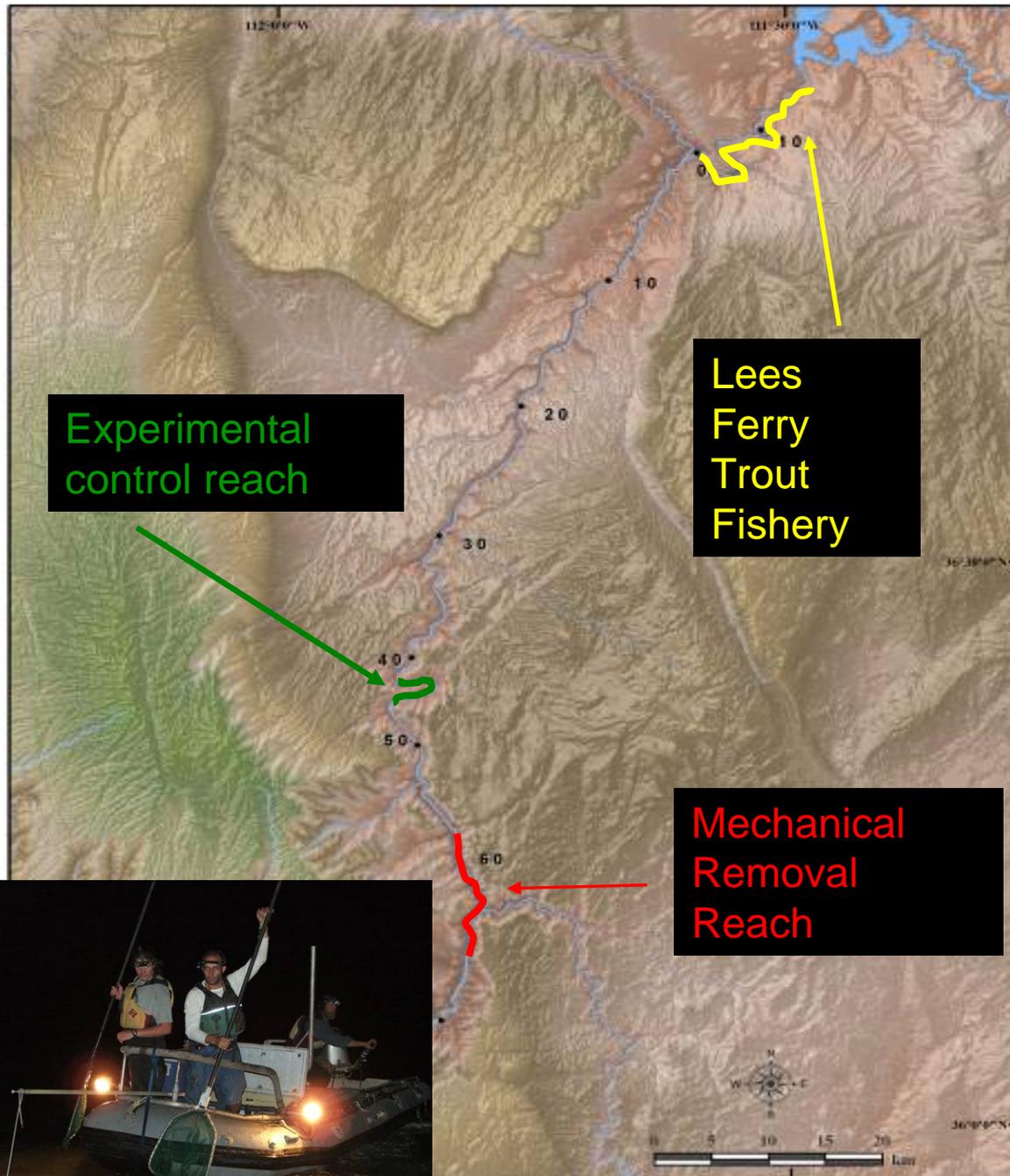


Project Background



- **Experimental Action 2003-2006**
- **Currently listed as a Conservation Measure in FWS Biological Opinion**
- **Standardized mainstem electrofishing monitoring in spring 2009 shows increases in rainbow trout near the LCR**
- **Catch rates observed in 2009 similar to those seen in 2002**







