**Appendix 4-4. Risk assessment for cattle ear tag use of diazinon and chlorpyrifos**

1. Registered uses

Diazinon and chlorpyrifos are used in cattle ear tags to control insect pests, including: flies, lice and ticks. Malathion does not have any registrations for cattle ear tags. At this time, there are six registrations for diazinon (Reg. Nos. 39039-3, 39039-6, 11556-123, 11556-148, 61483-78, and 11556-176) that allow this use. Each cattle ear tag contains approximately 15 g of formulated product, which contains 21-40% diazinon. There is one registration for chlorpyrifos (Reg. No. 39039-6) use in cattle ear tags. This registration includes 30% diazinon and 10% chlorpyrifos.

Labels indicate that two tags should be used per cow and that the products are effective for up to 5 months. According to information provided by the chlorpyrifos registrant, tags may be applied to a cow up to 4 times a year (*i.e.,* 8 tags per cow per year). Diazinon and chlorpyrifos, are transferred through the oil on the hair of cows and are distributed near the ears and face of cows by grooming. Insect pests are killed or repelled when contacting or feeding on the pesticide residues[[1]](#footnote-1),[[2]](#footnote-2).

1. Identification of species with ranges potentially overlapping with cattle ear tag use sites

Species of interest to this assessment were identified by overlapping ranges and designated critical habitats of listed species with sites where cattle ear tags could be used. The cattle ear tag land cover is described in Attachment 1-3. Species range data were provided by USFWS and NMFS. In this analysis, ArcGIS (v10.3.1) was used to identify where species overlapped with the cattle ear tag land cover. The numbers of species within each taxon that have ranges and critical habitats that overlap with the cattle ear tag land cover are provided in **Table B 4-4.1**. There are a total of 1374 species with ranges that overlaps with potential cattle ear tag use sites and 398 critical habitats that overlap with potential cattle eartag sites. The specific species that have overlapping ranges and critical habitats are listed in **Supplemental Table B 4-4.1** and **Supplemental Table B 4-4.2** (respectively)**.**

**Table B 4-4.1. Number of species by taxon with overlap of range or critical habitat with potential cattle ear tag use sites.**

| **Taxon** | **Number of species with overlap** | |
| --- | --- | --- |
| **Range** | **Critical habitat** |
| Amphibians | 34 | 19 |
| Arachnids | 12 | 3 |
| Birds | 80 | 17 |
| Clams | 126 | 39 |
| Conifers and Cycads | 4 | 0 |
| Crustaceans | 25 | 9 |
| Ferns and Allies | 5 | 5 |
| Fishes | 183 | 90 |
| Flowering Plants | 661 | 155 |
| Insects | 68 | 24 |
| Lichens | 2 | 0 |
| Mammals | 89 | 22 |
| Reptiles | 42 | 7 |
| Snails | 43 | 8 |

1. Risk Assessment

For chlorpyrifos, there are other uses (*e.g.,* wide area use) that overlap with the spatial footprint relevant to the cattle ear tag use. Therefore, the assessment of cattle ear tags for chlorpyrifos alone is not sufficient to make species specific effects determinations. Therefore, this analysis will be used in the overall weight of evidence for uses of chlorpyrifos.

For diazinon, there are areas where no other uses overlap with the spatial footprint represented by cattle ear tags. Effects determinations (Likely to adversely affect (LAA) or Not likely to adversely affect (NLAA)) are made here for those species with ranges and critical habitats (if designated) that are within the diazinon action area but the only overlap is with the spatial extent of the cattle ear tag use. This includes those species that have overlap of <1% of their ranges with other potential diazinon use site spatial layers (*i.e.,* nursery, orchard/vineyard and ground fruit and vegetable), which also account for spray drift transport. Species inhabiting aquatic areas were excluded if the downstream dilution analysis indicated that transport from agricultural (orchard, ground fruit and vegetables) and nursery use sites resulted in exposures above thresholds (**Appendix 3-5**). The numbers of species within each taxon that have ranges and critical habitats that only overlap with the cattle ear tag land cover are provided in **Table B 4-4.2**. There are a total of 141 species with ranges that overlap with potential cattle ear tag use sites and 128 species with overlapping critical habitats. The specific species that have ranges and critical habitats overlapping only with diazinon use on cattle ear tags are listed in **Supplemental Table B 4-4.3 and Supplemental Table B 4-4.4**.

**Table B 4-4.2. When considering diazinon uses, this table lists the number of species by taxon whose ranges or critical habitats only overlap with diazinon use on cattle ear tags.**

| **Taxon** | **Number of species with overlap** | |
| --- | --- | --- |
| **Range** | **Critical habitat** |
| Amphibians | 2 | 4 |
| Arachnids | 0 | 1 |
| Birds | 7 | 1 |
| Clams | 0 | 0 |
| Conifers and Cycads | 0 | 0 |
| Crustaceans | 1 | 0 |
| Ferns and Allies | 0 | 6 |
| Fishes | 14 | 7 |
| Flowering Plants | 106 | 94 |
| Insects | 4 | 8 |
| Lichens | 0 | 0 |
| Mammals | 6 | 4 |
| Reptiles | 0 | 1 |
| Snails | 1 | 2 |

* 1. Exposure routes

Cattle ear tags remain on a cow’s head, with chlorpyrifos and diazinon dissipating over time. In a registrant submitted dissipation study conducted with cattle ear tags impregnated with diazinon and chlorpyrifos (MRID 43260208), 68% of active ingredient remained on tags after 4 months. Dissipation of pesticide active ingredient from the tags occurs via grooming by other cows. Available dye studies show that residues are distributed near the ears, face and mouth. In these studies, no dye was transferred to other parts of the body, including the legs, back, belly and hips.[[3]](#footnote-3)[[4]](#footnote-4) Cows may also ingest some residues during grooming.

Once on the cow, pesticides can continue to dissipate via degredation, volatilization or wash off. Data are not available to define dissipation rates of pesticides on cows. Foliar dissipation data, which integrate degredation, volatilization and wash off, are available for diazinon and chlorpyrifos. These data indicate that diazinon and chlorpyrifos chemicals dissipate from foliar surfaces in a matter of days (half-lives range 0.4-5.3 d)[[5]](#footnote-5). Terrestrial field dissipation DT50s range from 5 to 20 days for diazinon and 33-56 for chlorpyrifos (including bare soil and cropped fields). When considering the available data for degredation, diazinon’s aerobic soil metabolism half-life values range from 9 to 57 days, while those of chlorpyrifos range 19-193 days. Diazinon and chlorpyrifos are semivolatile (Vapor pressure: 6.6-7.2×10-5 and 1.9×10-5 Torr, respectively)[[6]](#footnote-6), indicating the potential to volatilize from the cow.  It is expected that diazinon and chlorpyrifos will sorb to the oil on the hair and skin of cows. The octanol-water partition coefficient can be used to estimate the proportion of pesticide that will be available to be dissolved in water when it rains, where octanol is used as a surrogate for oil. Based on the inverse of the Kows for diazinon (5900) and chlorpyrifos (50,000), approximately 0.02% and 0.002% of the masses of diazinon and chlorpyrifos, respectively, would be available to partition to water in the case where there is rain.

The greatest exposure to a non-target organism is expected to be directly on the cow and very near the head of the cow. The routes of exposure to non-target organisms that are included in this analysis include: consumption of cows, consumption of insects that have preyed upon cows, and inhalation of volatilized residues near the head of the cow. Given that <0.02% of pesticide residues on the cow are potentially available for partitioning to water, wash off onto terrestrial habitats and subsequent runoff to aquatic habitats is considered discountable.

* 1. Risks to animals consuming cows

Exposures to non-target organisms may occur when listed species prey upon cows or consume cow carcasses[[7]](#footnote-7). The diets of listed terrestrial animals (including birds, mammals, reptiles, amphibians and invertebrates) were queried in order to identify potential species that prey upon cows. Species were selected if they prey upon cows, livestock or carrion.

Of the listed terrestrial invertebrates, several have diets that include carrion. Attachment 1-20 lists the dietary preferences of these species. Species that are cave-dwelling (*e.g.,* Icebox Cave beetle, *Pseudanophthalmus frigidus*) were excluded because caves will not be present in their habitats. One non-cave dwelling terrestrial invertebrate, the American burying beetle *(Nicrophorus americanus)* feeds upon mammal carcasses; however, this species is unlikely to consume cows since the prey size of this species (*i.e.,* 80-100 g[[8]](#footnote-8)) is orders of magnitude smaller than cows (635,000 g). Based on the available diet information for listed terrestrial invertebrates, it is unlikely that they prey upon cows. Therefore, the dietary route of exposure is not assessed for direct effects to listed terrestrial invertebrates.

When considering listed birds, several species have diets including carrion. Those species include:

* California condor (*Gymnogyps californianus)*
* Florida scrub-jay (*Aphelocoma coerulescens*)

Audubon's crested caracara (*Polyborus plancus audubonii*)

Of those species, it is most certain that the California condor may consume cattle as this is identified in FWS documentation as a dietary item of this species. In addition, the condor is a scavenger whose diet is composed of carrion, whereas the other two avian species are opportunistic omnivores, consuming a variety of dietary items. Attachment 1-17 includes the details of the dietary data available for listed birds.

