

Summary of 2002 Feather River Salmon Spawning Escapement Surveys
March 20, 2003

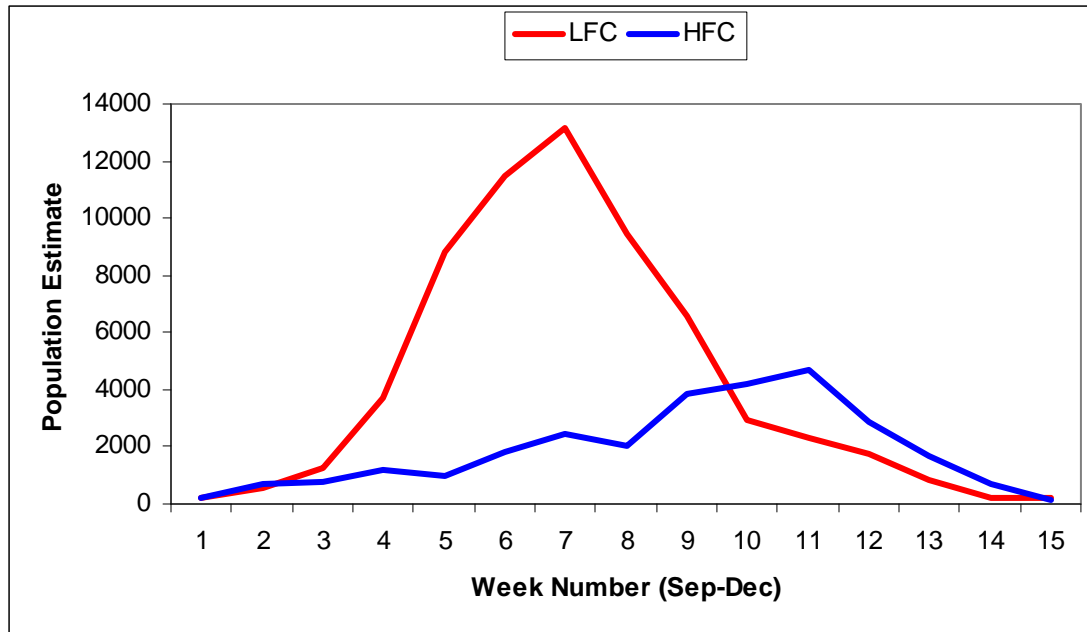
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The 2002 salmon spawning escapement survey began September 3 and continued through December 20. Details on sampling protocols and methods are provided in Appendix A (Microsoft Word File). Raw data, data summaries (including Schaefer tables) are provided in Appendix B (Microsoft Excel Workbook).

Population Estimate:

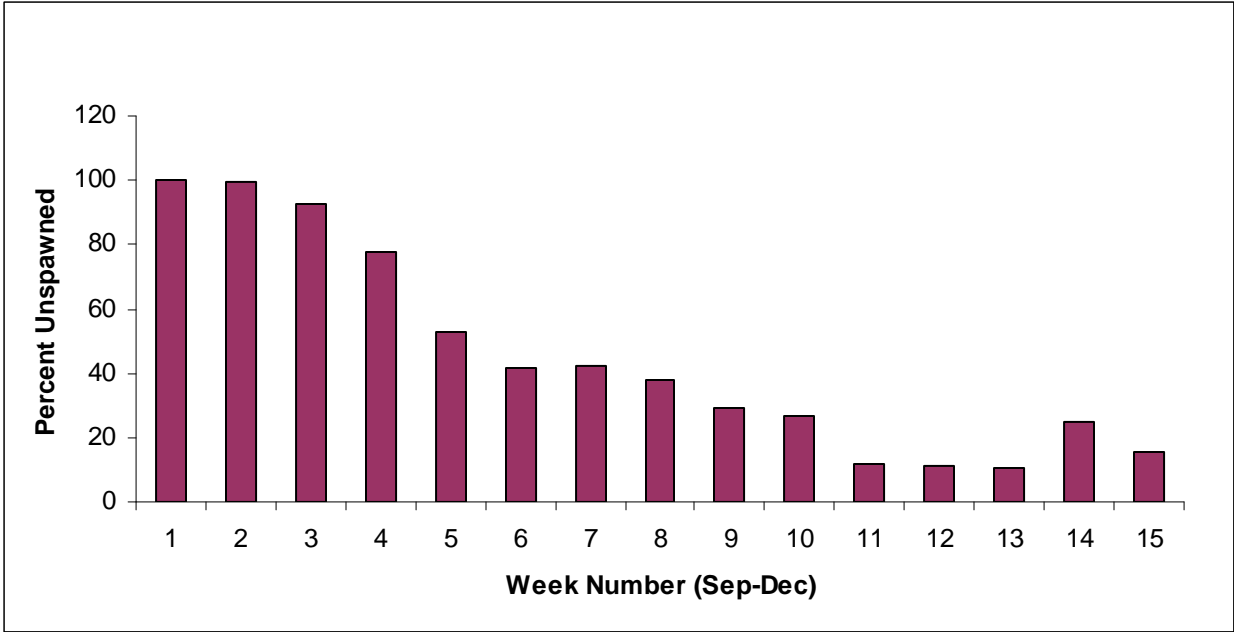
Salmon carcass mark recapture resulted in a population estimate for the Low Flow Channel (LFC) of 56,608 salmon, 51,332 adults and 5,276 grilse. The LFC includes the Feather River from the Fish Barrier Dam to the Thermalito Outlet. The population estimate for the High Flow Channel (HFC) of the Feather River was 26,738, 23,005 adults and 3,733 grilse. The HFC surveyed extended from the Thermalito Outlet downstream to the Gridley Bridge. The upstream skewed distribution of salmon spawning in the LFC and HFC was very consistent with previous years (63% percent LFC spawning is the long term average). The total in-river spawning for the Feather River (LFC + HFC) was 83,346, 78,070 adults and 9,009 grilse. These estimates may include spring and fall-run salmon since there spawning does not appear to be spatially or temporally segregated on the Feather River. An additional 20,500 fall-run salmon entered the Feather River Hatchery.



