

Figure 1. Estimated yearly natural production of all races of adult Chinook Salmon in the Central Valley. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly Delta outflow (cfs) from IEP Dayflow.

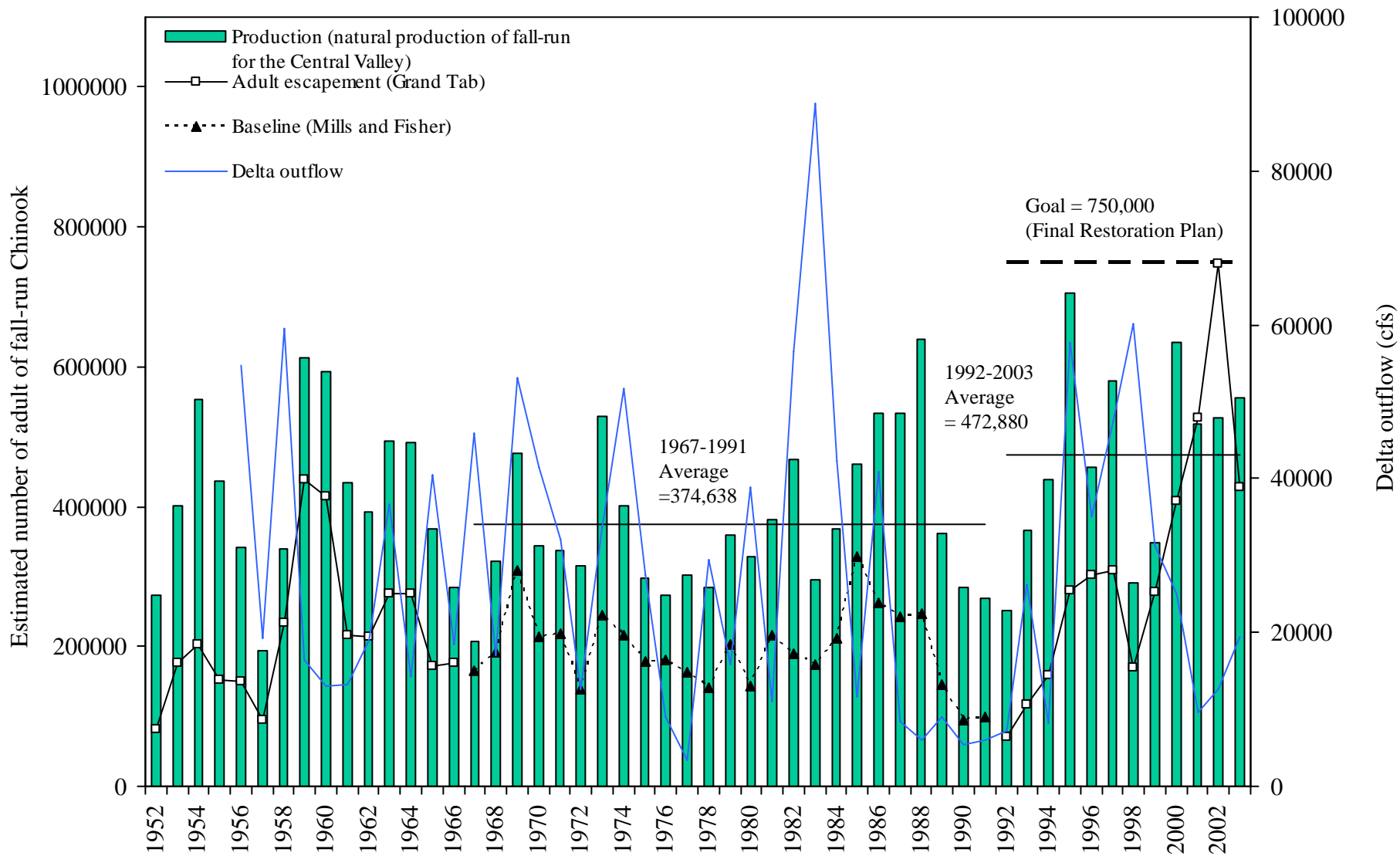


Figure 2. Estimated yearly natural production of adult fall-run Chinook salmon in the Central Valley, and in river escapements. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly Delta outflow (cfs) from IEP Dayflow.

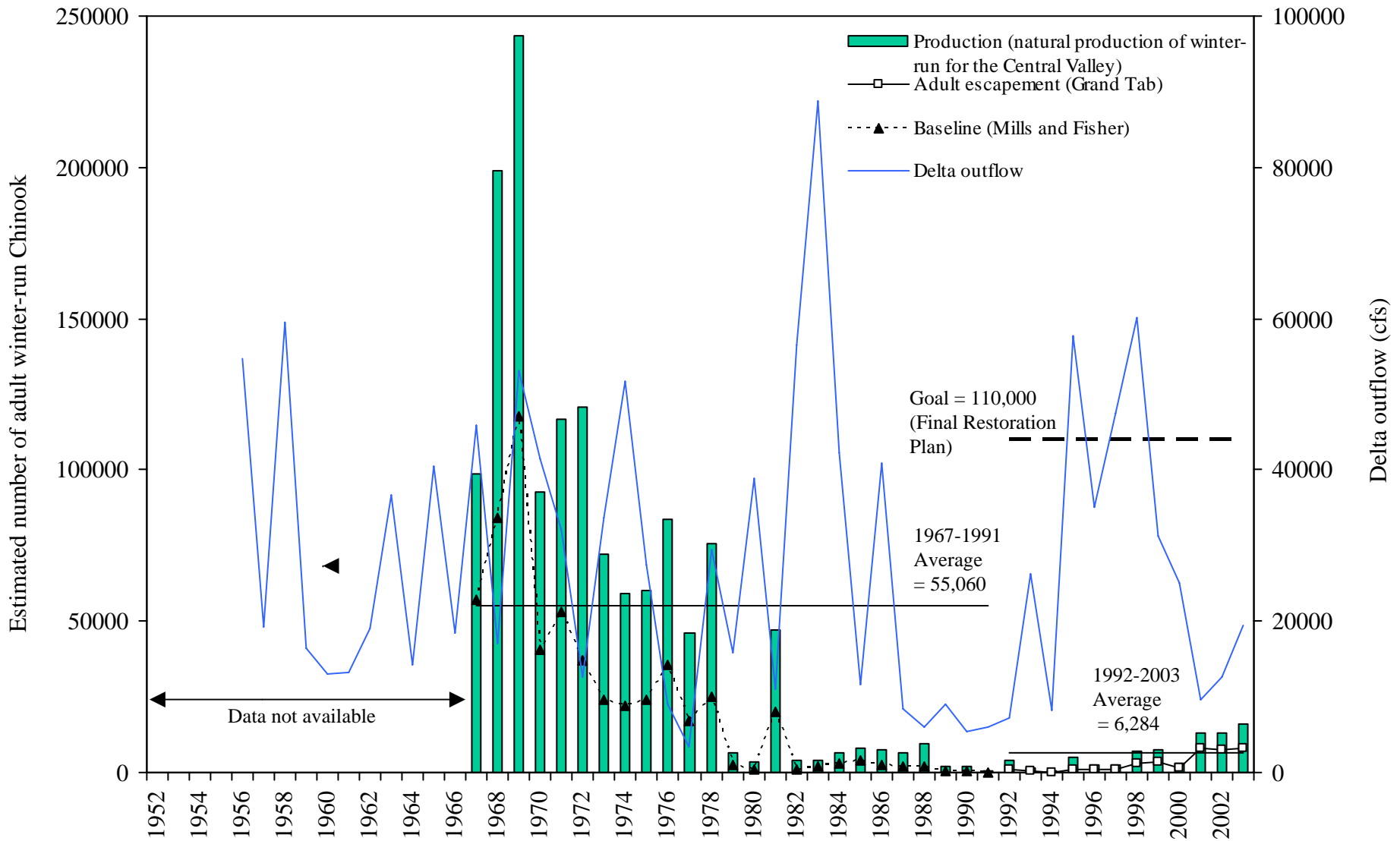


Figure 3. Estimated yearly adult natural production, and in river adult escapements of winter-run Chinook salmon in the Central Valley. 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967-1991) are from Mills and Fisher (CDFG, 1994). Mean yearly Delta outflow (cfs) from IEP Dayflow.

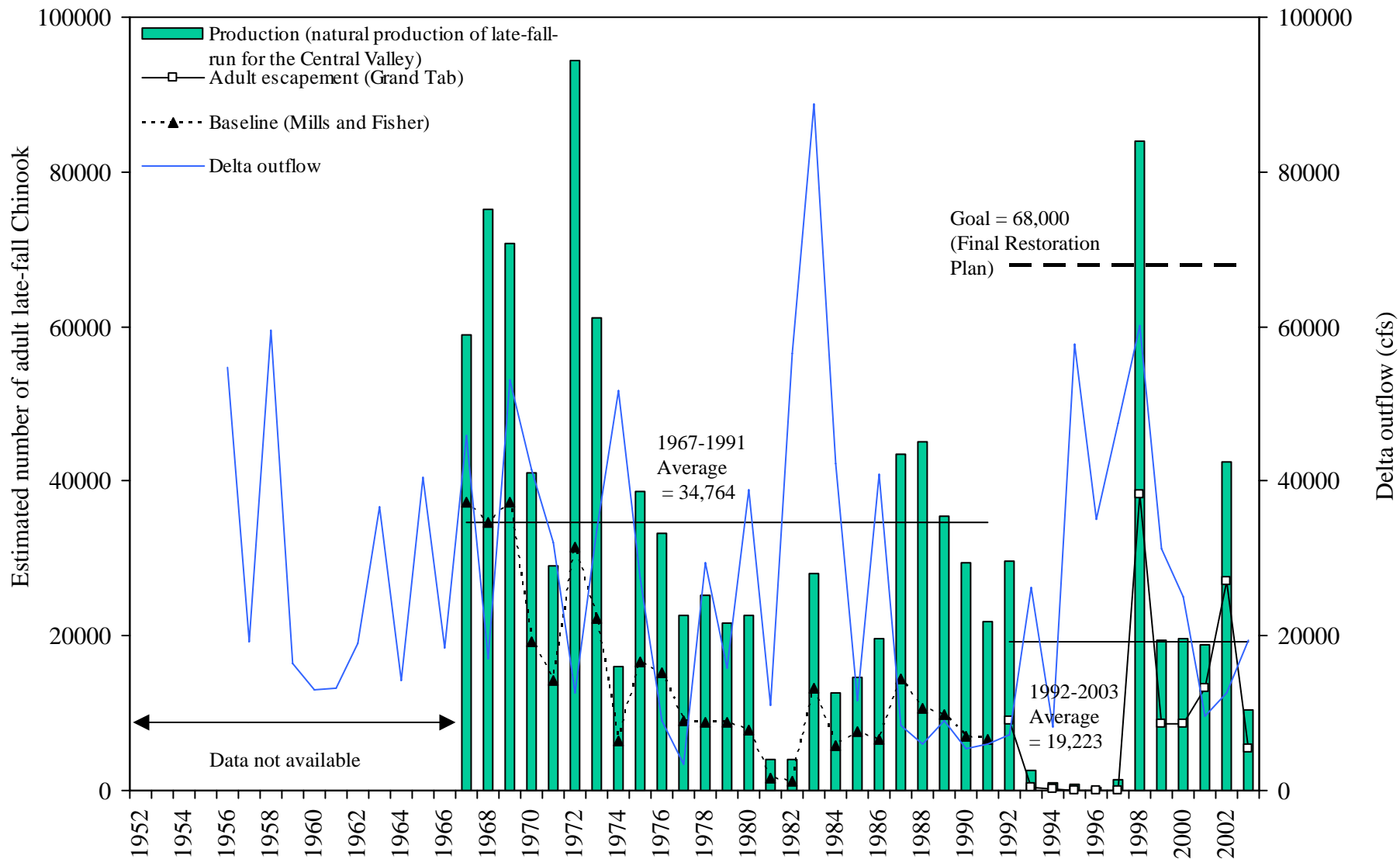


Figure 4. Estimated yearly adult natural production, and in river adult escapements of late-fall-run Chinook salmon in the Central Valley. 1967 – 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly Delta outflow (cfs) from IEP Dayflow.

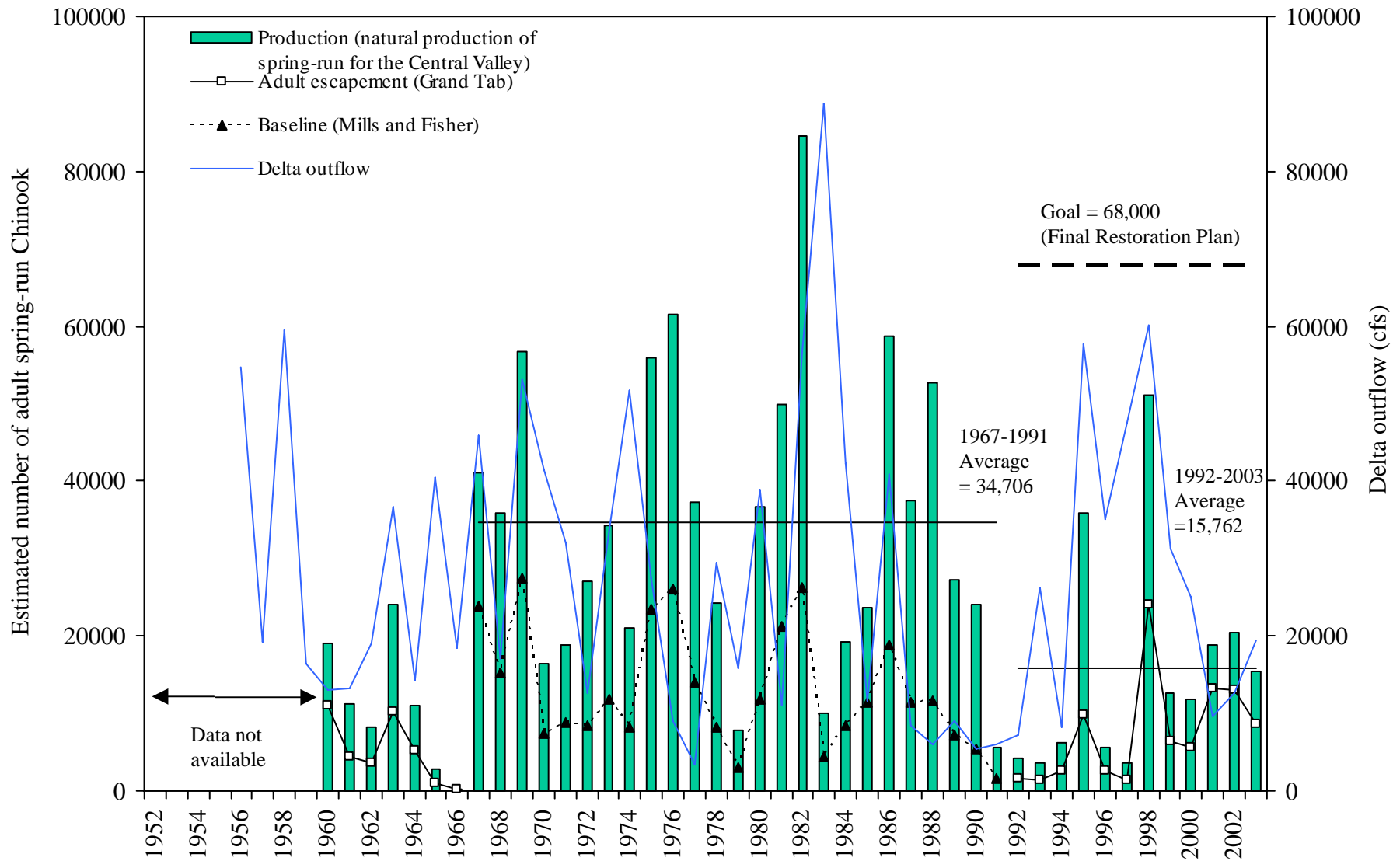


Figure 5. Estimated yearly adult natural production, and in river adult escapements of spring-run Chinook salmon in the Central Valley. 1960 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly Delta outflow (cfs) from IEP Dayflow.

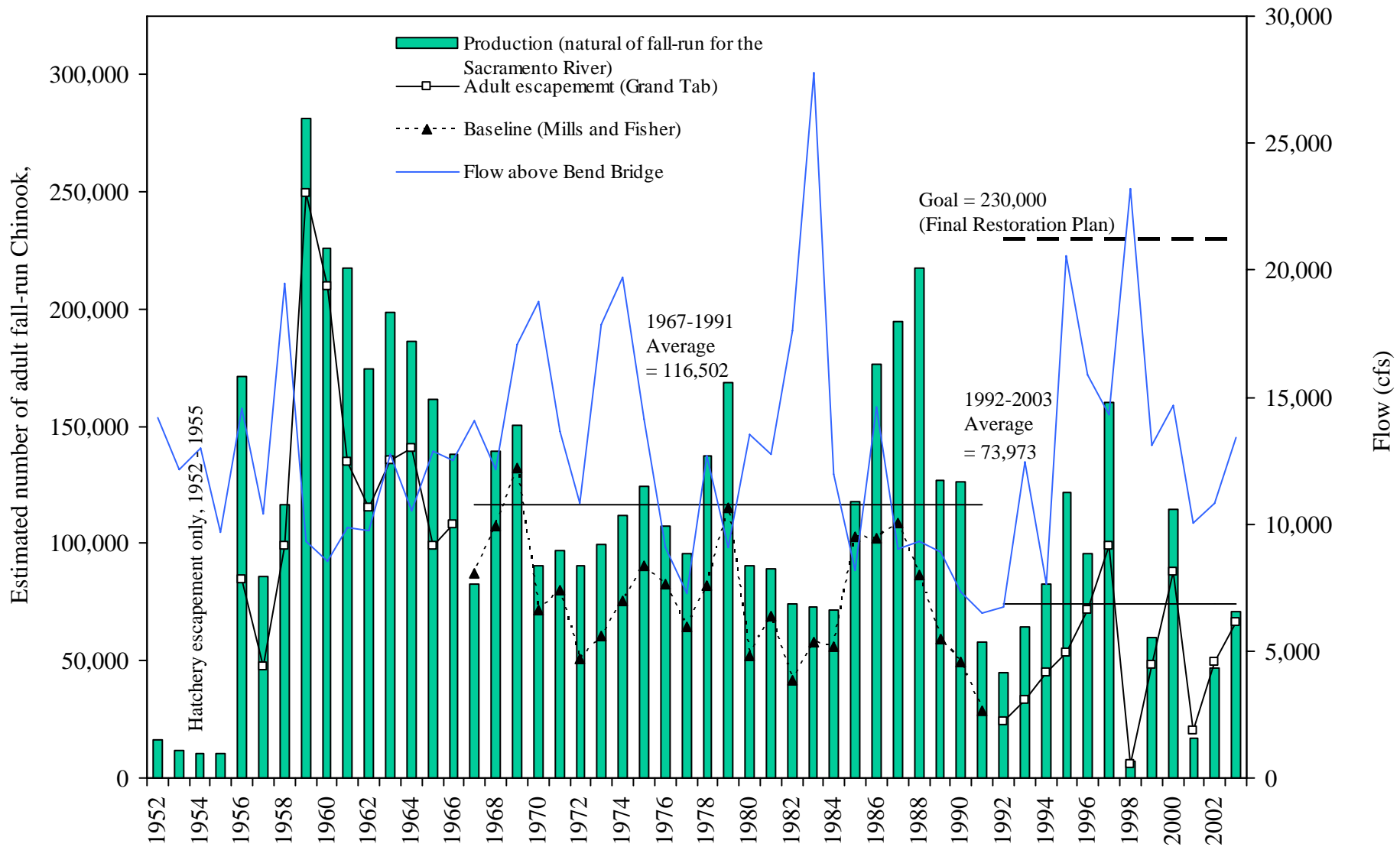


Figure 6. Estimated yearly adult natural production, and in river adult escapements of Sacramento River fall-run Chinook salmon. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Flow information (mean yearly cfs) is from USGS site 11377100 above Bend Bridge. Mean yearly flow (cfs) information from USGS 11377100, Sacramento River above Bend Bridge.