2009 Mechanical removal



- **Apr. 29 – May 20**
- **2 nights in experimental control reach**
 - 1 night 2003-2006 over randomly selected sites
- **6-pass depletion in LCR reach (12 nights)**
 - 4-5 pass depletion from 2003-2006
 - Kwagunt (RM 56) to Lava Chuar (RM 66)
- **139 Habitat-stratified sites in 2009 vs. 66, 500-meter sites 2003-2006**

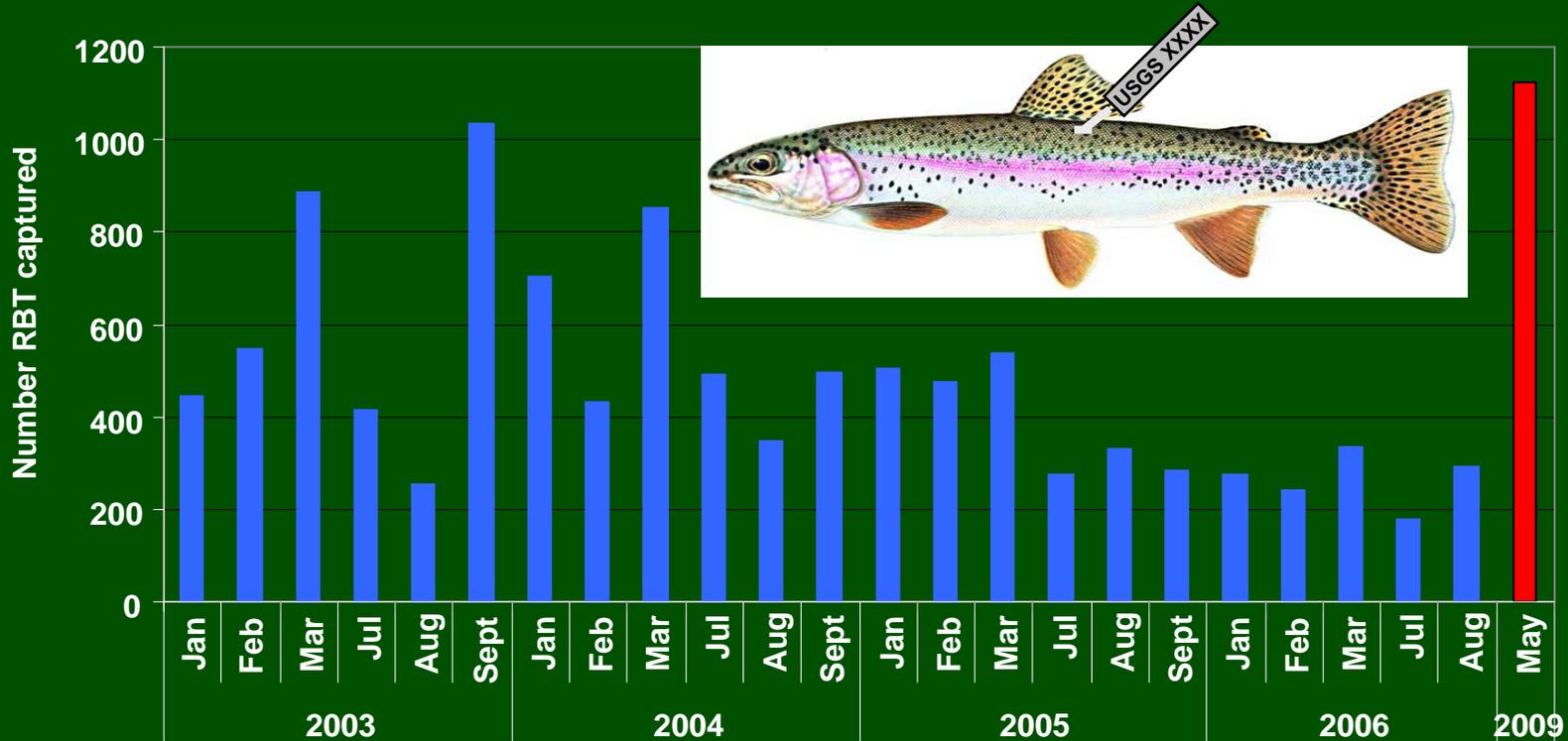




Experimental control reach

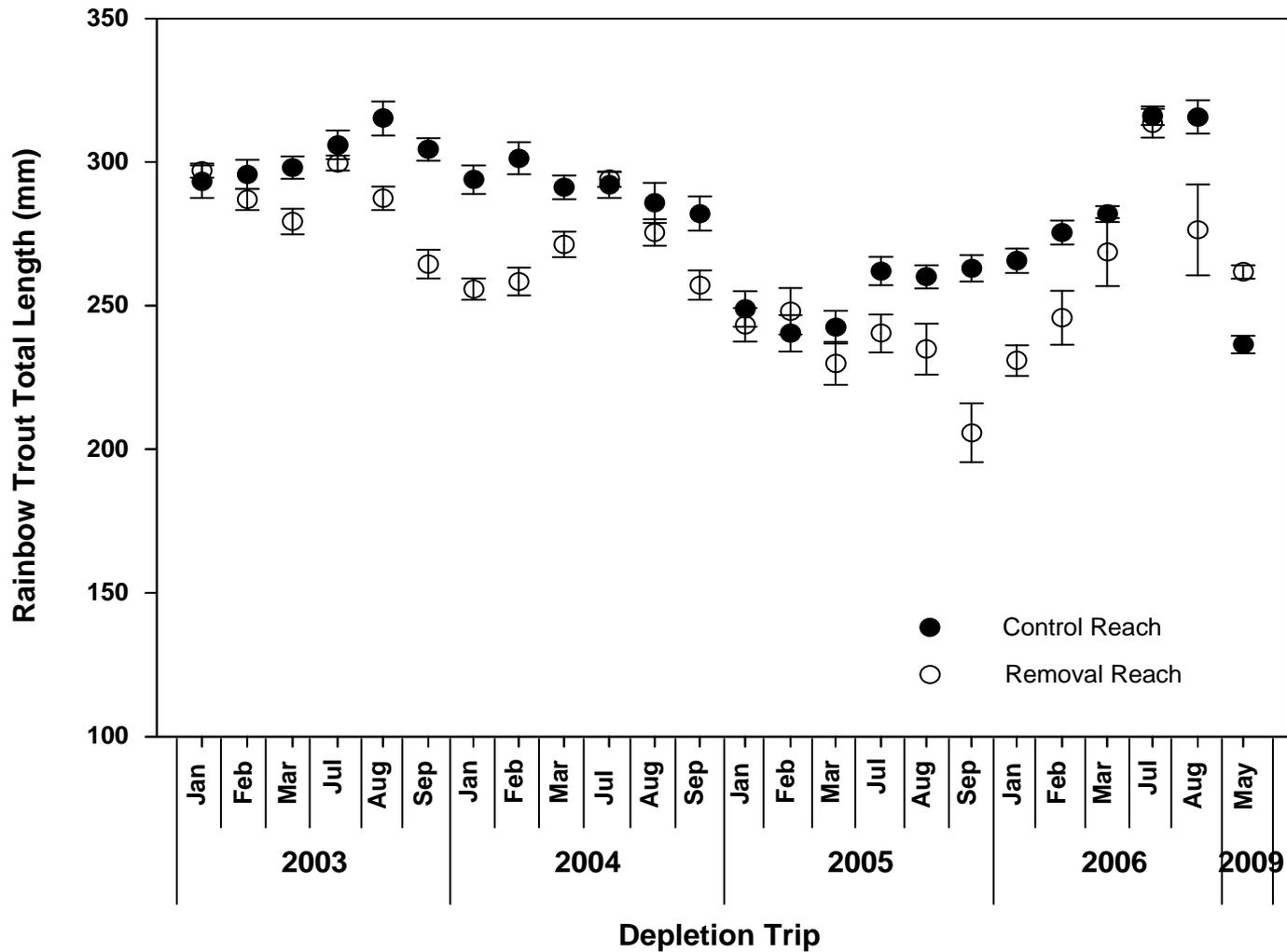
- 2-pass mark-recapture over the same 30 sites
- Began below President Harding rapid (RM 44; top of reach)
- All captured RBT > 8 in. were given a Floy tag

