# STATE OF CALIFORNIA DEPARTMENT OF FISH AND GAME WILDLIPE MANAGEMENT DIVISION NONGAME BIRD AND MAMMAL SECTION

BOBCAT HARVEST ASSESSMENT, 1991-92

by

William E. Grenfell Jr.

November 1992

## State of California THE RESOURCES AGENCY Department of Fish and Game

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### ABSTRACT

An estimated 1,502 bobcats were taken during the 1991 hunting year and the 1991-92 trapping season. According to export tag reports, trappers took 1,089 bobcats, and hunters took 401. The total take was a decrease of 21% from the 1990-91 year and was the lowest reported take in the last 15 years. The bobcat take decreased in all regions of the State except in the Northwest, East Sierra, and South Coast (Table 4). The average pelt price increased from \$49.50 last year to \$74.15 this year (Table 5). The average take per successful trapper increased, but the number of bobcat trappers decreased from 124 to 113.

Data on the bobcat harvest were gathered through the process of tagging bobcat furs for export; the annual trapping report and bobcat hunter report cards; and from U.S. Department of Agriculture, Animal Damage Control records.

#### INTRODUCTION

Bobcat harvest increased in California from the 1960s through the late 1970s. This increase reflected high fur prices and an abundant population of bobcats. The sale of bobcat fur has brought the highest dollar income to trappers of any species harvested and sold in California since the 1975-75 season. In order to determine the magnitude of the bobcat harvest and the resultant effect on bobcat populations throughout the State, a number of studies were initiated. Field studies of local population dynamics were completed on unharvested population in San Diego County. Reports on these studies have been previously distributed. A statewide harvest monitoring system was used where the age and sex structures of the harvested population were sampled to determine the effect of the harvest on various bobcat populations and to identify the amount of harvest. The age and sex structure of the various bobcat populations in California stabilized during the mid-1980s. Currently, only the monitoring of harvest quantity is being conducted, since the demand and harvest have been declining since 1981-82.

Public interest in the bobcat, on both the domestic and international fronts, has increased greatly over the last 20 years. Prior to 1971, the bobcat in California was a nonprotected mammal, and there were no restrictions on its take. In 1971, this species was given nongame status by the California Legislature. Subsequently, in 1974 a six-month season was imposed on the take of bobcats. This season was further restricted to the standard 3 1/2 month furbearer season in 1976. During the 1978-79 season, the export tag quota was reached by the end of January, effectively shortening the season by one month. During 1979-80, the season was reduced to 2 1/2 months, but was closed on December 29, 1979, one month earlier than proposed, because the quota of export tags had been reached once again.

For the 1980-81 season, the State was divided into three harvest zones, each with a different length season, depending upon the status of the local bobcat populations. These regulations were a result of previous research and monitoring efforts (see W-54-R-12, IV-7). The 1981-82 season length was increased by one week in length, except in the northeastern California region, in order to have the bobcat season coincide with the season on gray fox. In 1982-83, the northeastern California season was set back two weeks, and its length was increased by a week.

The season limit for bobcat sport hunters was set at two for the 1980-81 season and increased to five for the 1984-85 season. Prior to 1982-83, the sport hunting season length and timing coincided with the commercial take season. In 1982-83, the sport hunting season was extended for two weeks at the end of the commercial season in Del Norte, Humboldt, Kern, Lake, Mendicino, Trinity, and San Diego counties. For the 1985-86 season, the sport hunting season was extended on a statewide basis to open a week before the commercial season and to last until February 15.

The Defenders of Wildlife petitioned the Secretary of the Interior in early 1977 to place the bobcat on the endangered species list. Subjective evaluation of data from Animal Damage Control take, along with increased fur prices and commercial demand and take of bobcats, led this group to take this action. The Secretary later found that the petitioned action was not warranted.

In 1973, the United States became party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora. The treaty restricted trade in endangered species and established procedures to monitor the trade of other species that might be faced with endangerment in the future. The bobcat was one of the species deemed by the parties to the treaty as a candidate for future endangerment. The Endangered Species Scientific Authority (E.S.S.A.) was established as the scientific body to monitor the species status in the United States, and the U.S. Fish and Wildlife Service was given the authority over trade as provided by the treaty. The E.S.S.A. evaluated data to justify harvest and export of bobcat furs for three years.

In November, 1979, Defenders of Wildlife brought suit against the E.S.S.A. The suit was heard in December, and the court's decision reversed the E.S.S.A.'s findings for five states and parts of two others, but not for California. After the suit, the E.S.S.A. was dissolved and the responsibility was given to the U.S. Fish and Wildlife Service, whose Office of the Scientific Authority (O.S.A.) now has the responsibility for scientific monitoring.

