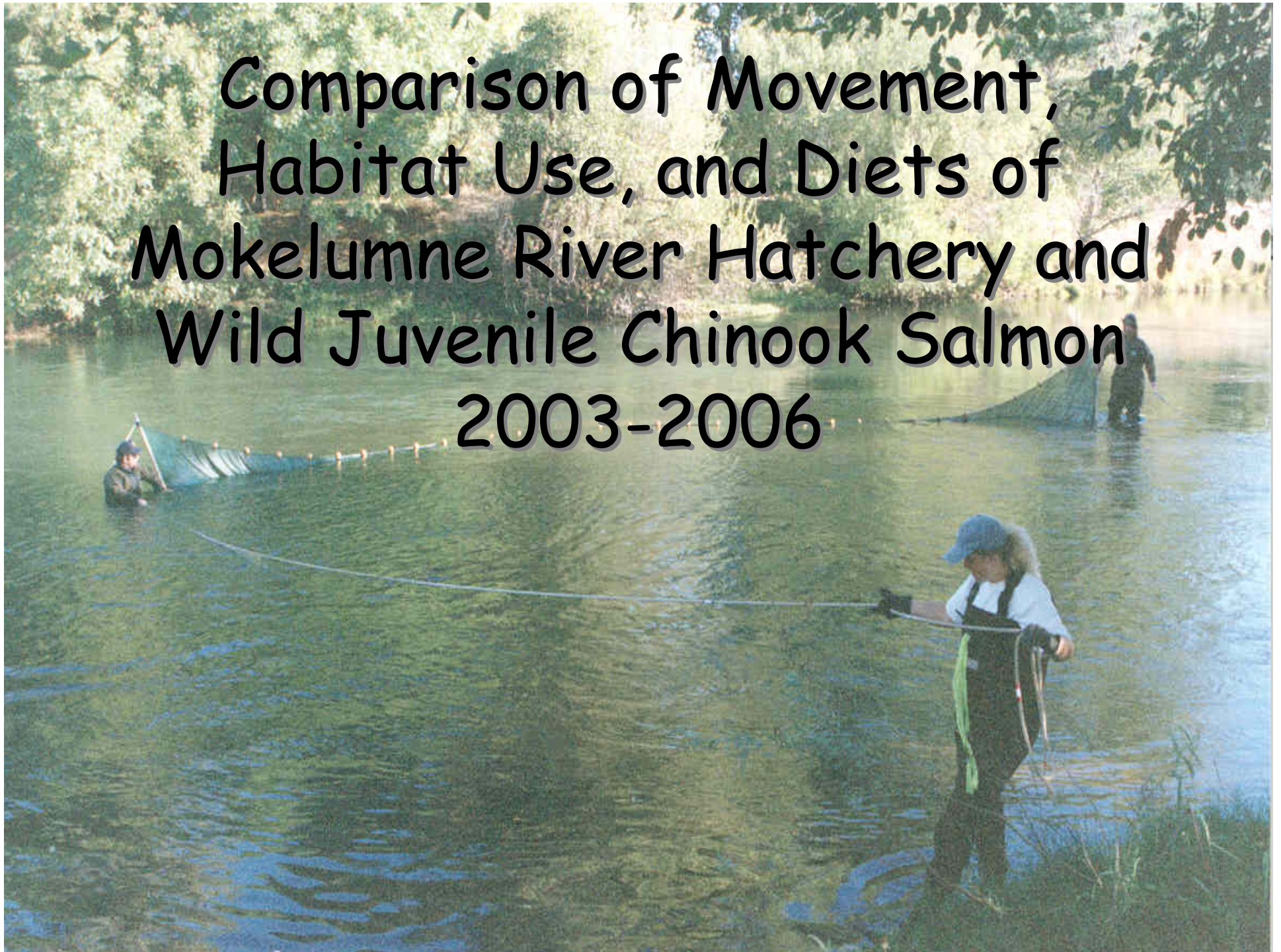
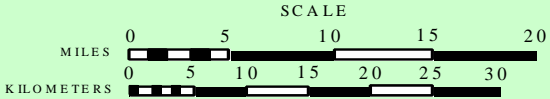
