

# FEDERAL AND STATE ENDANGERED SPECIES EXPENDITURES

FISCAL YEAR 1989



Compiled by  
U.S. Fish & Wildlife Service  
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## Summary

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**Purpose:** Section 18 of the Endangered Species Act (Act) of 1973 requires annual reporting of certain expenditures for the conservation of threatened and endangered species. This report presents these expenditures for Fiscal Year 1989.

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**Background:** Section 18 of the Act was amended on October 7, 1988, by Public Law 100-470 to require the Secretary of the Interior (working through the Fish and Wildlife Service) to report to the Congress annually on certain expenditures for the conservation of threatened and endangered species. Only those expenditures that are reasonably identifiable for a species are to be reported. All Federal agencies and those States receiving Section 6 grant-in-aid funds pursuant to the Act (States) are required to report. No such reporting requirements were included in the Act prior to this amendment.

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**Results:** Expenditures totaling more than \$43M are reported here for the conservation of 347 threatened and endangered species (Table 1). Expenditures are identified by species and reported separately for the Service and in aggregate for all other Federal agencies reporting and the States. The International Association of Fish and Wildlife Agencies assisted the Service by compiling the data on total States expenditures by species.

A total of 28 Federal agencies were identified as likely to have made expenditures for the conservation of threatened and endangered species. Of these, 11 reported expenditures, 4 indicated that expenditures were not reasonably identifiable by species, and 13 did not report. Responses from all reporting Federal agencies are included in Appendix 1. Expenditures were reported for approximately two-thirds of all United States listed species with a median expenditure of \$11,750 (range of \$100 to \$3.1 million) per species. Half of all expenditures were made on approximately 3 percent of those species for which expenditures were reported (Table 2). This conclusion is expected. Not only does Congress identify specific appropriations for most of these species, but wildlife managers use the interest in these species to protect other species in the same habitats, or suffering the same threats.

A good faith effort was made to develop species by species expenditures for this report. However, the information presented does not reflect the total National effort toward threatened and endangered species conservation, and presents an incomplete funding picture. A significant portion of threatened and endangered species conservation activities including law enforcement, consultation, recovery coordination and other actions are not easily or reasonably funded by species. Accounting procedures for staff salaries, operations, maintenance and other support service are not recorded by species. Also, there exists considerable variability among the various Federal agency reports.

## PURPOSE OF THIS REPORT

The Endangered Species Act of 1973 (Act) was reauthorized and amended on October 7, 1988. A new Section 18 was added to the Act that requires the Fish and Wildlife Service (Service) to report on certain expenditures on a species-by-species basis. The Section reads:

SEC. 18. On or before January 15, 1990, and each January 15 thereafter, the Secretary of the Interior, acting through the Fish and Wildlife Service, shall submit to the Congress an annual report covering the preceding fiscal year which shall contain--

(1) the accounting on a species by species basis of all reasonably identifiable Federal expenditures made primarily for the conservation of endangered or threatened species pursuant to this Act; and

(2) an accounting on a species by species basis of all reasonably identifiable expenditures made primarily for the conservation of endangered or threatened species pursuant to this Act by states receiving grants under Section 6.

This report constitutes the first report by the Service pursuant to the requirements of Section 18 of the Act. The report covers the Fiscal Year 1989 (October 1988 - September 1989).

The term "State" as used in this report is defined in Section 3(16) of the Act to mean any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

The term "conservation," as defined in Section 3(3) of the Act, means the use of all methods and procedures necessary to bring any endangered or threatened species to the point where the measures provided for by the Act are no longer necessary--including, but not limited to research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation. For the purposes of this report, the definition of conservation is further expanded to include any and all actions taken by Federal and State agencies to conserve threatened and endangered species (listed species) pursuant to the Act.

## BACKGROUND

Section 18 of the Act results from an amendment proposed by Senator McClure and adopted by the Senate during debate on the Senate bill (S. 675). The House bill (H.R. 1467) contained no language on this subject. In conference report, the Senate amendment was included. Both the House and the Senate accepted the conference committee report, including the amendment requiring an annual report for all reasonably identifiable expenditures made primarily for the conservation of listed species.

### Defining "Reasonably Identifiable Expenditures"

Senator McClure stated that the purpose of the amendment is to obtain information with which to assess claims that a disproportionate effort is being made to conserve a few, highly visible species at the expense of numerous, less well-known species that may have greater need for protection. The Service met with staff of the House Merchant Marine and Fisheries Committee and the Senate Environment and Public Works Committee for clarification of intent and purpose of the amendment. As a result of these discussions, the Service determined that a good faith effort was expected to develop and obtain data that are "reasonably identifiable". Also, that extensive or extraordinary measures to develop exceptionally precise statistics were not expected. The report was not expected to "pro-rate" staff salaries and other normal operational and maintenance costs that are expended for multiple species purposes.

Since it is recognized that certain expenditures would not be included, this report is not a complete representation of all Federal and State expenditures for the conservation of specific listed species. The expenditures reported in this report do not necessarily constitute all expenditures made for each species. This report does not present cost accounting in the sense of an accountant's ledger of credits and debits of all Federal and State funds available and their expenditure. This report does represent a compilation of those reasonably identifiable expenditures identified independently by the various Federal agencies and the States.

### Coverage

Expenditures are reported here for 347 threatened and endangered species (63%) of the 554 species that are listed under United States jurisdiction. A few species, which are known to occur in the United States but are not listed in the United States, are not included (ex. jaguar, short-tailed albatross, swift fox). No expenditure data are reported here for any entirely foreign species (ex. African elephant, Chinese egret, Orinoco crocodile, Manus island tree snail, Chilean false larch). Except for African elephant, there probably were no expenditures for foreign species in foreign jurisdictions by any reporting agencies.

All multiple listings were combined. Some species have more than a single listing in 50 CFR 17.11 or 17.12 due to more than one population being listed. For the purposes of reporting of expenditures, such multiple listings have usually been combined (ex. bald eagle, gray wolf). Some species are listed more than once because more than one subspecies is listed at 50 CFR Part 17 (ex. Falcon, American peregrine, and Falcon, Arctic peregrine).