An appeal by Defenders of Wildlife of the court's ruling to the Court of Appeals, District Court for the District of Columbia, resulted in a court order that prohibited bobcat pelts taken after July 1, 1982 from being exported. This ban was imposed until O.S.A. could satisfy the court that export findings were based on reliable population estimates and that each state would enforce a predetermined take limit. Guidelines from O.S.A. to the states to obtain this information were not accepted by the court. During 1982 there was legislative redefinition of the Endangered Species Act which effectively voided the court's ban on export. On December 1, 1982, the export ban was lifted and the major European market was reopened.

Since late 1982, there has been little activity to ban the harvest of bobcats. However, this has been a period of intense management and monitoring of bobcat populations and harvest. The results of this management and monitoring that are discussed in this report.

## **OBJECTIVES**

- 1. Determine the annual bobcat harvest on a regional basis.
- Use this information along with previously gathered information on bobcat biology and population dynamics to develop a statewide management plan and to manage local populations by manipulating season lengths and chronology, take methods, and harvest limits.

#### METHODS

The commercial take is determined through assessment of mandatory annual reports of licensed trappers and an export tagging program for all bobcat furs. Commercial fur trappers report their take at the end of each license year (fiscal year), giving the quantity of take of each species by county. Anyone possessing or wishing to sell or to transport a bobcat fur must have it tagged. As part of the tagging process, the trapper must supply information on the place, date, and method of take.

Information on sport hunting is gathered through the sale of hunting tags and their return. Sport hunters of bobcat are required to report their kill and provide information on their take.

All depredation take must be reported to the Department. This information is reported directly by the person doing the taking or by the public agencies doing the depredation control work.

### RESULTS

For the 1991-92 season, the total estimated take of bobcats was 1,502 individuals (Table 1). This was 21% less than were taken during 1990-91 and the lowest estimated take in the 15 seasons since 1976-77. Commercial trappers continue to take the majority (71%) of bobcats. The total hunter take of 401 (Table 2) was lower (55%) than in 1990-91. The hunter take also was the lowest in 15 seasons since the 1976-77 season (Table 1). The total take of bobcats ranged from none in 13 counties to 214 in Kern county (Table 2). This year only 3 of 5% counties reported a take of more than 100 bobcats; last year more than 100 bobcats were taken from 5 counties.

| Table 1  |  | Annual Take  | of Bobcats b<br>8 to 1991-92.   | y Huntin  | g and Tr  | apping   |
|--|--|--|---|---|---|--|
| Season   | Total<br>Commercial<br>Take                  | Commercial<br>Trapper<br>Take  | Commercial<br>Hunter<br>Take  | Total<br>Hunter<br>Take   | Animal<br>Damage<br>Control<br>Take                                   | Total<br>Annual<br>Take  |
|  | (IA+IB)                                      | (IA)   | (IB)  | (II)  |   | IA+II+III)   |
| 1977-78<br>1978-79<br>1979-80<br>1980-81<br>1981-82<br>1982-83<br>1983-84<br>1984-85<br>1985-86<br>1986-87<br>1987-88<br>1988-89 | 7362<br>8897<br>8099<br>9123<br>8994<br>5586 | 4650<br>6825<br>6686<br>8702<br>8162<br>7427<br>6576<br>7495<br>6927<br>8003<br>8017<br>4877 | 500<br>1500<br>1123<br>893<br>1175<br>1086<br>786<br>1402<br>1172<br>1120<br>977<br>709 | 15300<br>5811<br>7708<br>3737<br>3037<br>2951<br>2077<br>2993<br>2861<br>1739<br>2773<br>1778 | 208<br>56<br>32<br>24<br>34<br>48<br>43<br>48<br>36<br>44<br>47<br>52 | 20158<br>12692<br>14426<br>12463<br>11233<br>10426<br>8696<br>10536<br>9824<br>9786<br>10837<br>6707 |
| 1989-90<br>1990-91<br>1991-92  | 2980<br>1148<br>1089                         | 2677<br>962<br>1089  | 303<br>186<br>0   | 715<br>881<br>401   | 63<br>46<br>12*   | 3455<br>1889<br>1502   |

<sup>\*</sup> Federal fiscal year data 10-1-91 to 9-30-92. Previous data in this column 7-1 to 6-30.