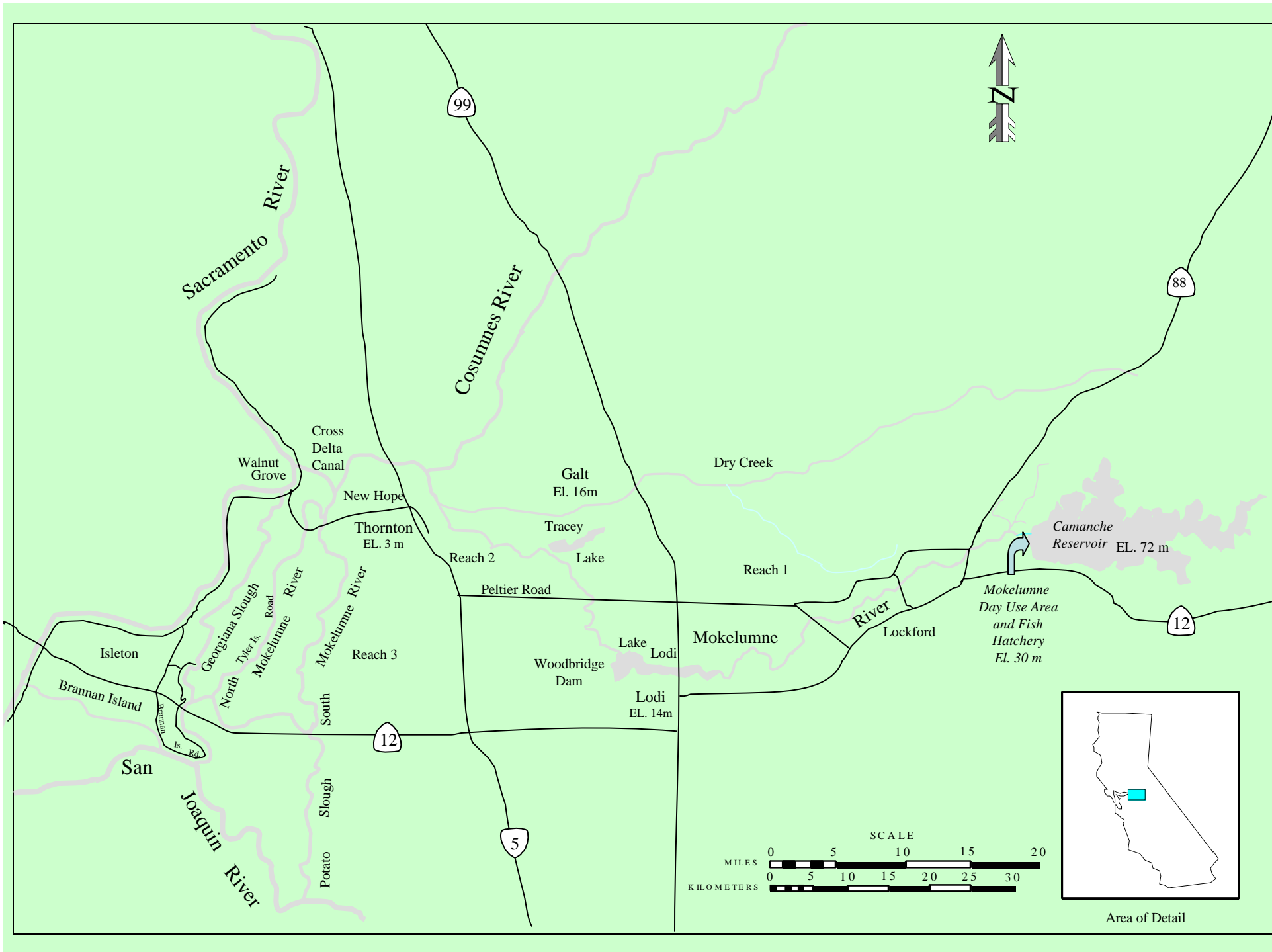