Reasonably identifiable expenditures as reported by other Federal agencies were received by the Service, but were not included for multiple species or for habitat groups of species (ex. appropriation for ten Hawaiian forest birds, expenditure for six Idaho riverine species). Whenever possible the

reporting Agency was queried for a species by species distribution of the expenditure. It may be possible to include these species or habitat groups in future reports.

The Service did not report land acquisition funds in the tables of expenditures (Tables 1 or 2). It is unclear whether other Federal agencies reported land acquisition funds. The Service acquired 16,200 acres specifically for endangered species in FY 1989 with \$13,300,000 from the Land and Water Conservation Fund (LWCF). Since these monies are separate from the other monies and would grossly distort Tables 1 or 2 for these species, these totals are not included. Below is an accounting of LWCF costs (\$000s) for specific species:

Whooping crane	\$5,000.0
Bald eagle	23.0
Masked bobwhite	553.4
American crocodile	200.0
Florida panther	3,957.5
Indiana/gray bats	34.1
Kirtland's warbler	296.0
Iowa Pleistocene snail and Northern monkshood	153.9
Key deer	3,073.2
West Indian manatee	3.5
Ash meadows (ca. 12 spp.)	6.8
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	\$13,301.4

## SECTION 18(1), FEDERAL EXPENDITURES

### Expenditures by the Fish and Wildlife Service

The Service's operational categories of expenditures include fisheries, refuges, land acquisition, law enforcement, research, and Regional and field operations for listing recovery, consultation, environmental contaminant and habitat conservation activities. All reasonably identifiable expenditures that could be attributed to individual species that were made by these operational categories were included.

For example, reasonably identifiable expenditures for research programs included large sums for species where an intensive effort is underway to save a species from extinction (ex. whooping crane, California condor), and smaller sums where only a minor research effort exists. The Refuges program identified specific listed species as a major responsibility of certain refuges. The Columbian white-tailed deer, Key deer, Hawaiian monk seal, and masked bobwhite quail are listed species with National Wildlife Refuges devoted nearly entirely to their management and recovery. Other listed species use these refuges, and listed species use most refuges for all or part of their life cycles. Only dedicated refuge expenditures that are reasonably identifiable on a species basis are included in this report.

Listed fish species benefit from Fisheries programs, but costs are seldom identifiable to a particular species. For example, the Dexter fish hatchery in southeast Arizona has achieved a remarkable record in the propagation and maintenance of listed southwestern fishes. Attributing costs on a species by species basis for the dozen or so species managed at Dexter is difficult. Few species specific expenditures could be reasonably identified in the Law Enforcement program. Only a small portion of the appropriation for Law Enforcement for FY 1989 could be identified as enforcement actions for specific endangered species. The 75 percent Federal contribution under Section 6 of the Act for each species is included in the amounts shown in FWS TOTAL in Table 1. The 25 percent State share for each species for which a Federal contribution was made is presumably included in the STATE TOTAL column of Table 1.

A significant portion of the Service's funds for listing and recovery are incorporated into salaries, operations and maintenance costs. As a result, they are not reasonably identifiable. Only salaries, operation and maintenance costs of specific species coordinators (ex. whooping crane, red wolf, grizzly bear, sea turtle) are included in this report. Other activity appropriations may have been expended, but were not reasonably identifiable.

#### Expenditures by Other Federal Agencies

A request was sent from the Service to 28 Federal agencies identified by the Service as likely to have species-specific expenditures under the Act, that requested a report of reasonably identifiable expenditures. The Service provided background information identifying reasonably identifiable expenditures (Appendix 2). A number of Agencies responded with letters indicating that they did not have any reasonably identifiable expenditures for individual species. Correspondence from all responding Agencies are included in Appendix 1. The data identified by those responding Federal agencies for individuals species have been aggregated in the OTHER FED COLUMN of this report (Table 1).

Service expenditures (FWS TOTAL) and other Federal agencies expenditures (OTHER FED) are totaled in the FED TOTAL column.

#### SECTION 18(2), STATE EXPENDITURES

The Committee staff anticipated that not all States would be willing to voluntarily submit their expenditures for a variety of reasons. As a result, the Secretary was expected to only submit voluntarily provided expenditure figures. In order to maximize the return of information, the assistance of the International Association of Fish and Wildlife Agencies (Association) was sought by the Service to coordinate the reporting of reasonably identifiable expenditures made by States that received grants-in-aid under Section 6 of the Act. As the States reported to the

Association, the Association collated the data by species and provided them to the Service. Total States expenditures are reported in Table 1 under the column STATE TOTAL. Data were not provided on an individual State's expenditures by species.

#### SUMMARY OF DATA

A total of \$43,725,000 are tabulated in this report for FY 1989. Two-thirds (347) of the 554 listed United States species have reasonably identifiable expenditures reported from one or more sources. It is assumed that this total may not represent total expenditures for species identified because all expenditures may not have been reasonably identifiable. Twelve (3.1 percent) listed species have reported expenditures that account for about half of the total amount reported here. Two of these are threatened species, and two others are multiple listings of threatened populations. Each of these twelve species has reported expenditures exceeding \$1 million. Together with another 60 species they account for approximately 90 percent of all reported expenditures (Table 2). It is probable that despite the difficulties inherent in this reporting system, 72 species did in fact receive most of the reasonably identifiable funding. This conclusion is expected. Not only does Congress identify specific appropriations for most of these species, but State and Federal Wildlife managers use the public interest in these species to help protect other species in the same habitats, or suffering the same population threats. The species identified by Congress as deserving of specific appropriations are the same species which drive interest and participation in the considerable State and private sector effort on behalf of listed species.

Expenditures totaling more than \$43M are reported here for the conservation of 347 threatened and endangered species (Table 1). Expenditures are identified by species and reported separately for the Service and in aggregate for all other Federal agencies reporting and the States. Expenditures for Category 1 and 2 review species (candidates) or other unlisted species were excluded because only listed species are reported here. For example, even though Congress appropriated money for the prelisting recovery of the Bruneau Hot Springs snail, it is not listed, and therefore is not reported here.