| Table 2. Tabl                | e of Bobcats b              | y County During         | the 1991-92  | Season.                 |
|------------------------------|-----------------------------|-------------------------|--|-------------------------|
| County                       | Licensed<br>Trapper<br>Take | Sport<br>Hunter<br>Take | Animal<br>Damage<br>Control<br>Take  | Total<br>County<br>Take |
| Alameda                      |                             | 2                       |  | 2                       |
| Alpine                       | 6                           | _                       |  | 6                       |
| Amador                       | 6<br>2<br>3                 | 1                       |  | 3                       |
| Butte                        | 3                           | ī                       |  | 2<br>6<br>3<br>4<br>8   |
| Calaveras                    |                             | 8                       |  | g                       |
| Colusa                       | 25                          | 1<br>8<br>2             |  | 27                      |
| Del Norte                    |                             | 10                      |  | 10                      |
| El Dorado                    | 2                           | 12                      |  | 14                      |
| Fresno                       | 27                          | 22                      |  | 49                      |
| Humboldt                     | 65                          | 14                      |  | 79                      |
| Imperial                     |                             | 1                       |  | í                       |
| Inyo                         | 26                          |                         |  | 26                      |
| Kern                         | 198                         | 1.6                     |  | 214                     |
| Lake                         | 15                          |                         |  | 15                      |
| Lassen                       | 24                          | 25                      |  | 49                      |
| Los Angeles                  | 36                          | 3<br>27                 |  | 39                      |
| Madera                       |                             | 27                      |  | 27                      |
| Marin                        |                             | 3                       |  | 3                       |
| Mariposa                     |                             | 3<br>1                  |  | i                       |
| Mendocino                    | 13                          | 15                      | 4  | 32                      |
| Modoc                        | 39                          | 15                      | 5.4P   | 54                      |
| Mono                         | 14                          | 3                       |  | 17                      |
| Monterey                     | 46                          | 15                      |  | 61                      |
| Napa                         | 6                           | 7                       | 1  | 14                      |
| Nevada                       |                             | 7<br>2<br>3             | 1  | 3                       |
| Placer                       |                             | 3                       |  | 3<br>3<br>19            |
| Plumas                       |                             | 18                      | 1  | 19                      |
| Riverside                    | 39                          | 5<br>1                  |  | 44                      |
| San Benito                   | 21                          | 1                       |  | 22                      |
| San Bernardino               | 55                          | 11                      |  | 66                      |
| San Diego                    | 53                          | 15                      |  | 68                      |
| San Luis Obispo              | 2                           | 7                       |  | 9<br>6                  |
| San Mateo                    |                             | 5<br>2<br>5<br>35       | 1  | 6                       |
| Santa Barbara<br>Santa Clara | 46                          | 2                       |  | 48                      |
| Shasta                       | 00                          | 5                       |  | 5                       |
| Sierra                       | 80                          | 35                      |  | 115                     |
| Siskiyou                     | 75                          | 3                       |  | 3                       |
| Sonoma                       | 75<br>9                     | 20                      | 2  | 103                     |
| Stanislaus                   | 7                           | 26<br>1<br>3            | 2  | 12                      |
| Tehama                       | 10                          | 10                      |  | 3                       |
| Trinity                      | 42                          | TO                      |  | 20                      |
| Tulare                       | 62                          | 10<br>8<br>25           |  | 50                      |
| Toulumne                     | 02                          | 8                       |  | 87                      |
| Ventura                      | 48                          | 5                       |  | 8<br>53                 |
|                              |                             |                         | -1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 |                         |
| Total                        | 1089                        | 401                     | 12   | 1502                    |

No bobcats were reported taken in Contra Costa, Glenn, Kings, Merced, Orange, Sacramento, San Francisco, San Joaquin, Santa Cruz, Solano, Sutter, Yolo, and Yuba counties.

Seven of the 10 counties reporting the highest commercial take of bobcats were the same as last year. However, Humboldt, Santa Barbara, and Trinity counties replaced Colusa, Fresno, and Los Angeles counties.

