
STATUS AND TRENDS OF CENTRAL VALLEY ANADROMOUS FISH POPULATIONS

**Presented at the Meeting Between Resource Agencies
and the Restoration Fund Roundtable
Folsom Civic Center
March 29, 1995**



California Department of Fish and Game

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California Department of Fish and Game

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Description of Additional Reports

The Department of Fish and Game is providing additional in-depth information regarding the status and trends of Central Valley anadromous fish populations, habitat restoration, additional data needs, needed regulatory or administrative actions, fish screening policy, criteria and priorities, status of habitat restoration implementation, and the Department's link and commitment to implementation of the Central Valley Project Improvement Act.

The material includes:

- ▶ This handout which includes copies of the status and trend overlays
- ▶ *Restoring Central Valley Streams: A Plan for Action* (November 1993)
- ▶ *Restoring Central Valley Streams: A Plan for Action, Status of Implementation* (draft: February 1995)
- ▶ *Department of Fish and Game Investment in the Federal Central Valley Project Improvement Act (Public Law 102-575)* (February 14, 1995)
- ▶ *Central Valley Anadromous Sport Fish Annual Run-size, Harvest, and Population Estimates, 1967 through 1991* (Revised August 1994)
- ▶ Fish Screen Action Plan (June 6, 1994 Edition) (Memorandum, June 21, 1995)
- ▶ Fish Screening Policies (Memorandum, February 2, 1994)
- ▶ *Sacramento River Winter-run Chinook Salmon Annual Report Prepared for the Fish and Game Commission* (March 1995)

Should you or your staff have any questions regarding the handout materials, please contact Mr. Dick Daniel or Mr. Terry J. Mills c/o California Department of Fish and Game, 1416 Ninth Street, Sacramento, California 95814. Mr. Daniel may be reached by telephone at (916) 653-9804, and Mr. Mills may be reached at (916) 653-9642. If you have very

specific questions, they will likely direct your call to the appropriate Department expert on that topic.

Descriptions of the handout material

- ▶ The green-covered report, *Restoring Central Valley Streams: A Plan For Action* (aka: Central Valley Action Plan), was developed during 1993 to present the Department's best assessment of factors adversely affecting anadromous fish population. The report established the Department's priorities for habitat restoration, habitat evaluations, and necessary regulatory and administrative actions to improve fish habitat. The report provides moderate detail on individual streams tributary to the Sacramento River, San Joaquin River, and eastside tributaries to the Delta. This report does not include restoration measures for the Sacramento-San Joaquin Delta.

- ▶ The unbound report, *Restoring Central Valley Streams: A Plan For Action, Status of Implementation*, is a draft report presently under review by the Department. This report is companion to the earlier Central Valley Action Plan and provides an update on the efforts to implement the many restoration measures contained in the earlier report. The descriptions are not limited to Department activities, but portray the efforts by other federal, state, and local agencies, and private interests.

- ▶ The unbound report, *Department of Fish and Game investment in the Federal Central Valley Project Improvement Act (Public Law 102-575)*, was prepared to display the Department's interest and commitment to participate in the implementation of the CVPIA. Although the State presently lacks sufficient funding to fully support implementation of the larger and more expensive fishery protection and restoration measures specified in the CVPIA, the Department has directly and indirectly supported the intent of the CVPIA through many of its ongoing management programs. The expenditures reported are not a measure or claim of "State cost sharing", but rather, a simple display of the Department's expenditures since November 1992 on actions related to the CVPIA. The handout version of the report does not contain the appendices.

- ▶ The report, *Central Valley Anadromous Sport Fish Annual Run-size, Harvest, and Population Estimates, 1967 through 1991* (aka: "The Book of Numbers"), was prepared to provide a compendium of fish numbers for use by the Department and for use in the

development of the Central Valley Anadromous Fish Restoration Program (CVPIA Section 3406(b)). The report provides fish population estimates for the 1967 through 1991 baseline period and provides short descriptions of the methods used to generate the estimates.

- ▶ The Fish Screen Action Plan (June 6, 1994 Edition) (Memorandum, June 21, 1995) presents the Department approach to unscreened diversions within the Central Valley.
- ▶ The Fish Screening Policies Memorandum provides the Department guidance on setting priorities regarding unscreened diversions.
- ▶ The report, *Sacramento River Winter-run Chinook Salmon Annual Report Prepared for the Fish and Game Commission*, summarized progress of some of the more visible management and recovery actions for the winter-run chinook that occurred in 1994.

Status and Trend Overlays

The "Book of Numbers" contains the most comprehensive set of fish population numbers presently available. However, it provides estimates only for the baseline 1967-1991 period specified in the Central Valley Project Improvement Act. The following overlays provide updated population status and trend data through 1994 for some of the anadromous fish stocks described in the "Book of Numbers."

Generally, the numbers of **adult** fish are presented except for stocks of special concern such as the winter-run chinook, spring-run chinook, and steelhead which have **total** numbers presented. Trend lines are plotted on each graph to provide additional perspective on stock status. The trend lines were calculated using a logarithmic sum of least squares regression curve as follows:

$$y = a + b * \text{natural log}(x).$$

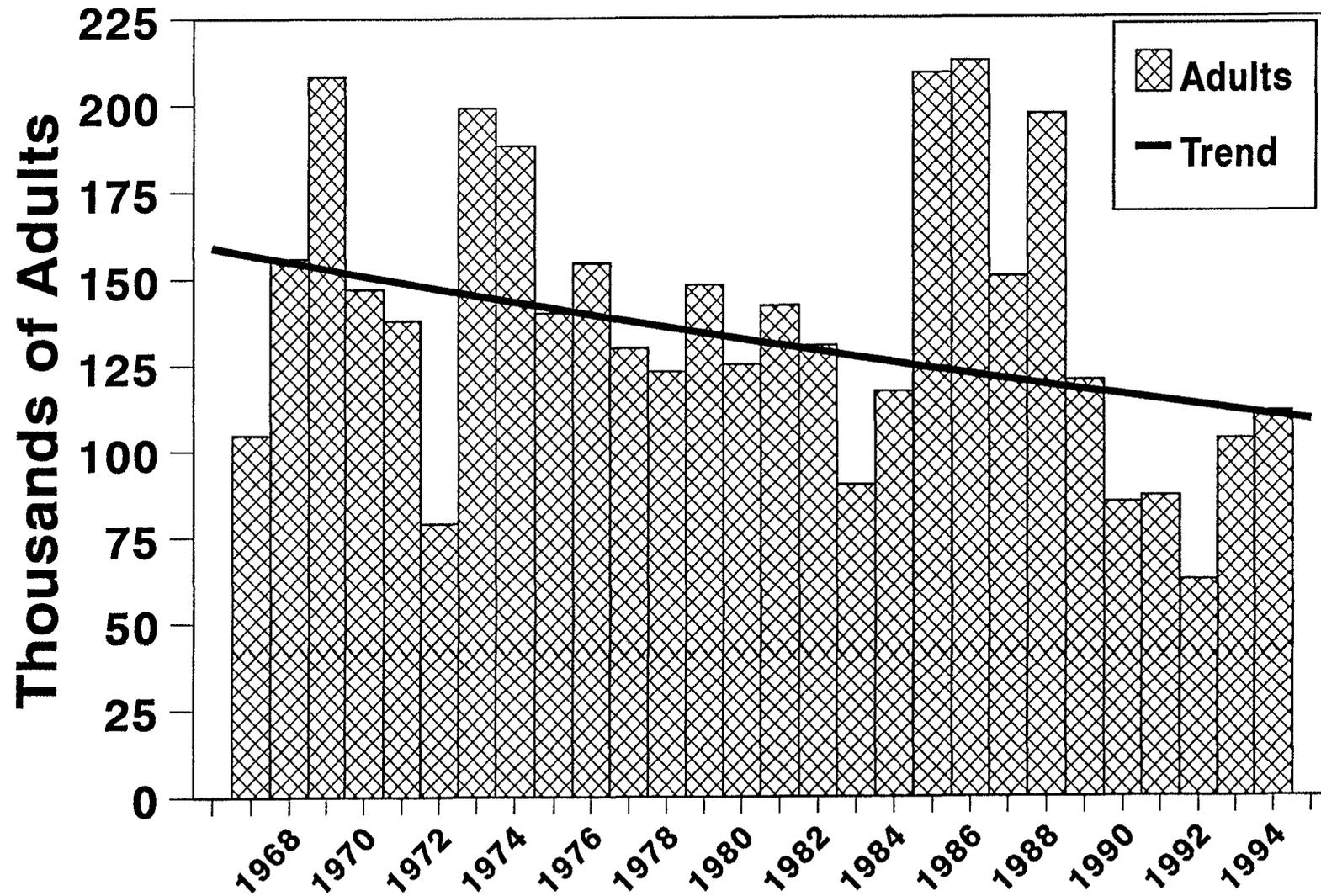
This approach is easily done using computer graphic software, and while not suitable for scientific analysis or publication, is quite suitable for cursory inspection of data trend.