The International Association of Fish and Wildlife Agencies assisted the Service by compiling the data on total States expenditures by species. A total of 28 Federal agencies were identified as likely to have made expenditures for the conservation of threatened and endangered species. Of these, 11 reported expenditures, 4 indicated that expenditures were not reasonably identifiable by species, and 13 did not report. Responses from all reporting Federal agencies are included in Appendix 1. Expenditures were reported for approximately two-thirds of all United States listed species with a median expenditure of \$11,750 (range of \$100 to \$3.1 million) per species. Half of all expenditures were made on approximately 3 percent of those species for which expenditures were reported (Table 2). Funding for these species may be more easily identifiable by species as they



typically represent those species named by the Congress to receive specific funding. This may represent an actual funding distribution or may be an artifact of the process used to determine reasonably identifiable expenditures.

A good faith effort was made to develop species by species expenditures for this report. However, the information presented does not reflect the total National effort toward threatened and endangered species conservation, and presents an incomplete funding picture. Therefore, the reader is cautioned against making comparisons with other reports on threatened and endangered species expenditures. A significant portion of threatened and endangered species conservation activities including law enforcement, consultation, recovery coordination and other actions are not easily or reasonably funded by species. Accounting procedures for staff salaries, operational and maintenance and other support service do not provide individual species totals. Also there exists significant variability among the various Federal agency reports.

The Service has provided previous reports on estimated allocations by species as requested by House Appropriations Committee staff. The reader of this 1989 report is cautioned that there are important differences in the assumptions that led to these previous reports, and to this report. The data in this report are considered more precise than previous reports since they represent expenditures. They may be biased however since they only include reasonably identifiable expenditures.

#### FUTURE SECTION 18 REPORTS

The amendment requiring this report was passed in the first quarter of the reporting period. The Service, other Federal agencies, and State agencies gathered the best available data with little opportunity for advance planning and coordination. Future reporting cycles will benefit from the FY 1989 experience. Where possible, reporting procedures will be enhanced for future reports to provide the best available data on reasonably identifiable expenditures for the conservation of threatened and endangered species pursuant to the intent of Section 18 of the Act.

Table 1. Reasonably Identifiable Federal and State Expenditures during FY 1989.

The list of species in Table 1 essentially follows the taxonomic and nomenclatural conventions used in 50 CFR Part 17 for the identification and sequence of names. For ease of reference, the alphabetized, inverted common name is provided by group (usually Class) of animals. Thus, the gray bat is found with other bats under "Bat, gray", and Judge Tait's mussel is found under "Mussel, Judge Tait's". Groups of animals follow the sequence: Mammals, Birds, Reptiles, Amphibians, Fishes, Snails, Clams, and Arthropods (which are further divided). Plants are alphabetized by inverted common name except when there is no common name. In such cases, scientific names are provided for plants. When this occurs, the phrase "=Sci. Name" is provided parenthetically. If a reader should need other information about a listed species, the species can be found in the format provided here in 50 CFR 17.11 (endangered and threatened wildlife) or 17.12 (endangered and threatened plants).

DATE: 21-Dec-89

## FY 89 FEDERAL AND STATE ENDANGERED SPECIES EXPENDITURES--\$000s

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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
MAMMALS						
Bat, gray	E	19.6		19.6	8.9	28.5
Bat, Hawaiian hoary	E	0.5		0.5		0.5
Bat, Indiana	E	55.5	3.4	58.9	111.4	170.3
Bat, little Mariana fruit	E	5.0		5.0		5.0
Bat, Mariana fruit	E	5.0	0.9	5.9		5.9
Bat, Mexican long-nosed	E					
Bat, Ozark big-eared	E	52.6		52.6	26.5	79.1
Bat, Sanborn's long-nosed	E	10.0	2.5	12.5		12.5
Bat, Virginia big-eared	E	25.0		25.0	28.5	53.5
Bear, grizzly or brown	T	478.8	2,145.5	2,624.3	300.0	2,924.3
Caribou, woodland	E	273.0	254.0	527.0	2.5	529.5
Cougar, eastern	E					
Deer, Columbian white-tailed	E	20.3	0.9	21.2	6.0	27.2
Deer, key	E	40.0		40.0	30.0	70.0
Dugong	E					
Ferret, black-footed	E	529.4	193.5	722.9	328.2	1,051.1
Fox, San Joaquin kit	E	5.0	95.3	100.3		100.3
Jaguarundi (2 ssp.)	E					
Manatee, West Indian (Florida)	E	1,220.0	9.5	1,229.5	20.0	1,249.5
Mouse, Alabama beach	E	5.4	0.2	5.6		5.6
Mouse, Anastasia Island beach	E				30.0	30.0
Mouse, Choctawahatchee beach	E				1.0	1.0
Mouse, Key Largo cotton	E				1.0	1.0
Mouse, Perdido Key beach	E		5.2	5.2	1.0	6.2
Mouse, Salt marsh harvest	E	47.5	6.0	53.5		53.5
Mouse, southeastern beach	T				0.3	0.3
Ocelot	E	22.4	6.5	28.9		28.9
Otter, southern sea	T	1,206.0	39.0	1,245.0	55.0	1,300.0
Panther, Florida	E	509.9	284.0	793.9	118.0	911.9
Prairie dog, Utah	T	15.0	8.5	23.5	32.6	56.1
Pronghorn, Sonoran	E		12.7	12.7		12.7
Rat, Fresno kangaroo	E					
Rat, giant kangaroo	E		10.0	10.0		10.0
Rat, Morro Bay kangaroo	E	39.0	25.0	64.0		64.0
Rat, Stephens' kangaroo	T		43.5	43.5		43.5
Rat, Tipton kangaroo	E		4.9	4.9		4.9
Seal, Caribbean monk	E					
Seal, Guadalupe fur	T					
Seal, Hawaiian monk	E		286.0	286.0		286.0
Shrew, Dismal Swamp southeastern	T	5.0	4.9	9.9	24.2	34.1
Squirrel, Carolina northern flying	E	26.0		26.0	10.0	36.0
Squirrel, Delmarva Peninsula fox	E	20.0		20.0	33.8	53.8
Squirrel, Mt. Graham red	E	33.0	150.0	183.0		183.0