The 2002 Feather River salmon population estimate is the third highest since 1970, previous highs were in 2001 (161,000 salmon) and 2000 (101,000 salmon).

Pre-spawning Mortality:

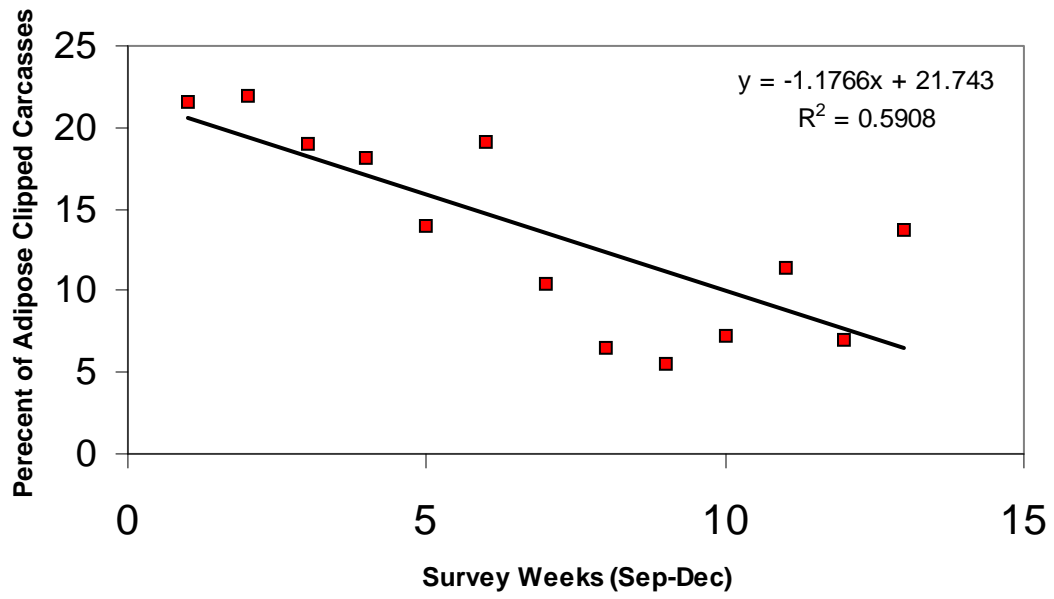
3,577 female salmon were examined to determine if they had successfully deposited their eggs. On average, 43.8% had died before depositing most of their eggs. Pre-spawning mortality was generally higher early in the survey (September-October), and in the LFC. Since we began monitoring pre-spawn mortality in 2000, we have observed similarly high levels. The cause for pre-spawning mortality is unclear, but it probably results from stress associated with upstream migration, angling pressure, and intense competition for limited spawning habitat.



	Spawned	Unspawned	Total	% Unspawned
LFC Sections 1-28	1627	1374	3001	45.78
HFC Sections 29-46	384	192	576	33.33

Coded Wire Tag (CWT) Sampling:

3,234 salmon were checked for the presence of an adipose fin clip (the external mark which indicates a CWT is present). 448 CWTs were collected, resulting an average 13.9% occurrence rate. CWTs were more common early in the survey than later. CWTed salmon also appeared to occur at a higher rate in the HFC than in the LFC. CWTs have not yet been read to determine the origin of tagged fish.



	Clipped	Non-clipped	CWT Rate
LFC Sections 1-28	423	2714	13.5
HFC Sections 29-46	25	72	25.8
Overall	448	2786	13.9