The enclosed overlays include the following:

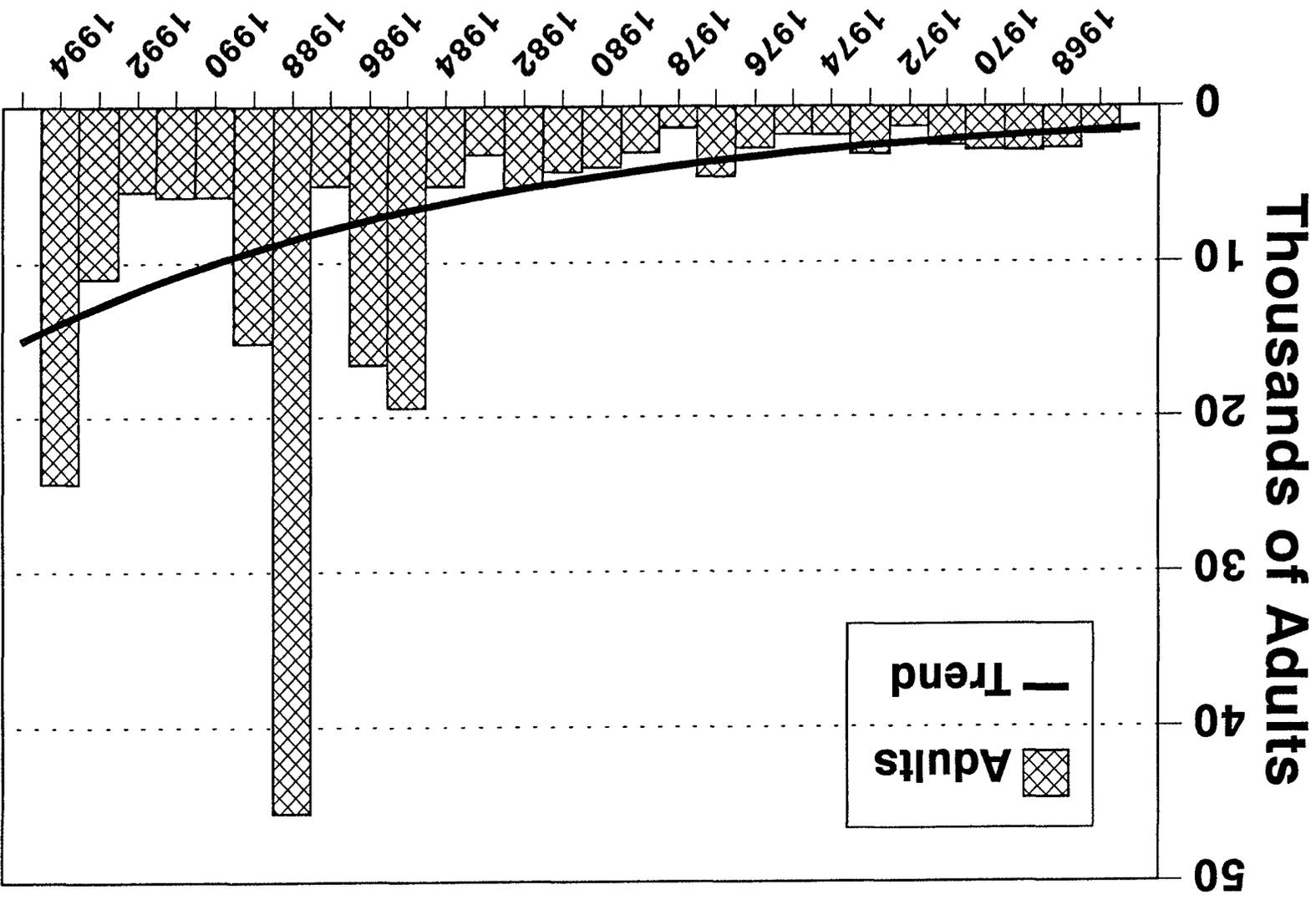
	Description
1	Sacramento Basin Naturally Spawning Fall Chinook, 1967-1994
2	Battle Creek Fall-run Chinook, 1967-1994
3	Feather River Fall-run Chinook, 1967-1994
4	Yuba River Fall-run Chinook, 1967-1994
5	American River Fall-run Chinook, 1967-1994
6	San Joaquin Fall-run Chinook, 1967-1994
7	Stanislaus River Fall-run Chinook, 1967-1994
8	Tuolumne River Fall-run Chinook, 1967-1994
9	Merced River Fall-run Chinook, 1967-1994
10	Winter-run Chinook Salmon, 1967-1994
11	Sacramento Late-fall-run Chinook, 1967-1992 (No counts since 1992 due to RBDD gate operations to protect winter-run chinook.)
12	Spring-run Chinook Salmon Mill Creek, 1967-1994
13	Spring-run Chinook Salmon Deer Creek, 1967-1994
14	Spring-run Chinook Salmon Butte Creek, 1967-1994
15	Steelhead Counts at Red Bluff Diversion Dam, 1967-1993
16	White Sturgeon, 1967-1994
17	Green Sturgeon, 1967-1994
18	Striped Bass, 1967-1994

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Sacramento Basin Naturally Spawning Fall Chinook 1967-1994