Experimental control reach rainbow trout



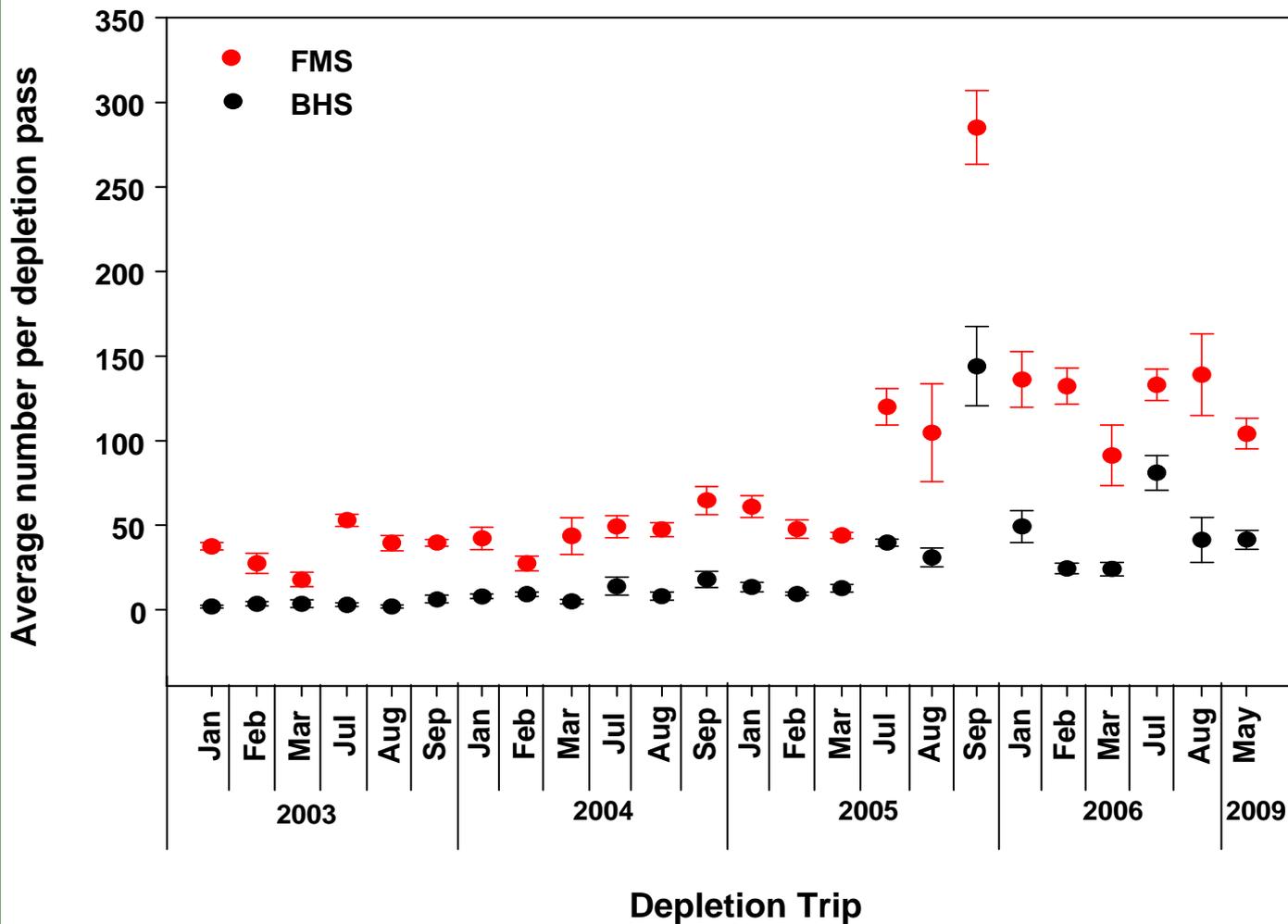


Rainbow trout average size



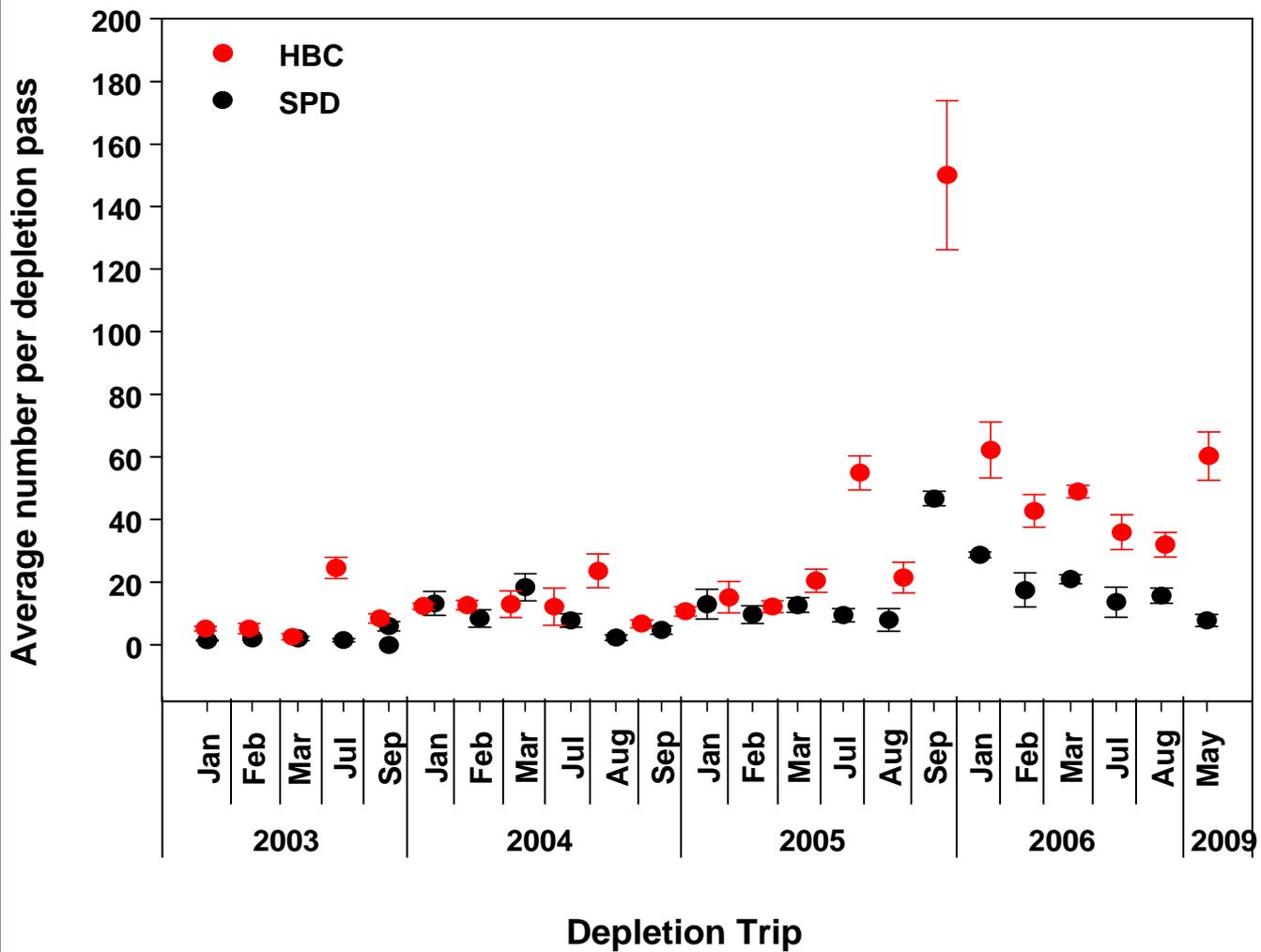


Native species





Native species





Future Mechanical Removals



- **Prior to 2009 Mechanical Removal, rainbow trout populations rebounded**
 - Estimated 2,300 – 3,300 prior to 2009 removal
 - Removed 1873 rainbow trout
 - Roughly 500 – 1500 fish remain
- **1 trip/year limits our ability to draw inferences about effectiveness of RBT removal**
- **Additional knowledge gained from native species**