When considering listed mammals, several species have diets including carrion. Those species include:

* Grey wolf (*Canis lupus)*
* Mexican grey wolf *(Canis lupus baileyi)*
* Jaguar (*Panthera onca*)
* Canada lynx (*Lynx canadensis*)
* Grizzly bear (*Ursus arctos horribilis*)

There is some uncertainty as to the likelihood that some of these species will consume cow carcasses. Available sources (Attachment 1-17) indicate that livestock is part of the diets of jaguar, bears and the two wolf species.

A dietary exposure analysis is conducted below for the 3 bird and 5 mammal species that potentially consume cow carcasses. Effects determinations are not made here for these species because their ranges overlap with other diazinon and chlorpyrifos use sites.

No other listed species included in **Supplemental Table B 4-4.1** and **Supplemental Table B 4-4.2** are likely to prey upon cows or consume cow carcasses. Therefore, dietary exposure to diazinon and chlorpyrifos through consumption of cows (alive or dead) is not of concern for all other listed species.

* + 1. *Estimation of pesticide concentration in cows*

Studies are available from the literature to quantify diazinon and chlorpyrifos residues in cows with cattle ear tags. Data from two studies involving chlorpyrifos (5-10% a.i./tag) reported residues in fatty tissues that were are high as 0.038 mg a.i./kg (Ivey 1979[[9]](#footnote-9), Byford et al. 1986[[10]](#footnote-10)). The value of 0.038 mg a.i./kg is used to estimate exposure to chlorpyrifos from cattle ear tags. In studies involving diazinon (9.6-20% a.i./tag), residues were as high as 0.05 mg a.i./kg (FAO 1996,[[11]](#footnote-11) Spradbery and Tozer 1996[[12]](#footnote-12)). The value of 0.05 mg a.i./kg (which was based on a cow with tags that were 20% a.i./tag) will be multiplied by 2 in order to derive a value that is representative of 40% a.i./tag, which is the maximum amount on a registered product for diazinon.

* + 1. *Risk to Birds*

Dose-based exposures were calculated for the avian species of interest (**Table B 4-4.3**). Doses were calculated by multiplying food ingestion rates by 0.1 mg a.i./kg diazinon or 0.038 mg a.i./kg chlorpyrifos. Equations for calculating food ingestion rates are included in **Attachment 1-7** (Equations 5 and 6). Dose-based thresholds for mortality and sublethal effects (Chapter 2) are adjusted based on the body weight of the assessed bird (see T-REX manual[[13]](#footnote-13) for equation).

The resulting doses for the avian species range 0.010-0.064 mg a.i./kg-bw for diazinon and 0.004-0.024 mg a.i./kg-bw for chlorpyrifos (**Table B 4-4.3**). The estimated doses do not exceed the mortality or sublethal thresholds for chlorpyrifos; however, the estimated diazinon doses exceed the threshold for mortality (but not sublethal effects). Therefore, there are concerns for dose-based exposures of birds to diazinon applied via cattle ear tags.

**Table B 4-4.3. Estimated doses and adjusted thresholds for three species of birds that potentially consume cows. Units are mg a.i./kg-bw.**

| **Species** | **BW (g)** | **Chlorpyrifos** | | | **Diazinon** | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Dose** | **Mortality threshold** | **Sublethal threshold** | **Dose** | **Mortality threshold** | **Sublethal threshold** |
| California condor | 8500 | 0.004 | 1.18 | 1.57 | 0.010 | 0.004 | 0.170 |
| Florida scrub-jay | 80 | 0.024 | 0.56 | 0.74 | 0.064 | 0.021 | 0.952 |
| Audubon's crested caracara | 834 | 0.007 | 0.81 | 1.08 | 0.018 | 0.009 | 0.400 |

The analysis above considers dose-based thresholds. Dietary based thresholds are not exceeded for birds. For chlorpyrifos, the concentration of 0.038 mg a.i./kg-diet is 2-3 orders of magnitude below the mortality (1.6) and sublethal (25) thresholds for birds. For diazinon, the concentration of 0.1 mg a.i./kg-diet is one order of magnitude below the mortality (2.5) and sublethal (4.0) thresholds for birds (see Chapter 2 for background on Thresholds).

* + 1. *Risk to Mammals*

Dose-based exposures were calculated for the mammalian species of interest (**Table B 4-4.4**). Doses were calculated by multiplying food ingestion rates by 0.1 mg a.i./kg diazinon or 0.038 mg a.i./kg chlorpyrifos. Equations for calculating food ingestion rates are included in **Attachment 1-7** (Equations 5 and 6). Dose-based thresholds for mortality and sublethal effects (Chapter 2) are adjusted based on the body weight of the assessed mammal (see T-REX manual for equation).

The resulting doses for the mammalian species range 0.009-0.015 mg a.i./kg-bw for diazinon and 0.004-0.006 mg a.i./kg-bw for chlorpyrifos (**Table B 4-4.4**). The estimated doses do not exceed the mortality or sublethal thresholds for chlorpyrifos or diazinon. This indicates that consumption of cow carcasses containing diazinon or chlorpyrifos residues from cattle ear tags are not of concern for effects to listed mammals.

**Table B 4-4.4. Estimated doses and adjusted thresholds for three species of mammals that potentially consume cows. Units are mg a.i./kg-bw.**

| **Species** | **BW (g)\*** | **Chlorpyrifos** | | | **Diazinon** | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Dose** | **Mortality threshold** | **Sublethal threshold** | **Dose** | **Mortality threshold** | **Sublethal threshold** |
| Grey wolf | 17,700 | 0.005 | 0.953 | 0.011 | 0.013 | 0.436 | 0.131 |
| Mexican grey wolf | 23,000 | 0.005 | 0.893 | 0.011 | 0.012 | 0.409 | 0.123 |
| Jaguar | 45,000 | 0.004 | 0.755 | 0.009 | 0.011 | 0.346 | 0.104 |
| Canada lynx | 8,000 | 0.006 | 1.163 | 0.014 | 0.015 | 0.532 | 0.160 |
| Grizzly bear | 113,000 | 0.004 | 0.600 | 0.007 | 0.009 | 0.275 | 0.083 |

\*Lowest of available values selected as this yields the greatest dose.

Although expected to be unlikely, there is potential for an even greater exposure via direct consumption of tags on cows. For example, consumption of tag containing 6 g diazinon could result in a dose of 440 mg a.i./kg-bw to the Mexican grey wolf, which would exceed the available thresholds. Consumption of a cattle ear tag containing diazinon was reported in a mortality incident involving a Mexican gray wolf[[14]](#footnote-14). In that incident, it is unclear whether the wolf died due to a physical impact of the tag on the gut of the animal or through toxicity of diazinon. If a listed mammal consumes a cattle ear tag, there is potential for effects.

* 1. Risk assessment for animals consuming insect pests of cows

Exposure to listed species may occur when feeding on insects that have preyed upon cows. Insect pests controlled by cattle ear tags include flies, lice and ticks. As indicated in the appendices that describe the life histories of listed species, the diets of many species include terrestrial arthropods. Listed species most likely to be exposed would include those that glean insects from cows. These would likely include some species of birds, bats and flying insects. Animals that forage on the ground may also consume dead insects that have residues of diazinon or chlorpyrifos. An assessment of the potential risks associated with this exposure route is included below.

Exposure via consumption of insects that have ingested pesticide residues on cows is generated using LD90 data for invertebrates exposed to diazinon and chlorpyrifos. This endpoint is selected because available efficacy data indicate that flies are controlled at a rate of 90-100% (Spradbery and Tozer 1996). Oral LD90 values are available for invertebrates exposed to these chemicals. For diazinon, the LD90 for adult honey bees is: 5.3 mg a.i./kg (MRID 5004151[[15]](#footnote-15)). A LD90 is available for western corn rootworm exposed to chlorpyrifos. 11.3 mg a.i./kg (ECOTOX 58594).

* + 1. *Risk Assessment for Invertebrates that consume Insects*

Consumption rates are not available for predatory invertebrates so that a dose based exposure can be estimated using the LD90 values above. It is assumed that diazinon and chlorpyrifos will pose a risk to invertebrate species that consume invertebrates that have died after preying upon cows that contain cattle ear tags. There are several listed species of invertebrates with ranges or critical habitats that overlap only with the diazinon use sites for cattle ear tags. Of those species, only the Helotes mold beetle (*Batrisodes venyivi*) consumes terrestrial invertebrates (this species has critical habitat that overlaps with the cattle eartag use layer). This species, however, is strictly cave-dwelling, therefore, exposures from the cattle eartag use are not expected. For all other invertebrates listed in **Supplemental** **Table B 4-4.3** and **Supplemental** **Table B 4-4.4**, their diets do not include terrestrial invertebrates so exposure to diazinon is not likely (details in Attachment 1-20). For those species NLAA calls are made.

* + 1. *Risk Assessment for Birds that Consume Insects*

The LD90 for diazinon (5.3 mg a.i./kg) is above the mortality (2.5) and sublethal (4.0) thresholds for birds (concentration based values). The LD90 for chlorpyrifos (11.3 mg a.i./kg) is also is above the mortality (1.6) threshold but not the sublethal (25) threshold for birds exposed to chlorpyrifos (concentration based values). Therefore, there is a concern for effects to listed birds that glean insects feeding on cows treated with cattle ear tags containing diazinon and chlropyrifos.