|        | Ten Counties Repo | tring in girest com |                 |                 |                 |
|--------|-------------------|---------------------|-----------------|-----------------|-----------------|
| Rank   | 1972-73           | 1973-74             | 1974-75         | 1975-76         | 1976-77         |
| 1      | Merced            | San Diego           | San Diego       | Humbol dt       | Humboldt        |
| 2      | Modoc             | Modoc               | Nodoc           | San Diego       | San Bernardino  |
| 3      | Shasta            | Tehama              | Lassen          | Modoc           | Santa Barbara   |
| 4      | Siskiyou          | Tuolumne            | Humboldt        | Shasta          | Shasta          |
| 5      | Humboldt          | Siskiyou            | Inyo            | Inyo            | San Benito      |
| 6      | Sierra            | Humbol dt           | Siskiyou        | Siskiyou        | Mendocino       |
| 7      | Tehama            | Mendocino           | Colusa          | Riverside       | Tulare          |
| 8      | San Bernardino    | Shasta              | Riverside       | San Bernardino  | Fresno          |
| 9      | Butte             | Lake                | Fresno          | Solano          | San Diego       |
| 10     | San Diego         | Solano              | Lake            | Lake            | Inyo            |
| Rank   | 1977-78           | 1978-79             | 1979-80         | 1980-81         | 1981-82         |
| 1      | San Bernardino    | Humbol dt           | Santa Barbara   | San Bernardino  | San Bernardino  |
| 2      | Humboldt          | San Bernardino      | Humboldt        | Monterey        | Kern            |
| 3      | Tulare            | Shasta              | Tulare          | Santa Barbera   | Monterey        |
| 4      | Santa Barbara     | Kern                | Kern            | San Luis Obispo |                 |
| 5      | Kern              | Siskiyou            | San Bernardino  | Mumbo l dt      | Tulare          |
| 5<br>6 | Invo              | Santa Barbera       | Siskiyou        | Tulare          | Humboldt        |
| 7      | Mendoc i no       | Inyo                | San Diego       | Mendoc i no     | San Diego       |
| 8      | Modoc             | Nodoc               | Mendoc i no     | Kern            | Ventura         |
| 9      | Shasta            | Mendoc i no         | Monterey        | San Diego       | Fresno          |
| 10     | Monterey          | Tehama              | San Luis Obispo | San Benito      | San Luis Obispo |
| Rank   | 1982-83           | 1983-84             | 1984-85         | 1985-86         | 1986-87         |
| 1      | San Bernardino    | San Bernardino      | Kern            | Kern            | San Bernardino  |
| 2      | Monterey          | Kern                | Tulare          | San Bernardino  | Kern            |
| 3      | Kern              | Santa Barbara       | Monterey        | Tulare          | Santa Barbara   |
| 4      | Santa Barbara     | San Luis Obispo     | San Bernardino  | Monterey        | Tulare          |
| 5      | San Luis Obispo   |                     | Santa Barbara   | Santa Barbara   | Ventura         |
| 6      | Tulare            | Monterey            | San Luis Obispo | San Diego       | Monterey        |
| 7      | Humboldt          | Tulare              | Los Angeles     | Ventura         | San Luis Obispo |
| 8      | Los Angeles       | San Diego           | Humboldt        | Humboldt        | San Diego       |
| 9      | San Diego         | Ventura             | Siskiyou        | Los Angeles     | Humboldt        |
| 10     | Ventura           | Humboldt            | San Diego       | Inyo            | Fresno          |
| Rank   | 1987-88           | 1988-89             | 1989-90         | 1990-91         | 1991-92         |
| 1      | San Bernardino    | San Bernardino      | Kern            | Kern            | Kern            |
| ż      | Kern              | Kern                | San Bernardino  | Tulare          | Shasta          |
| 3      | Monterey          | San Diego           | Ventura         | Colusa          | Siskiyou        |
| 4      | Tulare            | Santa Barbara       | Fresno          | San Bernardino  | Humboldt        |
| 5      | Santa Barbara     | Monterey            | Monterey        | Fresno          | Tulare          |
| 6      | Siskiyou          | Los Angeles         | Los Angeles     | Siskiyou        | San Bernardino  |
| 7      | Humboldt          | Ventura             | San Diego       | Los Angeles     | San Diego       |
| 8      | Ventura           | Fresno              | Siskiyou        | Ventura         | Ventura         |
| 9      | San Diego         | Tulare              | Tulare          | San Diego       | Santa Barbera   |
| 10     |                   | San Luis Obispo     |                 | Shesta          | Trinity         |

The 1991-92 Commercial take of bobcats was among the lowest in the previous five seasons in all but three of the geographic regions monitored (Table 4). The increase in the Northwest Region was from 115 bobcats last year (1990-91) to 260 this year. The increases in the East Sierra and South Coast are 4 and 36 animals respectively.