Battle Creek Fall-run Chinook 1967-1994

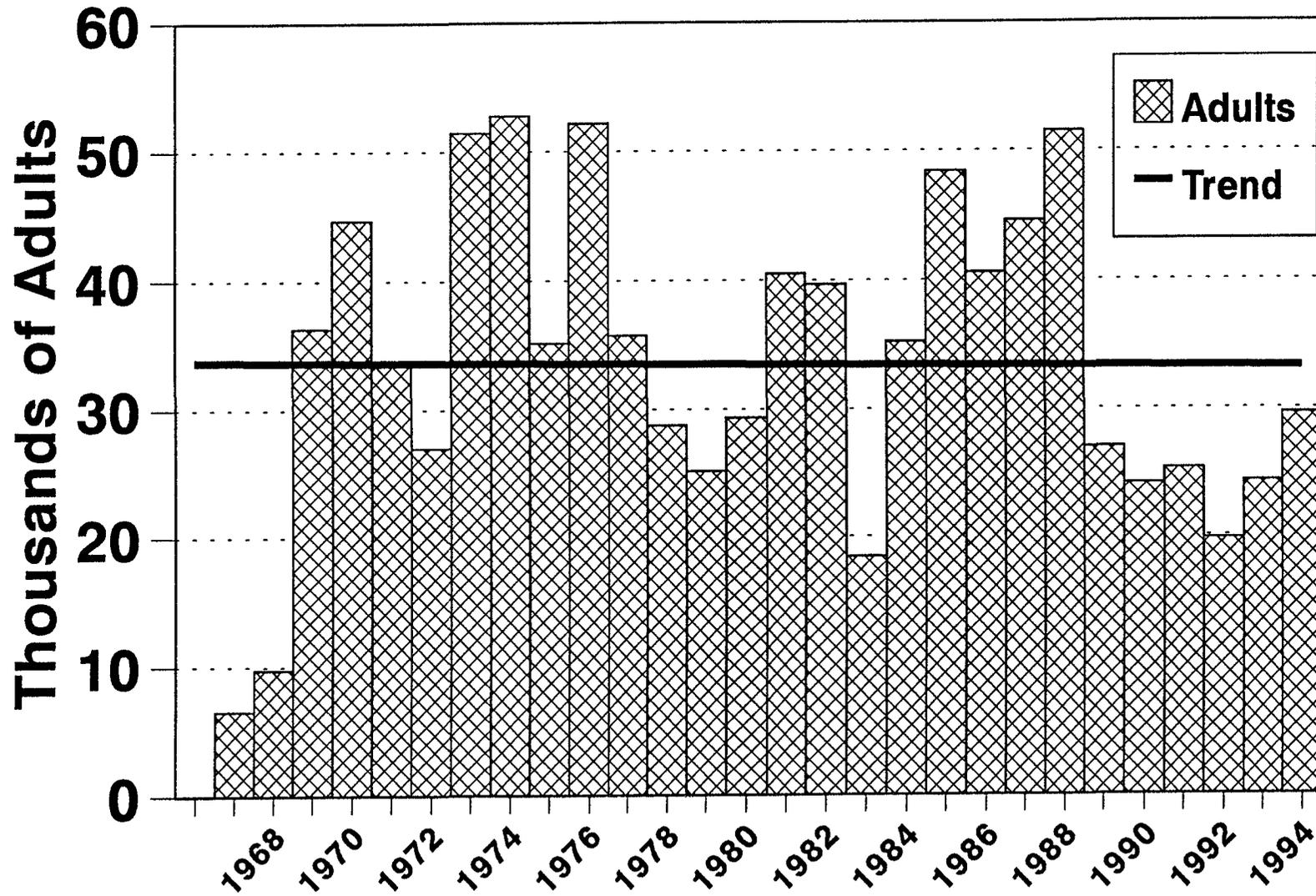


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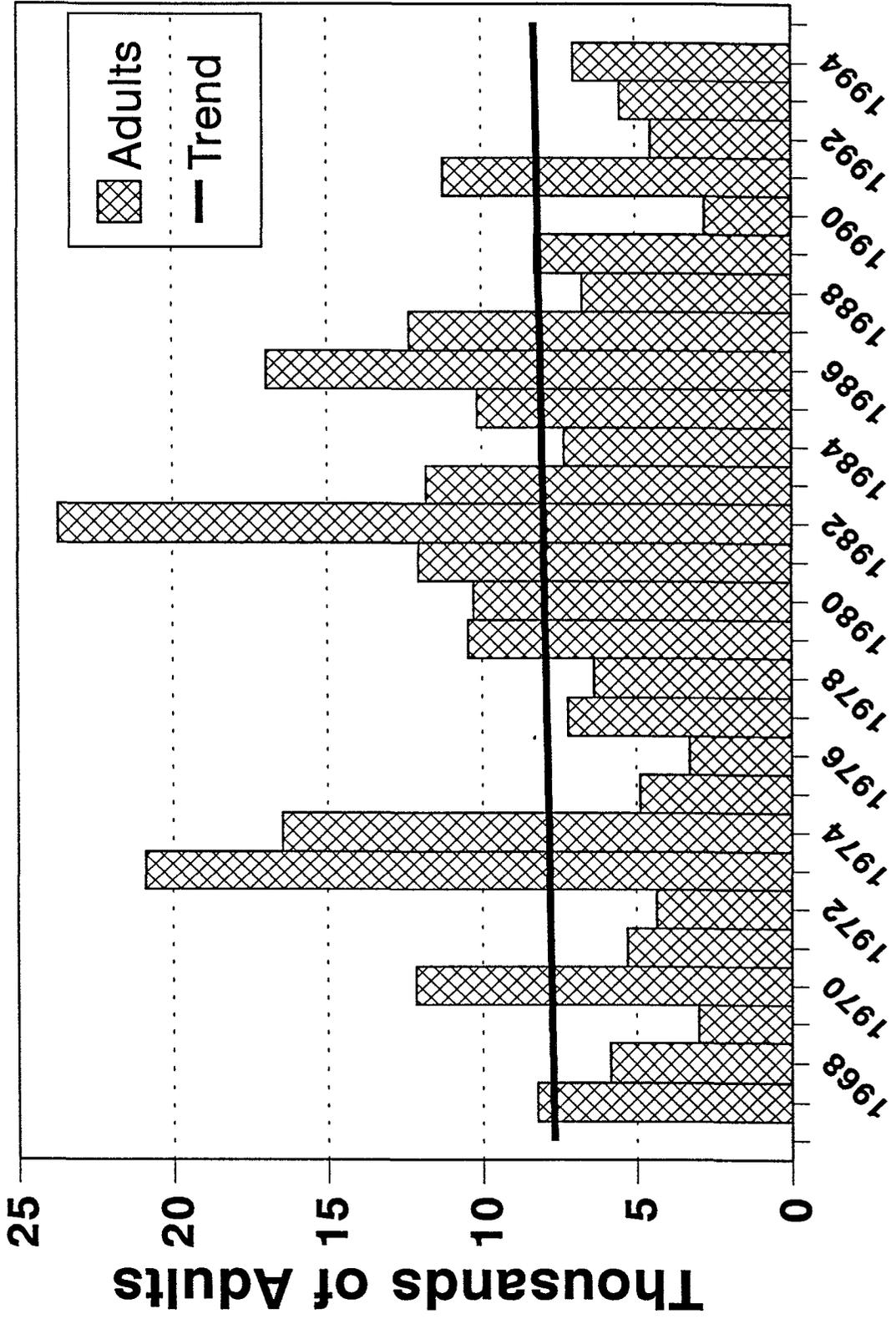
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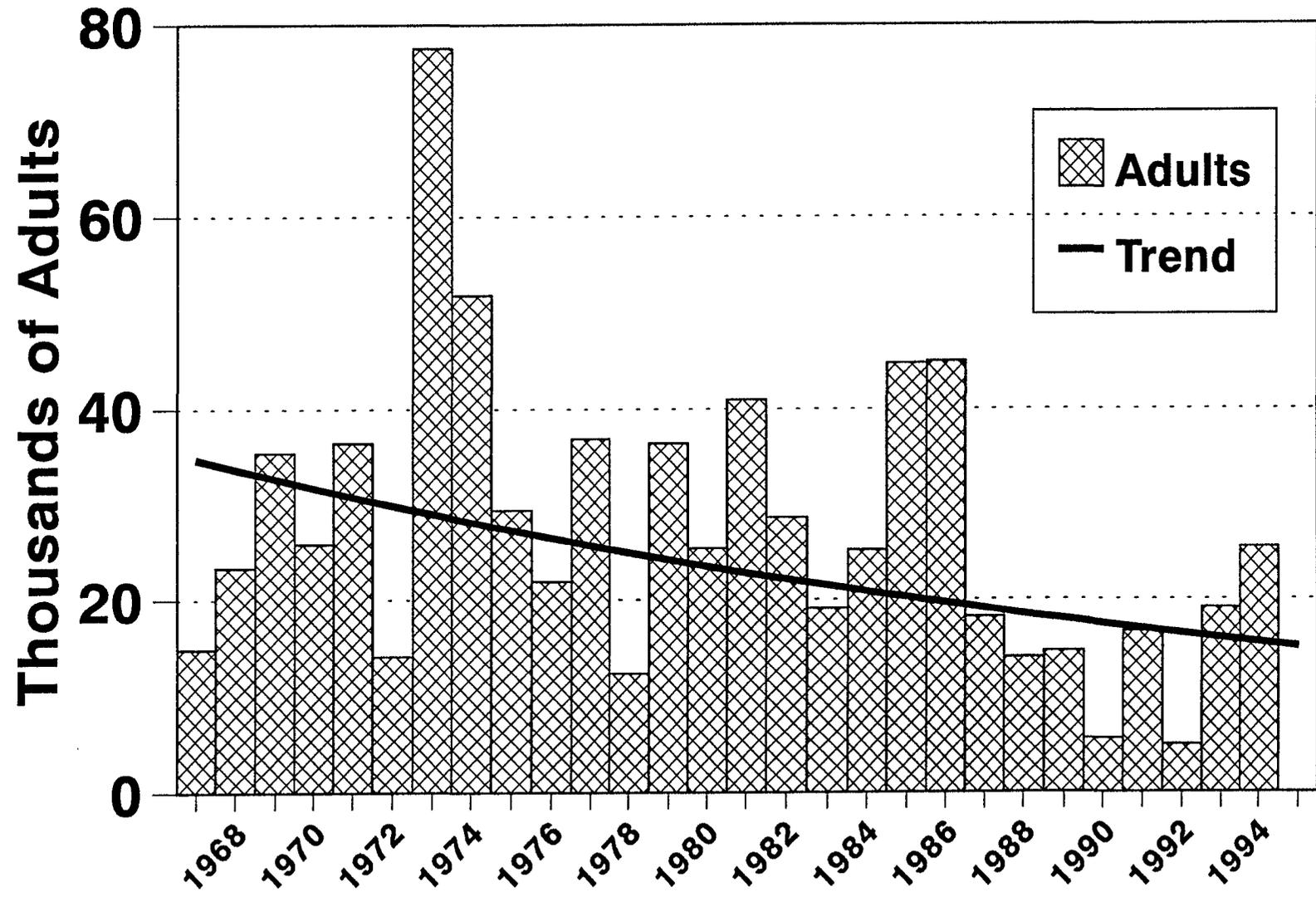
Feather River Fall-run Chinook 1967-1994



Yuba River Fall-run Chinook 1967-1994

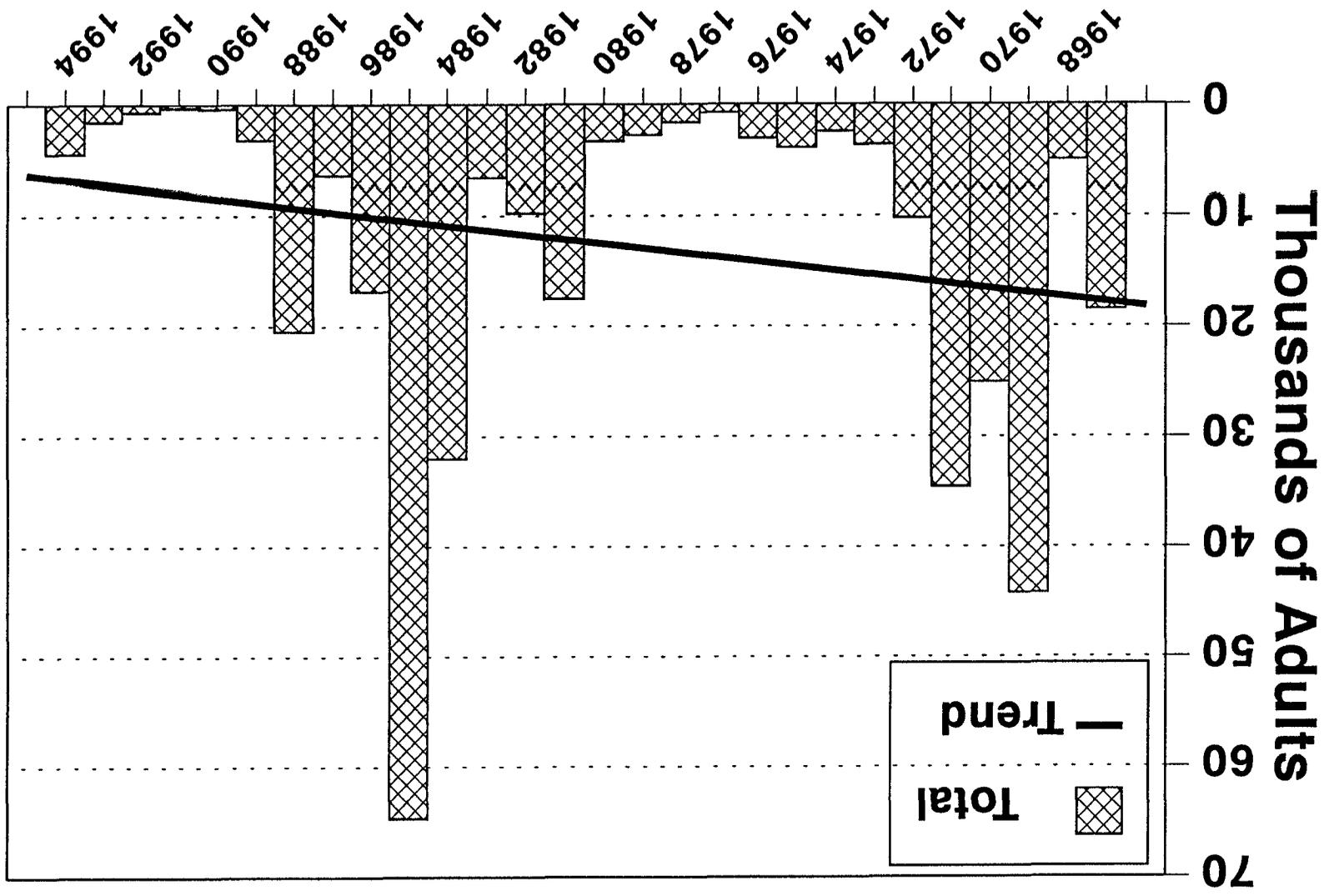


American River Fall-run Chinook 1967-1994



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San Joaquin Fall-run Chinook 1967-1994