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Squirrel, Virginia northern flying	E	11.0	0.4	11.4	43.3	54.7
Vole, Amargosa	E	4.0		4.0		4.0
Vole, Mualapai Mexican	E	10.0	2.7	12.7		12.7
Whale, blue	E		0.7	0.7		0.7
Whale, bowhead	E		90.0	90.0		90.0
Whale, finback	E		305.2	305.2		305.2
Whale, gray	E		108.3	108.3		108.3
Whale, humpback	E		20.5	20.5		20.5
Whale, right	E		229.2	229.2		229.2
Whale, Sei	E		0.3	0.3		0.3
Whale, sperm	E		0.3	0.3		0.3
Wolf, gray	E,T	654.9	1,514.7	2,169.6	35.7	2,205.3
Wolf, red	E	453.0	16.0	469.0	5.0	474.0
Woodrat, Key Largo	E				2.0	2.0
BIRDS						
Akepa, Hawaii (honeycreeper)	E	52.5		52.5		52.5
Akepa, Maui (honeycreeper)	E					
Akialoa, Kauai (honeycreeper)	E					
Akiapolaau (honeycreeper)	E	52.5		52.5		52.5
Blackbird, yellow-shouldered	E	56.5		56.5		56.5
Bobwhite, masked (quail)	E	318.5		318.5		318.5
Broadbill, Guam	E	40.0		40.0		40.0
Caracara, Audubon's (Florida) crested	T		5.0	5.0	4.0	9.0
Condor, California	E	808.6	1.0	809.6		809.6
Coot, Hawaiian (=alae keo keo)	E	62.5	1.6	64.1		64.1
Crane, Mississippi sandhill	E	749.8		749.8		749.8
Crane, whooping	E	1,111.7	278.3	1,390.0	27.5	1,417.5
Creeper, Hawaiian	E	52.5		52.5		52.5
Creeper, Molokai (Kakawahie)	E					
Creeper, Oahu (alauwahio)	E					
Crow, Hawaiian ('alala)	E	30.0		30.0		30.0
Crow, Mariana	E	40.0	0.9	40.9		40.9
Curlew, eskimo	E	16.3		16.3		16.3
Duck, Hawaiian (Koloea)	E	80.3	0.6	80.9		80.9
Duck, Laysan	E	83.7		83.7		83.7
Eagle, bald	E,T	275.2	1,997.5	2,272.7	835.9	3,108.6
Falcon, American peregrine	E	747.9	1,387.1	2,134.9	609.2	2,744.2
Falcon, Arctic peregrine	T	55.0	5.5	60.5	54.4	114.9
Falcon, northern aplomado	E	8.0		8.0		8.0
Finch, Laysan (honeycreeper)	E	53.8		53.8		53.8
Finch, Nihoa (honeycreeper)	E	53.8		53.8		53.8
Goose, Aleutian Canada	E	432.0	5.8	437.8	1.5	439.3
Goose, Hawaiian (nene)	E	30.0	1.2	31.2		31.2
Hawk, Hawaiian (Io)	E	52.5	0.6	53.1		53.1

DATE: 21-Dec-89

## FY 89 FEDERAL AND STATE ENDANGERED SPECIES EXPENDITURES--\$000s

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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Honeycreeper, crested ('akohekohe)	E					
Jay, Florida scrub	T	0.2		0.2	17.7	17.9
Kingfisher, Guam Micronesian	E	40.0		40.0		40.0
Kite, Everglade snail	E	24.1	12.5	36.6	7.0	43.6
Mallard, Mariana	E					
Megapode, Micronesian (La Perouse's)	E					
Millerbird, Nihoa (old world warbler)	E	53.7		53.7		53.7
Monarch, Tinian	T					
Moorhen (gallinule), Hawaiian common	E	58.6	1.6	60.2		60.2
Moorhen (gallinule), Mariana common	E					
Nightjar (whip-poor-will), Puerto Rico	E					
Nukupu'u (honeycreeper)	E					
'O'o, Kauai (= 'O'o 'A'a) (honeyeater)	E					
'O'u (honeycreeper)	E	15.0		15.0		15.0
Palila (honeycreeper)	E	546.7		546.7		546.7
Parrot, Puerto Rican	E	725.0	98.0	823.0		823.0
Parrotbill, Maui (honeycreeper)	E					
Pelican, brown	E		8.8	8.8	1.5	10.3
Petrel, Hawaiian dark-rumped	E		6.0	6.0		6.0
Pigeon, Puerto Rican plain	E	57.0		57.0		57.0
Plover, piping	E,T	244.6	600.2	844.7	193.3	1,038.0
Po'ouli (honeycreeper)	E					
Prairie-chicken, Attwater's	E	290.0		290.0		290.0
Rail, California clapper	E	47.5	75.0	122.5		122.5
Rail, Guam	E	40.0	1.6	41.6		41.6
Rail, light-footed clapper	E	101.9	10.1	112.0		112.0
Rail, Yuma clapper	E		6.0	6.0		6.0
Shearwater, Newell's Townsend's	T					
Shrike, San Clemente loggerhead	E	15.0		15.0		15.0
Sparrow, Cape Sable seaside	E		5.5	5.5		5.5
Sparrow, dusky seaside	E	5.0		5.0		5.0
Sparrow, Florida grasshopper	E				2.0	2.0
Sparrow, San Clemente sage	T					
Starling, Ponape mountain	E					
Stilt, Hawaiian (=Ae'o)	E	62.5	1.6	64.1		64.1
Stork, wood	E	31.8	6.4	38.2	2.7	40.9
Swiftlet, Mariana gray (=Vanikoro)	E					
Tern, California least	E	128.5	287.0	415.5		415.5
Tern, least (interior pop.)	E	101.4	150.5	251.9	5.8	257.7
Tern, roseate	E,T	113.8	8.5	122.3	28.9	151.2
Thrush, large Kauai	E					
Thrush, Molokai (oloma'o)	E					
Thrush, small Kauai (puaiohi)	E					
Towhee, Inyo brown	T					