| Table 4. Geographical Differences in the Amount of Commercial Take of Bobcats in California, 1986-87 to 1991-92. |                 |                             |                 |                             |                 |                     |                 |                             |                 |                             |                 |
|--|-----------------|-----------------------------|-----------------|-----------------------------|-----------------|---------------------|-----------------|-----------------------------|-----------------|-----------------------------|-----------------|
| Area '   | 1986-87<br>Take | Change<br><to><br/>(%)</to> | 1987-88<br>Take | Change<br><to><br/>(%)</to> | 1988-89<br>Take | Change<br><to></to> | 1989-90<br>Take | Change<br><to><br/>(%)</to> | 1990-91<br>Take | Change<br><to><br/>(%)</to> | 1991-92<br>Take |
| Northeast  | 514             | 17                          | 601             | -53                         | 282             | -28                 | 230             | -61                         | 90              | - 2                         | 88              |
| Northwest  | 1216            | 11                          | 1355            | -49                         | 694             | -48                 | 362             | -68                         | 115             | 96                          | 260             |
| North Coast  | 425             | 14                          | 483             | -35                         | 312             | -64                 | 112             | - 1                         | 111             | -51                         | 55              |
| Central Coa  | at 107          | 12                          | 120             | -67                         | 40              | -32                 | 27              | +33                         | 36              | -100                        | (               |
| North Sierra   | a 66            | -64                         | 24              | -67                         | 8               | 0                   | 8               | -100                        | 0               | 300                         | 3               |
| Central<br>Sierra  | 232             | 47                          | 342             | -63                         | 127             | -72                 | 35              | - 9                         | 32              | -87                         |                 |
| East Sierra  | 343             | -28                         | 248             | -71                         | 73              | 62                  | 118             | -66                         | 42              | 9                           | 46              |
| South Coast  | 2881            | -13                         | 2510            | -30                         | 1753            | -51                 | 857             | - 79                        | 180             | 20                          | 216             |
| South Sierra   | 1923            | - 6                         | 1809            | -43                         | 1026            | -32                 | 696             | -46                         | 375             | -23                         | 287             |
| Southern<br>California   | 1416            | 6                           | 1502            | -15                         | 1271            | -58                 | 535             | -69                         | 167             | -22                         | 130             |
| Total  | 9123            |                             | 8994            |                             | 5586            |                     | 2980            |                             | 1148            |                             | 1089            |

The market for bobcat fur has become relatively stable in both political and economic terms. However, the average price of a bobcat pelt dropped by about 88% in the two years prior to 1990-91. It dropped from an all time high of \$167.33 in 1986-87 to \$17.91 in 1989-90 (Table 5). During 1990-91, the pelt price increased to \$49.50. There was no national or international regulatory action pending which might have influenced the demand for bobcat furs. The market just appeared saturated during 1989-90 and 1990-91. During 1991-92 the price again increased to \$71.32. The saturation of the market appears to be over.

| Season             | Average Price        | Highest Price                  |
|--------------------|----------------------|--------------------------------|
| 1970-71            | \$ 10.86             | Not Recorded                   |
| 1971-72            | \$ 18.83             | \$ 30.00                       |
| 1972-73            | \$ 29.33             | \$ 6.00                        |
| 1973-74            | \$ 45.00             | <b>\$</b> 110.00               |
| 1974-75            | \$ 50.00             | \$ 110.00                      |
| 1975-76            | \$ 133.50            | \$ 300.00                      |
| 1976-77            | \$ 76.00             | \$ 225.00                      |
| 1977-78            | \$ 105.00            | \$ 185.00                      |
| 1978-79            | \$ 120.00            | \$ 426.00                      |
| 1979-80            | \$ 114.20            | \$ 313.00                      |
| 1980-81            | \$ 129.90            | \$ 325.00                      |
| 1981-82            | \$ 114.53            | \$ 325.00                      |
| 1982-83            | \$ 105.85            | \$ 342.11                      |
| 1983-84            | \$ 102.33            | \$ 380.00                      |
| 1984-85            | \$ 121.96            | \$ 368.00                      |
| 1985-86            | \$ 107.86            | Not Available<br>Not Available |
| 1986-87            | \$ 167.33            | Not Available                  |
| 1987-88            | \$ 142.73            | Not Available                  |
| 1988-89            | \$ 102.31            | Not Available                  |
| 1989-90            | \$ 17.91             | \$ 125.00                      |
| 1990-91<br>1991-92 | \$ 49.50<br>\$ 71.32 | \$ 74.15                       |

The average take per commercial trapper increased slightly to 9.6 animals compared to 7.0 last year. However, the number of bobcat trappers declined from 124 to 113. There were 1,007 bobcat trappers in 1980-81 season (Table 6).