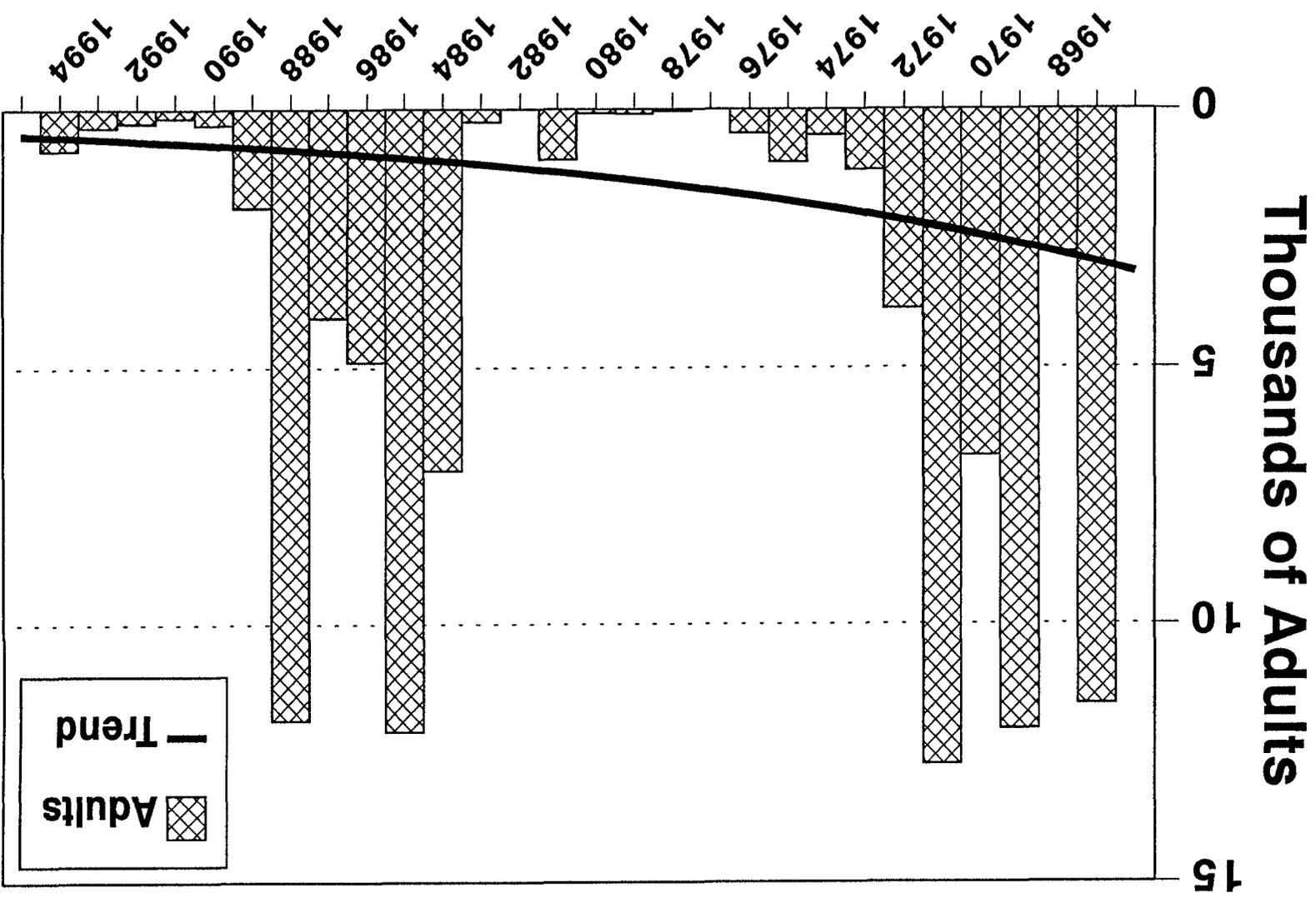


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Stanislaus River Fall-run Chinook 1967-1994

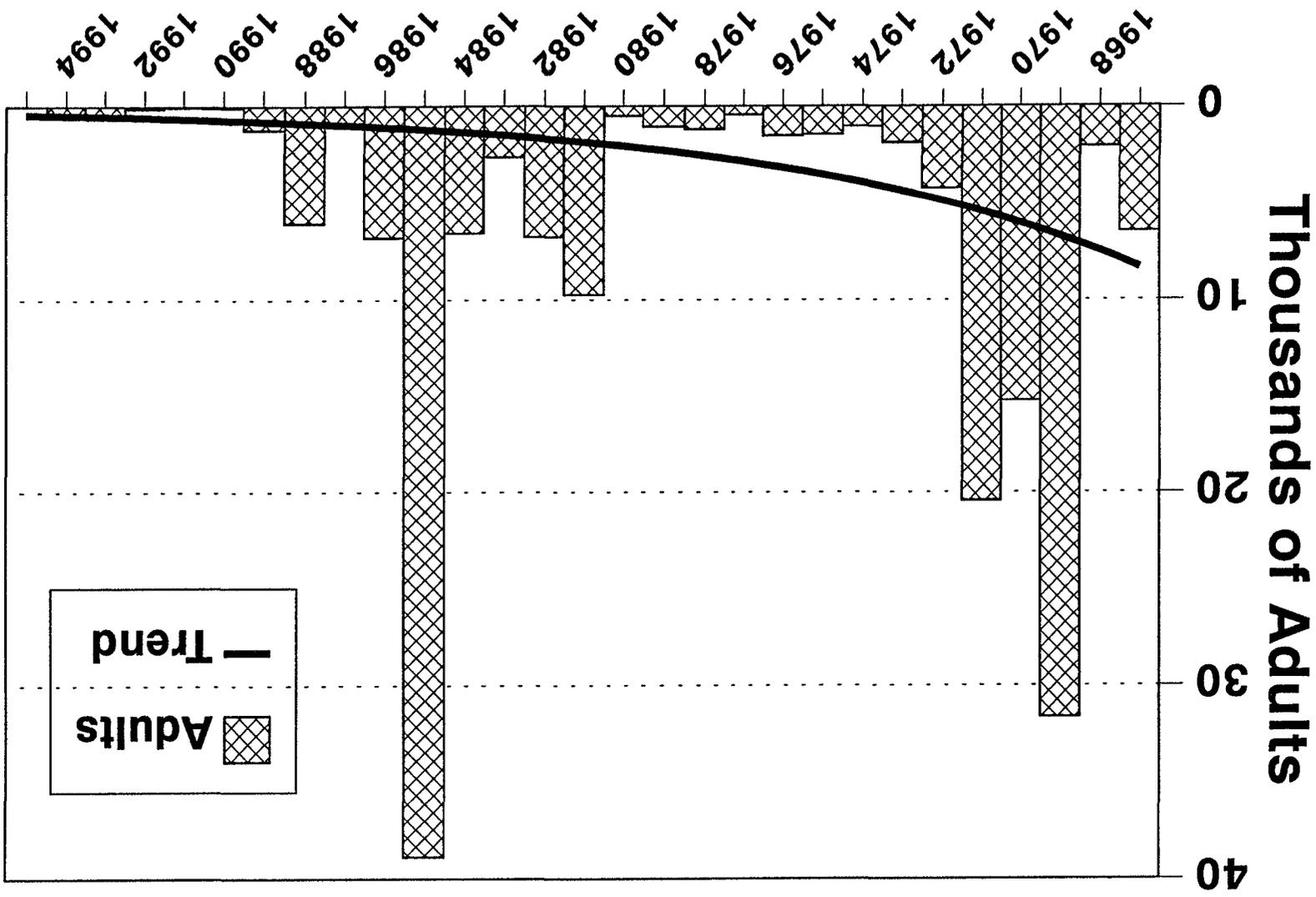


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Tuolumne River Fall-run Chinook 1967-1994