LAA determinations are made for the following avian species that have terrestrial arthropods in their diets and have ranges that only overlap with diazinon use on potential cattle ear tag sites:

* Palila (honeycreeper)
* Hawaii creeper

An LAA determination is made for the following avian species that has terrestrial arthropods in its diets and has critical habitat overlap with cattle ear tag sites:

* Palila (honeycreeper)

Two species, the San Clemente loggerhead shrike and the San Clemente sage sparrow consume terrestrial arthropods. It is considered unlikely that cattle will occur on their ranges, which are limited to San Clemente Island. This island is owned by the US Navy and used as a training area[[16]](#footnote-16). Therefore, cattle are not expected to occur on this island. Since cattle ear tag use is the only potential diazinon use site that overlaps with these two species, NLAA determinations are made for the San Clemente loggerhead shrike and the San Clemente sage sparrow.

* + 1. *Risk Assessment for Amphibians and Reptiles that Consume Insects*

Since limited toxicity data are available for amphibians and reptiles exposed to diazinon or chlorpyrifos, avian thresholds are used as surrogates for these species[[17]](#footnote-17). Therefore, there is risk to amphibians and reptiles through dietary exposure through consumption of insect pests that prey upon cows treated with cattle ear tags.

LAA determinations are made for the following amphibian species that have diets including terrestrial arthropods, in particular flies (which are targets for cattle ear tags), and have ranges that only overlap with diazinon use on potential cattle ear tag sites.

* Cheat Mountain Salamander (*Plethodon nettingi)*
* Yosemite toad *(Anaxyrus canorus)*

An LAA determination is also made for the designated critical habitats for the following species that eat terrestrial invertebrates and have critical habitats that overlap only with the cattle eartag use for diazinon:

* Yosemite toad *(Anaxyrus canorus)*
* Sierra Nevada yellow-legged frog (*Rana sierra*)

NLAA determinations are made for the desert tortoise and the frosted flatwoods salamander designated critical habitat. The desert tortoise diet includes plants and the frosted flatwoods salamander diet includes subterranean invertebrates (earthworms), therefore, exposure to diazinon via diet is not likely.

There is considerable uncertainty in using birds as surrogates for amphibians and reptiles as it is assumed that they will have similar responses to diazinon and chlorpyrifos. The actual sensitivities of amphibians and reptiles to diazinon and chlorpyrifos relative to birds is unknown. Given that diazinon and chlorpyrifos toxicity is attributed to metabolic transformation to the oxon degradates, differences in metabolic rates of birds and amphibians/reptiles may lead to different sensitivities. Since birds are warm blooded and amphibians/reptiles are cold blooded, it is expected that the metabolic rates of amphibians/reptiles will be lower than those of birds. This assumption is supported by available toxicity data for the bullfrog, which was at least 3 orders of magnitude less sensitive to diazinon compared to birds tested in the same study (mallards and pheasants; ECOTOX 50396[[18]](#footnote-18)). Therefore, there is low confidence associated with the robustness and relevance of use of the available avian toxicity data as a surrogate for amphibians and reptiles.

* + 1. *Risk Assessment for Mammals that Consume Insects*

For mammals, the mortality (2.38 mg a.i./kg-bw) and sublethal (0.35 ug a.i./kg-bw) thresholds for diazinon are also exceeded by the LD90 of 5.3 mg a.i./kg. For chlorpyrifos, the mortality (5.2 mg a.i./kg-bw) and sublethal (0.03 mg a.i./kg-bw) thresholds are exceeded by the LD90 of 11.3 mg a.i./kg. Therefore, there is potential risk to mammals included in **Supplemental Table B 4-4.1** and **Supplemental Table B 4-4.2** that have insects as part of their diets.

Of the mammalian species with ranges overlapping only with the diazinon use sites that represent cattle ear tags, none of them consume invertebrates. Therefore, NLAA determinations are made for these species (**Supplemental Table B 4-4.3**). Of the mammalian species that have designated critical habitat that only overlaps with the cattle ear tag use sites for diazinon, the Virginia big-eared bat (*Corynorhinus townsendii*), has flying insects in its diet and therefore the determination for its critical habitat is LAA. Two other species, St. Andrew beach mouse (*Peromyscus polionotus peninsularis*) and Choctawhatchee beach mouse (*Peromyscus polionotus allophrys*), consume insects; however, these species are primarily ground dwelling species (Coleoptera beetles and ants) that do not represent pests of cows and are not likely to have pesticide residues from cattle ear tag applications. Therefore, an NLAA determination is made for the critical habitat of the St. Andrew beach mouse and the Choctawhatchee beach mouse.

* 1. Risk assessment for inhalation route of exposure

Given that diazinon and chlorpyrifos are semi volatile, inhalation exposure may be of concern. In feeding upon insect prey that are near cows, it is possible that an individual of a listed terrestrial invertebrate, bat or a bird may fly near the head of a cow, thereby inhaling diazinon or chlorpyrifos residues that have volatilized from the cattle ear tag. This exposure route is assessed below for listed species of flying insects, bats and birds.

* + 1. *Estimation of pesticide concentration in air*

The concentration of diazinon and chlorpyrifos in the air surrounding the head of a cow with cattle ear tags is reliant upon two calculations: the mass of pesticide in the air on an hourly basis and the volume of air around the cow’s head where the chemical is present.

The following calculations and assumptions were used to estimate the mass of pesticide present in the air surround in the cow’s head:

1. An hourly dissipation rate of 0.017% (0.41%/24 hours, based on data from MRID 43260208) is multiplied by the amount of a.i. in two cattle ear tags.
   1. The highest amount of diazinon and chlorpyrifos in a single product is used (*i.e.,* 40% a.i.\*15 g formula/tag = 6 g a.i./tag = 6000 mg a.i./tag).
2. Since dissipation is a combination of partitioning onto the cow, degredation and volatilization, it is necessary to define the proportion that dissipated via volatilization.
   1. It is assumed that 1% volatilizes[[19]](#footnote-19).
3. The total mass estimated in the air value is 0.02 mg.
4. It is assumed that the chemical mass that is present in the air around the cow’s head will dissipate away from the cow after 1 hour.

The following calculations and assumptions were used to estimate the volume of air surrounding the cow’s head:

1. It is assumed that the shape of the cow’s head is a cuboid.
   1. The dimensions are as follows: 50 cm length x 20 cm width x 20 cm height[[20]](#footnote-20).
   2. These values are multiplied to generate a volume of 20,000 cm3 (20 L).
2. It is assumed that the volume of air surrounding the cow’s head extends 1 foot (30 cm) beyond the cow’s head. Beyond this, the ambient concentration of the a.i. in the air drops to zero.
3. The volume of the area representing the cow’s head and the surrounding air is calculated by adding 30 cm to each side of the cube (dimensions: 110 cm length x 80 cm width x 80 cm height). The resulting volume is 704 L.
4. The volume of the cow’s head is subtracted from the larger sphere to calculate the volume of the air. The result is 684 L.

When the mass a.i. (0.02 mg a.i.) is divided by the volume of air (684 L), the resulting hourly concentration near the cow’s head is 0.00003mg a.i./L.

* + 1. *Risks to listed birds*

For a 100 g bird, the concentration in air (0.00003mg a.i./L) results in a dose of 0.0026mg a.i./kg-bw when using the following equation to calculate the amount of air inhaled in 1 hour:

And then, dividing by the body weight of the bird.

This estimated exposure is one to two orders of magnitude below the dose-based thresholds for mortality and sublethal effects. For diazinon, the 1/million mortality and sublethal thresholds are 0.019 and 0.316 mg a.i./kg-bw (normalized to 100 g bw). For chlorpyrifos, the 1/million and sublethal thresholds are 0.58 and 0.77mg a.i./kg-bw (normalized to 100 g bw).

There is uncertainty is using these thresholds to represent inhalation toxicity, as they are dietary based. The relative differences in toxicity through the two routes is unknown. No avian toxicity data are available through the inhalation route; however toxicity via inhalation would need to be orders of magnitude more sensitive compared to the oral route in order to be of concern. This is considered to be unlikely, considering the available mammalian toxicity data that indicate that inhalation exposure is less sensitive than dietary.

* + 1. *Risks to listed bats*

For mammals, acute inhalation studies are available for diazinon where no mortality was observed at 1 mg a.i./L (Diazinon: MRIDs 42307236, 43665605, 42993303), which is orders of magnitude below the concentration estimated in air (*i.e.,* 0.00003mg a.i./L). In a study with chlorpyrifos, the NOEC for AChE inhibition and lethality was 0.0003 mg a.i./L (MRID 49119501), which is also above the estimated concentration in air. Based on this information, it is not likely that inhalation exposure will pose a risk to bats flying near the head of the cow.

* + 1. *Risks to listed flying invertebrates*

For invertebrates, an inhalation rate is calculated using oxygen respiration rates for honey bees that are published in the scientific literature. Allen (1959) reported respiration rates of 1.8 - 4.5 µL O2/mg-bw/hr for resting adult honey bees at 32oC. Using the oxygen content of the atmosphere (21%; Williams 2010), the reported respiration rate can be translated to an air inhalation rate ranging between 8.6-21x10-6 L air/mg-bw/hr. When this is multiplied by the concentration in air, the result is a dose of 2.6-6.3x10-10 mg a.i./mg-bw.

This value is several orders of magnitude below the most sensitive thresholds (contact based) for diazinon (2.0x10-5 mg a.i./mg-bw) and chlorpyrifos (3.16x10-6 mg a.i./mg-bw). As with birds, inhalation specific toxicity data are not available for invertebrates. It is assumed that the contact and inhalation endpoints will be on a similar order of magnitude.

Based on the low inhalation exposure relative to the thresholds, inhalation exposure does not pose a risk to listed flying invertebrates.