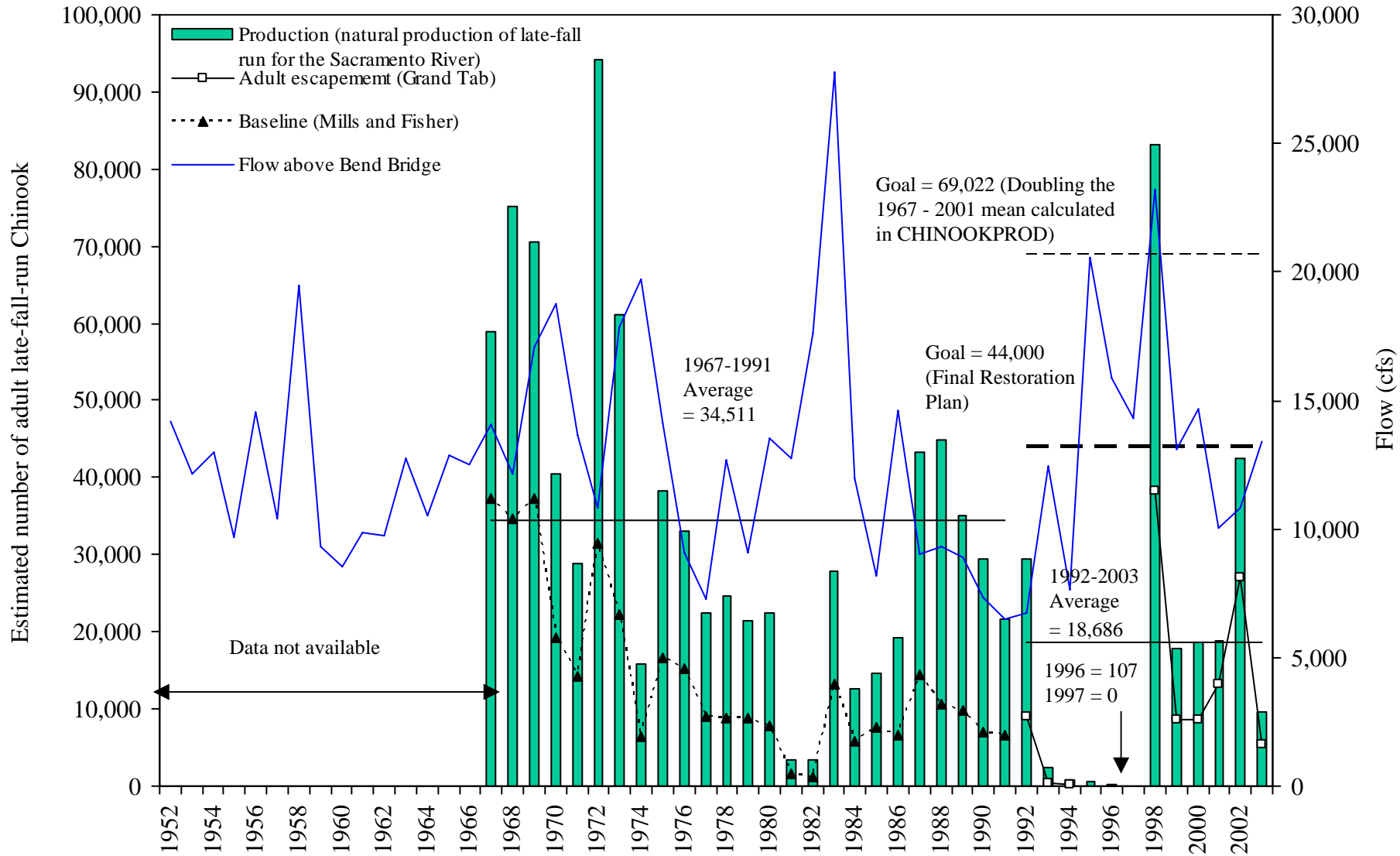


Figure 7. Estimated yearly adult natural production, and in river adult escapements of Sacramento River late-fall-run Chinook salmon. 1992 -2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Note that the doubling goal in the Final Restoration Plan is not double the 1967 - 2001 arithmetic mean as calculated in CHINOOKPROD. Mean yearly flow (cfs) information from USGS 11377100, Sacramento River above Bend Bridge

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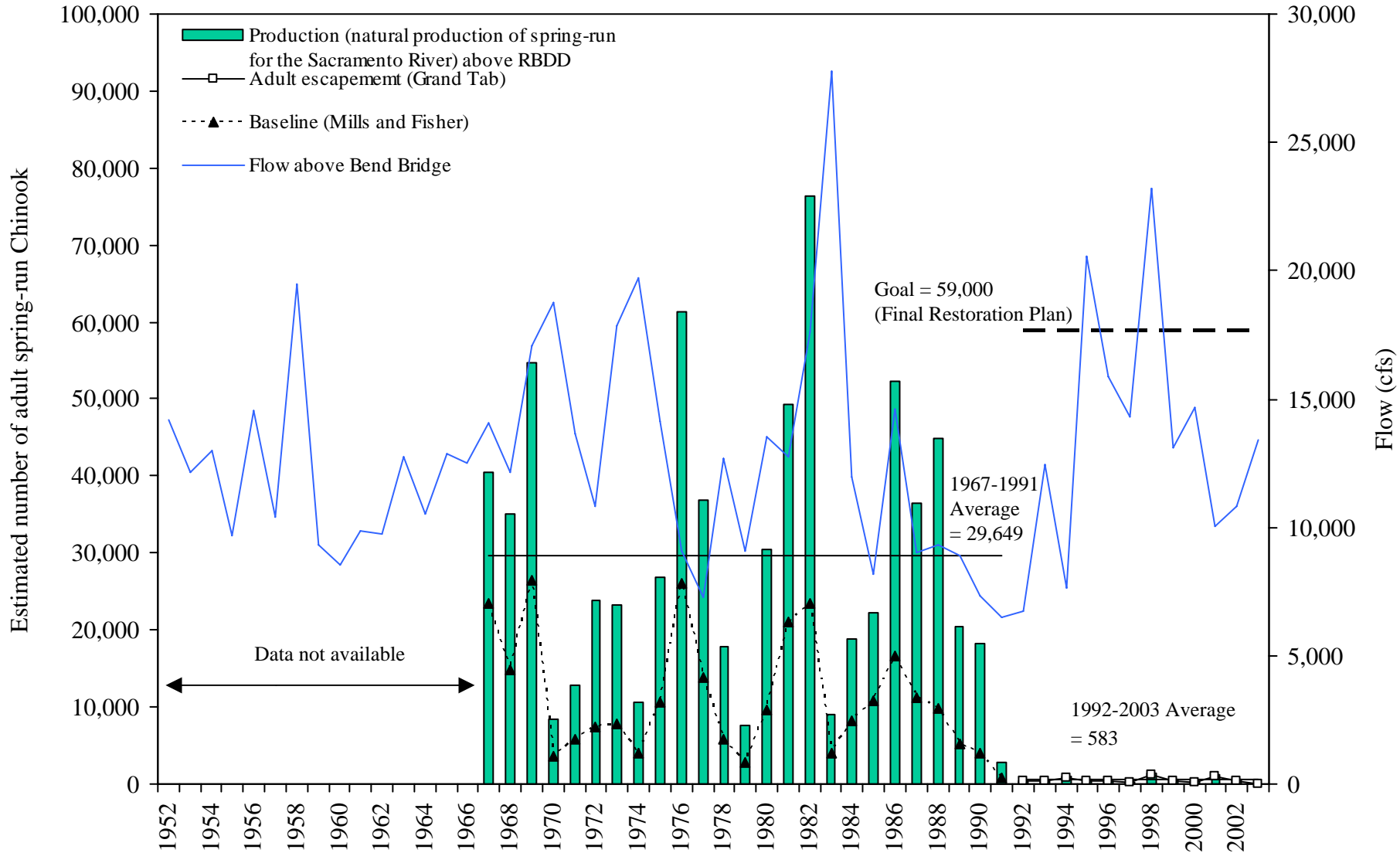


Figure 8. Estimated yearly adult natural production, and in river adult escapements of Sacramento River spring-run Chinook salmon. 1992-2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11377100, Sacramento River above Bend Bridge.

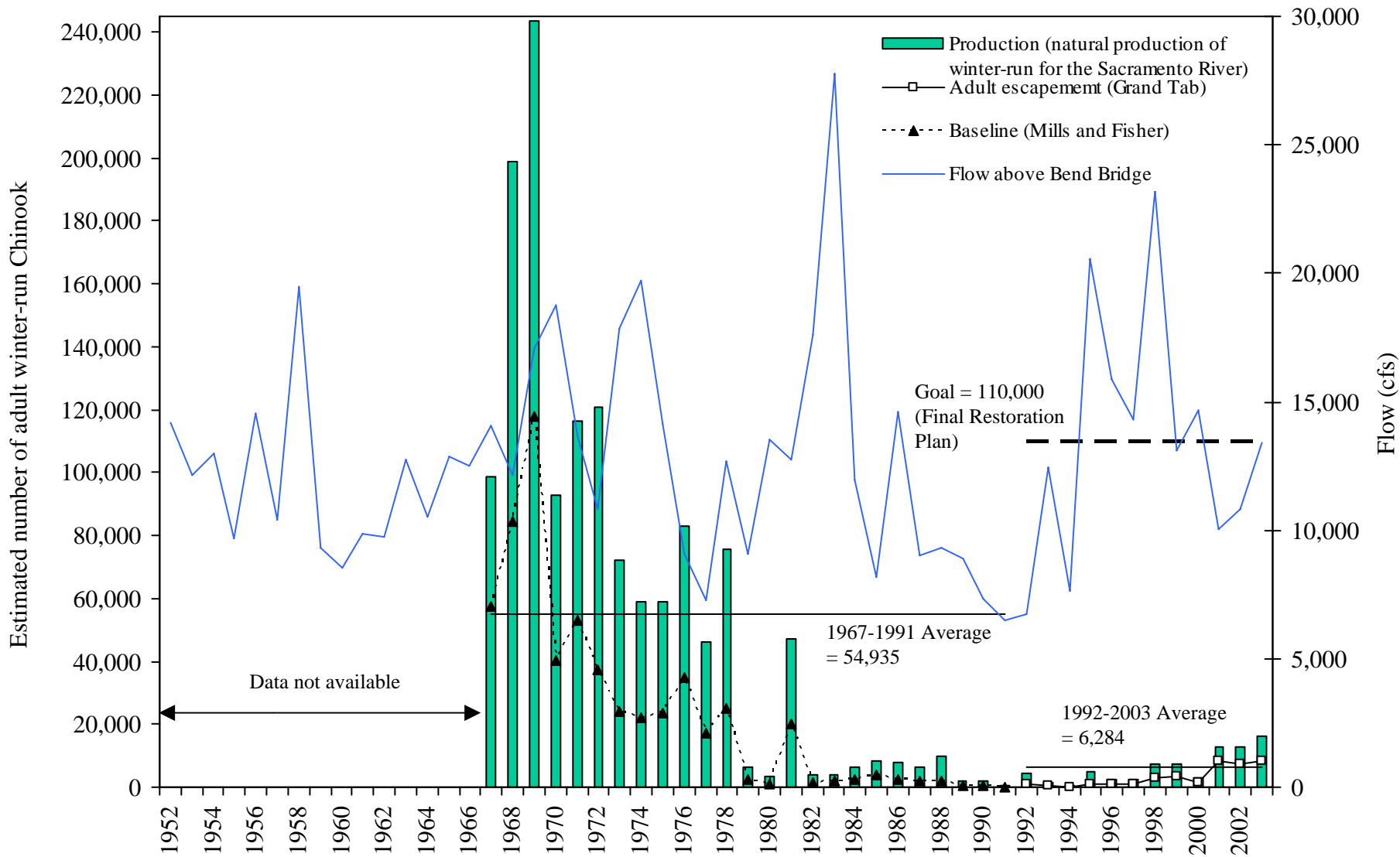


Figure 9. Estimated yearly adult natural production, and in river adult escapements of Sacramento River winter-run Chinook salmon. 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11377100, Sacramento River above Bend Bridge.

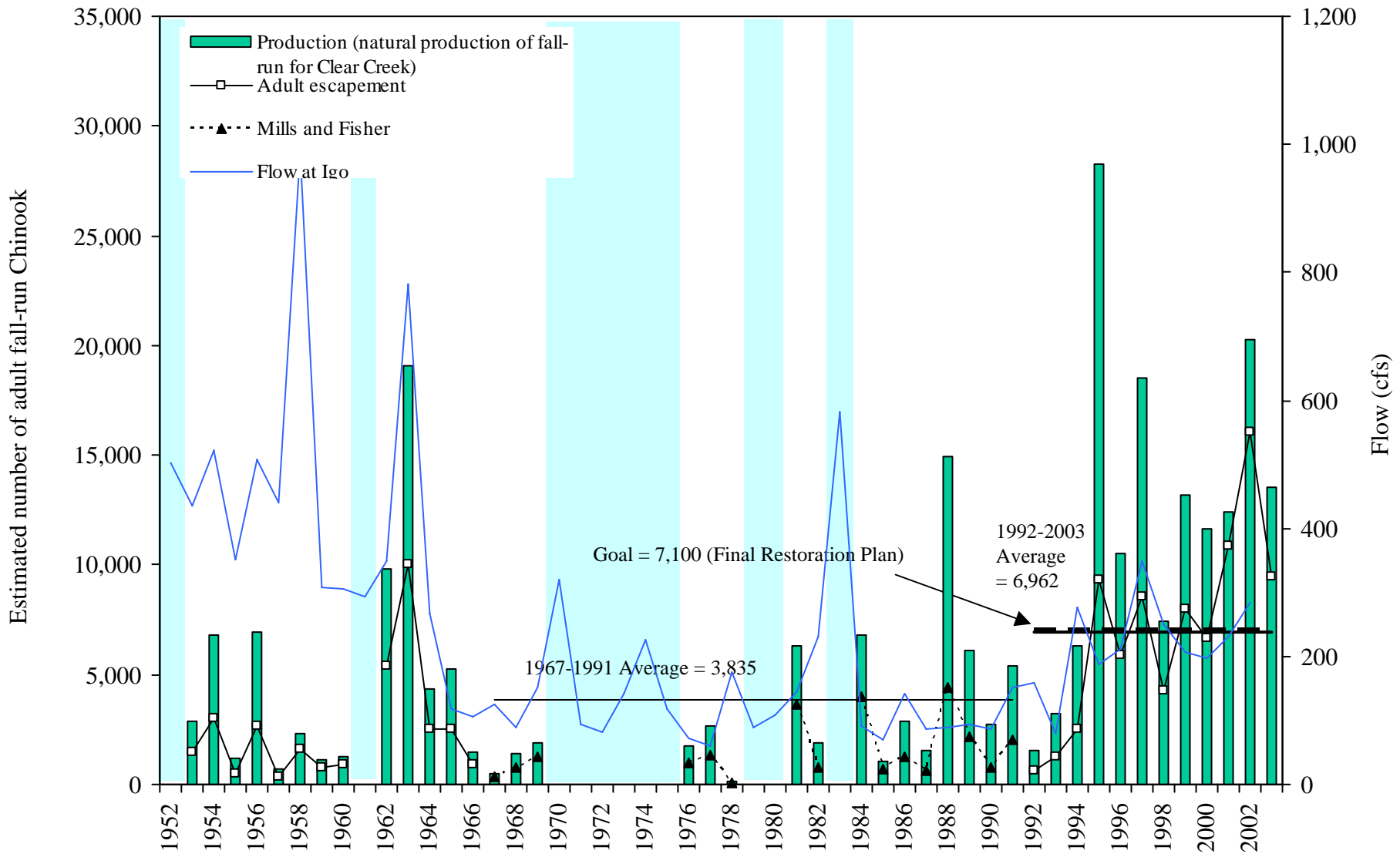


Figure 10. Estimated yearly adult natural production, and in river adult escapements of Clear Creek fall-run Chinook salmon.
 ■ = data was not available for 1961, 1970-1975, 1979 and 1980. 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11372000 Clear Creek near Igo.