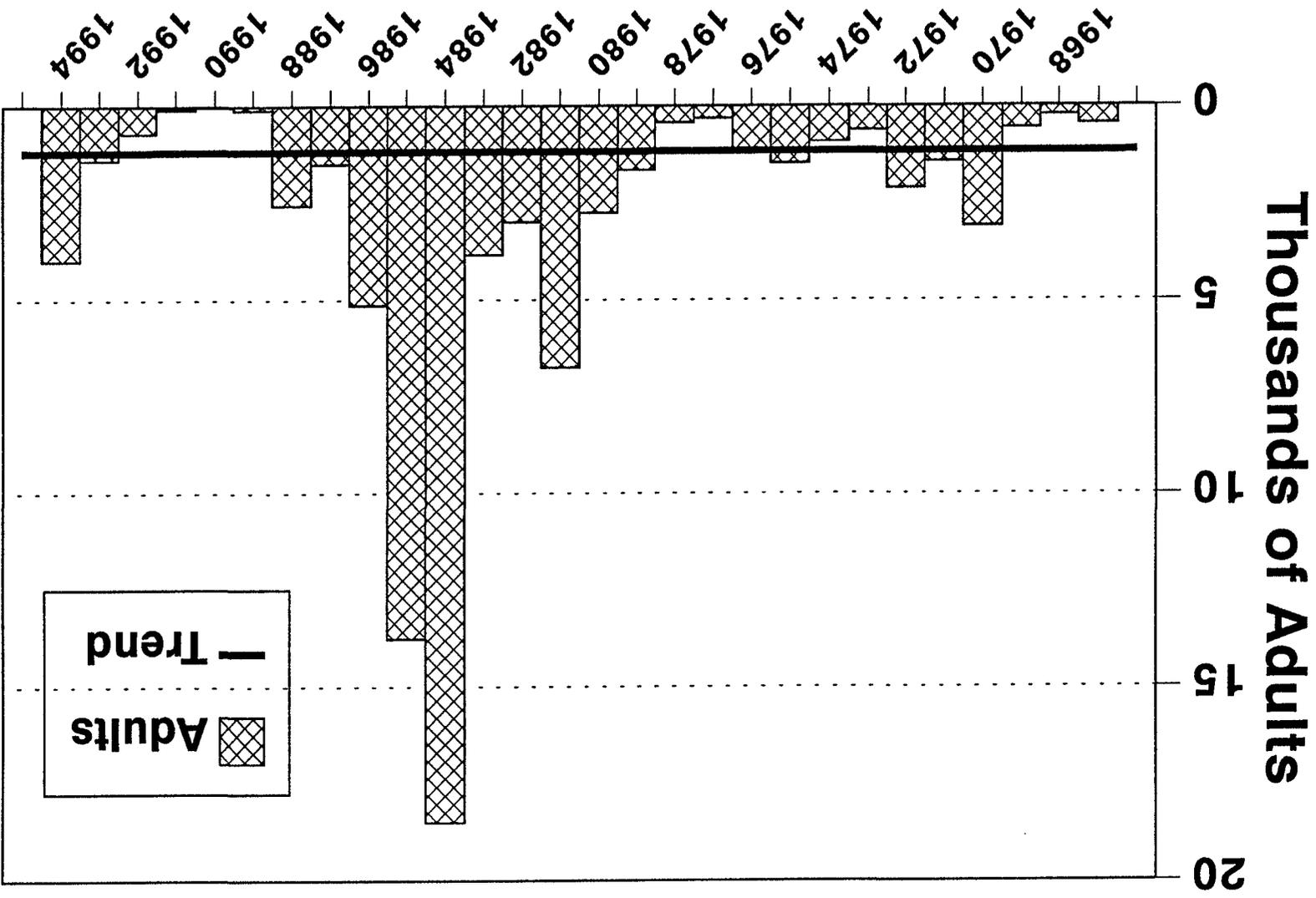


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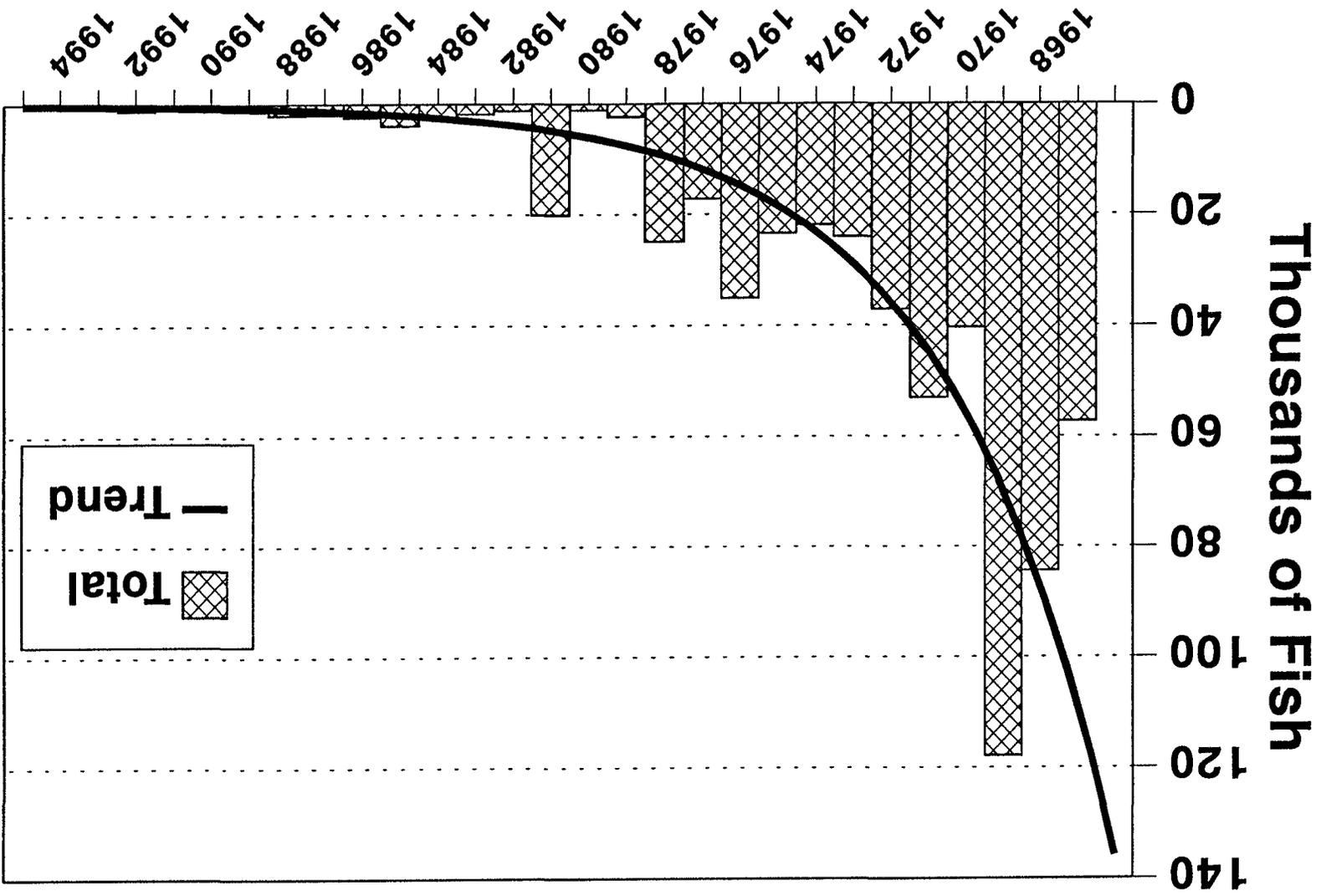
Merced River Fall-run Chinook 1967-1994