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Vireo, black-capped	E	44.0	103.3	147.3	5.3	152.6
Vireo, least Bell's	E	30.0	926.5	956.5		956.5
Warbler (wood), Bachman's	E	0.7		0.7	1.5	2.2
Warbler (wood), Kirtland's	E	868.4	144.6	1,013.0	4.7	1,017.7
Warbler (willow), nightingale reed	E					
White-eye, bridled	E	40.0		40.0		40.0
White-eye, Ponape great	E					
Woodpecker, ivory-billed	E	0.8		0.8		0.8
Woodpecker, red-cockaded	E	450.0	2,251.5	2,701.5	90.5	2,792.0
REPTILES						
Anole, Culebra Island giant	E					
Boa, Mona	T					
Boa, Puerto Rican	E					
Boa, Virgin Islands tree	E	10.0		10.0		10.0
Crocodile, American	E		3.0	3.0	2.5	5.5
Gecko, Monito	E					
Iguana, Mona ground	T					
Lizard, blunt-nosed leopard	E	40.0	27.0	67.0		67.0
Lizard, Coachella Valley fringe-toed	T	12.2		12.2		12.2
Lizard, Island night	T		8.5	8.5		8.5
Lizard, St. Croix ground	E	7.0		7.0		7.0
Rattlesnake, New Mexican ridge-nosed	T				12.6	12.6
Skink, blue-tailed mole	T					
Skink, sand	T					
Snake, Atlantic salt marsh	T					
Snake, Concho water	T		1.6	1.6		1.6
Snake, eastern indigo	T	2.3	0.8	3.1	0.4	3.5
Snake, San Francisco garter	E					
Tortoise, desert (Beaver Dam slope)	T	33.5		33.5	13.9	47.4
Tortoise, desert (Mojave population)	E	0.8	497.2	498.0		498.0
Tortoise, gopher	T	3.7	25.8	29.5	4.0	33.5
Turtle, Alabama red-bellied	E		8.3	8.3	0.4	8.7
Turtle, flattened musk	T		3.0	3.0		3.0
Turtle, green sea	E,T	101.9	68.5	170.4	11.6	182.0
Turtle, hawksbill sea (=carey)	E	31.1	46.3	77.4	12.1	89.5
Turtle, Kemp's (Atlantic) ridley sea	E	93.3	520.0	613.3	130.6	743.9
Turtle, leatherback sea	E	60.1	47.1	107.2	12.1	119.3
Turtle, loggerhead sea	T	257.6	140.5	398.1	55.8	453.9
Turtle, olive (Pacific) ridley sea	E,T	25.0		25.0		25.0
Turtle, Plymouth red-bellied	E	5.0		5.0	8.5	13.5
Turtle, ringed sawback	T				0.2	0.2
AMPHIBIANS						
Coqui, golden	T	10.0	2.5	12.5		12.5
Salamander, Cheat Mountain	T	5.0		5.0		5.0

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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Salamander, desert slender	E					
Salamander, Red Hills	T	0.6		0.6		0.6
Salamander, San Marcos	T					
Salamander, Santa Cruz long-toed	E	5.0		5.0		5.0
Salamander, Shenandoah	E					
Salamander, Texas blind	E					
Toad, Houston	E	18.8		18.8		18.8
Toad, Puerto Rican crested	T					
Toad, Wyoming	E	15.0	1.2	16.2	4.0	20.2
FISHES						
Catfish, Yaqui	T					
Cavefish, Alabama	E	1.2		1.2		1.2
Cavefish, Ozark	T	13.8		13.8	22.2	36.0
Chub, bonytail	E	191.0	516.3	707.3	37.2	744.5
Chub, Borax Lake	E					
Chub, Chihuahua	T				1.3	1.3
Chub, humpback	E	202.0	570.3	772.3	35.7	808.0
Chub, Hutton tui	T					
Chub, Mohave tui	E					
Chub, Owens tui	E		10.0	10.0		10.0
Chub, Pahrnagat roundtail (=bonytail)	E	87.5		87.5	4.7	92.2
Chub, slender	T	2.5		2.5	6.5	9.0
Chub, Sonora	T					
Chub, spotfin	T		0.9	0.9	12.4	13.3
Chub, Virgin River	E	10.0	2.0	12.0		12.0
Chub, Yaqui	E					
Chui-ui	E	120.0	495.0	615.0		615.0
Dace, Ash Meadows speckled	E	37.0		37.0	1.0	38.0
Dace, blackside	T					
Dace, desert	T					
Dace, Foskett speckled	T					
Dace, Kendall Warm Springs	E		1.2	1.2		1.2
Dace, Moapa	E	5.0		5.0	3.0	8.0
Darter, amber	E				5.0	5.0
Darter, bayou	T					
Darter, boulder (=Elk River)	E					
Darter, fountain	E		0.2	0.2		0.2
Darter, leopard	T		23.4	23.4		23.4
Darter, Maryland	E	4.0		4.0	30.0	34.0
Darter, Miangua	T	0.2		0.2	2.0	2.2
Darter, Okaloosa	E	30.0		30.0		30.0
Darter, slackwater	T					
Darter, snail	T					
Darter, waterdress	E	1.1		1.1		1.1