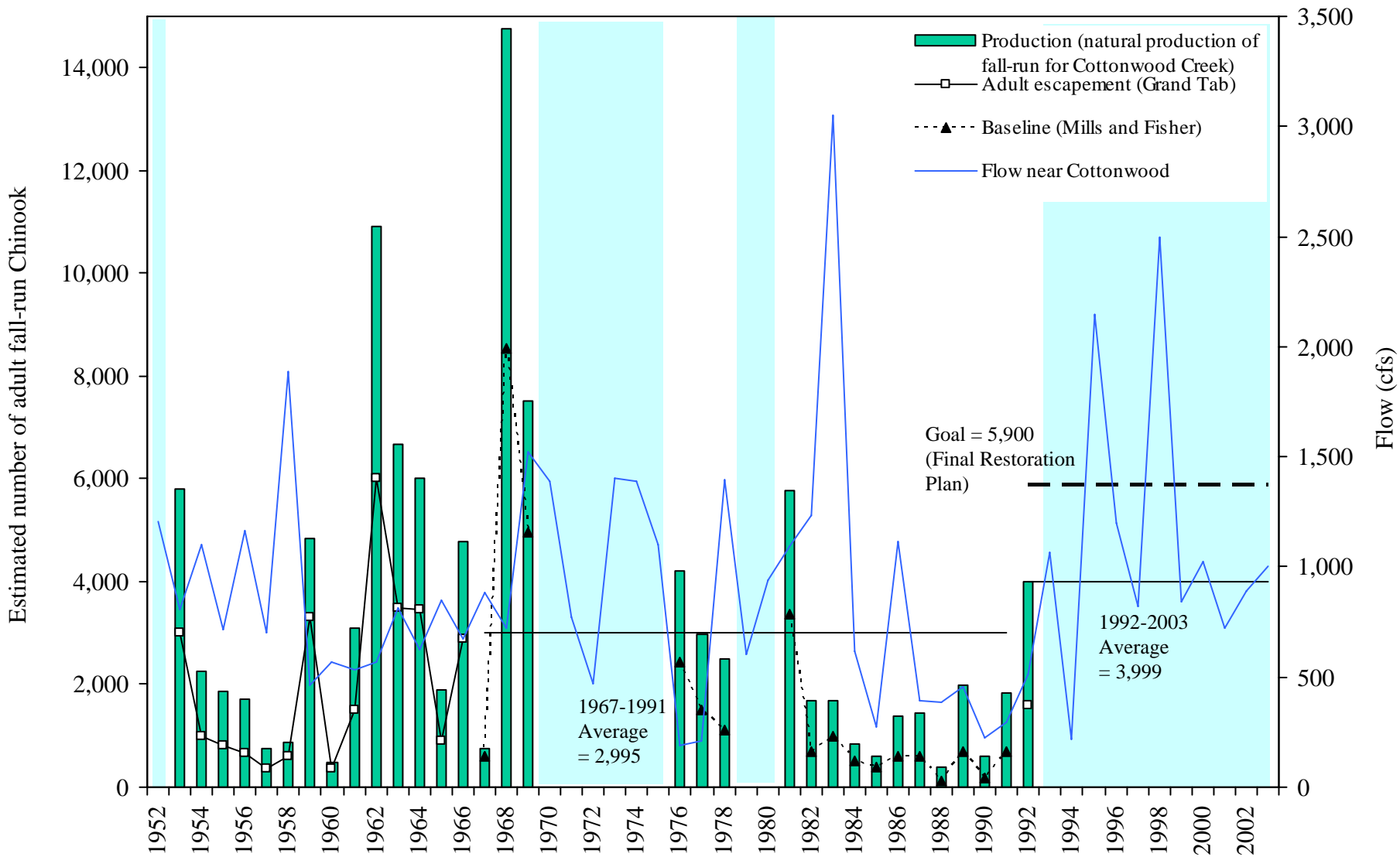


Figure 11. Estimated yearly adult natural production, and in river adult escapements of Cottonwood Creek fall-run Chinook salmon.
 □ = data was not available for 1952, 1970 - 1975, 1979 - 1980 and 1993 - 2003. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11376000 Cottonwood Creek near Cottonwood.

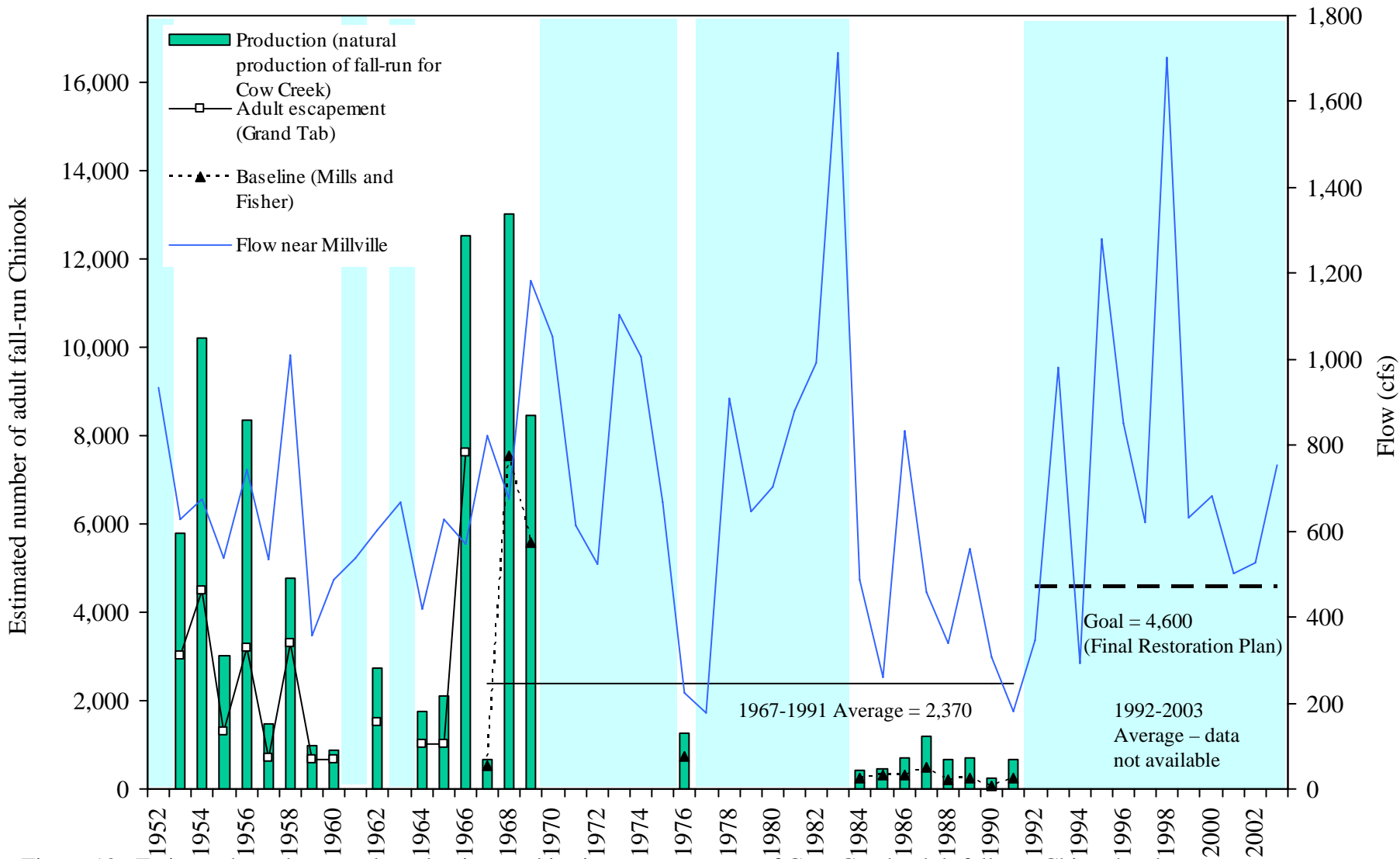


Figure 12. Estimated yearly natural production, and in river escapements of Cow Creek adult fall-run Chinook salmon.
 □ = data was not available for 1952, 1961, 1963, 1970 - 1975, 1977 - 1983, and 1992 - 2003. 1952 - 1966 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Flow information from USGS 11376550 Battle Creek below Coleman National Fish Hatchery. Mean yearly flow (cfs) information from USGS 11374000 Cow Creek near Millville.

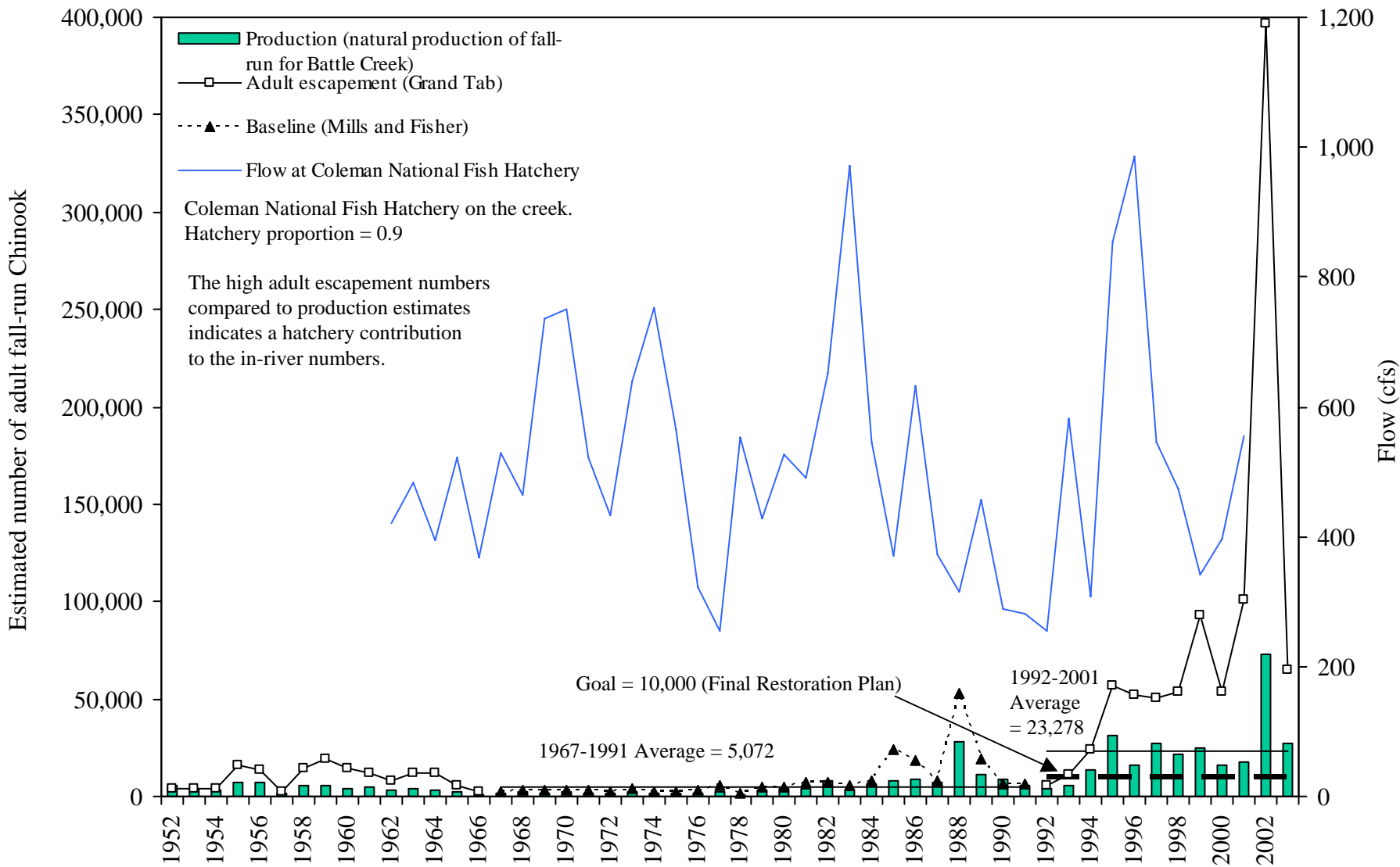


Figure 13. Estimated yearly natural production, and in river escapements of Battle Creek adult fall-run Chinook salmon. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11376550 Battle Creek below Coleman National Fish Hatchery.

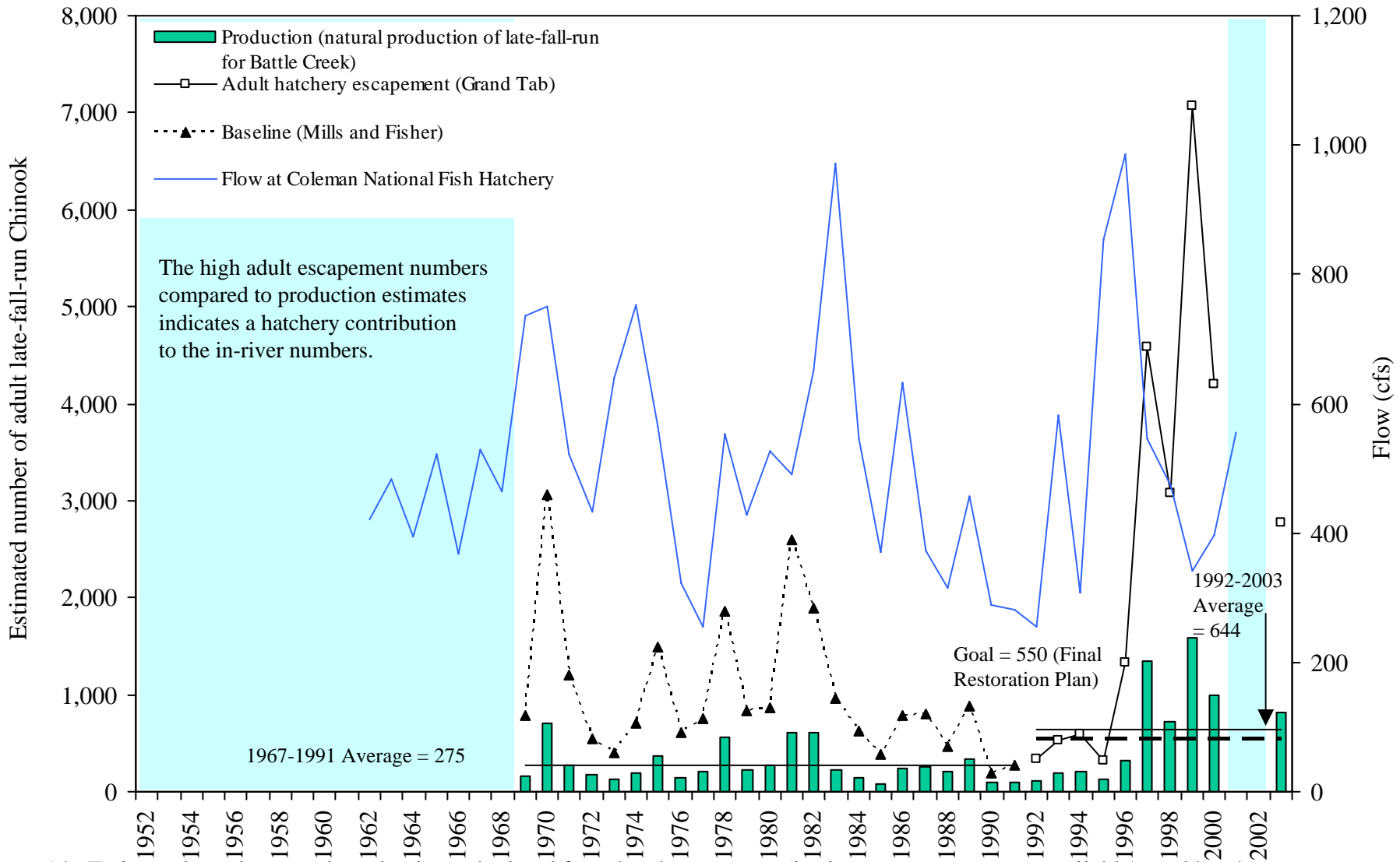


Figure 14. Estimated yearly natural production calculated from hatchery returns (in river returns were not available), and hatchery returns of Battle Creek adult late-fall-run Chinook salmon. 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004).

□ = data was not available for 1952-1968, 1978-1980, 1984 and 2001-2003. Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11376550 Battle Creek below Coleman National Fish Hatchery.