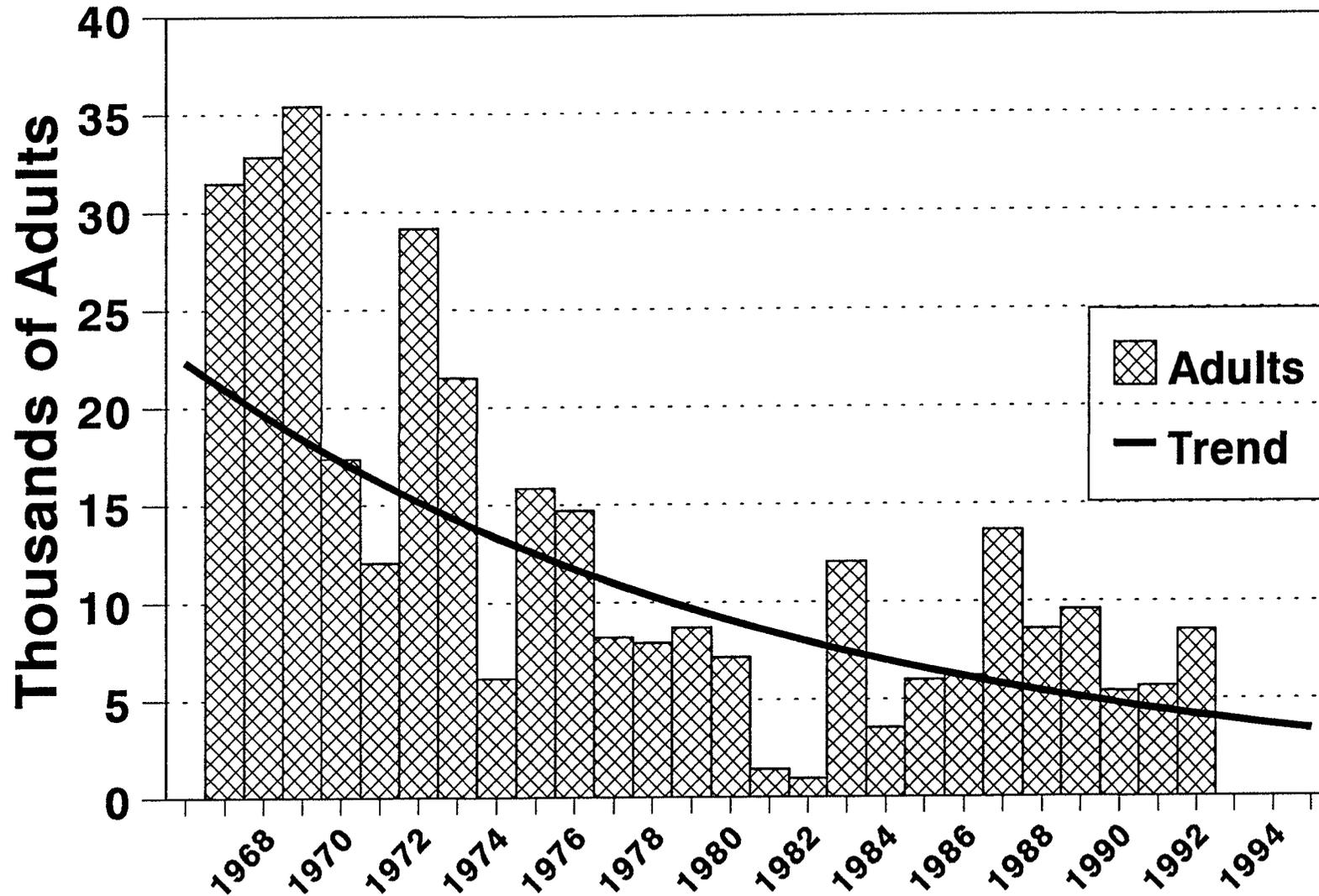
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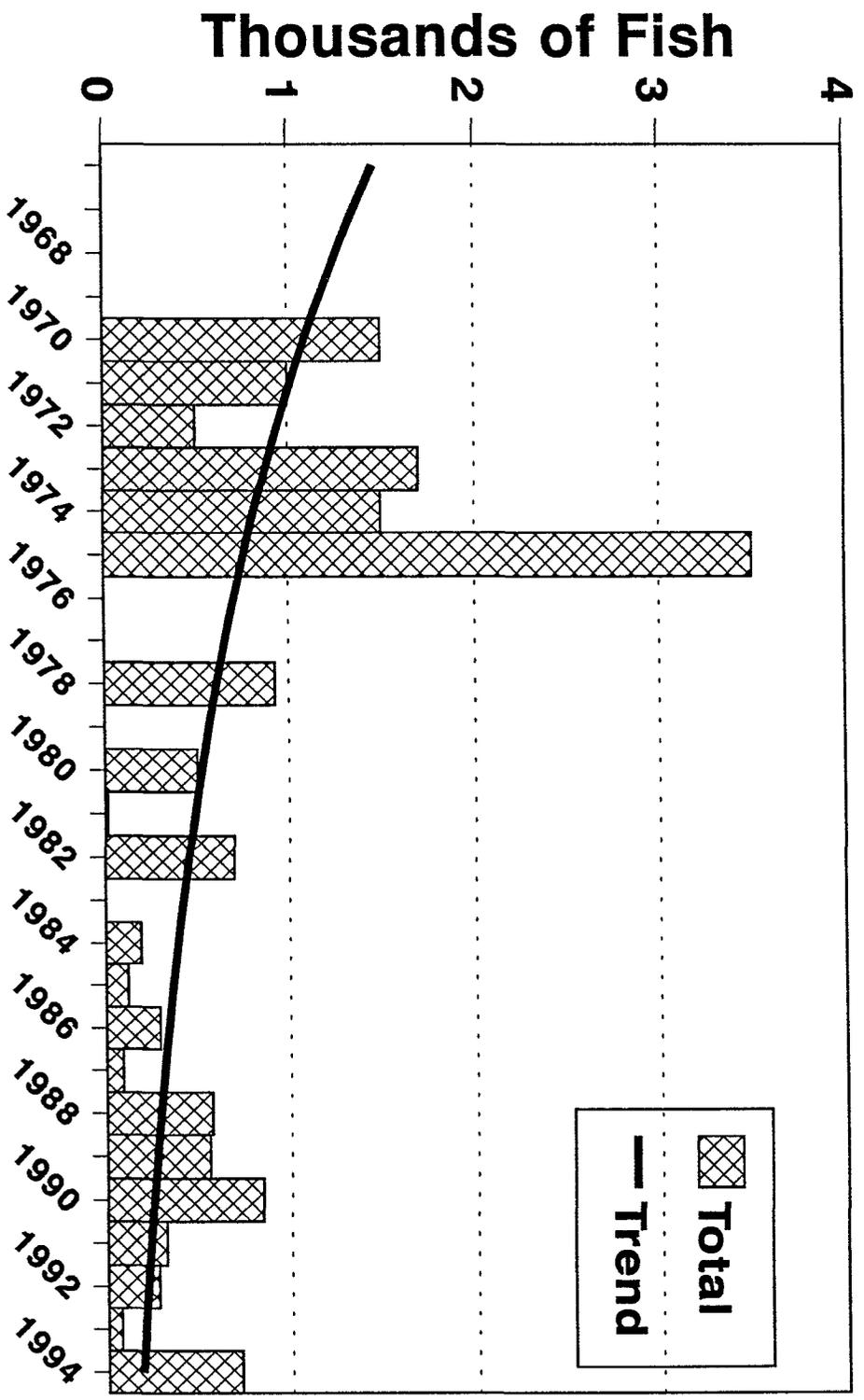
Winter-run Chinook Salmon 1967-1994