Comparison of Movement,
Habitat Use, and Diets of
Mokelumne River Hatchery and
Wild Juvenile Chinook Salmon
2003-2006





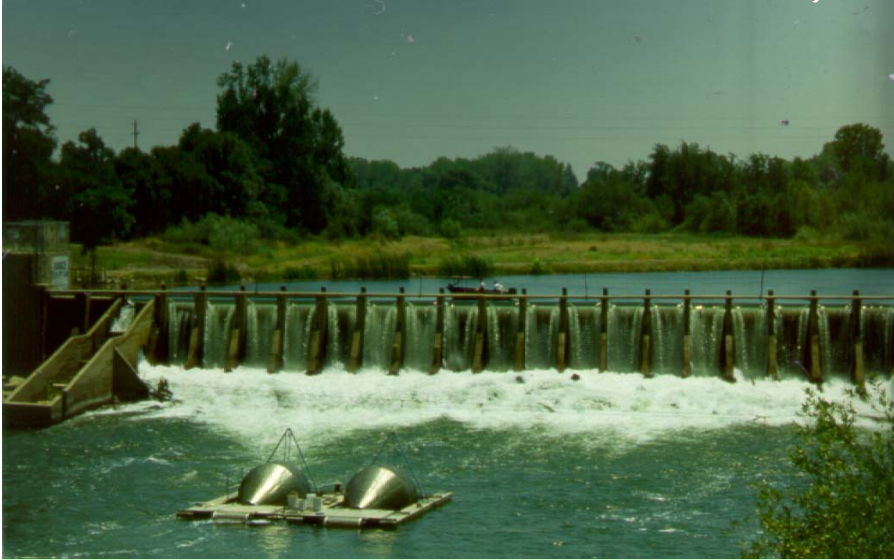
Area of Detail

Table 1. The number of hatchery Chinook salmon released volitionally and the total number of wild and volitionally released Chinook salmon captured during fish community surveys and by rotary screwtrap in the lower Mokelumne River, California. April through July, 2003 through 2006.

Year	Volitional Release		Release dates	Sampling Dates	Fish Community		Rotary Screw Trap	
	Number	Size Criteria			Hatchery Recapture	Wild Captures	Hatchery Recaptures estimate	Wild Captures estimate
2003	98,306	~106.9 per Kg	30-Apr	15-May	6	109	2,949	5,416
		104 mm FL	29-May	30-May			40,678	140,471
2004	97,100	~147.7 per Kg	3-May	3-May	36	255	7,551	3,922
		81 mm FL	14-May	19-May			72,025	87,654
2005	97,622	~142.9 per Kg	5-May	9-May	40	297	984	2,373
		83 mm FL	26-May	18-May			51,860	432,874
2006	103,178	~169.5 per Kg	1-May	3-May	71	313	244	26,578
		79 mm FL	7-May	12-May			75,835	1,197,778