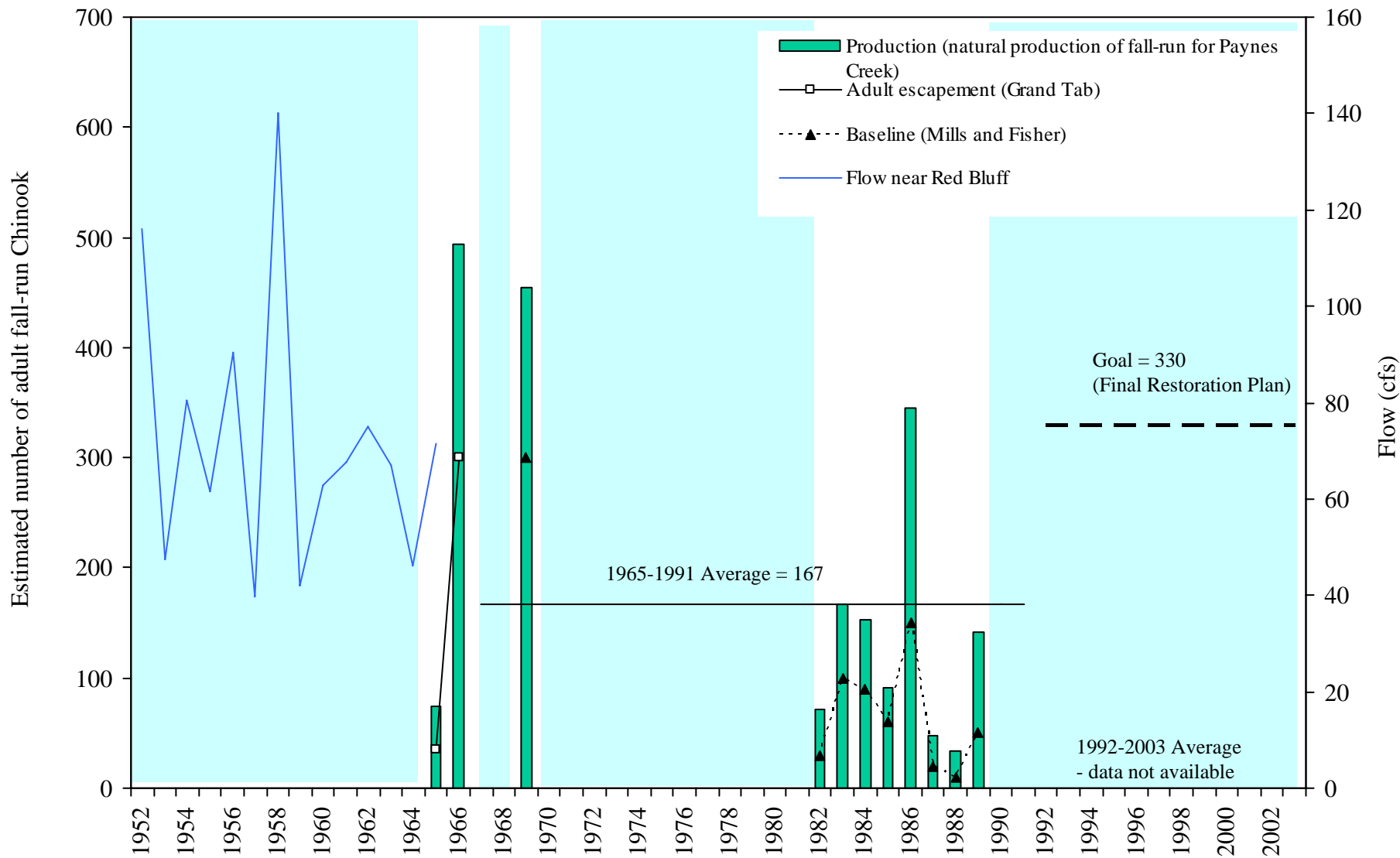


Figure 15. Estimated yearly natural production, and in river escapements of Paynes Creek adult fall-run Chinook salmon.
 [Shaded Area] = data was not available for 1952 - 1964, 1967 - 1968, 1970 - 1981, and 1992 - 2003. 1965-1966 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11377500, Paynes Creek near Red Bluff.

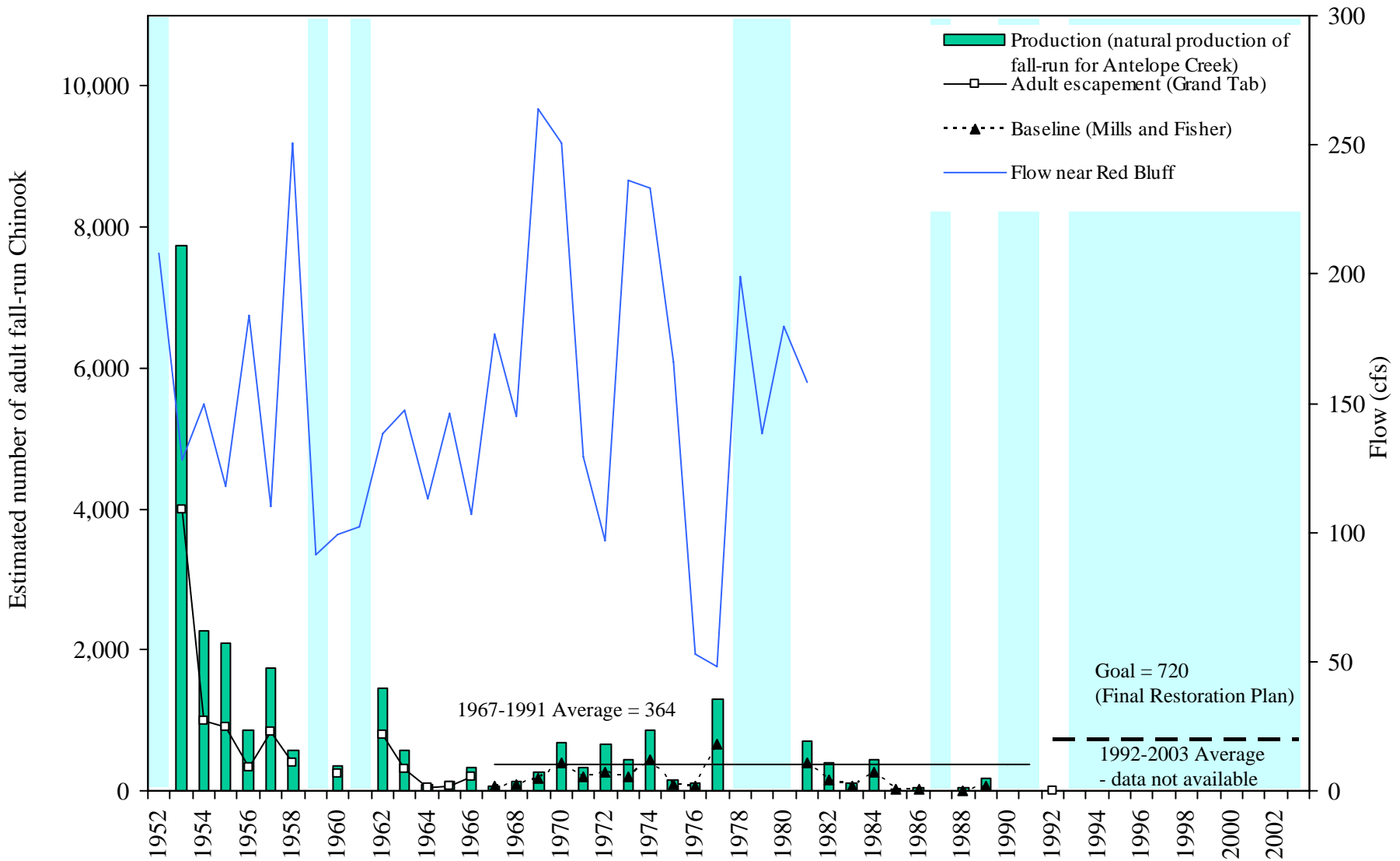


Figure 16. Estimated yearly natural production, and in river escapements of Antelope Creek adult fall-run Chinook salmon.
 = data was not available for 1952, 1959, 1961, 1978 - 1980, 1987,1990, 1991, and 1993 - 2003. 1952 - 1967 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11379000 Antelope Creek near Red Bluff.

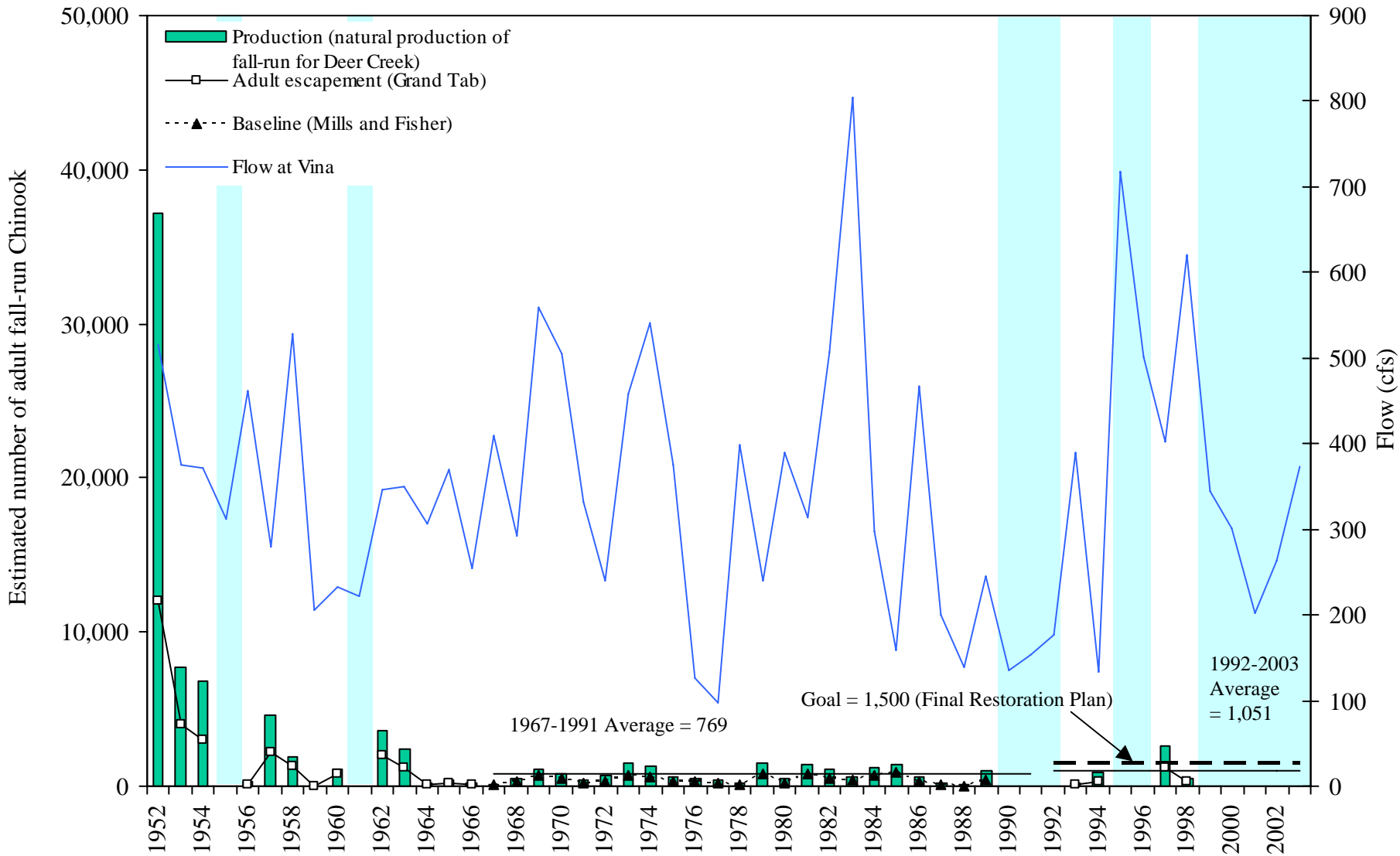


Figure 17. Estimated yearly natural production, and in river escapements of Deer Creek adult fall-run Chinook salmon.
 [Light blue shaded area] = data was not available for 1955, 1961, 1990 - 1992, 1995, 1996, and 1999 - 2003. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11383500 Deer Creek near Vina.

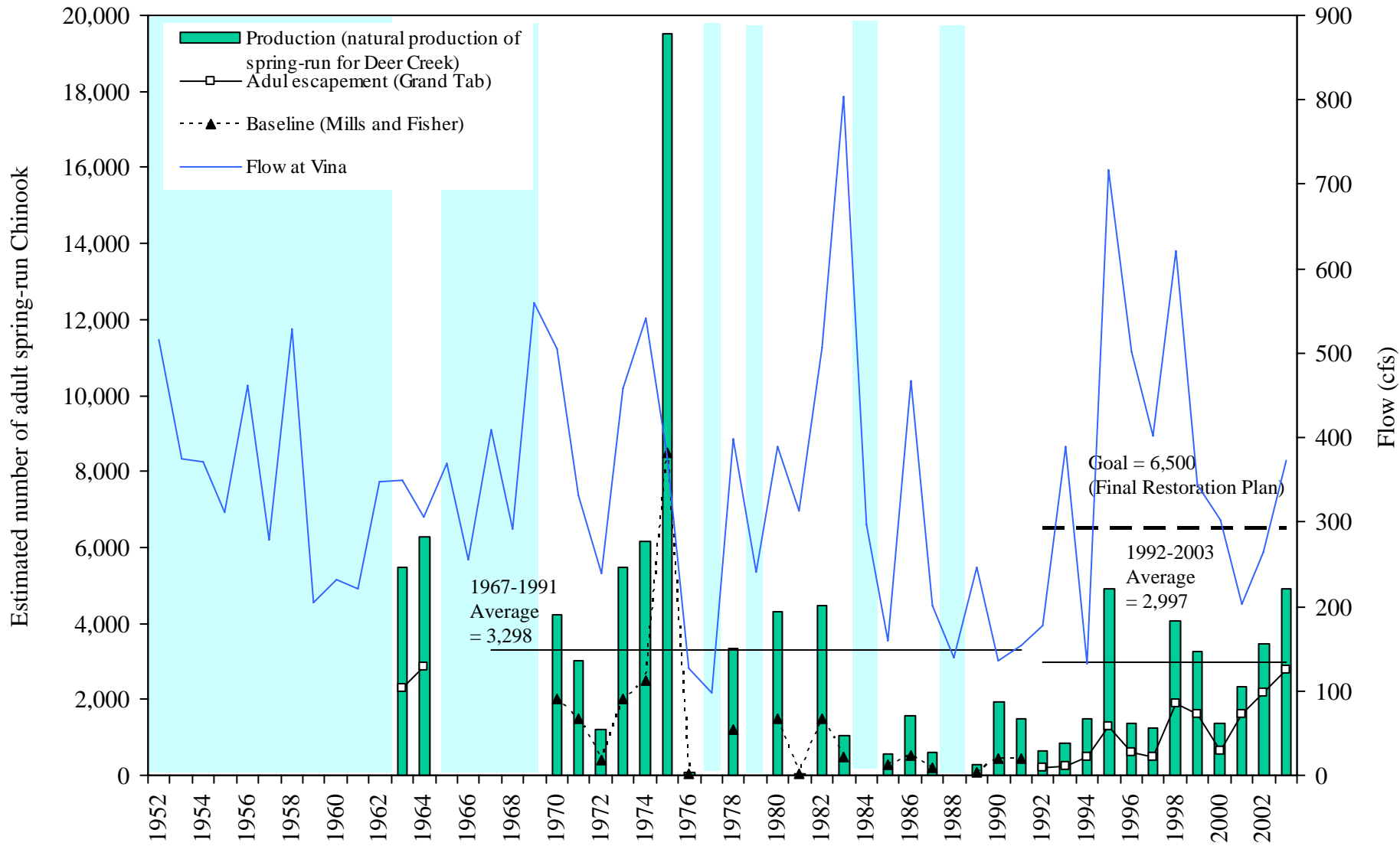


Figure 18. Estimated yearly natural production, and in river escapements of Deer Creek adult spring-run Chinook salmon.
 = data was not available for 1952 - 1962, 1965 - 1969, 1977, 1979, 1984, and 1988. 1952 - 1966, and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11383500 Deer Creek near Vina.

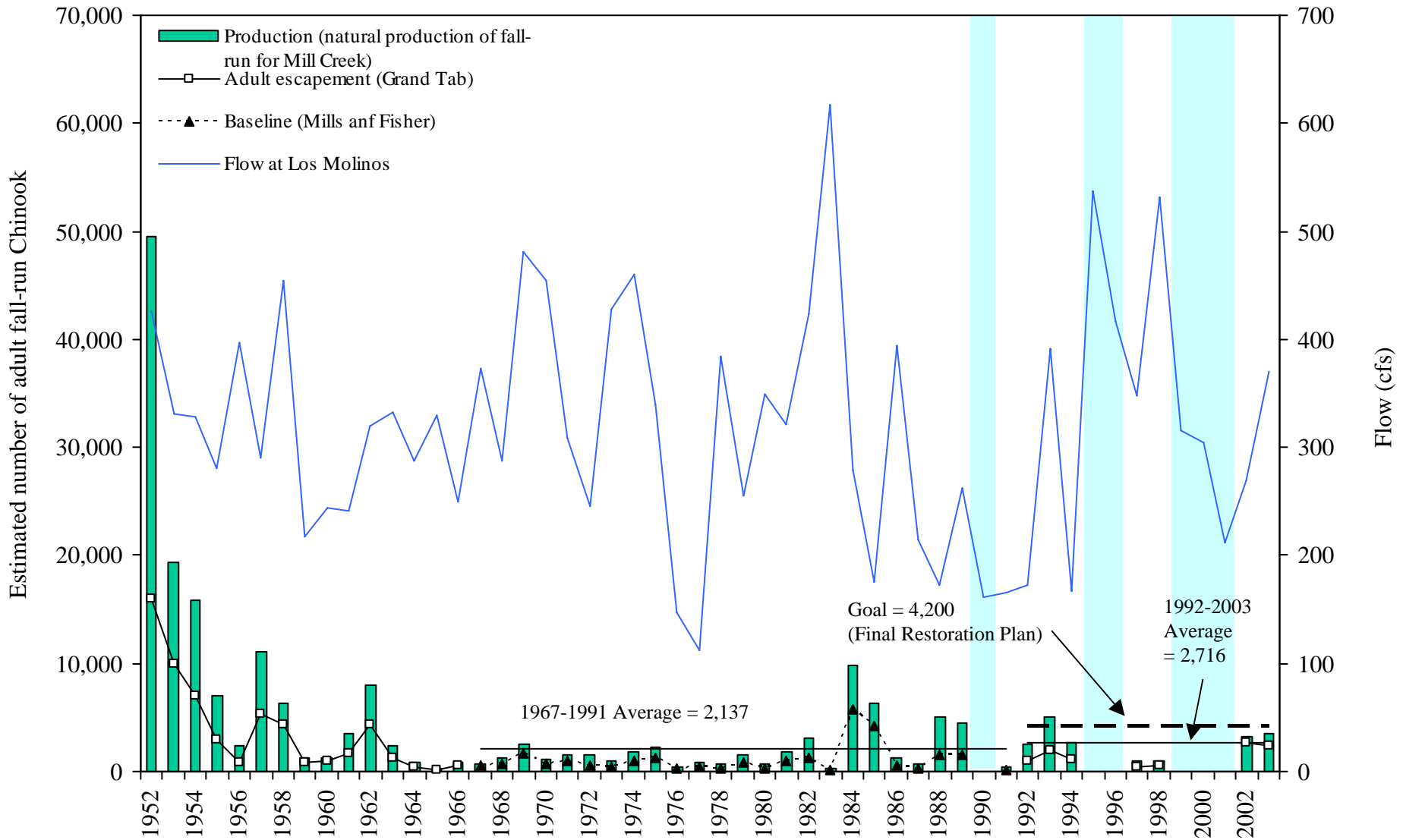


Figure 19. Estimated yearly natural production, and in river escapements of Mill Creek adult fall-run Chinook salmon.
 [Light blue shaded box] = data was not available for 1990, 1995 - 1996, and 1999 - 2001. 1952 -1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11381500, Mill Creek near Los Molinos.