| County          | Season |       |       |        |          |        |       |           |        |       |       |         |
|-----------------|--------|-------|-------|--------|----------|--------|-------|-----------|--------|-------|-------|---------|
| County          | 80-81  | 81-82 | 82-83 | 83-84  | 84-85    | 85-86  | 86-87 | 87-88     | 88-89  | 89-90 | 90-91 | 1991-92 |
| Butte           | 2.5    |       |       |        |          |        |       | 00W-00-59 |        |       |       |         |
| Freeno          | 10.2   | 9.1   | 8.5   | 11.9   | 10.0     | 12.1   | 17.6  | 15.3      | 16.1   | 17.4  |       |         |
| Glenn           | 5.0    | 5.5   | 6.8   |        | 5.8      |        | 1.0   | 10.7      |        |       |       |         |
| <b>Humboldt</b> | 5.3    | 5.7   | 4.8   | 7.6    | 9.3      | 18.0   | 12.5  | 13.0      | 8.6    | 2.3   |       |         |
| Inyo            | 8.5    | 5.0   | 5.3   | 7.8    | 5.6      | 14.2   | 9.7   | 6.2       | 0.0    | 4,0   |       |         |
| Kern            | 11.0   | 10.8  | 12.2  | 16.5   | 18.4     | 14.7   | 13.0  | 14.2      | 9.1    | 11.7  | 16.9  |         |
| Lake            | 4.7    | 5.9   | 4.6   | 5.9    | 0.7000.0 | S 5500 | 7.2   | 7.9       |        |       | 1007  |         |
| Lassen          | 3.8    | 5.9   | 6.5   | 3.6    | 4.8      | 4.4    | 4.4   | 9.8       | 3.9    | 5.6   |       |         |
| Los Angeles     | 14.1   | 8.1   | 8.8   | 13.5   | 15.8     | 14.9   | 15.6  | 11.1      | 12.0   | 14.4  | 5.9   |         |
| Madera          |        | 8.9   | 77.5  | 11.3   | 12.7     |        |       | 7.3       | 16.0   | 1464  | 207   |         |
| lariposa        | 5.7    | 10.1  | 6.3   | 50.000 | 9.6      | 7.2    | 10.1  | 19.9      |        |       |       |         |
| 4endocino       | 6.1    | 4.5   | 5.4   | 6.1    | 5.9      | 5.1    | 6.5   | 6.2       | 5.4    |       |       |         |
| 4odoc           | 3.2    | 4.6   | 5.5   | 7.7    | 7.2      | 6.3    | 6.2   | 7.2       | 7.2    | 3.0   |       |         |
| 4ono            |        | 4.2   | 6.9   | 9.2    |          | 9.9    | 9.6   | 6.5       | 1.6    | 3.0   |       |         |
| lonterey        | 16.3   | 14.2  | 11.7  | 14.7   | 18.0     | 17.8   | 21.4  | 24.8      | 14.0   | 16.1  |       |         |
| lumes           | 10000  | 5.5   | 4.5   |        |          | 11.0   | 6194  | 64.6      | 19.0   | 10.1  |       |         |
| tiverside       | 5.8    | 7.8   | 9.0   | 7.4    | 10.3     | 10.1   | 9.8   | 12.0      | 8.7    | 16.5  |       |         |
| San Benito      | 13.0   | 9.0   | 9.8   |        | 8.3      |        | 14.2  | 16.0      | 9.7    | 10.0  |       |         |
| San Bernardino  | 14.7   | 9.2   | 10.0  | 12.0   | 11.6     | 14.6   | 14.6  | 13.3      | 12.3   | 14.0  | 5.2   | 5.5     |
| San Diego       | 6.0    | 9.4   | 9.8   | 10.6   | 11.8     | 10.8   | 11.6  | 14.0      | 16.9   | 16.8  | 3.6   | 3.3     |
| San Luis Obispo |        | 8.5   | 10.6  | 14.4   | 11.1     | 10.8   | 14.7  | 14.4      | 10.4   | 7.5   |       |         |
| Santa Berbera   | 13.6   | 12.2  | 16.6  | 17.4   | 16.3     | 16.1   | 13.9  | 13.9      | 11.7   | 1.2   |       |         |
| Shasta          | 2.9    | 3.1   | 3.3   | 4.1    | 4.4      | 4.8    | 4.7   | 4.9       | 6.3    | 4.9   |       |         |
| Siskiyou        | 3.8    | 5.7   | 5.1   | 5.2    | 0.2      | 5.6    | 5.9   | 9.9       | 6.5    | 5.0   | 2.5   | 6.8     |
| Sonome          | 6.4    | 7.5   | 8.4   | 6.5    | 4.6      | 2.0    | 6.8   | 7.7       | 9.3    | 2.0   | 6.3   | 9.0     |
| cham            | 5.1    | 4.1   | 3.8   | 3.7    | 6.3      | 3.8    | 3.9   | 5.8       | 7.3    |       |       |         |
| rinity          | 3.3    | 3.3   | 4.4   | 2.5    | 3.5      | 2.0    | 8.5   | 5.0       | 2.2    |       |       |         |
| ulare           | 9.2    | 9.3   | 11.2  | 10.5   | 13.4     | 14.5   | 12.3  | 17.1      | 8.5    | 6.2   | 6.7   |         |
| uolumne         | 7.4    | 5.8   | 6.9   | 5.4    | 13.7     | 19.3   | 16.3  | 5.2       | 0.3    | 9.6   | 0.7   |         |
| /entura         | 9.4    | 10.4  | 11.2  | 10.4   | 13.5     | 12.6   | 18.4  | 16.6      | 9.9    | 16.1  |       |         |
| Statewide       | 8.04   | 8.78  | 9.08  | 11.86  | 12.01    | 12.71  | 14.75 | 13.55     | 12.61  | 12.06 | 7.00  | 9.60    |
| I Troppose      |        |       |       |        |          |        |       |           |        |       |       |         |
| Trappers        | 4 007  | 000   | 004   | /00    | 200      |        |       |           |        |       |       | 20.12   |
| narvesting      | 1,007  | 909   | 821   | 488    | 398      | 547    | 584   | 664       | 443    | 303   | 124   | 113     |
| obcats          |        |       |       |        |          |        |       |           |        |       |       |         |
| Trappers        |        |       |       |        |          |        |       |           |        |       |       |         |
| icensed         | 7 204  | 7 404 | 3,901 | 4 409  | 4 /24    | 4 /45  | 4 7/5 | 4         | 4 64 4 | 834   | 511   | 371     |