* 1. *Indirect effects*

It is assumed that if cattle ear tags are used on cows, they are effective in controlling insect pests (flies, ticks, lice); however, given that cows are expected to be distributed throughout a landscape, the use of cattle ear tags is expected to impact a small proportion of the overall insect biomass available in the environment. One exception to this may be on combined feeding operations where the density of cows is substantially greater compared to grazing lands. Given the high disturbance of these operations, these areas do not represent suitable habitat for listed species. In addition, available information indicates that cattle ear tags are not used on combined feeding operations[[21]](#footnote-21).

Therefore, declines in invertebrate abundance are not expected to impact listed species. As a result, potential indirect effects to listed species that rely upon invertebrates as a food source are considered discountable when considering diazinon and chlorpyrifos.

* 1. Discussion of Additional Uncertainties

In addition to the uncertainties indicated above, several other considerations should be discussed.

First, when considering exposures through consumption of cow carcasses or dead invertebrate pests of cows, the above assessment does not consider potential declines in diazinon and chlorpyrifos residues through degredation or dissipation.

Second, this assessment relies upon threshold values for diazinon and chlorpyrifos single active ingredients. As noted in the introduction, there is a cattle ear tag formulation that includes both active ingredients. This assessment does not account for potential increases (due to synergy) in the toxicity of a single active ingredient due to exposures to the combination of the two ingredients or other chemicals present in the environment.

Third, although this assessment concludes that there is risk to animals that consume cow carcasses or insect pests of cows with cattle ear tags, this assessment does not consider the likelihood that an individual of a listed species will encounter a cow. On a field scale, 1-30 acres are needed in order to provide the necessary forage for cows[[22]](#footnote-22). This indicates that cows will be dispersed throughout a pasture site. For many of the listed species included in **Supplemental** **Table B 4-4.1**, the fraction of their ranges that overlap with potential cattle ear tag use sites is low (e.g., <5%).

When considering these uncertainties, as well as those discussed above, in cases where risk is identified above, the confidence is considered to be low.

* 1. Risk Conclusions

This analysis indicates potential risks through dietary exposures, specifically through 1) consumption of cows (including carcasses) that have been treated with diazinon or chlorpyrifos ear tags and 2) consumption of insects (especially pests of cows) that have died as a result of contact with treated cows. Although there is risk through dietary routes of exposure, the confidence associated with this risk conclusion is low. The risk to birds and insects exposed via inhalation is considered low. Also, risks to terrestrial and aquatic organisms potentially exposed after diazinon and chlorpyrifos wash off of treated cows is considered discountable.

As noted above, effects determinations are made for diazinon for those species with ranges and/or critical habitats that only overlap with the cattle ear tag land cover. This includes 141 species based on range overlap and 128 species based on designated critical habitat. The specific species and the effects determinations are summarized in **Supplemental Table B 4-4.3 and Supplemental Table B 4-4.4**. Of those species, LAA determinations are made for 4 species with range overlap, *i.e.,* Palila, Hawaii creeper, Yosemite toad and cheat mountain salamander. These LAA determinations are based on potential exposures to diazinon following consumption of invertebrates that preyed upon cows with cattle ear tags. LAA determinations are made for designated critical habitat of four species, *i.e.,* Virginia big-eared bat, palila,Yosemite toad, and Sierra Nevada yellow-legged frog. Again, these LAA determinations are based on potential exposures to diazinon following consumption of invertebrates that preyed upon cows with cattle ear tags. NLAA determinations are made for the remaining 137 species and 124 designated critical habitats.