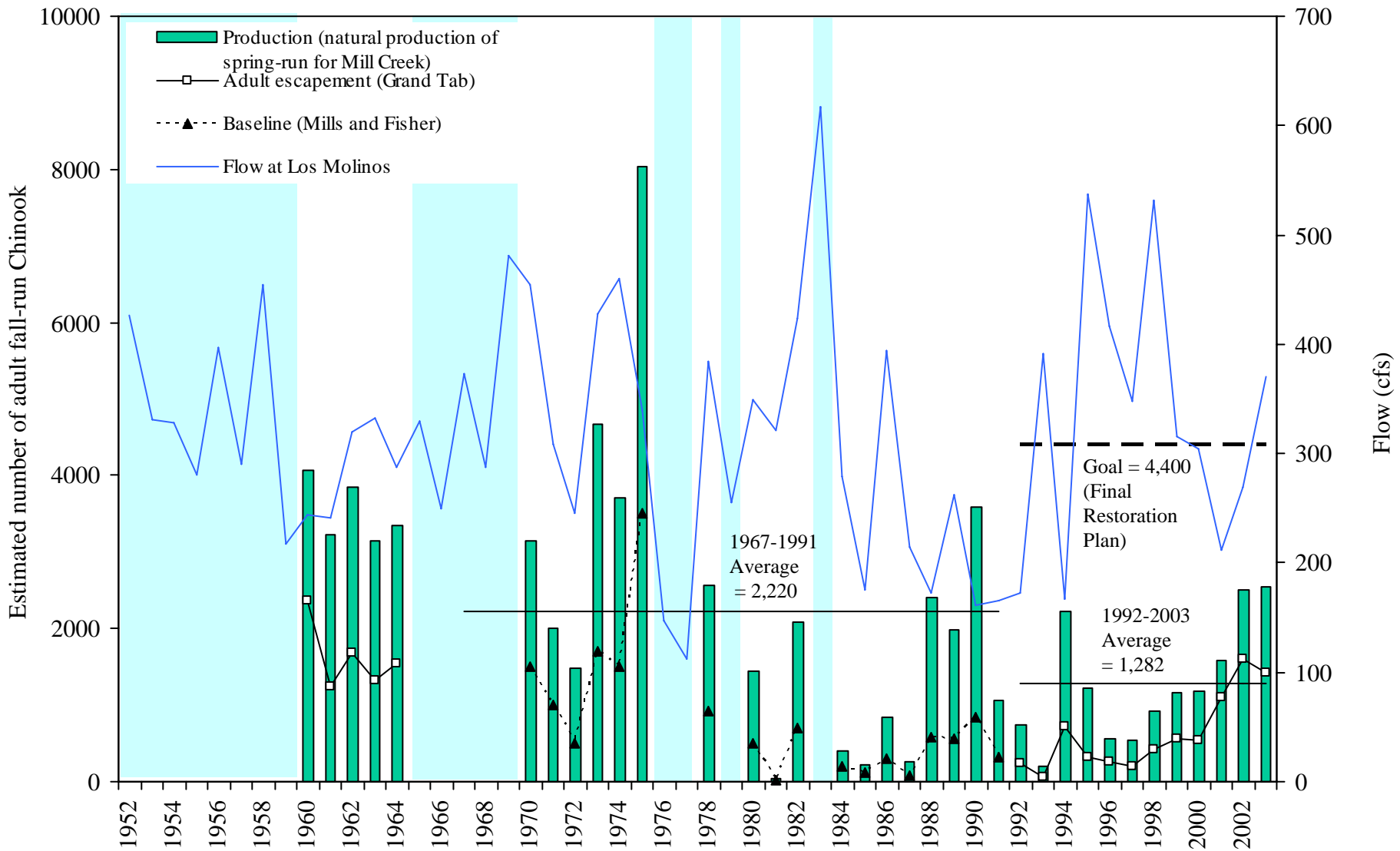


Figure 20. Estimated yearly natural production, and in river escapements of Mill Creek adult spring-run Chinook salmon.
 □ = data was not available for 1952 - 1959, 1965 - 1969, 1976, 1979, and 1983. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11381500, Mill Creek near Los Molinos.

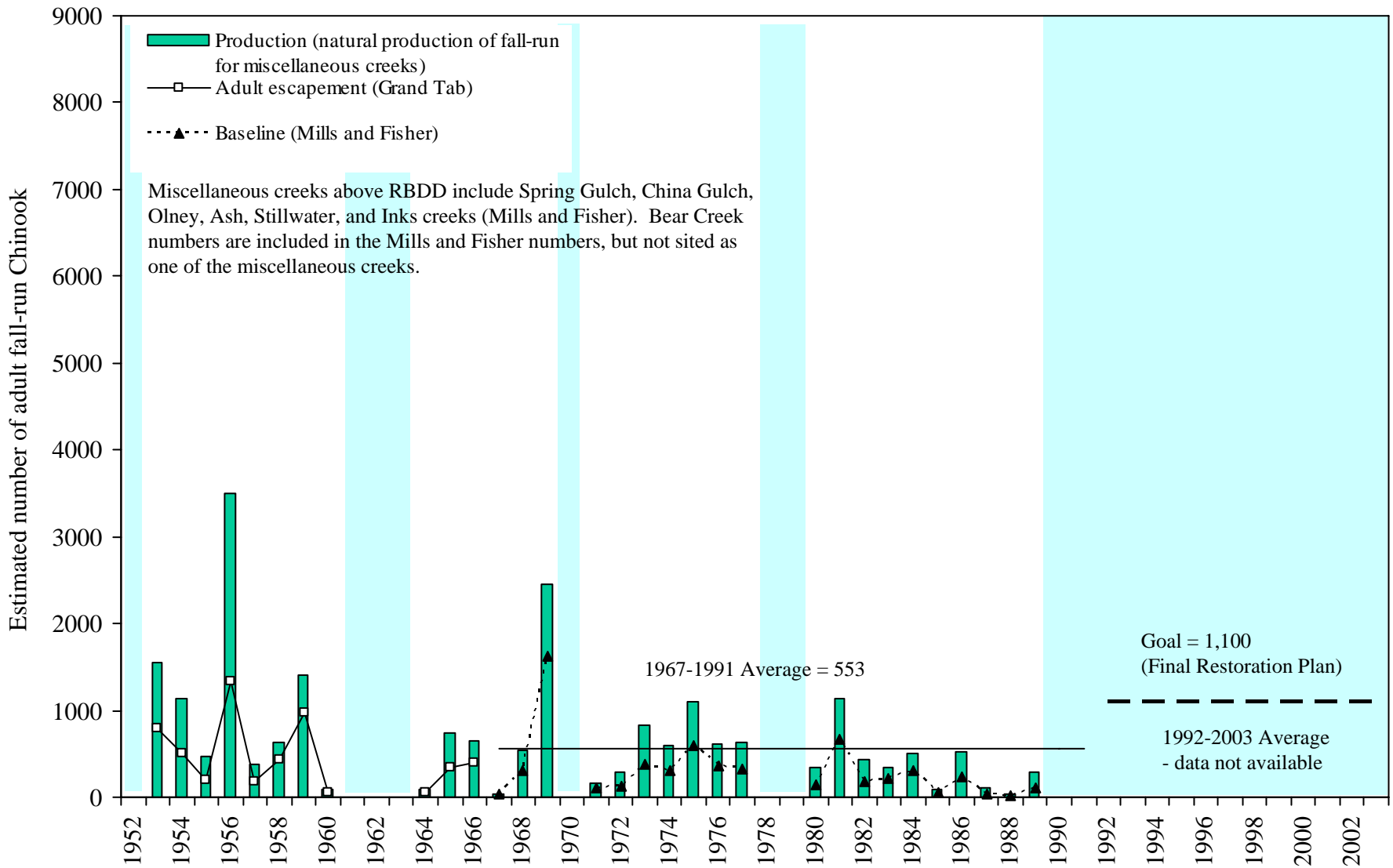


Figure 21. Estimated yearly natural production of miscellaneous creeks adult fall-run Chinook salmon above RBDD.

□ = data was not available for 1952, 1961 - 1963, 1971 - 1975, and 1977 - 2003. 1952 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994).

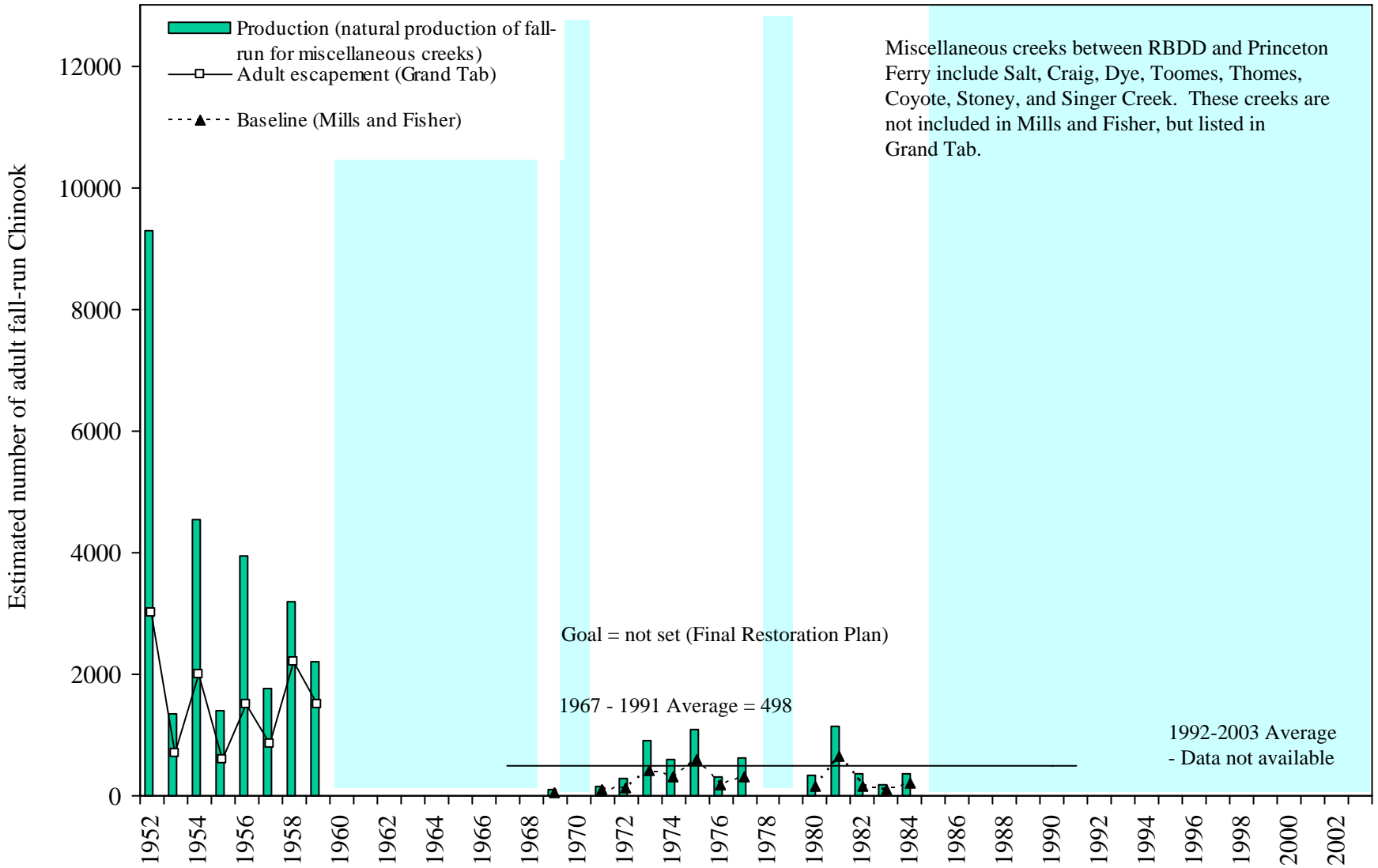


Figure 22. Estimated yearly natural production of miscellaneous creeks adult fall-run Chinook salmon below RBDD. [Light blue shaded area] = data was not available for 1960-1968, 1970, 1978, 1979, and 1985 - 2003. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994).

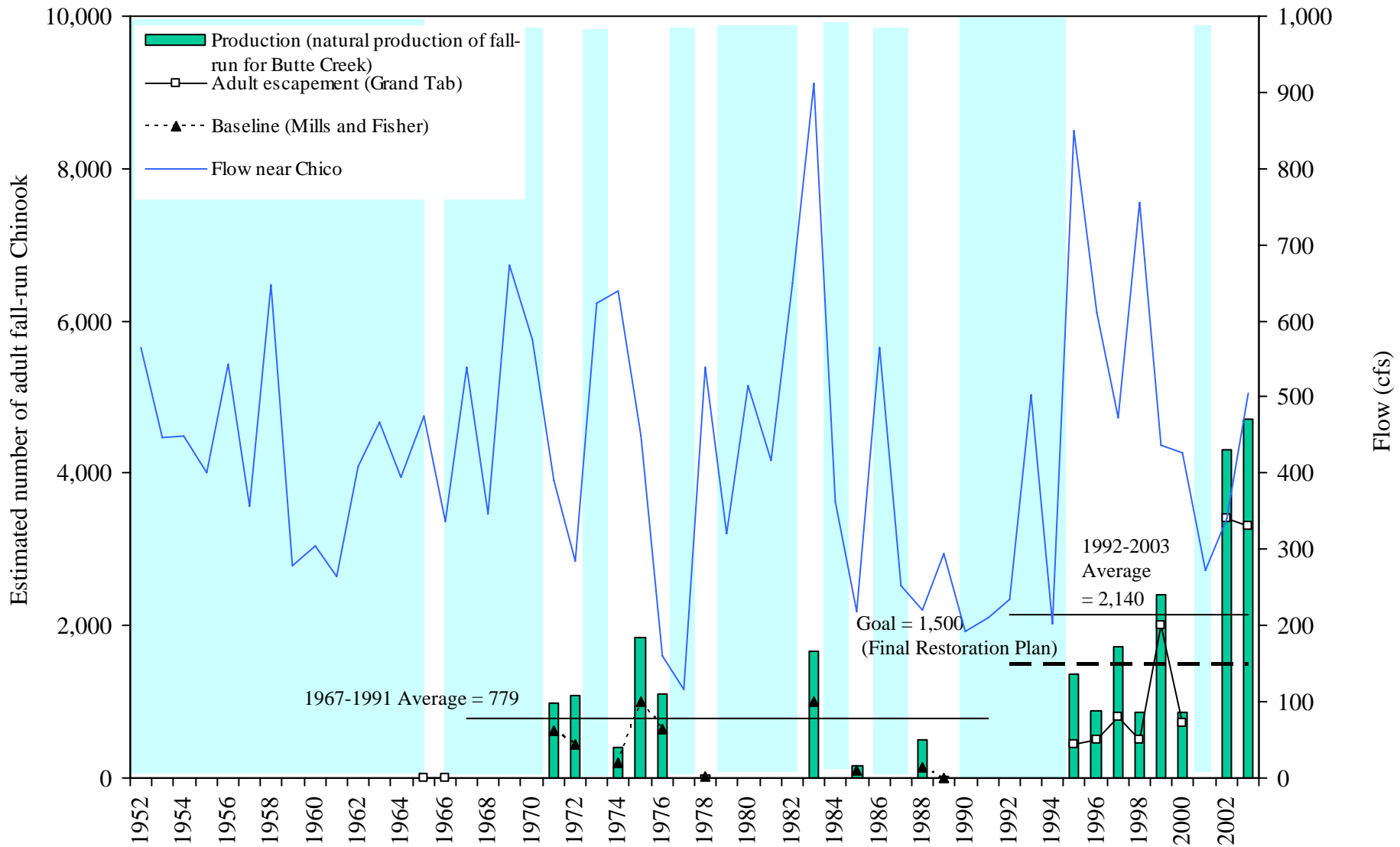


Figure 23. Estimated yearly natural production, and in river escapements of Butte Creek adult fall-run Chinook salmon.

□ = data was not available for 1952 - 1964, 1966 - 1970, 1973, 1977, 1979 - 1982, 1984, 1986, 1987, 1990 - 1994, and 2001. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11390000 Butte Creek near Chico.