Sacramento Late-fall-run Chinook 1967-1992

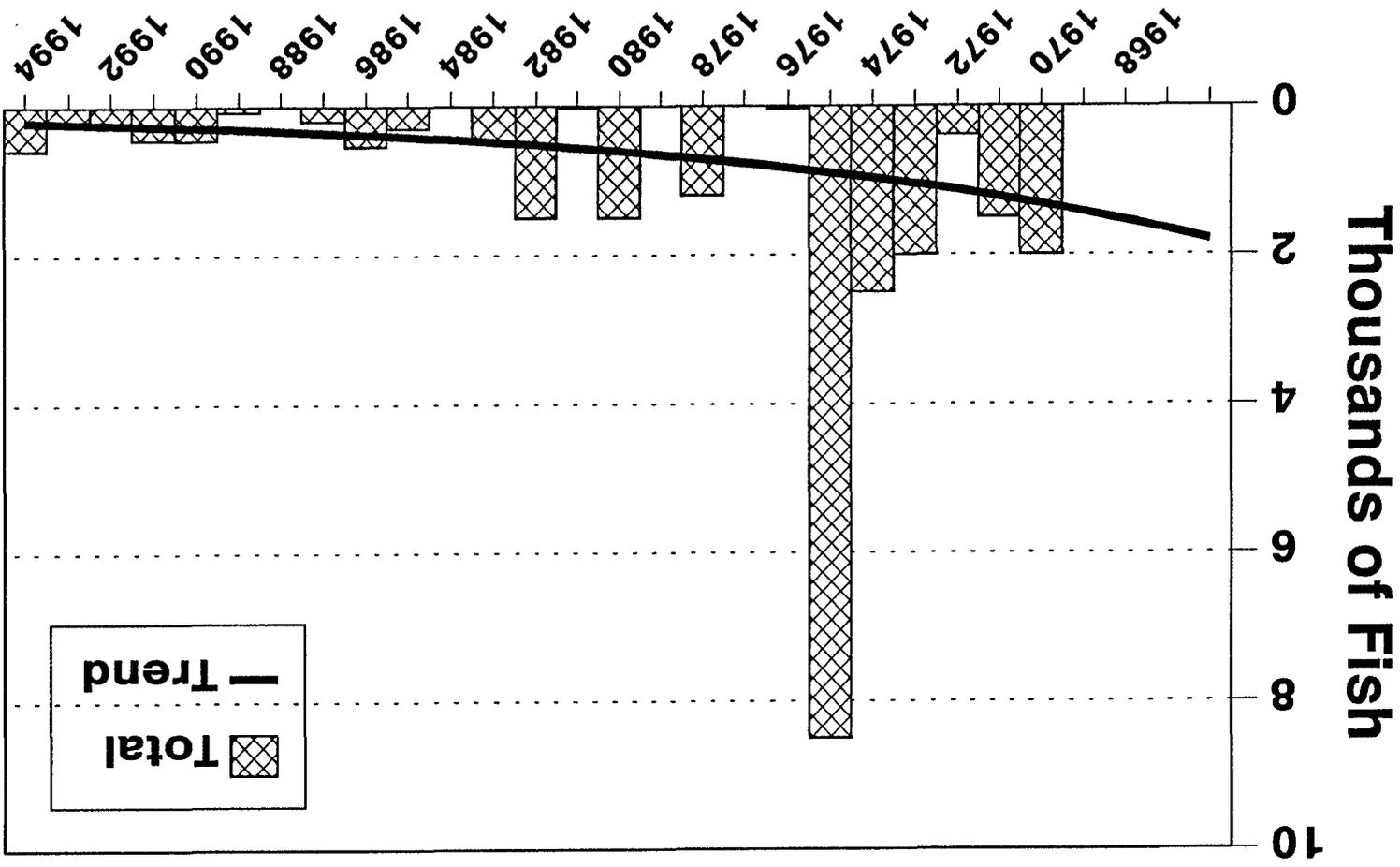


Spring-run Chinook Salmon Mill Creek 1967-1994

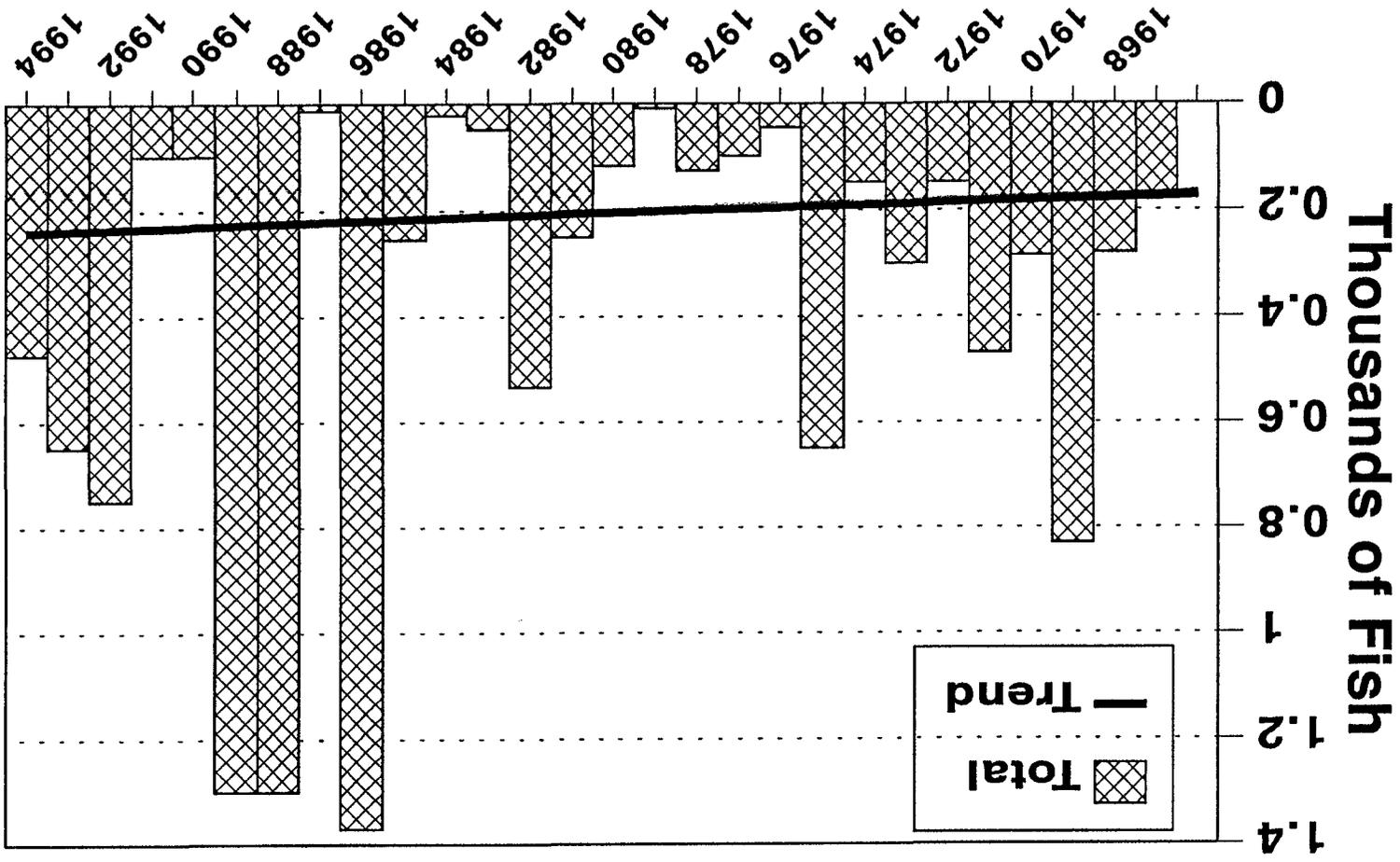


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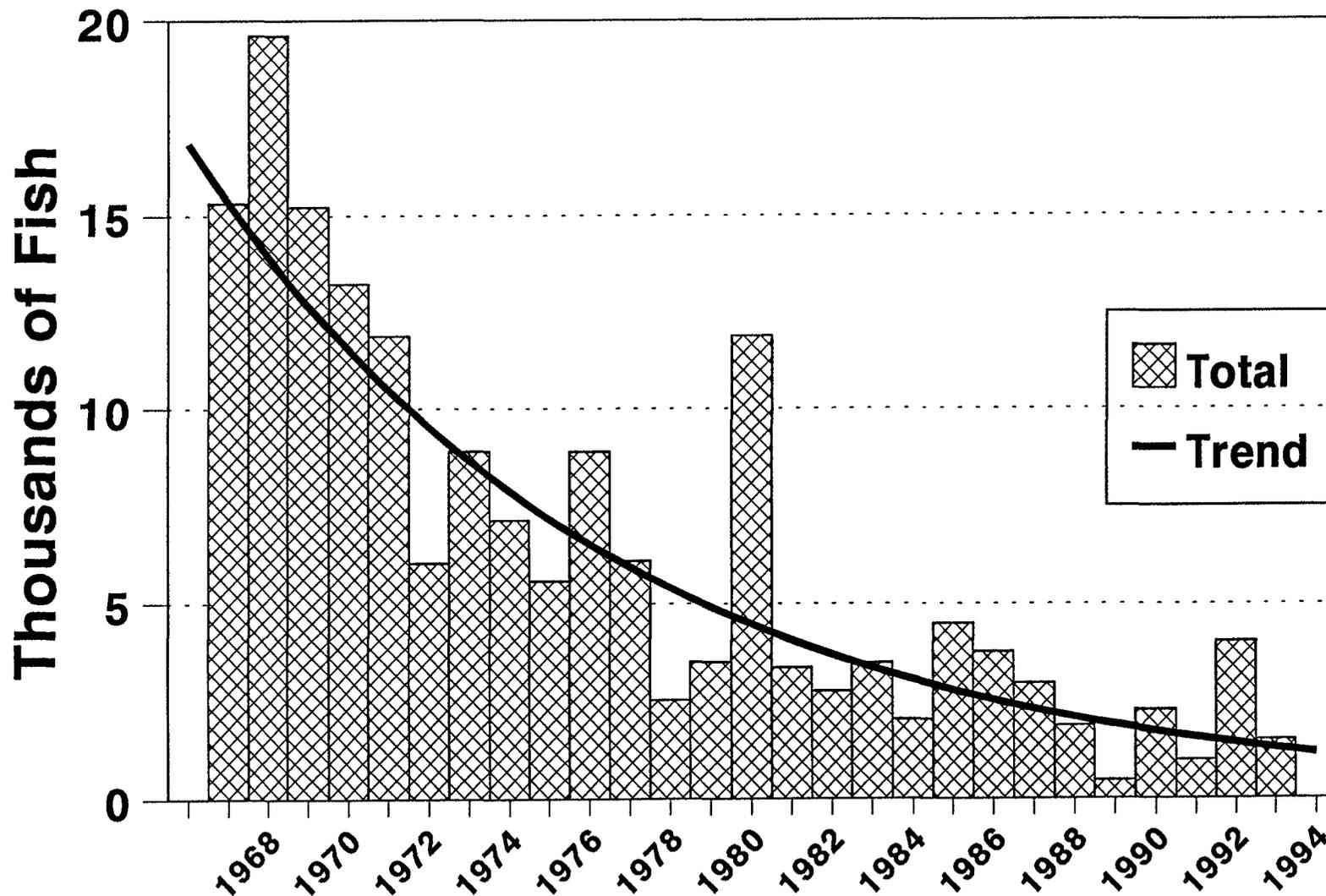
Spring-run Chinook Salmon Deer Creek 1967-1994