**Supplemental Table 1. Species with ranges overlapping with use sites for cattle ear tags.**

| **EntityID** | **Common Name** | **Scientfic Name** | **Taxon** | **% Overlap** |
| --- | --- | --- | --- | --- |
| 1 | Indiana bat | *Myotis sodalis* | Mammals | 21.89 |
| 2 | Grizzly bear | *Ursus arctos horribilis* | Mammals | 36.73 |
| 3 | Columbian white-tailed deer | *Odocoileus virginianus leucurus* | Mammals | 17.01 |
| 5 | Black-footed ferret | *Mustela nigripes* | Mammals | 54.57 |
| 6 | San Joaquin kit fox | *Vulpes macrotis mutica* | Mammals | 43.79 |
| 7 | West Indian Manatee | *Trichechus manatus* | Mammals | 13.94 |
| 8 | Florida panther | *Puma (=Felis) concolor coryi* | Mammals | 14.61 |
| 9 | Sonoran pronghorn | *Antilocapra americana sonoriensis* | Mammals | 28.96 |
| 11 | Gray wolf | *Canis lupus* | Mammals | 31.45 |
| 12 | Gray wolf | *Canis lupus* | Mammals | 7.15 |
| 13 | Mexican wolf | *Canis lupus baileyi* | Mammals | 46.61 |
| 15 | Hawaiian hoary bat | *Lasiurus cinereus semotus* | Mammals | 10.03 |
| 17 | Salt marsh harvest mouse | *Reithrodontomys raviventris* | Mammals | 25.31 |
| 18 | Jaguar | *Panthera onca* | Mammals | 41.13 |
| 20 | Utah prairie dog | *Cynomys parvidens* | Mammals | 80.77 |
| 21 | Gray bat | *Myotis grisescens* | Mammals | 30.42 |
| 22 | Gulf Coast jaguarundi | *Herpailurus (=Felis) yagouaroundi cacomitli* | Mammals | 29.92 |
| 24 | Canada Lynx | *Lynx canadensis* | Mammals | 35.08 |
| 25 | Ozark big-eared bat | *Corynorhinus (=Plecotus) townsendii ingens* | Mammals | 35.96 |
| 27 | Virginia big-eared bat | *Corynorhinus (=Plecotus) townsendii virginianus* | Mammals | 14.75 |
| 30 | Ocelot | *Leopardus (=Felis) pardalis* | Mammals | 33.18 |
| 33 | Woodland caribou | *Rangifer tarandus caribou* | Mammals | 14.54 |
| 34 | Choctawhatchee beach mouse | *Peromyscus polionotus allophrys* | Mammals | 1.29 |
| 35 | Perdido Key beach mouse | *Peromyscus polionotus trissyllepsis* | Mammals | 4.49 |
| 37 | Fresno kangaroo rat | *Dipodomys nitratoides exilis* | Mammals | 31.13 |
| 38 | Giant kangaroo rat | *Dipodomys ingens* | Mammals | 44.55 |
| 39 | Stephens' kangaroo rat | *Dipodomys stephensi (incl. D. cascus)* | Mammals | 23.26 |
| 40 | Tipton kangaroo rat | *Dipodomys nitratoides nitratoides* | Mammals | 32.58 |
| 41 | Alabama beach mouse | *Peromyscus polionotus ammobates* | Mammals | 3.39 |
| 42 | Carolina northern flying squirrel | *Glaucomys sabrinus coloratus* | Mammals | 13.63 |
| 43 | Mount Graham red squirrel | *Tamiasciurus hudsonicus grahamensis* | Mammals | 83.01 |
| 45 | Southern sea otter | *Enhydra lutris nereis* | Mammals | 24.58 |
| 47 | Lesser long-nosed bat | *Leptonycteris curasoae yerbabuenae* | Mammals | 41.94 |
| 48 | Mexican long-nosed bat | *Leptonycteris nivalis* | Mammals | 38.85 |
| 49 | Point Arena mountain beaver | *Aplodontia rufa nigra* | Mammals | 7.69 |
| 50 | Anastasia Island beach mouse | *Peromyscus polionotus phasma* | Mammals | 4.08 |
| 51 | Pacific pocket mouse | *Perognathus longimembris pacificus* | Mammals | 7.98 |
| 52 | Preble's meadow jumping mouse | *Zapus hudsonius preblei* | Mammals | 67.39 |
| 53 | Southeastern beach mouse | *Peromyscus polionotus niveiventris* | Mammals | 7.48 |
| 55 | Riparian brush rabbit | *Sylvilagus bachmani riparius* | Mammals | 17.46 |
| 56 | Peninsular bighorn sheep | *Ovis canadensis nelsoni* | Mammals | 10.46 |
| 57 | Sierra Nevada bighorn sheep | *Ovis canadensis sierrae* | Mammals | 40.16 |
| 58 | Buena Vista Lake ornate Shrew | *Sorex ornatus relictus* | Mammals | 38.91 |
| 59 | Northern Idaho Ground Squirrel | *Urocitellus brunneus* | Mammals | 66.85 |
| 60 | Florida salt marsh vole | *Microtus pennsylvanicus dukecampbelli* | Mammals | 12.90 |
| 61 | Hualapai Mexican vole | *Microtus mexicanus hualpaiensis* | Mammals | 95.67 |
| 62 | Riparian woodrat (=San Joaquin Valley) | *Neotoma fuscipes riparia* | Mammals | 24.63 |
| 63 | San Bernardino Merriam's kangaroo rat | *Dipodomys merriami parvus* | Mammals | 23.66 |
| 65 | akiapolaau | *Hemignathus wilsoni* | Birds | 15.55 |
| 66 | California condor | *Gymnogyps californianus* | Birds | 45.55 |
| 67 | Whooping crane | *Grus americana* | Birds | 49.56 |
| 69 | Hawaiian (=koloa) Duck | *Anas wyvilliana* | Birds | 5.54 |
| 73 | Hawaiian goose | *Branta (=Nesochen) sandvicensis* | Birds | 9.96 |
| 74 | Crested honeycreeper | *Palmeria dolei* | Birds | 1.88 |
| 76 | Hawaiian common gallinule | *Gallinula chloropus sandvicensis* | Birds | 5.12 |
| 79 | Palila (honeycreeper) | *Loxioides bailleui* | Birds | 21.34 |
| 80 | Puerto Rican parrot | *Amazona vittata* | Birds | 2.00 |
| 81 | Maui parrotbill (honeycreeper) | *Pseudonestor xanthophrys* | Birds | 1.98 |
| 82 | Hawaiian petrel | *Pterodroma sandwichensis* | Birds | 11.47 |
| 83 | Attwater's greater prairie-chicken | *Tympanuchus cupido attwateri* | Birds | 48.78 |
| 84 | Yuma clapper rail | *Rallus longirostris yumanensis* | Birds | 38.31 |
| 85 | Cape Sable seaside sparrow | *Ammodramus maritimus mirabilis* | Birds | 1.09 |
| 87 | Micronesian megapode | *Megapodius laperouse* | Birds | 1.32 |
| 88 | Short-tailed albatross | *Phoebastria (=Diomedea) albatrus* | Birds | 6.51 |
| 89 | Masked bobwhite (quail) | *Colinus virginianus ridgwayi* | Birds | 29.95 |
| 94 | Kirtland's Warbler | *Setophaga kirtlandii (= Dendroica kirtlandii)* | Birds | 5.27 |
| 95 | Ivory-billed woodpecker | *Campephilus principalis* | Birds | 1.14 |
| 96 | California least tern | *Sterna antillarum browni* | Birds | 44.85 |
| 97 | Hawaii akepa | *Loxops coccineus* | Birds | 15.22 |
| 98 | Maui akepa | *Loxops ochraceus* | Birds | 3.08 |
| 101 | Puerto Rican plain Pigeon | *Columba inornata wetmorei* | Birds | 1.92 |
| 102 | California clapper rail | *Rallus longirostris obsoletus* | Birds | 16.77 |
| 103 | Light-footed clapper rail | *Rallus longirostris levipes* | Birds | 8.01 |
| 104 | Hawaiian stilt | *Himantopus mexicanus knudseni* | Birds | 59.87 |
| 106 | Molokai thrush | *Myadestes lanaiensis rutha* | Birds | 2.34 |
| 107 | Red-cockaded woodpecker | *Picoides borealis* | Birds | 11.04 |
| 108 | Hawaiian coot | *Fulica americana alai* | Birds | 5.54 |
| 110 | Mississippi sandhill crane | *Grus canadensis pulla* | Birds | 4.96 |
| 111 | Puerto Rican nightjar | *Caprimulgus noctitherus* | Birds | 0.87 |
| 112 | Hawaii creeper | *Oreomystis mana* | Birds | 3.50 |
| 114 | Newell's Townsend's shearwater | *Puffinus auricularis newelli* | Birds | 10.58 |
| 115 | San Clemente loggerhead shrike | *Lanius ludovicianus mearnsi* | Birds | 4.08 |
| 116 | San Clemente sage sparrow | *Amphispiza belli clementeae* | Birds | 5.16 |
| 117 | Yellow-shouldered blackbird | *Agelaius xanthomus* | Birds | 1.55 |
| 118 | Mariana (=aga) Crow | *Corvus kubaryi* | Birds | 2.36 |
| 120 | Mariana common moorhen | *Gallinula chloropus guami* | Birds | 1.92 |
| 121 | Guam rail | *Rallus owstoni* | Birds | 2.19 |
| 123 | Least Bell's vireo | *Vireo bellii pusillus* | Birds | 25.37 |
| 124 | Wood stork | *Mycteria americana* | Birds | 11.05 |
| 125 | Audubon's crested caracara | *Polyborus plancus audubonii* | Birds | 14.71 |
| 126 | northern aplomado falcon | *Falco femoralis septentrionalis* | Birds | 11.24 |
| 127 | Puerto Rican broad-winged hawk | *Buteo platypterus brunnescens* | Birds | 1.18 |
| 128 | Puerto Rican sharp-shinned hawk | *Accipiter striatus venator* | Birds | 1.17 |
| 129 | Mexican spotted owl | *Strix occidentalis lucida* | Birds | 55.76 |
| 130 | Piping Plover | *Charadrius melodus* | Birds | 5.35 |
| 131 | Piping Plover | *Charadrius melodus* | Birds | 48.11 |
| 132 | Western snowy plover | *Charadrius alexandrinus nivosus* | Birds | 10.89 |
| 133 | Florida grasshopper sparrow | *Ammodramus savannarum floridanus* | Birds | 21.60 |
| 134 | Least tern | *Sterna antillarum* | Birds | 53.86 |
| 135 | Roseate tern | *Sterna dougallii dougallii* | Birds | 0.95 |
| 136 | Roseate tern | *Sterna dougallii dougallii* | Birds | 2.74 |
| 138 | Black-capped Vireo | *Vireo atricapilla* | Birds | 17.93 |
| 139 | Golden-cheeked warbler (=wood) | *Dendroica chrysoparia* | Birds | 22.75 |