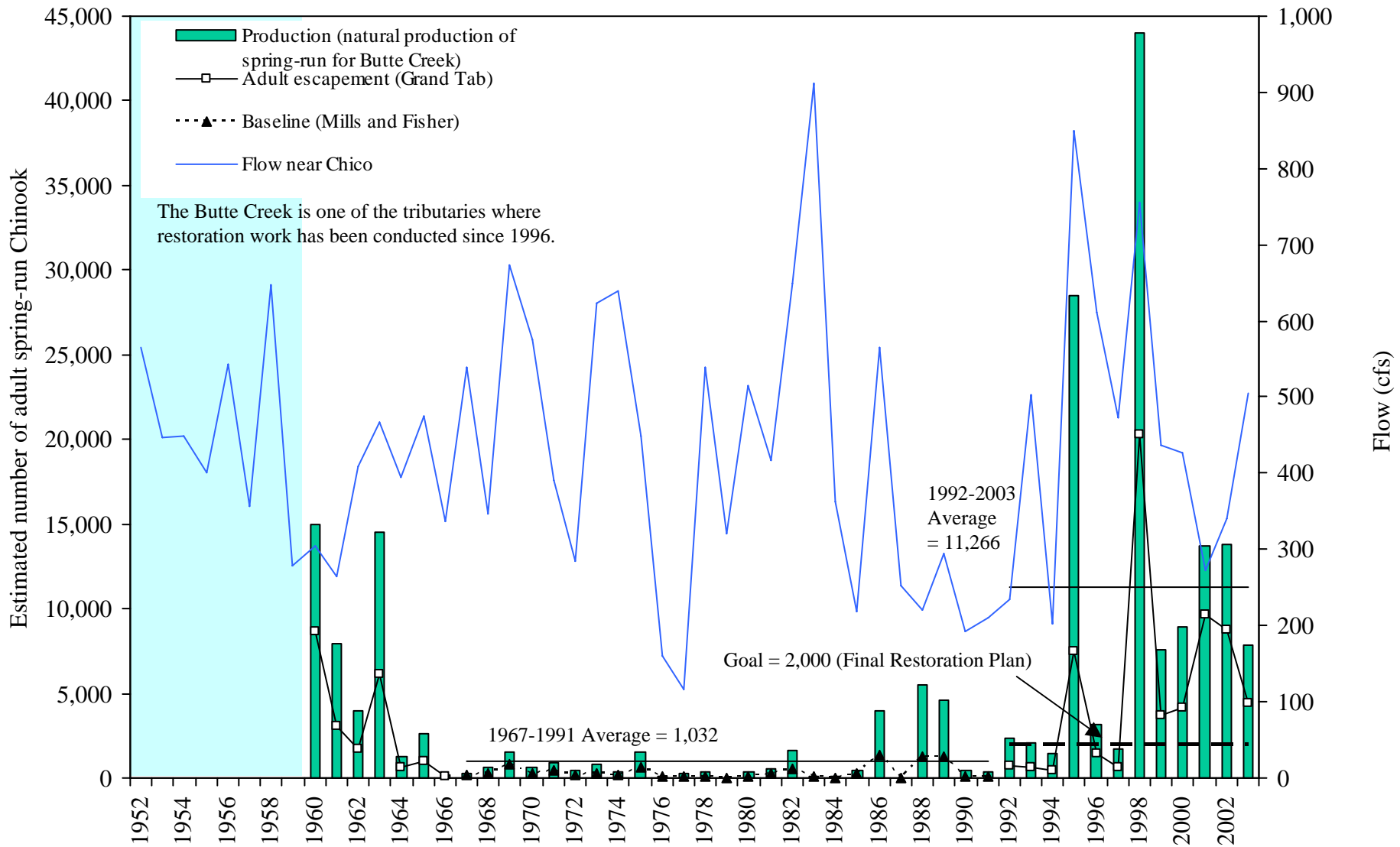


Figure 24. Estimated yearly natural production, and in river escapements of Butte Creek adult spring-run Chinook salmon. 1952- 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). [light blue box] = data was not available for 1952 - 1959, and 1991. Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11390000 Butte Creek near Chico.

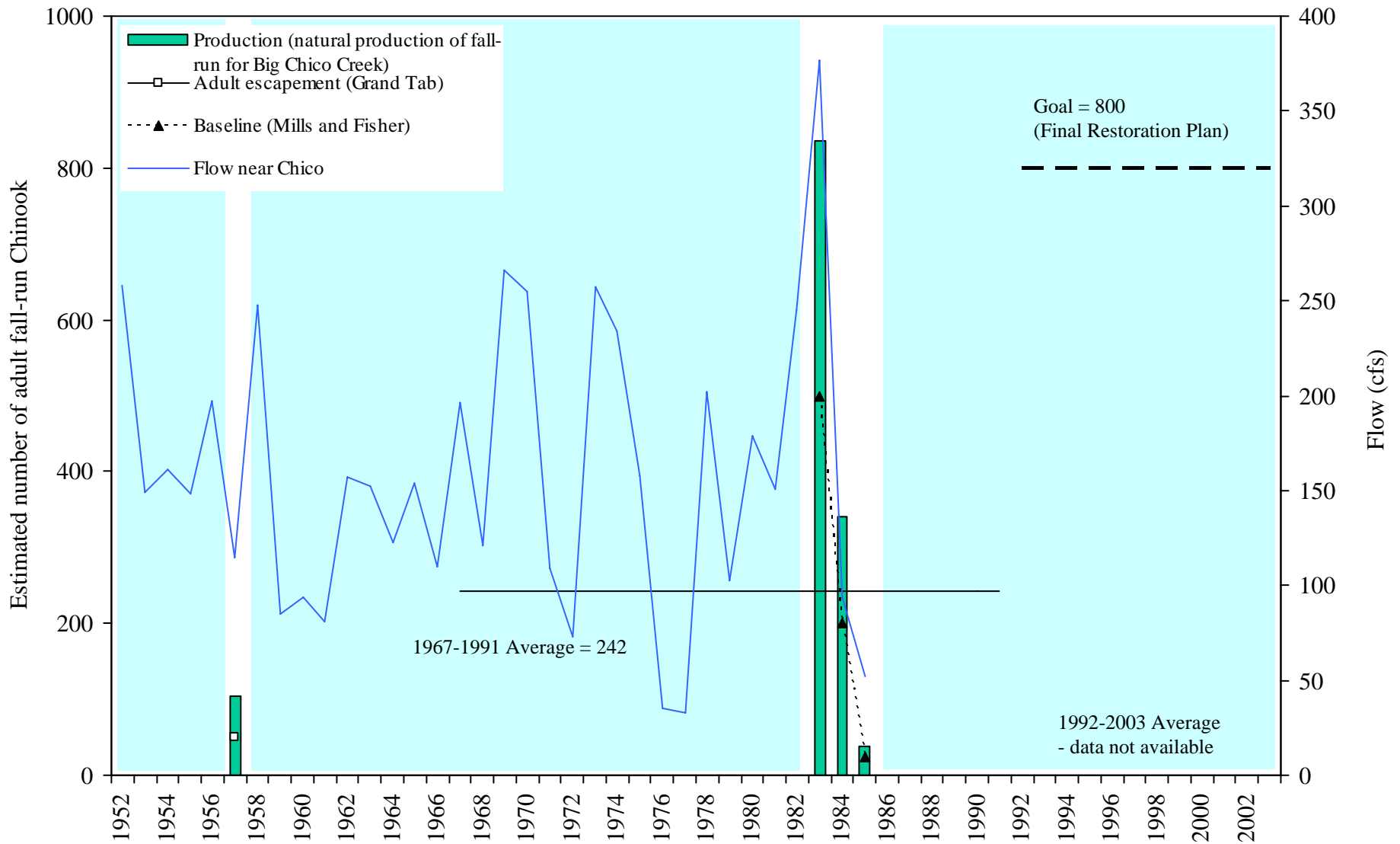


Figure 25. Estimated yearly natural production, and in river escapements of Big Chico Creek adult fall-run Chinook salmon.
 □ = data was not available for 1952 - 1956, 1958 - 1982, and 1986 - 2003. 1952 - 1967 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11384000 Big Chico Creek near Chico.

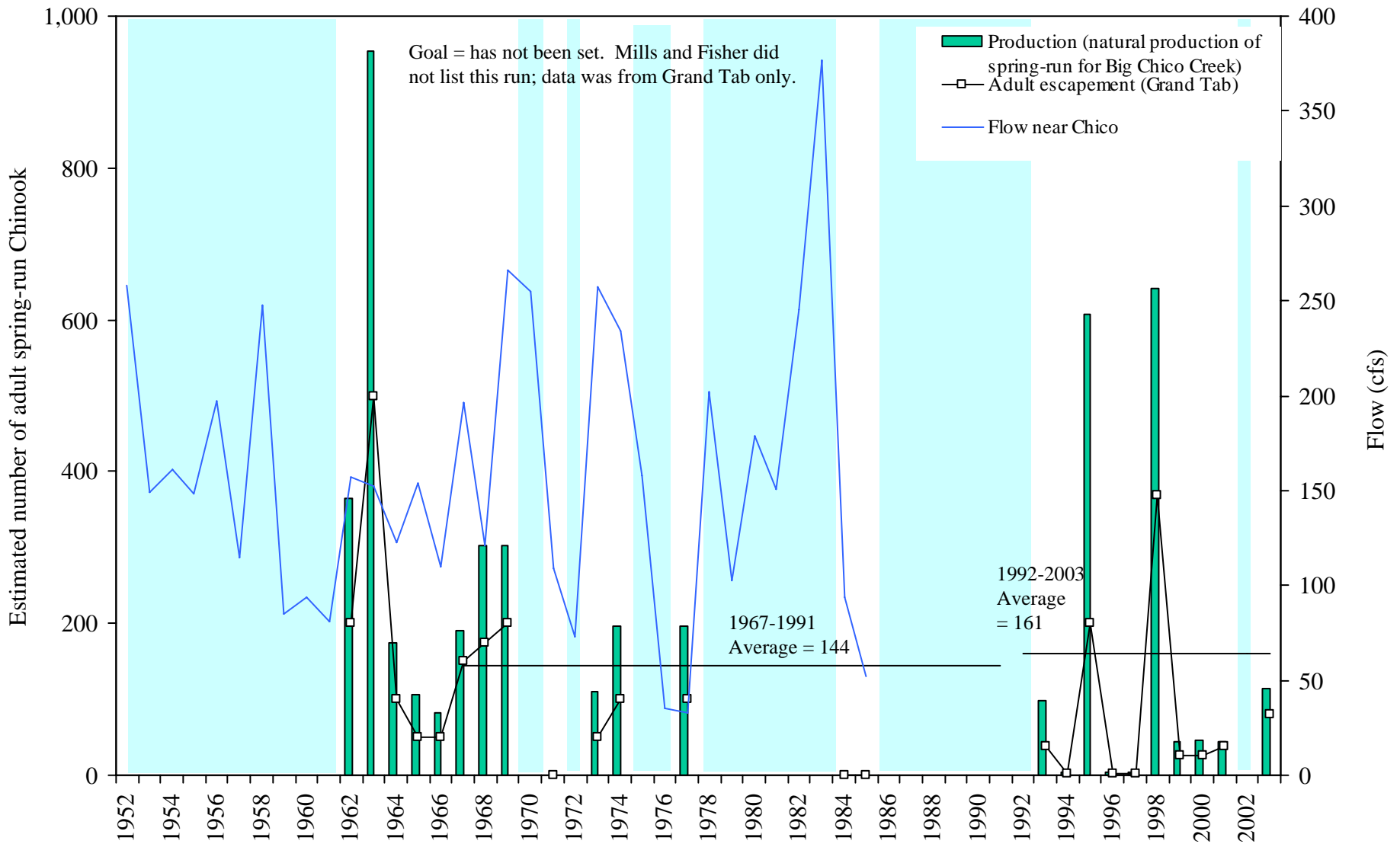


Figure 26. Estimated yearly natural production, and in river escapements of Big Chico Creek adult spring-run Chinook salmon.
 = data was not available for 1952 - 1961, 1970, 1972, 1975 - 1976, 1978 - 1983, 1986 - 1992, and 2002.
 1952 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Mean yearly flow (cfs) information from USGS 11384000 Big Chico Creek near Chico.

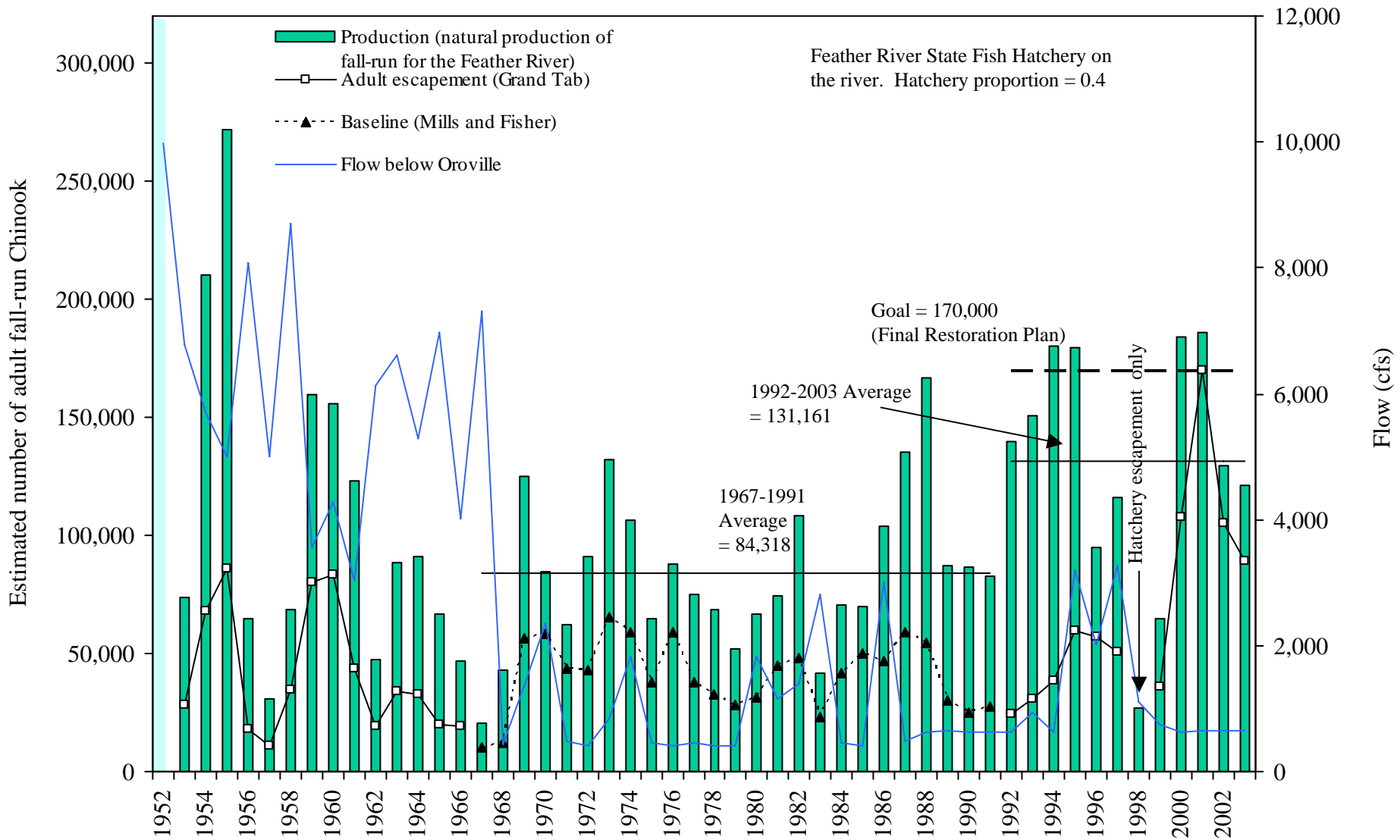


Figure 27. Estimated yearly natural production, and in river escapements of Feather River adult fall-run Chinook salmon. In-river escapements were not available for 1990 and 1998. 1952 - 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11407000, Feather River at Oroville.

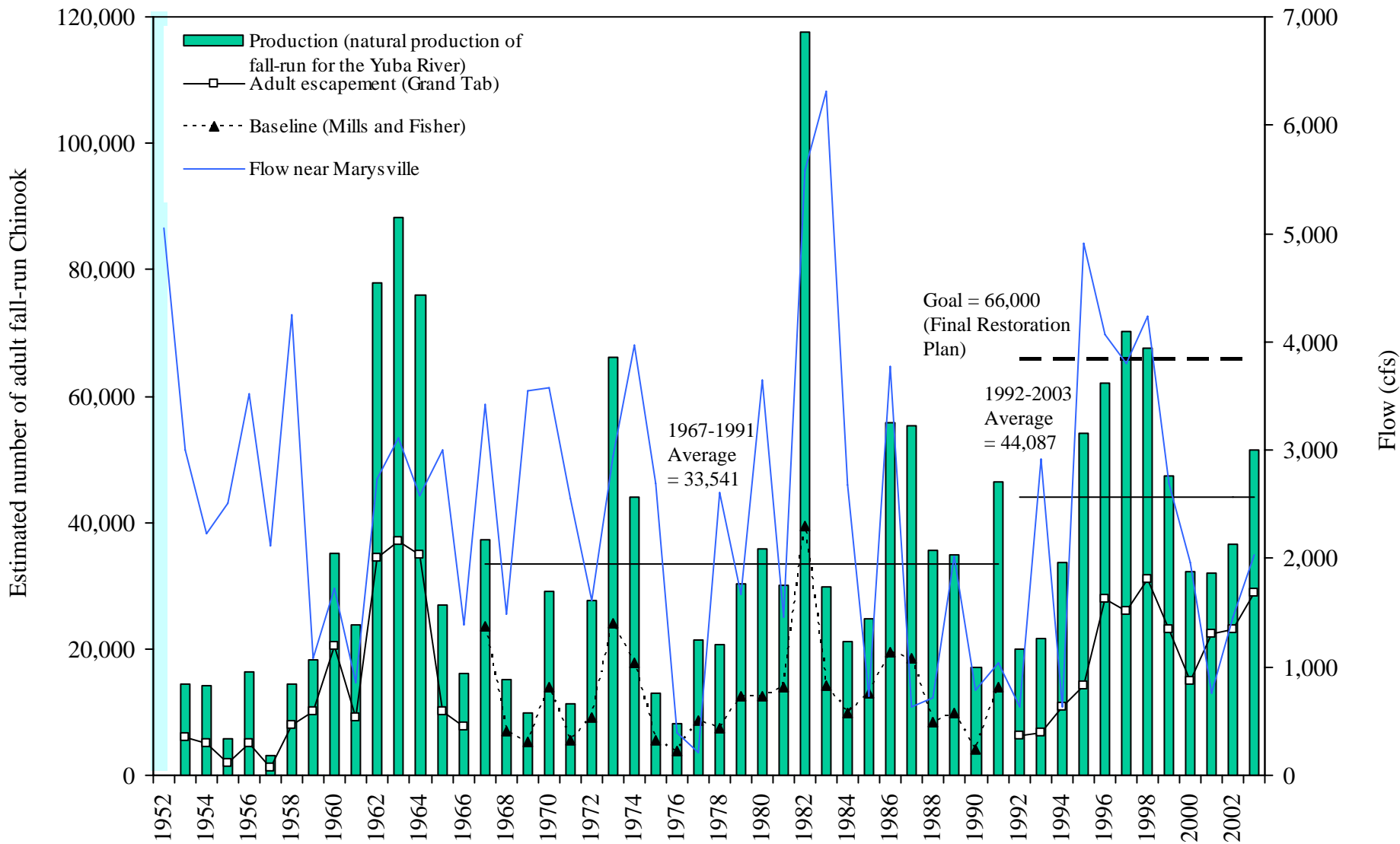


Figure 28. Estimated yearly natural production, and in river escapements of Yuba River adult fall-run Chinook salmon. 1967-1991 baseline numbers are from Mills and Fisher (CDFG, 1994). 1952 - 1966 and 1992-2003 numbers are from CDFG Grand Tab (February 5, 2004). = data was not available for 1952. Mean yearly flow (cfs) information from USGS 11421000, Yuba River at Marysville.