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Gambusia, Big Bend	E					
Gambusia, Clear Creek	E					
Gambusia, Pecos	E					
Gambusia, San Marcos	E		0.2	0.2		0.2
Killifish, Pahrump	E	4.0		4.0	2.0	6.0
Logperch, Conasauga	E	10.0		10.0	5.0	15.0
Logperch, Roanoke	E		4.0	4.0		4.0
Madtom, Scioto	E					
Madtom, Smoky	E	2.5	0.3	2.8		2.8
Madtom, yellowfin	T	2.5		2.5	6.5	9.0
Minnow, loach	T		3.7	3.7		3.7
Pupfish, Ash Meadows Amargosa	E	37.0		37.0	2.0	39.0
Pupfish, Comanche Springs	E	15.0		15.0		15.0
Pupfish, desert	E	2.0	8.8	10.8		10.8
Pupfish, Devil's Hole	E	3.0		3.0	0.7	3.7
Pupfish, Leon Springs	E					
Pupfish, Owens	E	7.5	3.0	10.5		10.5
Pupfish, Warm Springs	E	37.0		37.0	1.0	38.0
Sculpin, pygmy	T					
Shiner, beautiful	T					
Shiner, Cape Fear	E				0.5	0.5
Shiner, Pecos bluntnose	T					
Silverside, Waccamaw	T				0.8	0.8
Spikedace	T		3.7	3.7	2.7	6.4
Spinedace, Big Spring	T	10.0		10.0	1.0	11.0
Spinedace, Little Colorado	T	15.0		15.0		15.0
Spinedace, White River	E				3.0	3.0
Springfish, Hiko White River	E	1.5		1.5	2.0	3.5
Springfish, Railroad Valley	T	3.0		3.0	6.0	9.0
Springfish, White River	E	1.5		1.5	5.0	6.5
Squawfish, Colorado River	E	192.0	516.3	708.3	39.9	748.2
Stickleback, unarmored threespine	E		10.0	10.0		10.0
Sturgeon, shortnose	E	116.0	70.5	186.5		186.5
Sucker, June	E	16.0		16.0	2.8	18.8
Sucker, Lost River	E	44.8	1.0	45.8		45.8
Sucker, Modoc	E	40.0		40.0		40.0
Sucker, shortnose	E	44.8		44.8		44.8
Sucker, Warner	T		9.0	9.0		9.0
Topminnow, Gila (Yaqui)	E		33.3	33.3		33.3
Trout, Apache	T	2.8	15.0	17.8		17.8
Trout, Gila	E	12.0	40.0	52.0	1.4	53.4
Trout, greenback cutthroat	T	89.0	25.0	114.0	28.0	142.0
Trout, Lahontan cutthroat	T		718.0	718.0	5.0	723.0
Trout, Little Kern golden	T		63.1	63.1		63.1



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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Trout, Paiute cutthroat	T		41.0	41.0		41.0
Woundfin	E	38.1	9.0	47.1	24.5	71.6
SNAILS						
Shagreen, Magazine Mountain	T					
Snail, Chittanooga ovate amber	T	1.0		1.0	1.0	2.0
Snail, flat-spined three-toothed	T	2.0		2.0	0.8	2.8
Snail, Iowa Pleistocene	E	68.8		68.8	12.0	80.8
Snail, Noonday	T				0.1	0.1
Snails, Oahu tree (29-41 spp.)	E					
Snail, painted snake coiled forest	T					
Snail, Stock Island	T					
Snail, Virginia fringed mountain	E				2.0	2.0
CLAMS						
Mussel, Curtus'	E	4.0	36.0	40.0		40.0
Mussel, Judge Tait's	E	4.0	36.0	40.0		40.0
Mussel, Marshall's	E	4.0		4.0		4.0
Mussel, penitent	E	4.0	36.0	40.0		40.0
Mussel, ring pink (=golf stick pearly)	E					
Pearlshell, Louisiana	E				1.0	1.0
Pearly mussel, Alabama lamp	E					
Pearly mussel, Appalachian monkeyface	E		0.1	0.1	1.5	1.6
Pearly mussel, birdwing	E				1.5	1.5
Pearly mussel, cracking	E					
Pearly mussel, Cumberland bean	E	12.5		12.5	1.5	14.0
Pearly mussel, Cumberland monkeyface	E		0.1	0.1		0.1
Pearly mussel, Curtis'	E				3.5	3.5
Pearly mussel, dromedary	E		0.1	0.1	1.5	1.6
Pearly mussel, green-blossom	E		0.1	0.1	1.5	1.6
Pearly mussel, Higgins' eye	E	105.4	331.0	436.4	1.3	437.7
Pearly mussel, little-wing	E	12.5		12.5	1.5	14.0
Pearly mussel, orange-footed	E				3.0	3.0
Pearly mussel, pale lilliput	E					
Pearly mussel, pink mucket	E	27.0		27.0	8.3	35.3
Pearly mussel, tubercled-blossom	E				3.5	3.5
Pearly mussel, turgid-blossom	E					
Pearly mussel, white cat's paw	E				7.0	7.0
Pearly mussel, white wartyback	E				3.0	3.0
Pearly mussel, yellow-blossom	E					
Pigtoe, fine-rayed	E		0.1	0.1		0.1
Pigtoe, rough	E				4.5	4.5
Pigtoe, shiny	E		0.5	0.5	1.5	2.0
Pocketbook, fat	E	44.6	307.0	351.6	24.5	376.1
Pocketbook, speckled	E					
Riffle shell, tan	E	25.0		25.0	1.5	26.5

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Shell, stirrup	E	4.0		4.0		4.0
Spiny mussel, James River (=Virginia)	E				0.3	0.3
Spiny mussel, Tar River	E	5.0		5.0	4.0	9.0
CRUSTACEANS						
Amphipod, Hay's spring	E					
Crayfish, Cave	E				0.2	0.2
Crayfish, Nashville	E					
Crayfish, Shasta (=placid)	E	8.0		8.0		8.0
Isopod, Madison Cave	T				2.0	2.0
Isopod, Socorro	E	10.0		10.0	20.2	30.2
Shrimp, Alabama cave	E	0.8		0.8		0.8
Shrimp, California freshwater	E	5.0		5.0		5.0
Shrimp, Kentucky Cave	E					
INSECTS						
Beetle, Amer. burying (=giant carrion)	E	6.5	0.5	7.0		7.0
Beetle, delta green ground	T					
Beetle, Kretschmarr Cave mold	E					
Beetle, Tooth Cave ground	E					
Beetle, valley elderberry longhorn	T	3.4	8.0	11.4		11.4
Butterfly, bay checkerspot	T					
Butterfly, El Segundo blue	E					
Butterfly, Lange's metalmark	E	13.0		13.0		13.0
Butterfly, lotis blue	E					
Butterfly, mission blue	E					
Butterfly, Oregon silverspot	T	10.0	80.0	90.0	3.0	93.0
Butterfly, Palos Verde blue	E					
Butterfly, San Bruno elfin	E					
Butterfly, Schaus swallowtail	E					
Butterfly, Smith's blue	E					
Moth, Kern primrose sphinx	T	3.2		3.2		3.2
Naucorid, Ash Meadows	T	3.0		3.0		3.0
Skipper, Pawnee montane	T					
ARACHNIDS						
Harvestman, Bee Creek Cave	E					
Pseudoscorpion, Tooth Cave	E					
Spider, Tooth Cave	E					
PLANTS						
Achyranthes rotundata (=Sci. Name)	E					
Agave, Arizona	E	1.5		1.5		1.5
Akoko, Eva Plains	E				0.1	0.1
Amphianthus, little	T				0.4	0.4
Arrowhead, bunched	E	2.5		2.5		2.5
Aster, decurrent false	T	7.8	2.2	10.0	5.2	15.2