| 140 | Florida scrub-jay | *Aphelocoma coerulescens* | Birds | 16.17 |
| 142 | Northern spotted owl | *Strix occidentalis caurina* | Birds | 20.80 |
| 143 | Marbled murrelet | *Brachyramphus marmoratus* | Birds | 11.40 |
| 145 | Coastal California gnatcatcher | *Polioptila californica californica* | Birds | 14.80 |
| 146 | Spectacled eider | *Somateria fischeri* | Birds | 1.56 |
| 147 | Steller's Eider | *Polysticta stelleri* | Birds | 0.78 |
| 148 | Mariana gray swiftlet | *Aerodramus vanikorensis bartschi* | Birds | 2.29 |
| 149 | Southwestern willow flycatcher | *Empidonax traillii extimus* | Birds | 46.78 |
| 151 | Blunt-nosed leopard lizard | *Gambelia silus* | Reptiles | 42.30 |
| 152 | San Francisco garter snake | *Thamnophis sirtalis tetrataenia* | Reptiles | 10.91 |
| 153 | Hawksbill sea turtle | *Eretmochelys imbricata* | Reptiles | 0.96 |
| 154 | Leatherback sea turtle | *Dermochelys coriacea* | Reptiles | 2.54 |
| 156 | Puerto Rican boa | *Epicrates inornatus* | Reptiles | 2.70 |
| 160 | Olive ridley sea turtle | *Lepidochelys olivacea* | Reptiles | 5.21 |
| 163 | St. Croix ground lizard | *Ameiva polops* | Reptiles | 6.62 |
| 166 | New Mexican ridge-nosed rattlesnake | *Crotalus willardi obscurus* | Reptiles | 85.89 |
| 167 | Atlantic salt marsh snake | *Nerodia clarkii taeniata* | Reptiles | 8.83 |
| 168 | Alabama red-belly turtle | *Pseudemys alabamensis* | Reptiles | 5.35 |
| 169 | Flattened musk turtle | *Sternotherus depressus* | Reptiles | 20.55 |
| 170 | Plymouth Redbelly Turtle | *Pseudemys rubriventris bangsi* | Reptiles | 5.80 |
| 171 | Ringed map turtle | *Graptemys oculifera* | Reptiles | 18.35 |
| 172 | Yellow-blotched map turtle | *Graptemys flavimaculata* | Reptiles | 12.21 |
| 173 | Eastern indigo snake | *Drymarchon corais couperi* | Reptiles | 10.83 |
| 174 | Virgin Islands tree boa | *Epicrates monensis granti* | Reptiles | 7.97 |
| 175 | Coachella Valley fringe-toed lizard | *Uma inornata* | Reptiles | 7.33 |
| 176 | American crocodile | *Crocodylus acutus* | Reptiles | 2.88 |
| 178 | Bluetail mole skink | *Eumeces egregius lividus* | Reptiles | 30.05 |
| 179 | Sand skink | *Neoseps reynoldsi* | Reptiles | 24.30 |
| 180 | Copperbelly water snake | *Nerodia erythrogaster neglecta* | Reptiles | 18.82 |
| 181 | Gopher tortoise | *Gopherus polyphemus* | Reptiles | 13.94 |
| 182 | Bog (=Muhlenberg) turtle | *Clemmys muhlenbergii* | Reptiles | 21.39 |
| 183 | Alameda whipsnake (=striped racer) | *Masticophis lateralis euryxanthus* | Reptiles | 34.68 |
| 185 | Desert tortoise | *Gopherus agassizii* | Reptiles | 20.78 |
| 187 | Giant garter snake | *Thamnophis gigas* | Reptiles | 34.54 |
| 188 | Santa Cruz long-toed salamander | *Ambystoma macrodactylum croceum* | Amphibians | 22.63 |
| 189 | Texas blind salamander | *Typhlomolge rathbuni* | Amphibians | 13.68 |
| 190 | Houston toad | *Bufo houstonensis* | Amphibians | 47.19 |
| 192 | Red Hills salamander | *Phaeognathus hubrichti* | Amphibians | 9.69 |
| 194 | San Marcos salamander | *Eurycea nana* | Amphibians | 13.68 |
| 197 | Barton Springs salamander | *Eurycea sosorum* | Amphibians | 13.91 |
| 198 | Cheat Mountain salamander | *Plethodon nettingi* | Amphibians | 3.27 |
| 199 | Frosted Flatwoods salamander | *Ambystoma cingulatum* | Amphibians | 4.99 |
| 201 | Sonora tiger Salamander | *Ambystoma tigrinum stebbinsi* | Amphibians | 75.55 |
| 202 | Wyoming Toad | *Bufo hemiophrys baxteri* | Amphibians | 95.84 |
| 203 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 33.48 |
| 204 | Arroyo (=arroyo southwestern) toad | *Anaxyrus californicus* | Amphibians | 24.55 |
| 205 | California red-legged frog | *Rana draytonii* | Amphibians | 36.65 |
| 206 | Chiricahua leopard frog | *Rana chiricahuensis* | Amphibians | 64.66 |
| 207 | Mountain yellow-legged frog | *Rana muscosa* | Amphibians | 5.64 |
| 208 | dusky gopher frog | *Rana sevosa* | Amphibians | 7.20 |
| 209 | Humpback chub | *Gila cypha* | Fishes | 73.16 |
| 210 | Cui-ui | *Chasmistes cujus* | Fishes | 42.18 |
| 211 | Moapa dace | *Moapa coriacea* | Fishes | 1.90 |
| 212 | Maryland darter | *Etheostoma sellare* | Fishes | 30.11 |
| 213 | Big Bend gambusia | *Gambusia gaigei* | Fishes | 3.34 |
| 214 | Clear Creek gambusia | *Gambusia heterochir* | Fishes | 0.99 |
| 215 | Colorado pikeminnow (=squawfish) | *Ptychocheilus lucius* | Fishes | 70.75 |
| 216 | Comanche Springs pupfish | *Cyprinodon elegans* | Fishes | 4.96 |
| 218 | Owens pupfish | *Cyprinodon radiosus* | Fishes | 46.19 |
| 219 | Gila topminnow (incl. Yaqui) | *Poeciliopsis occidentalis* | Fishes | 69.48 |
| 220 | Apache trout | *Oncorhynchus apache* | Fishes | 49.11 |
| 221 | Gila trout | *Oncorhynchus gilae* | Fishes | 75.51 |
| 222 | Greenback Cutthroat trout | *Oncorhynchus clarki stomias* | Fishes | 66.05 |
| 223 | Paiute cutthroat trout | *Oncorhynchus clarkii seleniris* | Fishes | 56.03 |
| 224 | Okaloosa darter | *Etheostoma okaloosae* | Fishes | 8.03 |
| 225 | Mohave tui chub | *Gila bicolor ssp. mohavensis* | Fishes | 15.75 |
| 226 | Pahranagat roundtail chub | *Gila robusta jordani* | Fishes | 93.18 |
| 227 | Kendall Warm Springs dace | *Rhinichthys osculus thermalis* | Fishes | 92.06 |
| 228 | Fountain darter | *Etheostoma fonticola* | Fishes | 14.28 |
| 229 | Watercress darter | *Etheostoma nuchale* | Fishes | 7.48 |
| 230 | Pecos gambusia | *Gambusia nobilis* | Fishes | 41.47 |
| 232 | Unarmored threespine stickleback | *Gasterosteus aculeatus williamsoni* | Fishes | 22.92 |
| 233 | Lahontan cutthroat trout | *Oncorhynchus clarkii henshawi* | Fishes | 80.66 |
| 234 | Woundfin | *Plagopterus argentissimus* | Fishes | 70.90 |
| 235 | Snail darter | *Percina tanasi* | Fishes | 26.46 |
| 236 | Alabama cavefish | *Speoplatyrhinus poulsoni* | Fishes | 25.38 |
| 237 | Spotfin Chub | *Erimonax monachus* | Fishes | 21.80 |
| 238 | Leopard darter | *Percina pantherina* | Fishes | 13.47 |
| 239 | Slackwater darter | *Etheostoma boschungi* | Fishes | 34.11 |
| 240 | Roanoke logperch | *Percina rex* | Fishes | 19.34 |
| 241 | Pygmy Sculpin | *Cottus paulus (=pygmaeus)* | Fishes | 16.63 |
| 242 | Cape Fear shiner | *Notropis mekistocholas* | Fishes | 21.88 |
| 243 | Waccamaw silverside | *Menidia extensa* | Fishes | 4.17 |
| 244 | Bayou darter | *Etheostoma rubrum* | Fishes | 12.24 |
| 245 | Scioto madtom | *Noturus trautmani* | Fishes | 17.74 |
| 246 | Slender chub | *Erimystax cahni* | Fishes | 26.51 |
| 247 | Yellowfin madtom | *Noturus flavipinnis* | Fishes | 23.33 |
| 248 | Little Kern golden trout | *Oncorhynchus aguabonita whitei* | Fishes | 45.65 |
| 249 | Bonytail chub | *Gila elegans* | Fishes | 74.12 |
| 250 | San Marcos gambusia | *Gambusia georgei* | Fishes | 16.33 |
| 252 | Alabama sturgeon | *Scaphirhynchus suttkusi* | Fishes | 12.64 |
| 253 | Borax Lake chub | *Gila boraxobius* | Fishes | 80.30 |
| 254 | Chihuahua chub | *Gila nigrescens* | Fishes | 80.59 |
| 255 | Sonora chub | *Gila ditaenia* | Fishes | 85.62 |
| 256 | Virgin River Chub | *Gila seminuda (=robusta)* | Fishes | 65.64 |
| 257 | Niangua darter | *Etheostoma nianguae* | Fishes | 39.70 |
| 258 | Smoky madtom | *Noturus baileyi* | Fishes | 10.92 |
| 259 | Yaqui catfish | *Ictalurus pricei* | Fishes | 40.08 |
| 260 | Ozark cavefish | *Amblyopsis rosae* | Fishes | 45.73 |
| 261 | Hutton tui chub | *Gila bicolor ssp.* | Fishes | 70.88 |
| 262 | Owens Tui Chub | *Gila bicolor ssp. snyderi* | Fishes | 41.85 |
| 263 | Yaqui chub | *Gila purpurea* | Fishes | 39.03 |
| 265 | Clover Valley speckled dace | *Rhinichthys osculus oligoporus* | Fishes | 88.82 |
| 266 | Desert dace | *Eremichthys acros* | Fishes | 68.62 |
| 267 | Foskett speckled dace | *Rhinichthys osculus ssp.* | Fishes | 67.88 |
| 268 | Independence Valley speckled dace | *Rhinichthys osculus lethoporus* | Fishes | 94.52 |
| 269 | Cherokee darter | *Etheostoma scotti* | Fishes | 8.86 |
| 270 | Neosho madtom | *Noturus placidus* | Fishes | 58.66 |
| 271 | Pygmy madtom | *Noturus stanauli* | Fishes | 22.93 |
| 272 | Devils River minnow | *Dionda diaboli* | Fishes | 3.16 |