Spring-run Chinook Salmon Estimate Butte Creek 1967-1994

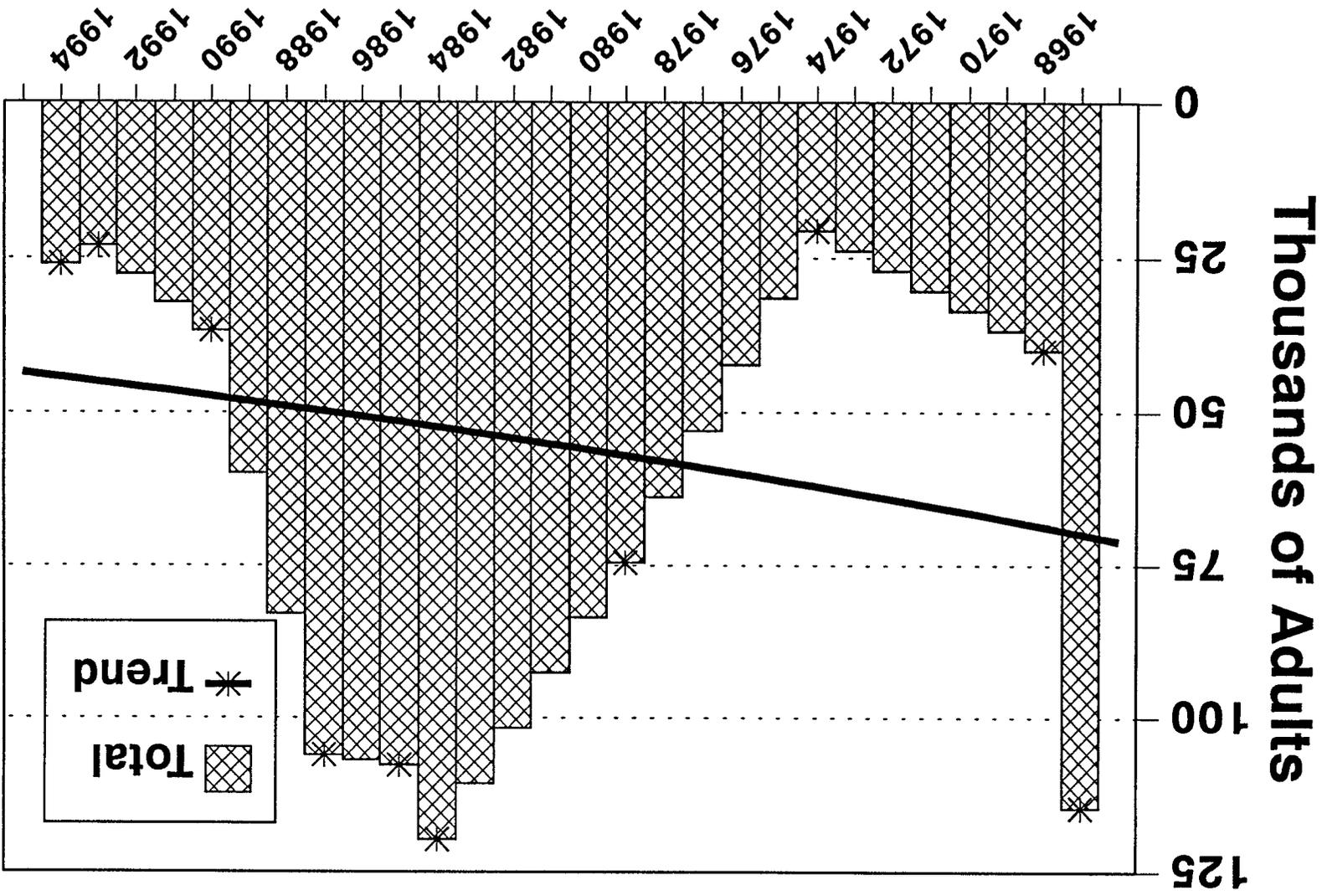


Steelhead Counts at Red Bluff Diversion Dam 1967-1993

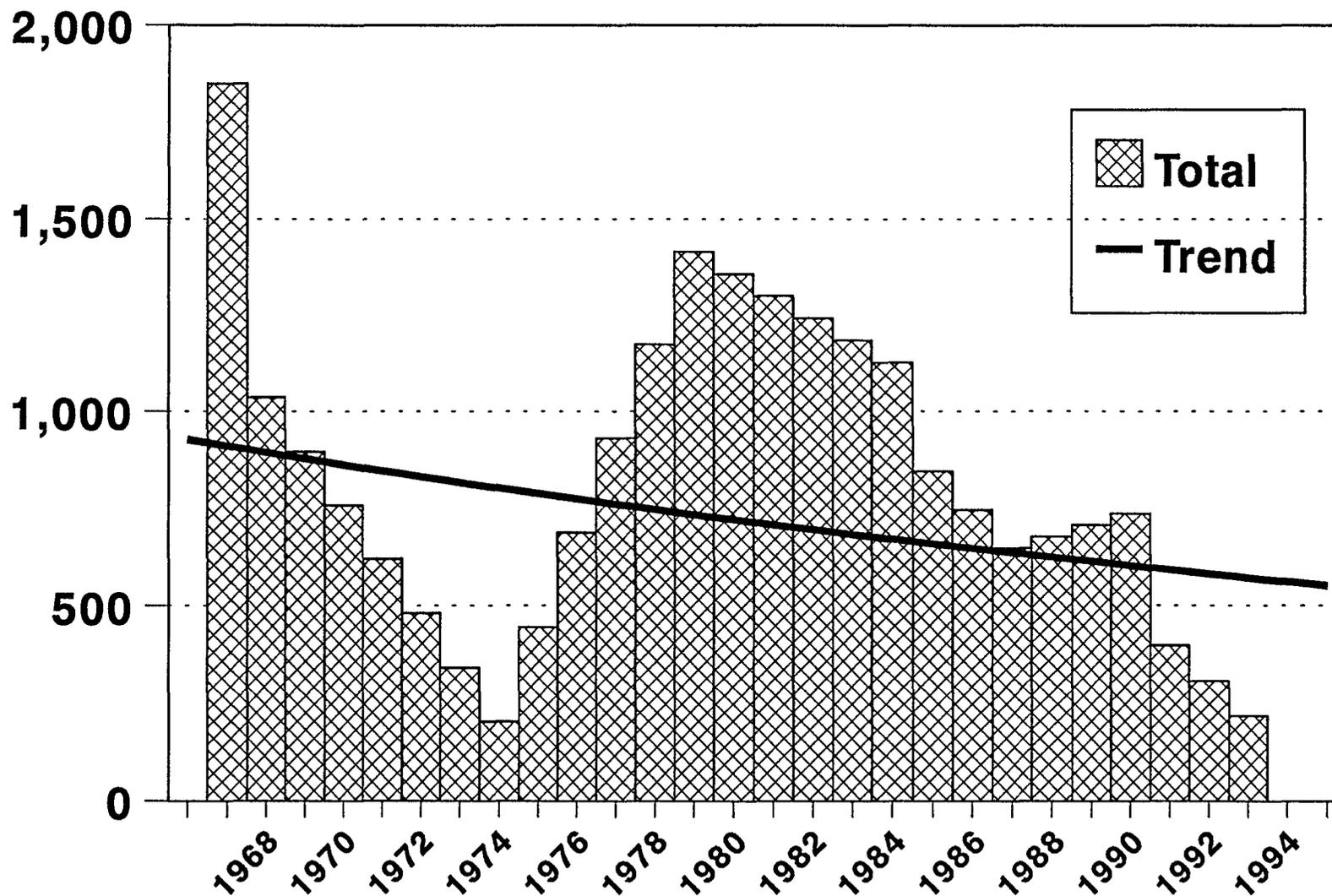


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White Sturgeon 1967-1994

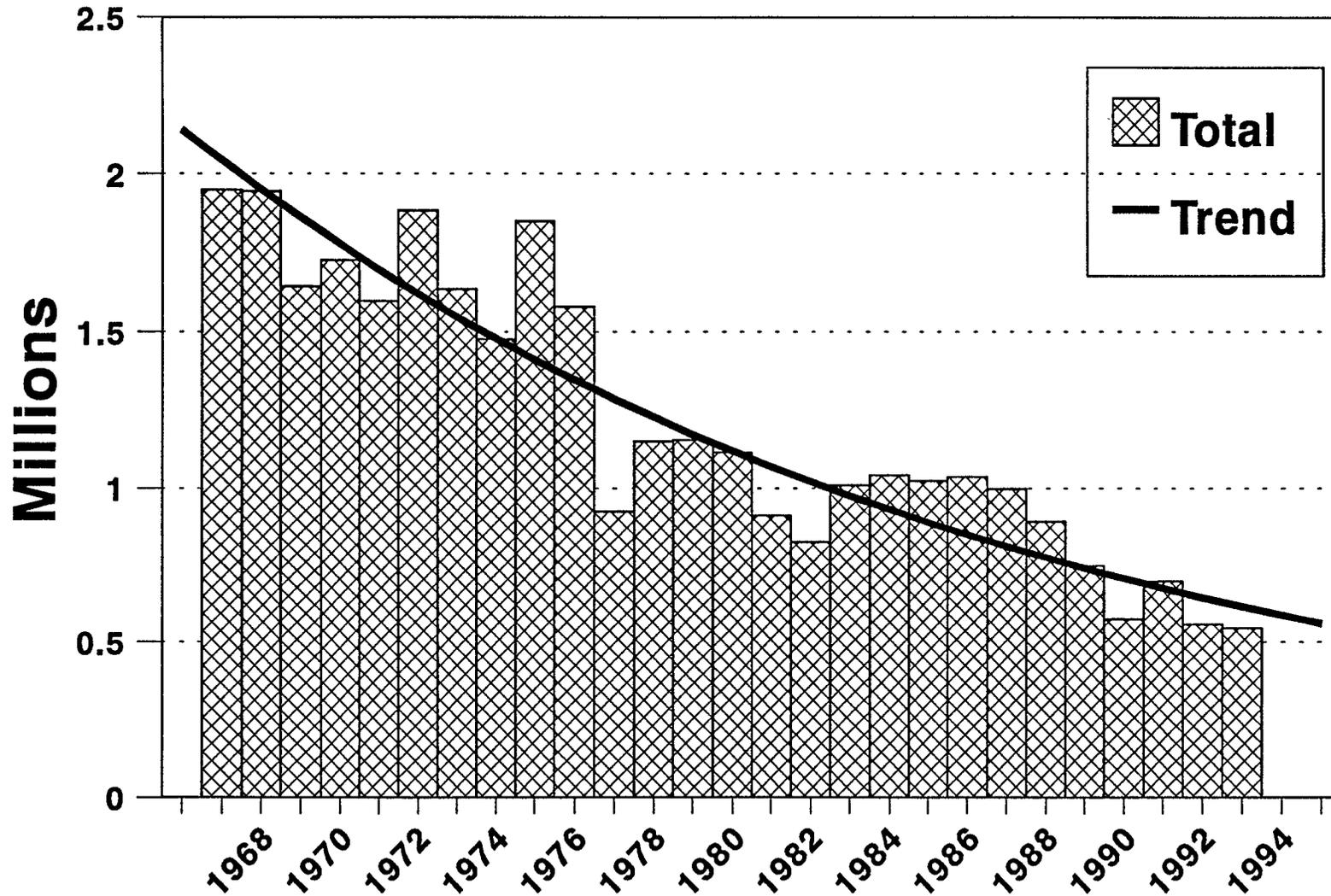


Green Sturgeon 1967-1994



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STRIPED BASS 1967-1993



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