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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Aster, Florida golden	E					
Aster, Ruth's golden	E	1.0		1.0		1.0
Barberry, Truckee	E					
Bariaco	E					
Beardtongue, Penland	E					
Bear-poppy, dwarf	E	0.3	10.0	10.3		10.3
Beauty, Harper's	E					
Bellflower, Brooksville	E					
Bidens, cuneate	E					
Birch, Virginia round-leaf	E	5.0		5.0		5.0
Bird's beak, palmate-bracted	E	20.0		20.0		20.0
Bird's-beak, salt marsh	E					
Bittercress, small-anthered	E					
Bitterweed, Texas	E		21.1	21.1		21.1
Bladder-pod, Missouri	E	6.4	3.5	9.9	27.5	37.4
Bladder-pod, white	E	5.3		5.3		5.3
Blazingstar, Ash Meadows	T					
Blazingstar, Heller's	T					
Blazingstar, scrub	E					
Blue-star, Kearney's	E	7.5		7.5		7.5
Bonamia, Florida	T					
Boxwood, Vahl's	E					
Broom, San Clemente Island	E					
Buckwheat, steamboat	E					
Bush-clover, prairie	T	31.0		31.0	28.5	59.5
Bush-mallow, San Clemente Island	E					
Buttercup, autumn	E	0.1		0.1		0.1
Button, Mohr's Barbara	E				0.2	0.2
Cactus, Arizona hedgehog	E	1.5		1.5		1.5
Cactus, black lace	E					
Cactus, Brady pincushion	E		2.5	2.5		2.5
Cactus, bunched cory	T					
Cactus, Chisos Mtn. Hedgehog	T	1.7		1.7		1.7
Cactus, Cochise pincushion	T					
Cactus, Key tree	E					
Cactus, Knowlton	E	8.0		8.0	11.5	19.5
Cactus, Kuenzler hedgehog	E				2.5	2.5
Cactus, Lee pincushion	T				2.5	2.5
Cactus, Lloyd's hedgehog	E					
Cactus, Lloyd's Mariposa	T					
Cactus, Mesa Verde	T	5.0		5.0	16.0	21.0
Cactus, Nellie cory	E					
Cactus, Nichol's Turk's head	E		5.4	5.4		5.4
Cactus, Peebles Navajo	E	7.8	5.4	13.2		13.2

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Cactus, purple-spined hedgehog	E					
Cactus, San Rafael	E		8.0	8.0		8.0
Cactus, Siler pincushion	E		3.5	3.5		3.5
Cactus, Sneed pincushion	E				2.5	2.5
Cactus, spineless hedgehog	E		3.3	3.3	3.0	6.3
Cactus, Tobusch fishhook	E					
Cactus, Unita Basin hookless	T		6.0	6.0	3.0	9.0
Cactus, Wright fishhook	E		14.0	14.0		14.0
Centauray, spring-loving	T					
Checker-mallow, pedate	E					
Cinquefoil, Robbin's	E				5.5	5.5
Cliff-rose, Arizona	E		31.1	31.1		31.1
Clover, running buffalo	E	8.1		8.1	1.2	9.3
Coneflower, Tennessee purple	E	0.5		0.5		0.5
Coyote-thistle, Loch Lomond	E					
Cress, Toad-flax	E		6.0	6.0		6.0
Cycladenia, Jones	T		6.0	6.0		6.0
Cypress, Santa Cruz	E					
Daisy, lakeside	T	3.1		3.1	0.6	3.7
Daisy, Maguire	E		6.0	6.0		6.0
Daphnopsis hellerana (=Sci. Name)	E					
Dogweed, ashly	E	4.5		4.5		4.5
Dropwort, Canby's	E	8.5		8.5	0.4	8.9
Erubia	E					
Euphorbia (=Chamaesyce) garberi (=Sci. Name)	T					
Evening-primrose, Antioch Dunes	E	6.0		6.0		6.0
Evening-primrose, Eureka Valley	E					
Evening-primrose, San Benito	T		10.0	10.0		10.0
Fern, Aleutian shield	E	48.0		48.0		48.0
Fern, American hart's-tongue	T					
Fern, Elfin tree	E	2.0		2.0		2.0
Fiddleneck, Large-flowered	E	20.0		20.0		20.0
Fleabane, Rhizome	T	10.0		10.0	12.0	22.0
Four-o'clock, MacFarlane's	E	2.5	2.1	4.6		4.6
Frankenia, Johnston's	E					
Gardenia, Ma'u (Hawaiian)	E	3.7		3.7		3.7
Geocarpon minimum (=Sci. Name)	T	8.3		8.3	6.6	14.9
Gerardia, sandplain	E	6.1		6.1	2.1	8.2
Globe-berry, Tumamoc	E		1,167.3	1,167.3		1,167.3
Goetzea, Beautiful (matabuey)	E					
Goldenrod, Blue Ridge	T					
Goldenrod, Houghton's	T	2.1		2.1		2.1
Goldenrod, Short's	E					
Goldenrod, white-haired	T					