| 273 | Loach minnow | *Tiaroga cobitis* | Fishes | 76.68 |
| 275 | Desert pupfish | *Cyprinodon macularius* | Fishes | 37.61 |
| 276 | Beautiful shiner | *Cyprinella formosa* | Fishes | 79.98 |
| 277 | Cahaba shiner | *Notropis cahabae* | Fishes | 17.46 |
| 278 | Palezone shiner | *Notropis albizonatus* | Fishes | 15.18 |
| 279 | Pecos bluntnose shiner | *Notropis simus pecosensis* | Fishes | 81.01 |
| 280 | Big Spring spinedace | *Lepidomeda mollispinis pratensis* | Fishes | 97.98 |
| 281 | Little Colorado spinedace | *Lepidomeda vittata* | Fishes | 59.93 |
| 282 | White River spinedace | *Lepidomeda albivallis* | Fishes | 97.22 |
| 283 | Hiko White River springfish | *Crenichthys baileyi grandis* | Fishes | 96.45 |
| 284 | Railroad Valley springfish | *Crenichthys nevadae* | Fishes | 96.07 |
| 285 | White River springfish | *Crenichthys baileyi baileyi* | Fishes | 97.17 |
| 286 | Gulf sturgeon | *Acipenser oxyrinchus (=oxyrhynchus) desotoi* | Fishes | 1.63 |
| 287 | June sucker | *Chasmistes liorus* | Fishes | 25.43 |
| 288 | Lost River sucker | *Deltistes luxatus* | Fishes | 58.95 |
| 290 | Razorback sucker | *Xyrauchen texanus* | Fishes | 65.70 |
| 291 | Shortnose Sucker | *Chasmistes brevirostris* | Fishes | 62.54 |
| 292 | Warner sucker | *Catostomus warnerensis* | Fishes | 69.42 |
| 293 | Amber darter | *Percina antesella* | Fishes | 13.23 |
| 294 | Conasauga logperch | *Percina jenkinsi* | Fishes | 19.15 |
| 295 | Blackside dace | *Phoxinus cumberlandensis* | Fishes | 19.91 |
| 296 | Spikedace | *Meda fulgida* | Fishes | 78.13 |
| 297 | Boulder darter | *Etheostoma wapiti* | Fishes | 40.47 |
| 298 | Goldline darter | *Percina aurolineata* | Fishes | 13.21 |
| 299 | Arkansas River shiner | *Notropis girardi* | Fishes | 51.86 |
| 300 | Blue shiner | *Cyprinella caerulea* | Fishes | 17.26 |
| 301 | Bull Trout | *Salvelinus confluentus* | Fishes | 27.18 |
| 303 | Pallid sturgeon | *Scaphirhynchus albus* | Fishes | 46.29 |
| 305 | Delta smelt | *Hypomesus transpacificus* | Fishes | 20.61 |
| 306 | Tidewater goby | *Eucyclogobius newberryi* | Fishes | 13.06 |
| 307 | Bluemask (=jewel) Darter | *Etheostoma sp.* | Fishes | 25.61 |
| 308 | Duskytail darter | *Etheostoma percnurum* | Fishes | 15.07 |
| 309 | Rio Grande Silvery Minnow | *Hybognathus amarus* | Fishes | 4.88 |
| 311 | Topeka shiner | *Notropis topeka (=tristis)* | Fishes | 41.44 |
| 312 | Santa Ana sucker | *Catostomus santaanae* | Fishes | 10.04 |
| 313 | Relict darter | *Etheostoma chienense* | Fishes | 17.98 |
| 314 | White sturgeon | *Acipenser transmontanus* | Fishes | 1.66 |
| 315 | Etowah darter | *Etheostoma etowahae* | Fishes | 7.98 |
| 316 | Vermilion darter | *Etheostoma chermocki* | Fishes | 20.99 |
| 317 | Cumberland bean (pearlymussel) | *Villosa trabalis* | Clams | 26.11 |
| 318 | Purple bean | *Villosa perpurpurea* | Clams | 26.04 |
| 319 | Green blossom (pearlymussel) | *Epioblasma torulosa gubernaculum* | Clams | 32.32 |
| 320 | Tubercled blossom (pearlymussel) | *Epioblasma torulosa torulosa* | Clams | 24.52 |
| 321 | Turgid blossom (pearlymussel) | *Epioblasma turgidula* | Clams | 32.95 |
| 322 | Yellow blossom (pearlymussel) | *Epioblasma florentina florentina* | Clams | 23.91 |
| 323 | Purple Cat's paw (=Purple Cat's paw pearlymussel) | *Epioblasma obliquata obliquata* | Clams | 27.36 |
| 324 | White catspaw (pearlymussel) | *Epioblasma obliquata perobliqua* | Clams | 29.09 |
| 325 | Higgins eye (pearlymussel) | *Lampsilis higginsii* | Clams | 20.27 |
| 326 | Alabama lampmussel | *Lampsilis virescens* | Clams | 20.83 |
| 327 | Pale lilliput (pearlymussel) | *Toxolasma cylindrellus* | Clams | 32.30 |
| 328 | Winged Mapleleaf | *Quadrula fragosa* | Clams | 23.80 |
| 329 | Appalachian monkeyface (pearlymussel) | *Quadrula sparsa* | Clams | 27.76 |
| 330 | Cumberland monkeyface (pearlymussel) | *Quadrula intermedia* | Clams | 30.14 |
| 331 | Pink mucket (pearlymussel) | *Lampsilis abrupta* | Clams | 20.36 |
| 332 | Birdwing pearlymussel | *Lemiox rimosus* | Clams | 31.02 |
| 333 | Curtis pearlymussel | *Epioblasma florentina curtisii* | Clams | 17.10 |
| 334 | Dromedary pearlymussel | *Dromus dromas* | Clams | 26.36 |
| 335 | Littlewing pearlymussel | *Pegias fabula* | Clams | 24.31 |
| 336 | White wartyback (pearlymussel) | *Plethobasus cicatricosus* | Clams | 25.88 |
| 337 | Finerayed pigtoe | *Fusconaia cuneolus* | Clams | 26.55 |
| 338 | Rough pigtoe | *Pleurobema plenum* | Clams | 28.44 |
| 339 | Shiny pigtoe | *Fusconaia cor* | Clams | 27.81 |
| 340 | Orangefoot pimpleback (pearlymussel) | *Plethobasus cooperianus* | Clams | 26.42 |
| 341 | Ring pink (mussel) | *Obovaria retusa* | Clams | 26.95 |
| 342 | Fat pocketbook | *Potamilus capax* | Clams | 3.38 |
| 343 | Ouachita rock pocketbook | *Arkansia wheeleri* | Clams | 18.37 |
| 344 | Rough rabbitsfoot | *Quadrula cylindrica strigillata* | Clams | 27.49 |
| 345 | Scaleshell mussel | *Leptodea leptodon* | Clams | 24.58 |
| 346 | Tan riffleshell | *Epioblasma florentina walkeri (=E. walkeri)* | Clams | 26.29 |
| 347 | Black clubshell | *Pleurobema curtum* | Clams | 16.82 |
| 348 | Southern combshell | *Epioblasma penita* | Clams | 15.97 |
| 349 | Flat pigtoe | *Pleurobema marshalli* | Clams | 16.92 |
| 350 | Heavy pigtoe | *Pleurobema taitianum* | Clams | 17.83 |
| 351 | Tar River spinymussel | *Elliptio steinstansana* | Clams | 14.39 |
| 352 | Clubshell | *Pleurobema clava* | Clams | 22.73 |
| 353 | Cumberlandian combshell | *Epioblasma brevidens* | Clams | 26.81 |
| 354 | Appalachian elktoe | *Alasmidonta raveneliana* | Clams | 11.11 |
| 355 | Cumberland elktoe | *Alasmidonta atropurpurea* | Clams | 21.76 |
| 356 | Alabama (=inflated) heelsplitter | *Potamilus inflatus* | Clams | 12.84 |
| 357 | Orangenacre mucket | *Lampsilis perovalis* | Clams | 16.47 |
| 358 | Oyster mussel | *Epioblasma capsaeformis* | Clams | 26.40 |
| 359 | Cracking pearlymussel | *Hemistena lata* | Clams | 29.22 |
| 360 | Speckled pocketbook | *Lampsilis streckeri* | Clams | 26.84 |
| 361 | James spinymussel | *Pleurobema collina* | Clams | 16.86 |
| 362 | Stirrupshell | *Quadrula stapes* | Clams | 16.80 |
| 363 | Dwarf wedgemussel | *Alasmidonta heterodon* | Clams | 16.09 |
| 364 | Louisiana pearlshell | *Margaritifera hembeli* | Clams | 9.50 |
| 365 | Southern acornshell | *Epioblasma othcaloogensis* | Clams | 15.76 |
| 366 | Purple bankclimber (mussel) | *Elliptoideus sloatianus* | Clams | 9.08 |
| 367 | Upland combshell | *Epioblasma metastriata* | Clams | 18.52 |
| 368 | Fanshell | *Cyprogenia stegaria* | Clams | 48.43 |
| 369 | Arkansas fatmucket | *Lampsilis powellii* | Clams | 13.01 |
| 370 | Carolina heelsplitter | *Lasmigona decorata* | Clams | 21.17 |
| 371 | Oval pigtoe | *Pleurobema pyriforme* | Clams | 10.71 |
| 372 | Finelined pocketbook | *Lampsilis altilis* | Clams | 16.89 |
| 373 | Shinyrayed pocketbook | *Lampsilis subangulata* | Clams | 8.83 |
| 374 | Northern riffleshell | *Epioblasma torulosa rangiana* | Clams | 26.65 |
| 375 | Fat threeridge (mussel) | *Amblema neislerii* | Clams | 7.69 |
| 376 | Cumberland pigtoe | *Pleurobema gibberum* | Clams | 33.04 |
| 377 | Ovate clubshell | *Pleurobema perovatum* | Clams | 16.06 |
| 378 | Southern clubshell | *Pleurobema decisum* | Clams | 17.08 |
| 379 | Triangular Kidneyshell | *Ptychobranchus greenii* | Clams | 16.24 |
| 380 | Alabama moccasinshell | *Medionidus acutissimus* | Clams | 16.97 |
| 381 | Coosa moccasinshell | *Medionidus parvulus* | Clams | 17.47 |
| 382 | Dark pigtoe | *Pleurobema furvum* | Clams | 20.44 |
| 383 | Southern pigtoe | *Pleurobema georgianum* | Clams | 17.63 |
| 384 | Gulf moccasinshell | *Medionidus penicillatus* | Clams | 9.24 |
| 385 | Ochlockonee moccasinshell | *Medionidus simpsonianus* | Clams | 7.46 |
| 386 | Chipola slabshell | *Elliptio chipolaensis* | Clams | 7.26 |
| 387 | Morro shoulderband (=Banded dune) snail | *Helminthoglypta walkeriana* | Snails | 33.88 |
| 389 | Chittenango ovate amber snail | *Succinea chittenangoensis* | Snails | 28.50 |
| 390 | Flat-spired three-toothed Snail | *Triodopsis platysayoides* | Snails | 7.07 |