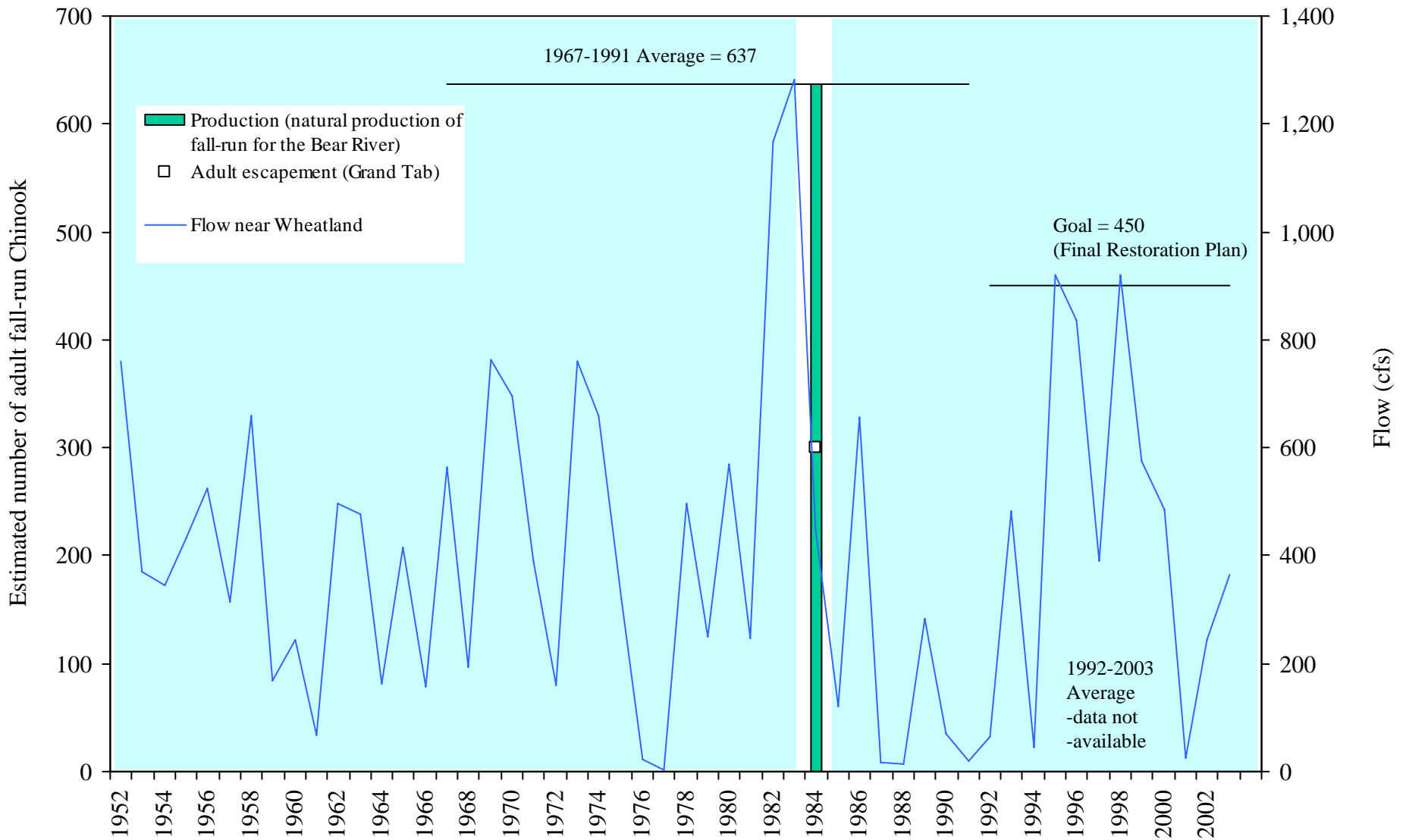


Figure 29. Estimated yearly natural production, and in river escapements of Bear River adult fall-run Chinook salmon.

□ = data was not available for 1952 - 1983, and 1985 - 2003. Numbers are from CDFG Grand Tab (February 5, 2004). Mean yearly flow (cfs) information from USGS 11424000 Bear River near Wheatland.

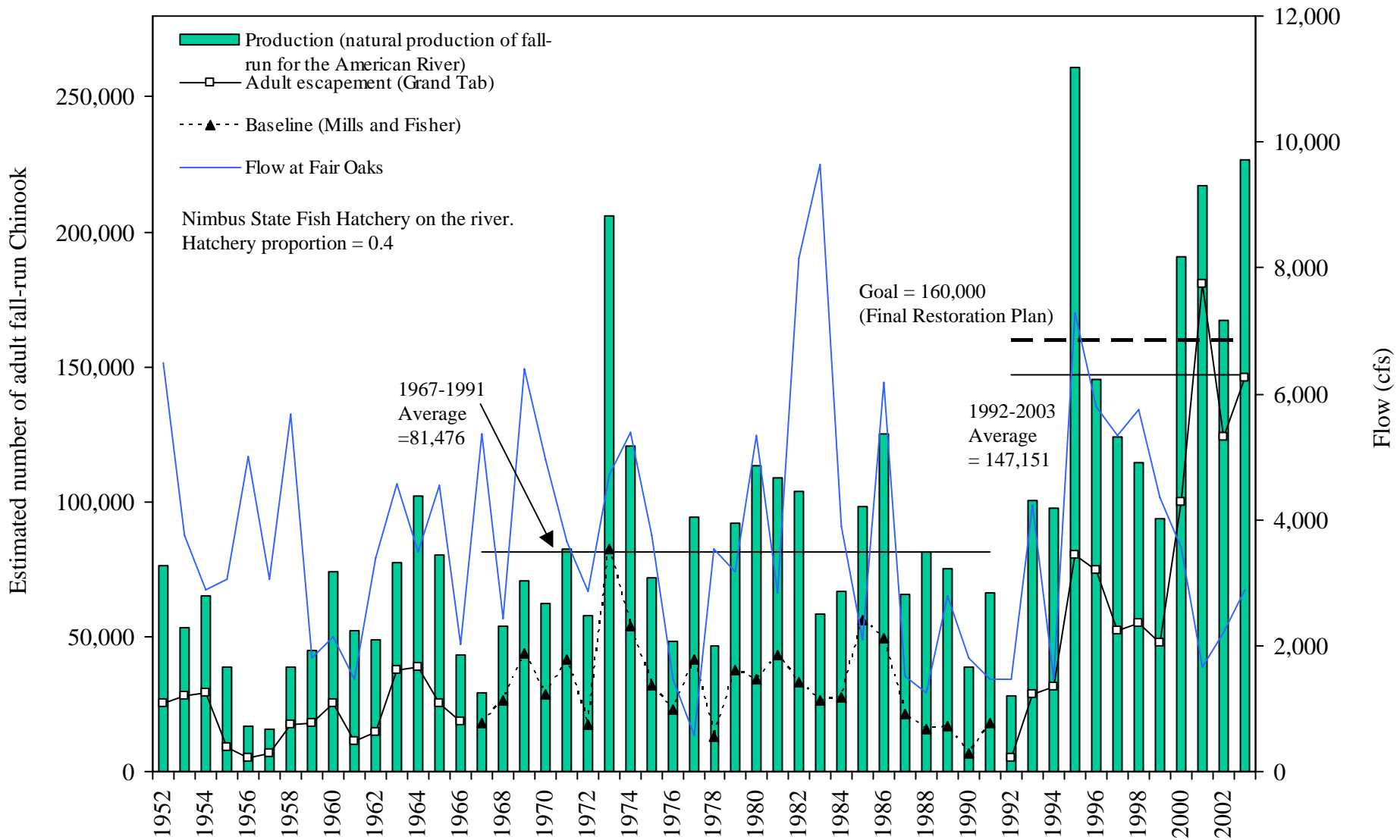


Figure 30. Estimated yearly natural production, and in river escapements of American River adult fall-run Chinook salmon. 1952 - 1966, and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11446500, American River near Fair Oaks.

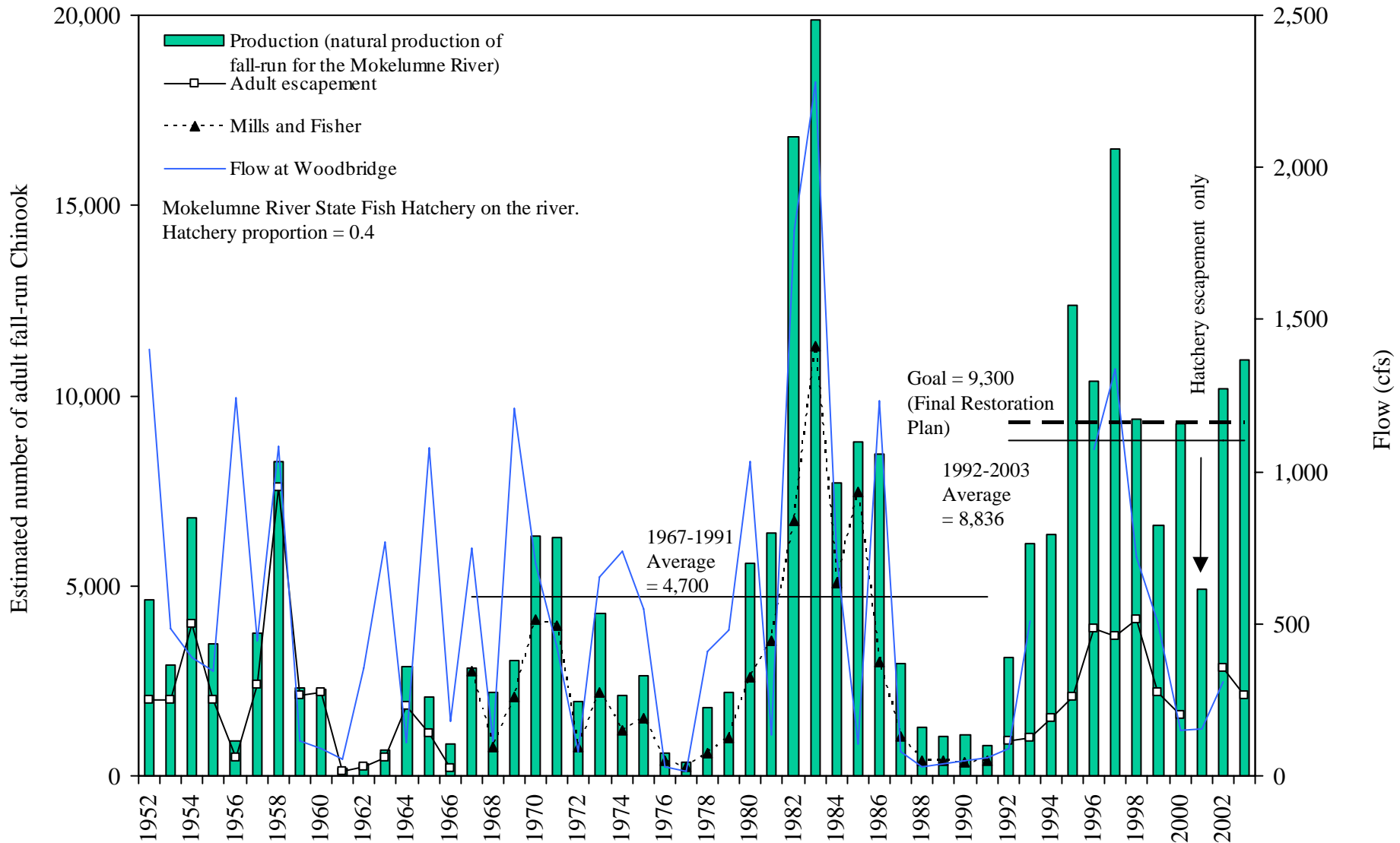


Figure 31. Estimated yearly natural production, and in river escapements of Mokelumne River adult fall-run Chinook salmon. In river escapement numbers were not available for 2001. 1952 – 1966 and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11325500 Mokelumne River at Woodbridge.

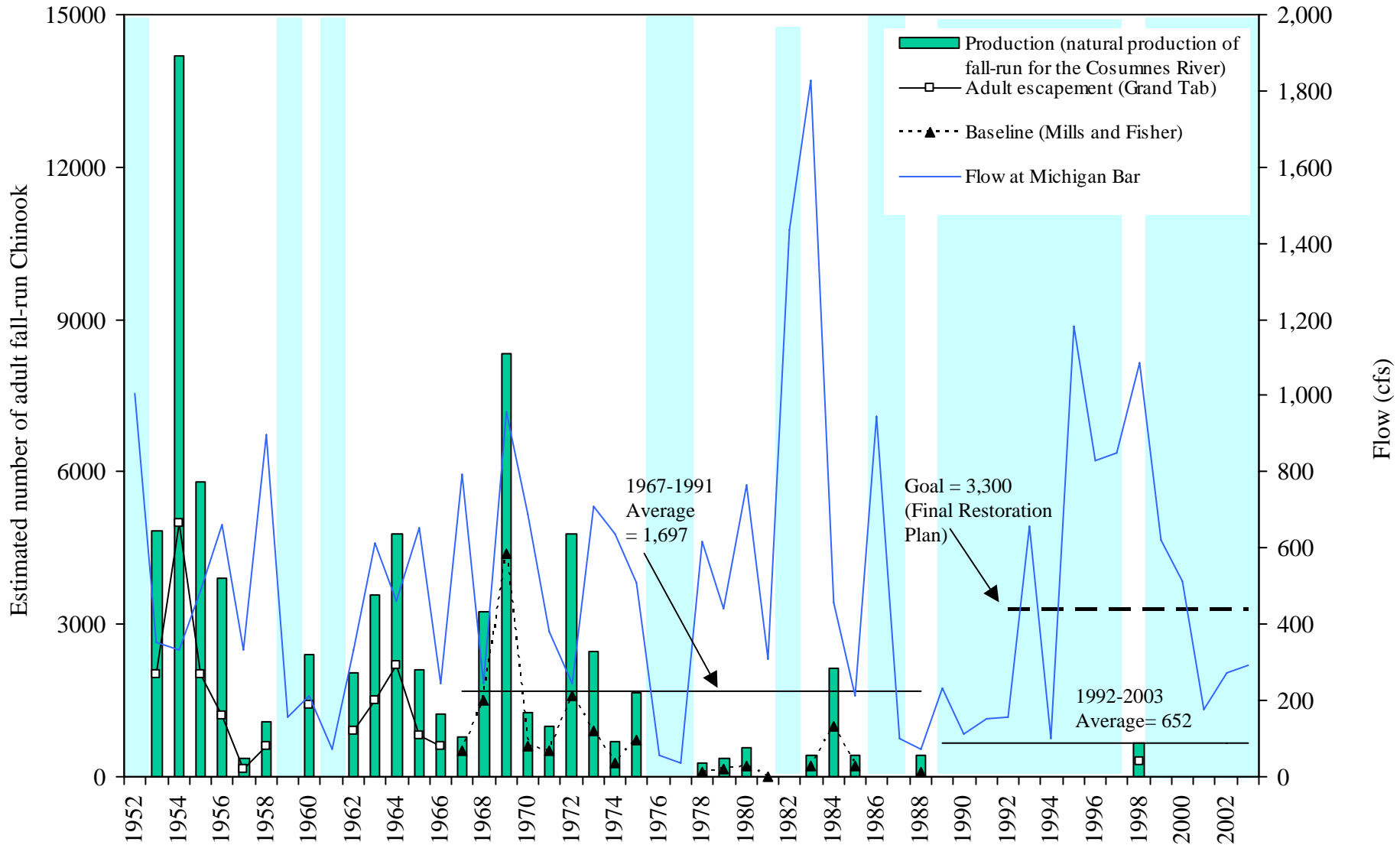


Figure 32. Estimated yearly natural production, and in river escapements of Cosumnes River adult fall-run Chinook salmon.
 □ = data was not available for 1952, 1959, 1961, 1976-1977, 1982, 1986, 1987, 1989 - 1997, and 1999 - 2003.
 1952-2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11335000, Cosumnes River at Michigan Bar.

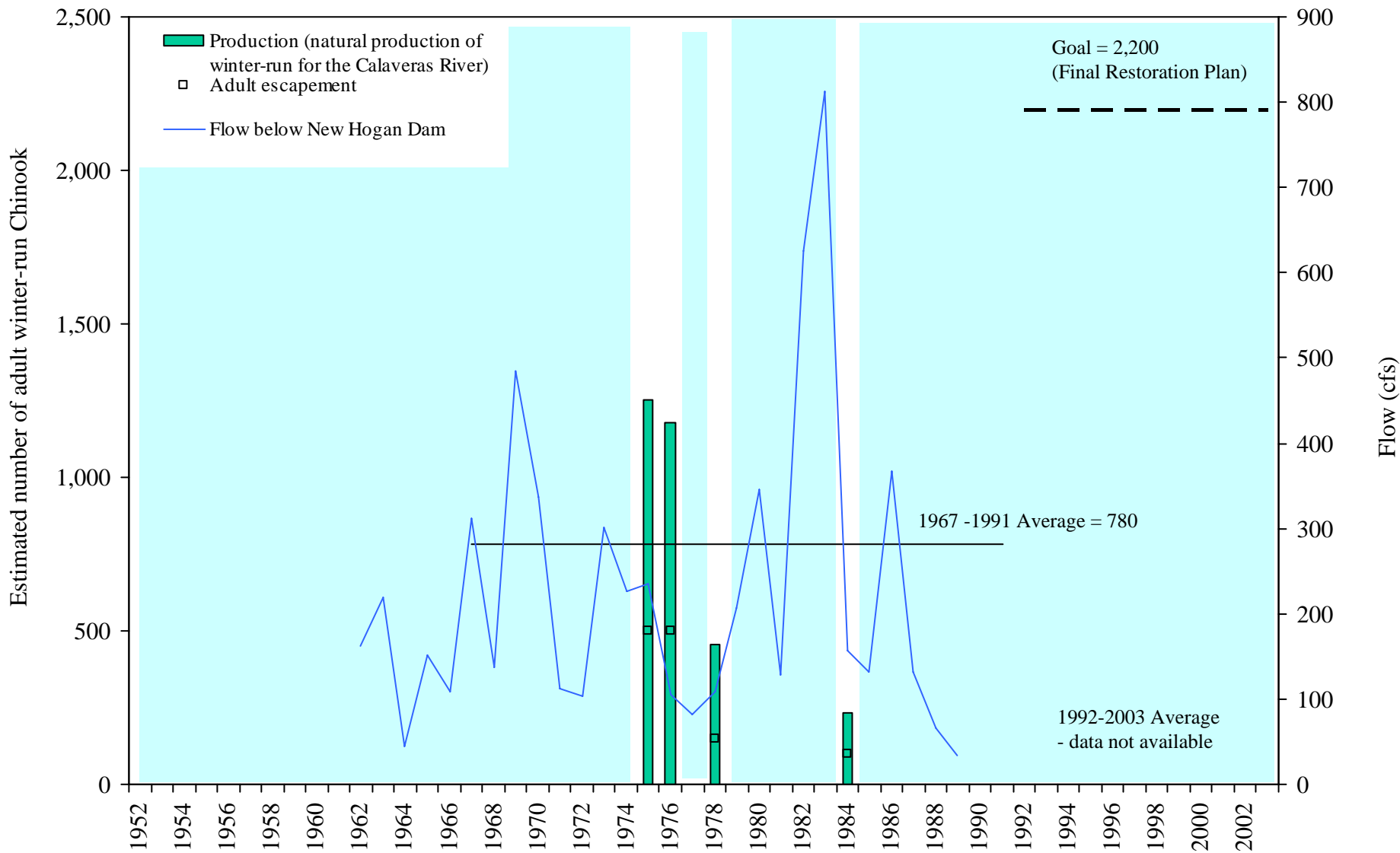


Figure 33. Estimated yearly natural production of Calaveras River adult winter-run Chinook salmon. = data was not available for 1952 - 1974, 1977, 1979 – 1983, and 1985 - 2003. 1952 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers from Mills and Fisher (CDFG, 1994) were not available. Mean yearly flow (cfs) information from USGS 11308900 Calaveras River below New Hogan Dam.