As usual, the commercial take of bobcats was primarily by trapping (77%) (Tables 7 and 8). Hunting with dogs remains the second most common way to take bobcats. This method was most commonly employed in Tulare County. About 0.1% of the bobcat furs were salvaged; 1.2% were taken through the use of a predator call and 1.7% were taken by hunting where the specific method was not given. Predator calling only occurs occasionally as a commercial hunting method.

|                 | Taken<br>by Trap | %<br>Salvaged<br>Road Kill | % Taken<br>Misc.<br>Hunting | % Taken<br>by Dogs | % Taken<br>by Calling | Sample<br>Size |
|-----------------|------------------|----------------------------|-----------------------------|--------------------|-----------------------|----------------|
| Alpine          | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 6              |
| Amador          | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 2              |
| Butte           | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 6<br>2<br>3    |
| Colusa          | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 25             |
| El Dorado       | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 2              |
| Fresno          | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 27             |
| Humboldt        | 43.1             | 0.0                        | 1.5                         | 55.4               | 0.0                   | 65             |
| Inyo            | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 26             |
| Kern            | 97.0             | 0.0                        | 0.5                         | 0.0                | 2.5                   | 198            |
| Lake            | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 15             |
| Lassen          | 95.8             | 0.0                        | 0.0                         | 0.0                | 4.2                   | 24             |
| Los Angeles     | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 36             |
| Mendocino       | 84.6             | 0.0                        | 0.0                         | 15.4               | 0.0                   | 1.3            |
| Modoc           | 59.0             | 0.0                        | 35.9                        | 5.1                | 0.0                   | 39             |
| Mono            | 100.0            | 0.0                        | 0.0                         | . 0.0              | 0.0                   | 14             |
| Monterey        | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 46             |
| Napa            | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 6              |
| Riverside       | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 39             |
| San Benito      | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 21             |
| San Bernardino  | 98.2             | 0.0                        | 1.8                         | 0.0                | 0.0                   | 55             |
| San Diego       | 98.1             | 0.0                        | 1.9                         | 0.0                | 0.0                   | 53             |
| San Luis Obispo |                  | 0.0                        | 0.0                         | 0.0                | 0.0                   | 2              |
| Santa Barbara   | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 46             |
| Shasta          | 10.0             | 0.0                        | 0.0                         | 90.0               | 0.0                   | 80             |
| Siskiyou        | 76.0             | 0.0                        | 0.0                         | 18.7               | 5.3                   | 75             |
| Sonoma          | 11.1             | 0.0                        | 0.0                         | 88.9               | 0.0                   | 9              |
| Tehama          | 100.0            | 0.0                        | 0.0                         | 0.0                | 0.0                   | 10             |
| Trinity         | 42.9             | 0.0                        | 0.0                         | 57.1               | 0.0                   | 42             |
| Tulare          | 1.6              | 0.0                        | 0.0                         | 93.5               | 4.8                   | 62             |
| Ventura         | 97.9             | 2.1                        | 0.0                         | 0.0                | 0.0                   | 48             |
| Total           | 77.2             | 0.1                        | 1.7                         | 19.8               | 1.2                   | 1089           |