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Gooseberry, Miccosukee (Florida)	T					
Gouania hillebrandii (=Sci. Name)	E					
Grass, Eureka Dune	E					
Grass, Solano	E					
Groundsel, San Francisco Peaks	T					
Gumplant, Ash Meadows	T					
Haplostachys haplostachya var. angustifolia	E					
Harperella	E	9.0		9.0	0.4	9.4
Heartleaf, dwarf-flowered	T					
Heather, mountain golden	T					
Higuero de Sierra	E					
Holly, Cook's	E	2.0		2.0		2.0
Hypericum, highlands scrub	E					
Indian paintbrush, San Clemente Island	E					
Iris, dwarf lake	T	2.8		2.8		2.8
Ivesia, Ash Meadows	T					
Kauai hau kuahiwi	E	3.7		3.7		3.7
Kokio, Cooke's	E					
Koki'o (=hau-hele'ula or Hawaii tree cotton)	E					
Ko'oloa'ula	E					
Ladies'-tresses, Navasota	E					
Lagu, Hyan	E					
Larkspur, San Clemente Island	E					
Lead-plant, Crenulate	E					
Leather flower, Alabama	E	1.5		1.5		1.5
Lily, Minnesota trout	E	10.6		10.6	15.0	25.6
Lipochaeta venosa (=Sci. Name)	E					
Liveforever, Santa Barbara Island	E		6.7	6.7		6.7
Locoweed, Fassett's	T	0.1		0.1	1.0	1.1
Lomatium, Bradshaw's	E	5.0	6.5	11.5		11.5
Loosestrife, rough-leaved	E					
Lousewort, Furbish	E	7.5		7.5		7.5
Lupine, scrub	E					
Mallow, Peter's Mountain	E	2.0		2.0		2.0
Manzanita, Presido (=Raven's)	E					
Meadowrue, Cooley's	E					
Mesa-mint, San Diego	E	10.0		10.0		10.0
Milkpea, Small's	E					
Milkweed, Mead's	T	7.7		7.7	6.1	13.8
Milkweed, Welsh's	T		7.0	7.0		7.0
Milk-vetch, Ash meadows	T					
Milk-vetch, heliotrope	E					
Milk-vetch, Jesup's	E				0.6	0.6
Milk-vetch, Mancos	E				7.0	7.0

SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Milk-vetch, Osterhout	E	1.6		1.6		1.6
Mint, Garrett's (=scrub, in part)	E					
Mint, Lakela's	E					
Mint, longspurred	E					
Mint, scrub	E					
Monkshood, northern wild	T	81.6		81.6	11.3	92.9
Mustard, Carter's	E					
Mustard, slender-petaled	E					
Naupaka, dwarf	E					
Nigua	E					
Niterwort, Amargosa	E					
Oak, Hinckley	T	9.2		9.2		9.2
Orchid, eastern prairie fringed	T	8.3	82.5	90.8		90.8
Orchid, western prairie fringed	T	20.5	82.5	103.0		103.0
Palo de Ramon	E	7.0		7.0		7.0
Panicgrass, Carter's	E					
Pawpaw, beautiful	E					
Pawpaw, four-petal	E					
Pawpaw, Rugel's	E					
Pennyroyal, McKittrick	T				2.5	2.5
Pennyroyal, Todsens's	E	15.0		15.0	7.5	22.5
Penstemon, blowout	E	16.2		16.2	16.0	32.2
Peperomia, Wheeler's	E	2.0		2.0		2.0
Phacelia, clay	E	6.0		6.0		6.0
Phacelia, North Park	E				8.0	8.0
Pink, swamp	T	11.0	3.0	14.0	4.9	18.9
Pitaya, Davis' green	E					
Pitcher-plant, Alabama canebrake	E					
Pitcher-plant, green	E	17.3		17.3	1.5	18.8
Pitcher-plant, mountain sweet	E					
Plum, scrub	E					
Pogonia, small whorled	E	2.5		2.5	6.7	9.2
Polygala, tiny	E					
Pondberry	E	3.0	0.6	3.6	0.3	3.9
Poppy, Sacramento prickly	E					
Poppy-mallow, Texas	E					
Prickly-apple, fragrant	E					
Prickly-ash	E					
Primrose, Maguire	T					
Quillwort, black spored	E				0.2	0.2
Quillwort, mat-forming	E				0.3	0.3
Rattleweed, hairy	E				3.0	3.0
Rhododendron, Chapman	E					
Rock-cress, McDonald's	E					

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SPECIES (50 CFR Part 17)	STATUS	FWS TOTAL	OTHER FED	FED TOTAL	STATE TOTAL	GRAND TOTAL
Rock-cress, shale barren	E	7.7		7.7		7.7
Rush-pea	E					
Sandalwood, Lanai or 'iliihi	E					
Sandwort, Cumberland	E					
Sand-verbena, large-fruited	E	1.7		1.7		1.7
Schiedea, Diamond Head	E					
Sedge, Navajo	T					
Silversword, 'Ahinahina Mauna Kea	E					
Skullcap, large-flowered	E				0.2	0.2
Snakeroot	E					
Snowbells, Texas	E	14.0		14.0		14.0
Spineflower, slender-horned	E		20.0	20.0		20.0
Spurge	E					
Stenogyne angustifolia var. angustifolia	E					
Sumac, Michaux's	E					
Sunray, Ash Meadows	T					
Thistle, Pitcher's	T	3.2	10.7	13.9	2.0	15.9
Thistle, Sacramento Mountains	T	10.0	0.1	10.1	8.0	18.1
Thornmint, San Mateo	E	13.0		13.0		13.0
Torreya, Florida	E				4.0	4.0
Townsendia, Last Chance	T		6.0	6.0		6.0
Tree, pygmy fringe	E					
Trillium, persistent	E				1.0	1.0
Trillium, relict	E				0.4	0.4
Uhiuhi	E	3.8		3.8		3.8
Vetch, Hawaiian	E	3.8		3.8		3.8
Wallflower, Contra Costa	E	6.0		6.0		6.0
Warea, wide-leaf	E					
Water-willow, Cooley's	E					
Whitlow-wort, papery	T					
Wild-buckwheat, clay-loving	E	0.2		0.2	10.0	10.2
Wild-buckwheat, gypsum	T				2.5	2.5
Wild-rice, Texas	E		0.2	0.2		0.2
Wireweed	E					
Wire-lettuce, Malheur	E	2.5	15.0	17.5		17.5
Woolly-star, Santa Ana River	E		30.0	30.0		30.0
Ziziphus, Florida	E					
TOTALS		18,353.2	21,285.5	39,638.7	4,086.1	43,724.8

TOTAL SPECIES ON LIST: 554