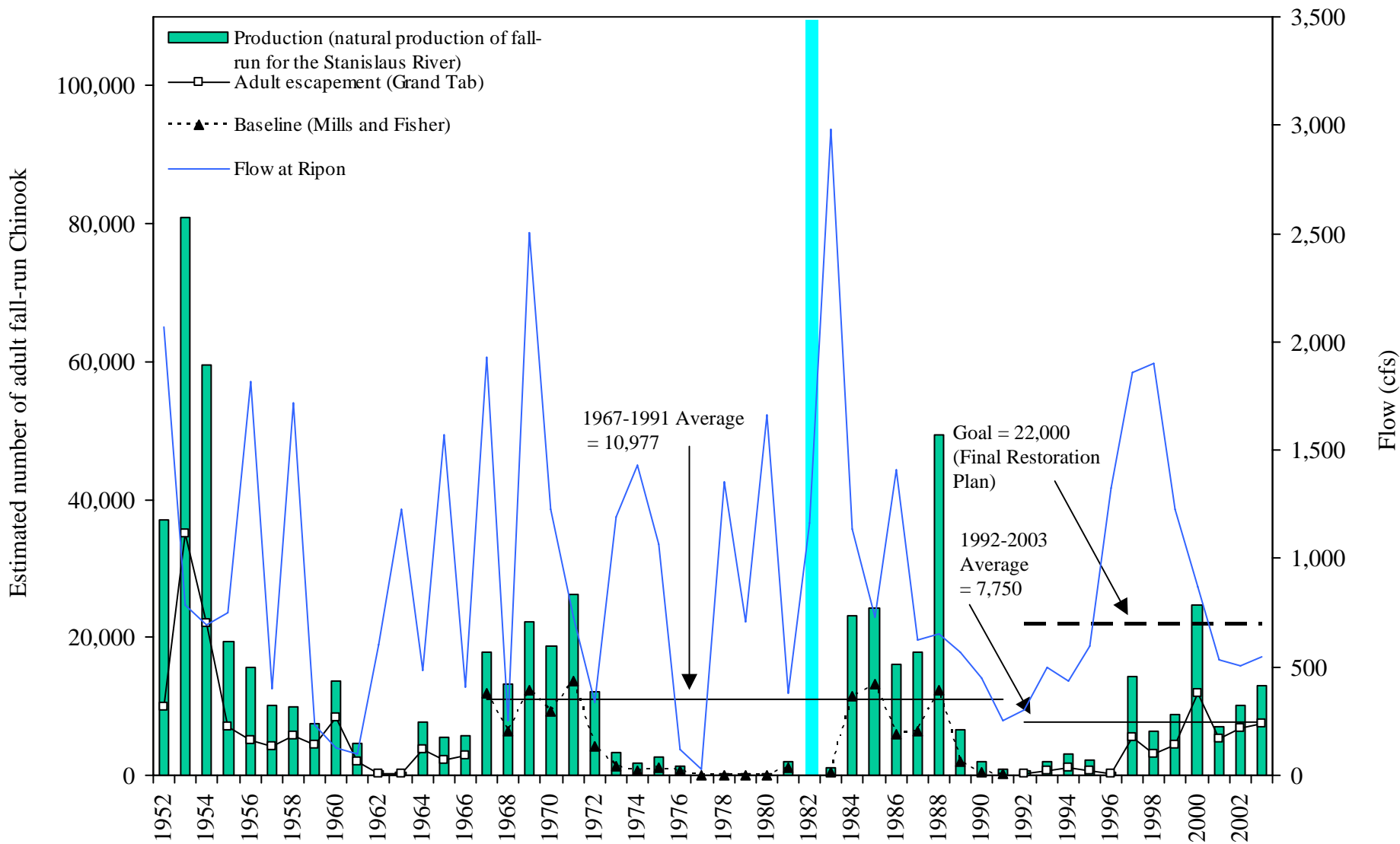


Figure 34. Estimated yearly natural production, and in river escapements of Stanislaus River adult fall-run Chinook salmon. 1952 – 1966, and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). = data was not available for 1982. Mean yearly flow (cfs) information from USGS 11303000, Stanislaus River at Ripon.

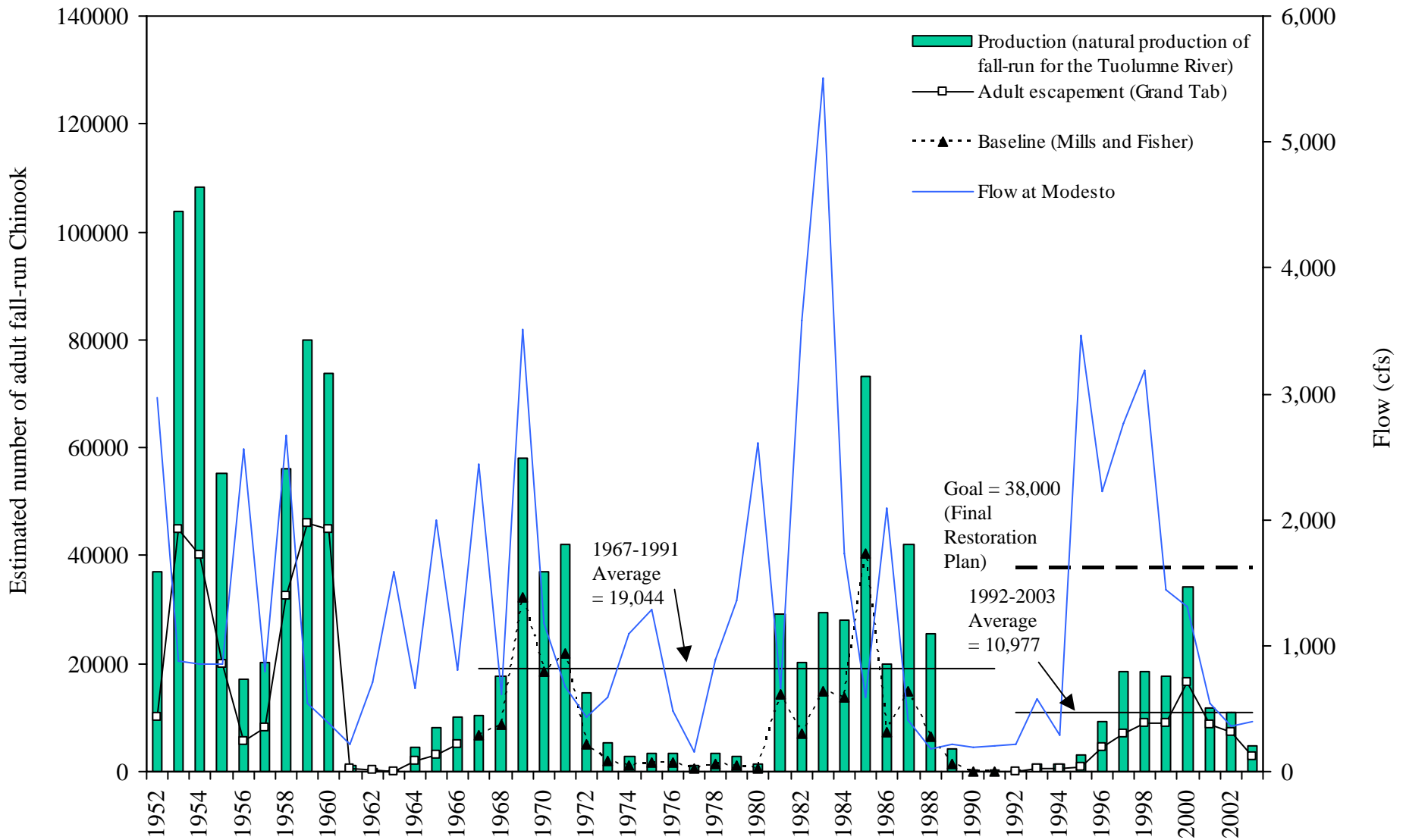


Figure 35. Estimated yearly natural production, and in river escapements of Tuolumne River adult fall-run Chinook salmon. 1952-1966, and 1992-2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11290000, Tuolumne River at Modesto.

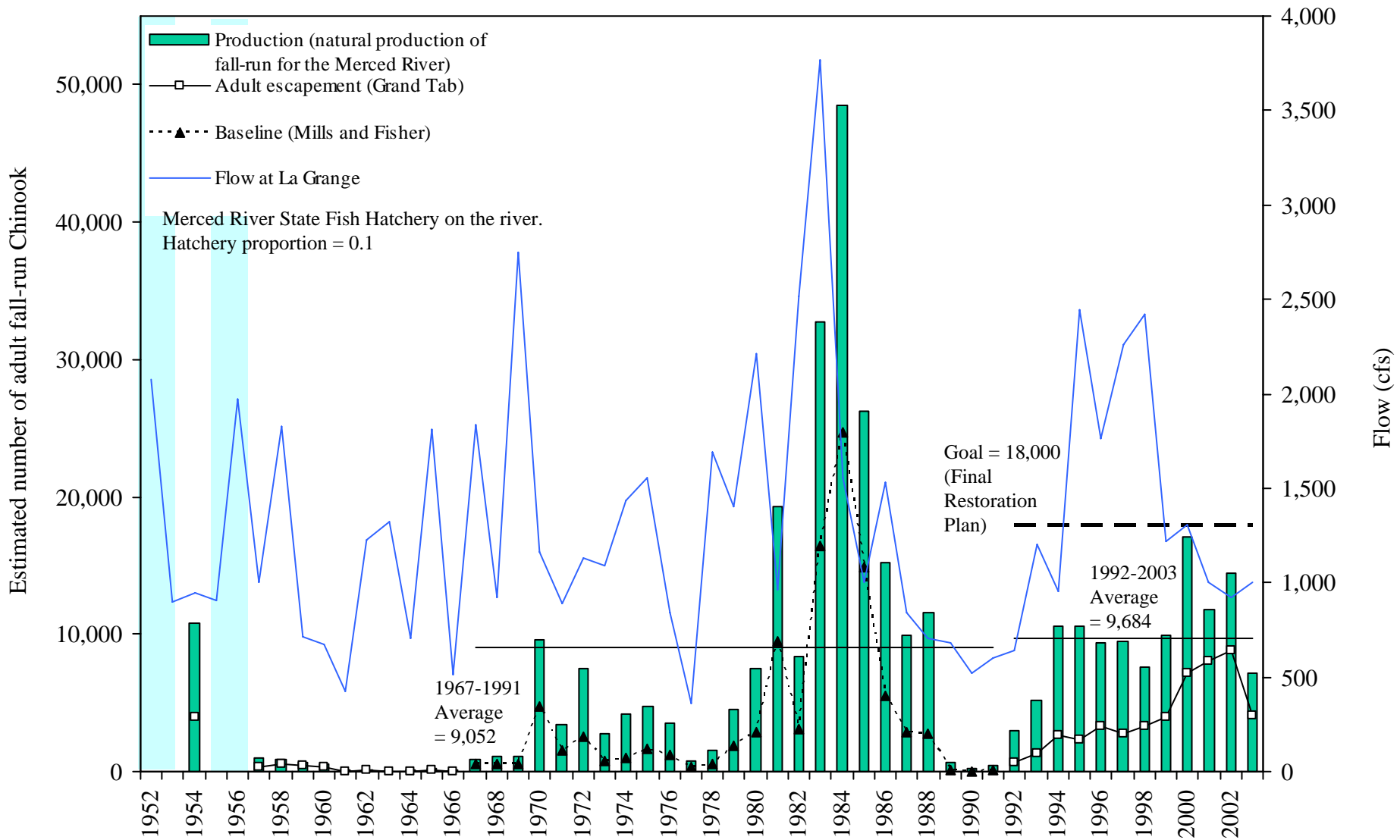


Figure 36. Estimated yearly natural production, and in river escapements of Merced River adult fall-run Chinook salmon. 1952 - 1966, and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). [] = data was not available for 1952 - 1953, and 1955 - 1956. Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from U 11270900, Merced River below Mercer Falls Dam.

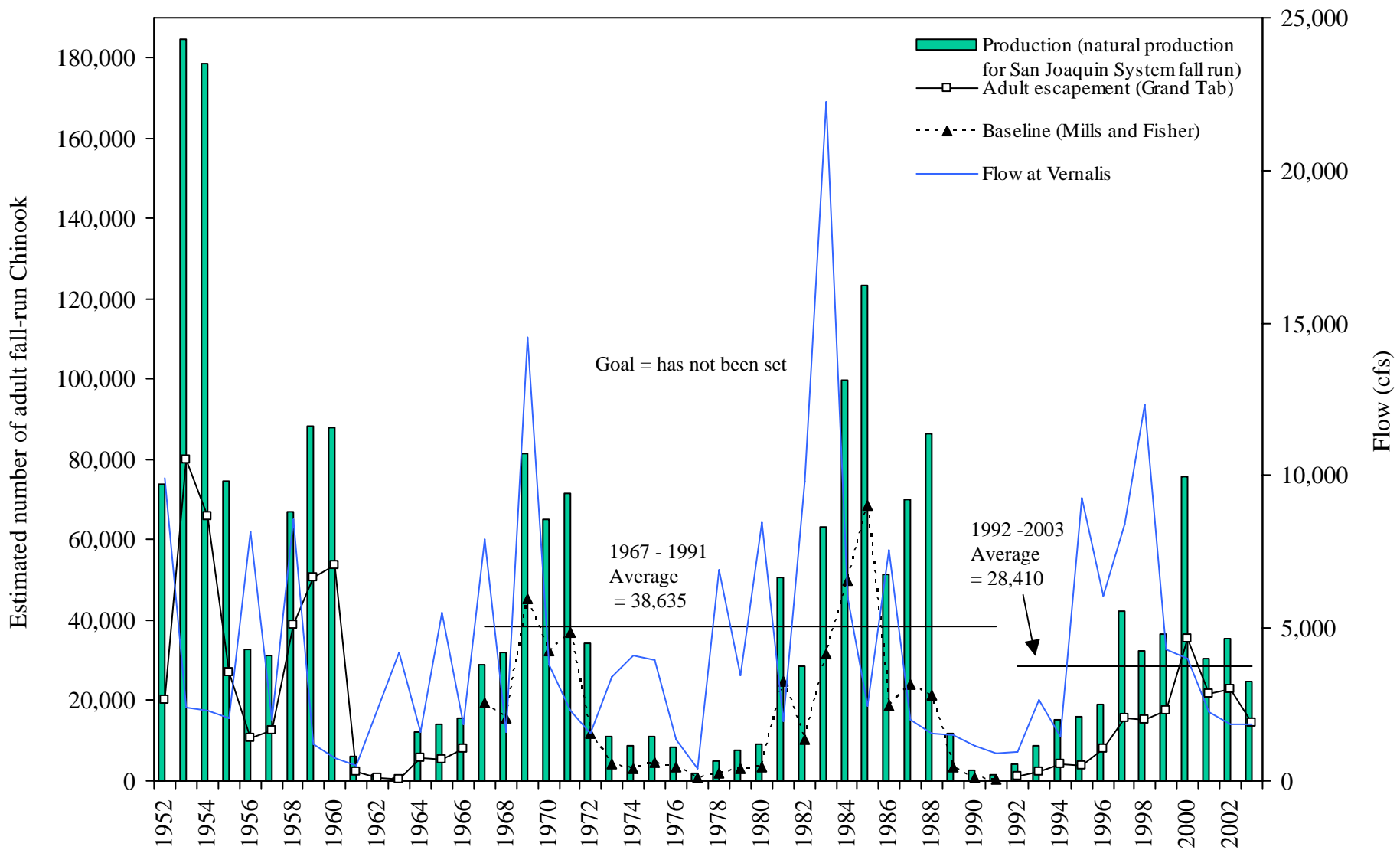


Figure 37. Estimated yearly natural production, and in river escapements of San Joaquin System adult fall-run Chinook salmon. The San Joaquin System is the sum of the Stanislaus, Tuolumne, and Merced Rivers. 1952 - 1966, and 1992 - 2003 numbers are from CDFG Grand Tab (February 5, 2004). Baseline numbers (1967 - 1991) are from Mills and Fisher (CDFG, 1994). Mean yearly flow (cfs) information from USGS 11303500, San Joaquin River near Vernalis.