| Table 8. Method of Commercial Take of Bobcats, 1980-91. |      |      |         |            |           |         |        |  |  |
|---|------|------|---------|------------|-----------|---------|--------|--|--|
| Method of Take (Percent of Total Statewide Take) Season |      |      |         |            |           |         |        |  |  |
| Jeason -  | Trap | Dogs | Calling | Misc. Hunt | Road Kill | Unknown | Total% |  |  |
| 1980-81   | 90.6 | 6.6  | 0.7     | 1.4        | 0.3       | 0.5     | 100.1  |  |  |
| 1981-82   | 86.2 | 9.5  | 1.3     | 1.8        | 0.3       | 0.9     | 100.0  |  |  |
| 1982-83   | 86.7 | 10.4 | 0.9     | 1.4        | 0.2       | 0.4     | 100.0  |  |  |
| 1983-84   | 89.0 | 9.3  | 0.4     | 1.1        | 0.2       | <0.1    | 100.0  |  |  |
| 1984-85   | 82.8 | 13.5 | 0.7     | 1.7        | 0.3       | 1.0     | 100.0  |  |  |
| 1985-86   | 85.1 | 13.2 | 0.6     | 0.7        | 0.1       | 0.3     | 100.0  |  |  |
| 1986-87   | 83.4 | 10.6 | 0.8     | 0.8        | 0.1       | 4.2     | 99.9   |  |  |
| 1987-88   | 88.5 | 9.6  | 1.1     | 0.6        | 0.1       | 0.1     | 100.0  |  |  |
| 1988-89   | 85.5 | 11.8 | 0.9     | 0.4        | 0.1       | 1.4     | 100.1  |  |  |
| 1989-90   | 89.9 | 7.8  | 0.7     | 1.6        |           |         | 100.0  |  |  |
| 1990-91   | 83.7 | 13.2 | 2.4     | 0.5        | 0.2       |         | 100.0  |  |  |
| 1991-92   | 77.2 | 19.8 | 1.2     | 1.7        | 0.1       | •       | 100.0  |  |  |

Information on the extent and distribution of the sport hunting take of bobcats is gathered through the sport hunting tag program. Obtaining these tags and returning them to the Department upon taking bobcat are legal requirements of bobcat hunters. The Department sold 1,011 bobcat hunting tags during the 1991-92 season. Four hundred and one were returned to the Department. The sport hunting take, by county, is shown in Table 2.

#### DISCUSSION

The total bobcat harvest decreased again in the 1991-92 season. This is curious because pelt prices increased by about 44% (Table 5). Also, the number of bobcat trappers decreased slightly from 124 to 113. The decrease in bobcat trapping, and other trapping is probably due to new regulations recommended by the Department and enacted by the Fish and Game Commission. These new regulations require that all leghold traps be of the commercially manufactured padded type. Many trappers decided not to trap this year because the cost of converting to new traps was too prohibitive.

Since the 1982-83 season, and with no change in season length, the harvest has remained below the 14,400 statewide harvest limit. Harvest monitoring should continue; and, if the statewide harvest reaches 14,000 bobcats, the age and sex structure monitoring should be reinstated.

The bobcat take in northeastern California has been monitored every year because, in the past, the age and sex structures had not increased to levels comparable to other areas of the State during the time the Department monitored these population parameters. If the harvest in this local area increases to more than 425 for more than two successive season, additional management action should be instigated to determine the effects on that population. The local harvest has been below this level for the last four seasons.

| Table 9. H | Recent Commerc      | lal Harves | t of Bobcat | s in Northeas | stern California                  |
|------------|---------------------|------------|-------------|---------------|-----------------------------------|
| Season     | Eastern<br>Siskiyou | County     | Lassen      | Plumas        | Tota<br>Northeaster<br>California |
| 1978-79    | 81                  | 306        | 246         | 47            | 680                               |
| 1979-80    | 88                  | 216        | 302         | 95            | 701                               |
| 1980-81    | 82                  | 126        | 96          | 39            | 343                               |
| 1981-82    | 49                  | 143        | 147         | 58            | 397                               |
| 1982-83    | 74                  | 238        | 177         | 35            | 524                               |
| 1983-84    | 45                  | 182        | 84          | 17            | 328                               |
| 1984-85    | 54                  | 231        | 188         | 33            | 506                               |
| 1985-86    | 78                  | 181        | 108         | 23            | 390                               |
| 1986-87    | 78                  | 237        | 139         | 60            | 514                               |
| 1987-88    | 148                 | 223        | 187         | 43            | 601                               |
| 1988-89    | 60                  | 107        | 85          | 30            | 282                               |
| 1989-90    | 36                  | 62         | 85          | 47            | 230                               |
| 1990-91    | 22                  | 30         | 29          | 9             | 90                                |
| 1991-92    | 25                  | 39         | 24          | Ó             | 88                                |

# RECOMMENDATION

1. Continue to monitor the take of bobcats by geographical area, and use that information to determine the management needed to maintain viable bobcat populations throughout California.