1995-2003

Rotary Screw Trap Placement



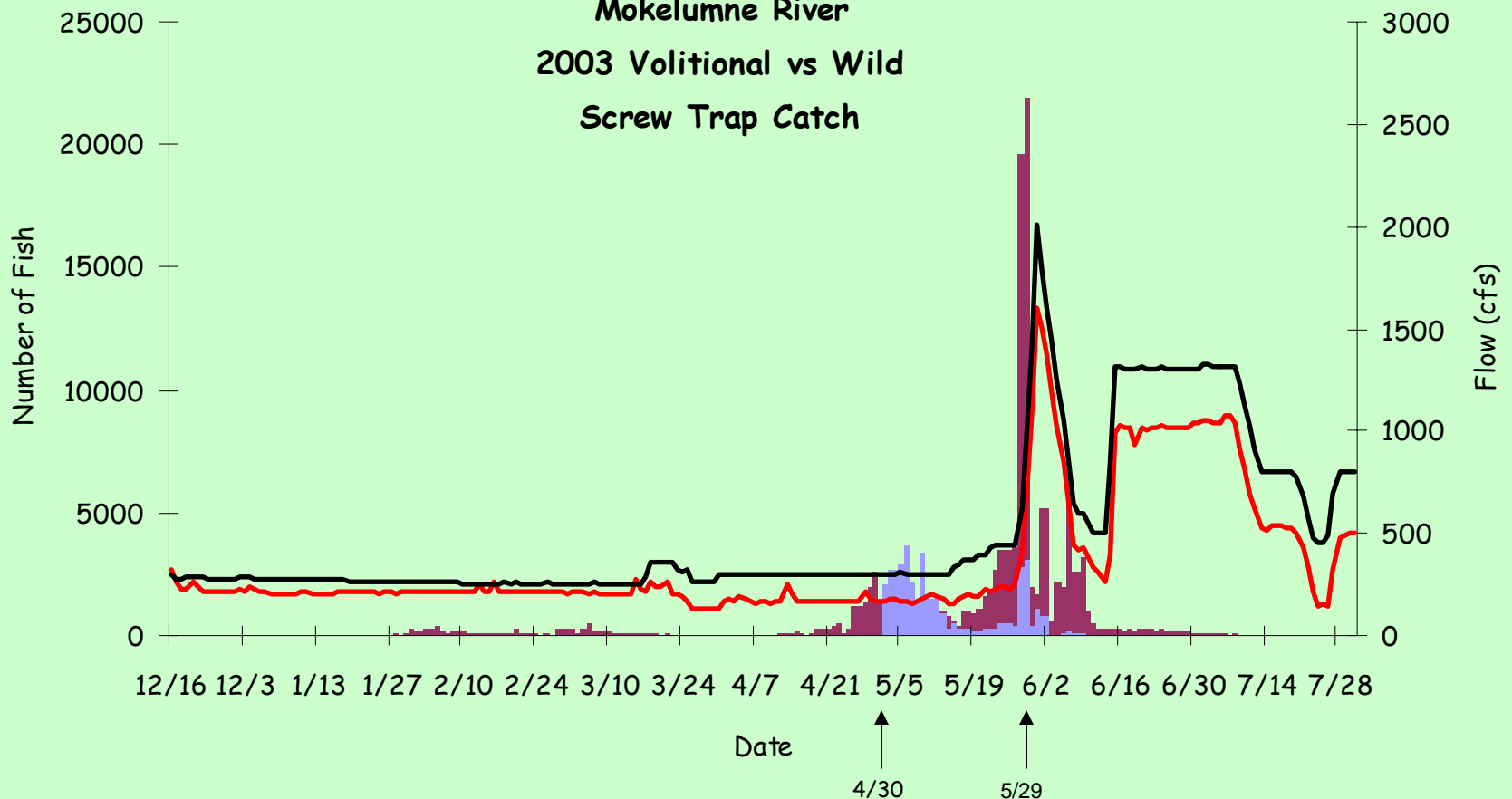
2004



2005-2006

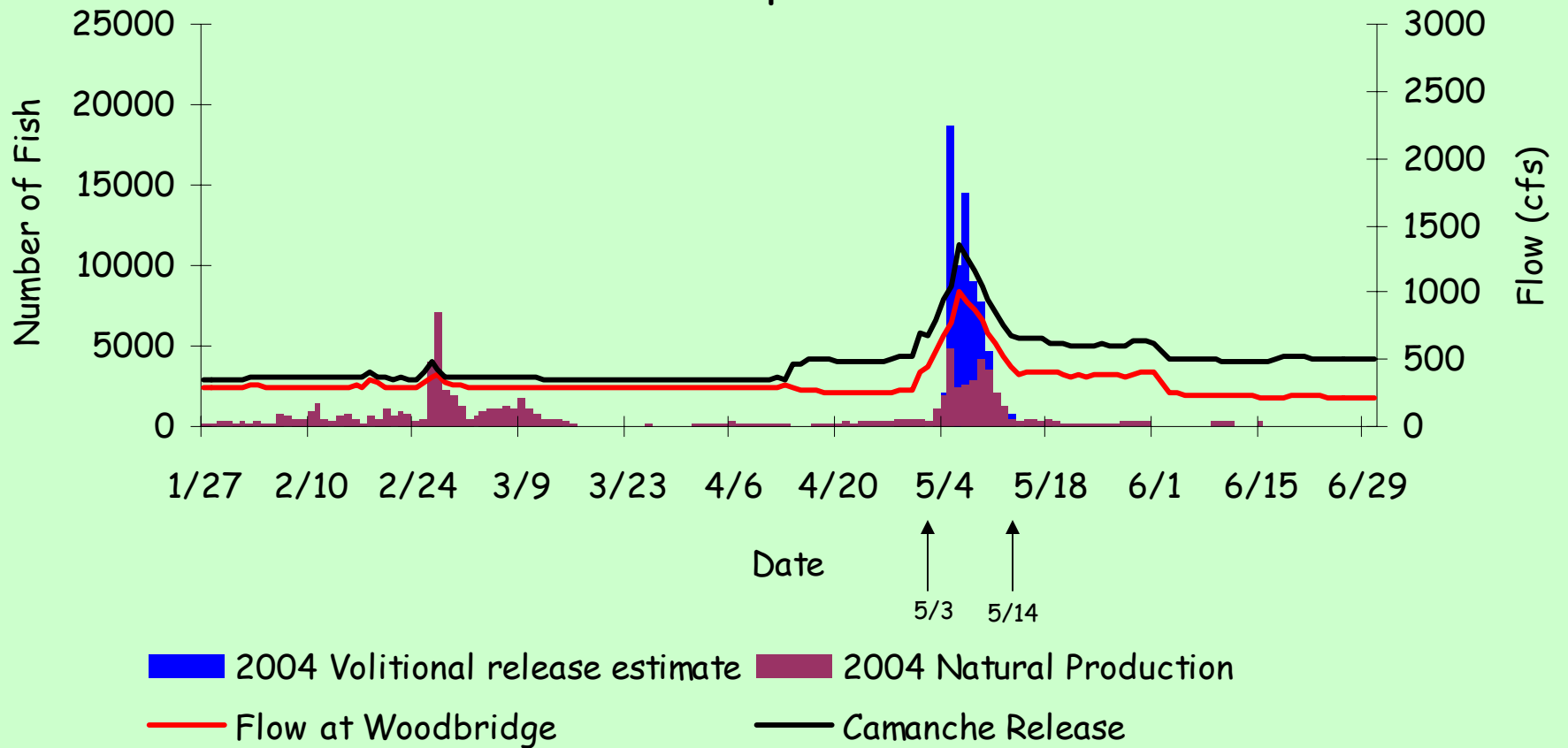


**Mokelumne River
2003 Volitional vs Wild
Screw Trap Catch**

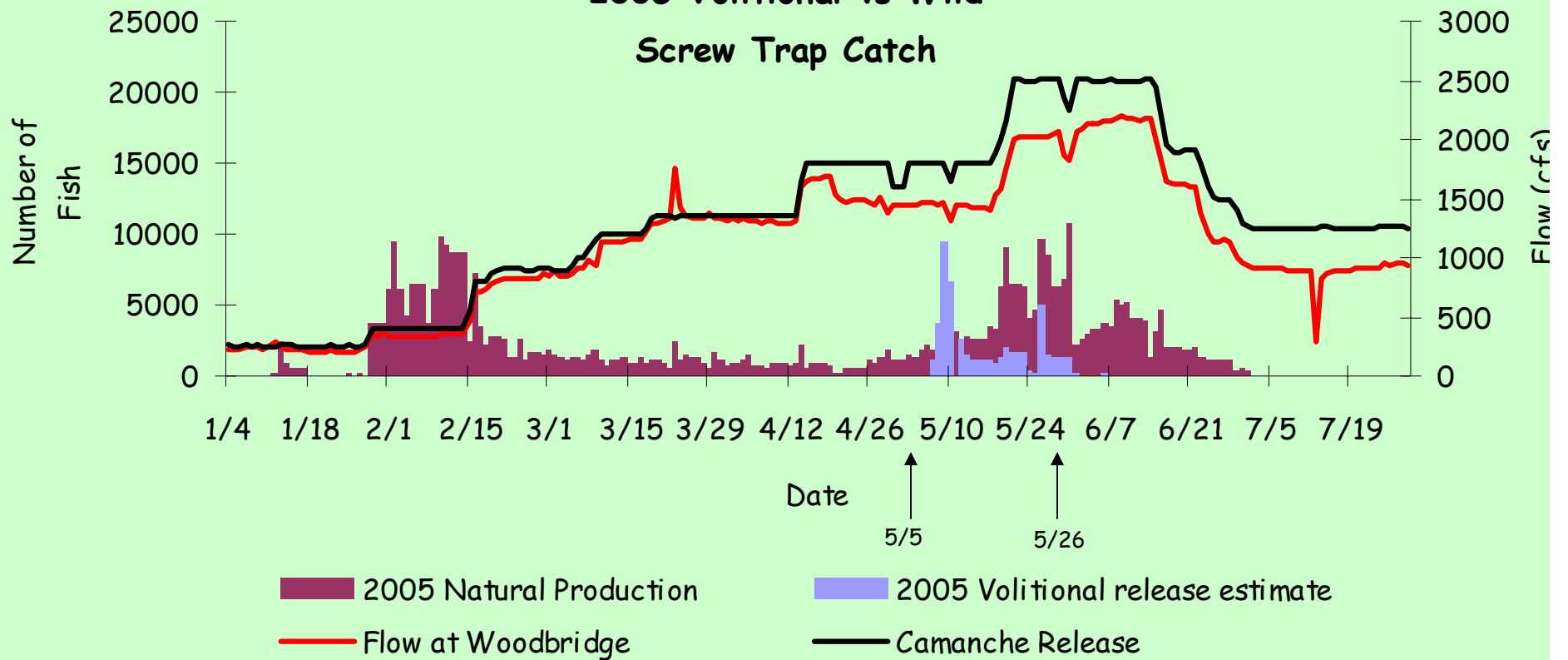


2003 Natural Production
 2003 Volitional release estimate
 Flow at Woodbridge
 Camanche Release

Mokelumne River
2004 Volitional vs Wild
Screw Trap Catch



Mokelumne River 2005 Volitional vs Wild Screw Trap Catch



Fish Community Surveys

- Size of fish
 - Volitional > wild all three years
 - Both were smaller at capture during higher water years
 - Both larger as you move downstream
 - Volitional consistently captured at an advanced life stage over wild
 - Wild fish had more advanced lifestage by reach/volitional no relationship

Fish Community Surveys (cont.)

- Habitat Use
 - Chi Square - volitional more common in reaches 2 and 6 than any other reach
 - In 2003 and 2004 no use of non-contiguous off channel pools by either group, in 2005 (more water) only wild fish used this habitat.

Diets

- Food to be identified to family, and lifestage (larva, pupa, adult) determined
- Food items to be classified by size class
- Dry Biomass calculated
- IRI (index of relative importance)
 - $IRI = (\%N + \%W) \times \%O$