| 391 | Iowa Pleistocene snail | *Discus macclintocki* | Snails | 44.44 |
| 392 | noonday globe | *Patera clarki nantahala* | Snails | 2.07 |
| 393 | Painted snake coiled forest snail | *Anguispira picta* | Snails | 25.42 |
| 395 | Virginia fringed mountain snail | *Polygyriscus virginianus* | Snails | 32.36 |
| 396 | Anthony's riversnail | *Athearnia anthonyi* | Snails | 21.16 |
| 398 | Bliss Rapids snail | *Taylorconcha serpenticola* | Snails | 48.02 |
| 399 | Snake River physa snail | *Physa natricina* | Snails | 31.26 |
| 400 | Kanab ambersnail | *Oxyloma haydeni kanabensis* | Snails | 50.71 |
| 401 | Royal marstonia (snail) | *Pyrgulopsis ogmorhaphe* | Snails | 20.46 |
| 402 | Armored snail | *Pyrgulopsis (=Marstonia) pachyta* | Snails | 34.94 |
| 403 | Alamosa springsnail | *Tryonia alamosae* | Snails | 66.88 |
| 404 | Bruneau Hot springsnail | *Pyrgulopsis bruneauensis* | Snails | 13.27 |
| 406 | Tumbling Creek cavesnail | *Antrobia culveri* | Snails | 17.33 |
| 407 | Tulotoma snail | *Tulotoma magnifica* | Snails | 15.07 |
| 408 | Socorro springsnail | *Pyrgulopsis neomexicana* | Snails | 66.88 |
| 409 | Banbury Springs limpet | *Lanx sp.* | Snails | 6.26 |
| 411 | Lacy elimia (snail) | *Elimia crenatella* | Snails | 20.24 |
| 412 | Cylindrical lioplax (snail) | *Lioplax cyclostomaformis* | Snails | 11.07 |
| 413 | Flat pebblesnail | *Lepyrium showalteri* | Snails | 9.57 |
| 414 | Painted rocksnail | *Leptoxis taeniata* | Snails | 22.73 |
| 415 | Plicate rocksnail | *Leptoxis plicata* | Snails | 26.46 |
| 416 | Round rocksnail | *Leptoxis ampla* | Snails | 11.85 |
| 417 | Slender campeloma | *Campeloma decampi* | Snails | 32.36 |
| 419 | El Segundo blue butterfly | *Euphilotes battoides allyni* | Insects | 22.23 |
| 420 | Karner blue butterfly | *Lycaeides melissa samuelis* | Insects | 15.26 |
| 421 | Lange's metalmark butterfly | *Apodemia mormo langei* | Insects | 39.34 |
| 422 | Lotis blue butterfly | *Lycaeides argyrognomon lotis* | Insects | 3.78 |
| 423 | Mission blue butterfly | *Icaricia icarioides missionensis* | Insects | 4.37 |
| 424 | Mitchell's satyr Butterfly | *Neonympha mitchellii mitchellii* | Insects | 17.97 |
| 425 | Myrtle's silverspot butterfly | *Speyeria zerene myrtleae* | Insects | 32.90 |
| 426 | Quino checkerspot butterfly | *Euphydryas editha quino (=E. e. wrighti)* | Insects | 22.93 |
| 427 | San Bruno elfin butterfly | *Callophrys mossii bayensis* | Insects | 22.53 |
| 428 | Smith's blue butterfly | *Euphilotes enoptes smithi* | Insects | 11.13 |
| 430 | Callippe silverspot butterfly | *Speyeria callippe callippe* | Insects | 24.10 |
| 431 | Oregon silverspot butterfly | *Speyeria zerene hippolyta* | Insects | 18.58 |
| 432 | Palos Verdes blue butterfly | *Glaucopsyche lygdamus palosverdesensis* | Insects | 2.29 |
| 433 | Kern primrose sphinx moth | *Euproserpinus euterpe* | Insects | 67.89 |
| 434 | Pawnee montane skipper | *Hesperia leonardus montana* | Insects | 5.44 |
| 435 | Delta green ground beetle | *Elaphrus viridis* | Insects | 31.75 |
| 436 | Valley elderberry longhorn beetle | *Desmocerus californicus dimorphus* | Insects | 36.69 |
| 437 | Uncompahgre fritillary butterfly | *Boloria acrocnema* | Insects | 61.34 |
| 438 | Bay checkerspot butterfly | *Euphydryas editha bayensis* | Insects | 17.34 |
| 440 | American burying beetle | *Nicrophorus americanus* | Insects | 57.78 |
| 441 | Hungerford's crawling water Beetle | *Brychius hungerfordi* | Insects | 10.01 |
| 442 | Northeastern beach tiger beetle | *Cicindela dorsalis dorsalis* | Insects | 2.06 |
| 443 | Puritan tiger beetle | *Cicindela puritana* | Insects | 4.23 |
| 444 | Behren's silverspot butterfly | *Speyeria zerene behrensii* | Insects | 28.10 |
| 445 | Hine's emerald dragonfly | *Somatochlora hineana* | Insects | 5.32 |
| 446 | Blackburn's sphinx moth | *Manduca blackburni* | Insects | 16.02 |
| 447 | Coffin Cave mold beetle | *Batrisodes texanus* | Insects | 34.92 |
| 448 | Kretschmarr Cave mold beetle | *Texamaurops reddelli* | Insects | 13.94 |
| 449 | Tooth Cave ground beetle | *Rhadine persephone* | Insects | 24.97 |
| 450 | Fender's blue butterfly | *Icaricia icarioides fenderi* | Insects | 25.49 |
| 451 | Laguna Mountains skipper | *Pyrgus ruralis lagunae* | Insects | 26.04 |
| 452 | Delhi Sands flower-loving fly | *Rhaphiomidas terminatus abdominalis* | Insects | 16.17 |
| 453 | Comal Springs riffle beetle | *Heterelmis comalensis* | Insects | 12.09 |
| 454 | Comal Springs dryopid beetle | *Stygoparnus comalensis* | Insects | 12.09 |
| 455 | Saint Francis' satyr butterfly | *Neonympha mitchellii francisci* | Insects | 7.55 |
| 456 | Mount Hermon June beetle | *Polyphylla barbata* | Insects | 2.44 |
| 457 | Ohlone tiger beetle | *Cicindela ohlone* | Insects | 4.50 |
| 458 | Zayante band-winged grasshopper | *Trimerotropis infantilis* | Insects | 5.52 |
| 459 | [no common name] Beetle | *Rhadine infernalis* | Insects | 16.40 |
| 460 | Helotes mold beetle | *Batrisodes venyivi* | Insects | 16.40 |
| 461 | [no common name] Beetle | *Rhadine exilis* | Insects | 16.40 |
| 462 | Carson wandering skipper | *Pseudocopaeodes eunus obscurus* | Insects | 60.25 |
| 463 | Kauai cave wolf or pe'e pe'e maka 'ole spider | *Adelocosa anops* | Arachnids | 2.83 |
| 464 | Bee Creek Cave harvestman | *Texella reddelli* | Arachnids | 13.91 |
| 465 | Bone Cave harvestman | *Texella reyesi* | Arachnids | 24.97 |
| 466 | Tooth Cave pseudoscorpion | *Tartarocreagris texana* | Arachnids | 13.94 |
| 467 | Tooth Cave Spider | *Neoleptoneta myopica* | Arachnids | 13.94 |
| 468 | Spruce-fir moss spider | *Microhexura montivaga* | Arachnids | 15.83 |
| 469 | Cokendolpher Cave Harvestman | *Texella cokendolpheri* | Arachnids | 16.40 |
| 470 | Government Canyon Bat Cave Spider | *Neoleptoneta microps* | Arachnids | 16.40 |
| 471 | Madla's Cave Meshweaver | *Cicurina madla* | Arachnids | 16.40 |
| 472 | Robber Baron Cave Meshweaver | *Cicurina baronia* | Arachnids | 16.40 |
| 473 | Government Canyon Bat Cave Meshweaver | *Cicurina vespera* | Arachnids | 16.40 |
| 474 | Braken Bat Cave Meshweaver | *Cicurina venii* | Arachnids | 16.40 |
| 476 | Madison Cave isopod | *Antrolana lira* | Crustaceans | 54.96 |
| 477 | Peck's cave amphipod | *Stygobromus (=Stygonectes) pecki* | Crustaceans | 10.26 |
| 478 | Nashville crayfish | *Orconectes shoupi* | Crustaceans | 18.14 |
| 479 | Shasta crayfish | *Pacifastacus fortis* | Crustaceans | 35.91 |
| 480 | Alabama cave shrimp | *Palaemonias alabamae* | Crustaceans | 19.21 |
| 481 | California freshwater shrimp | *Syncaris pacifica* | Crustaceans | 25.86 |
| 482 | Kentucky cave shrimp | *Palaemonias ganteri* | Crustaceans | 42.94 |
| 483 | Socorro isopod | *Thermosphaeroma thermophilus* | Crustaceans | 66.88 |
| 484 | Illinois cave amphipod | *Gammarus acherondytes* | Crustaceans | 19.89 |
| 485 | Kauai cave amphipod | *Spelaeorchestia koloana* | Crustaceans | 2.59 |
| 486 | Lee County cave isopod | *Lirceus usdagalun* | Crustaceans | 35.91 |
| 487 | Squirrel Chimney Cave shrimp | *Palaemonetes cummingi* | Crustaceans | 20.49 |
| 488 | Cave crayfish | *Cambarus zophonastes* | Crustaceans | 18.60 |
| 489 | Cave crayfish | *Cambarus aculabrum* | Crustaceans | 42.85 |
| 490 | Conservancy fairy shrimp | *Branchinecta conservatio* | Crustaceans | 45.08 |
| 491 | Longhorn fairy shrimp | *Branchinecta longiantenna* | Crustaceans | 68.86 |
| 492 | Riverside fairy shrimp | *Streptocephalus woottoni* | Crustaceans | 24.21 |
| 493 | Vernal pool fairy shrimp | *Branchinecta lynchi* | Crustaceans | 38.47 |
| 494 | Vernal pool tadpole shrimp | *Lepidurus packardi* | Crustaceans | 35.89 |
| 495 | San Diego fairy shrimp | *Branchinecta sandiegonensis* | Crustaceans | 11.12 |
| 496 | San Diego thornmint | *Acanthomintha ilicifolia* | Flowering Plants | 12.37 |
| 497 | No common name | *Achyranthes mutica* | Flowering Plants | 29.15 |
| 498 | Sonoma alopecurus | *Alopecurus aequalis var. sonomensis* | Flowering Plants | 32.06 |
| 500 | San Diego ambrosia | *Ambrosia pumila* | Flowering Plants | 17.96 |
| 501 | Hoffmann's rock-cress | *Arabis hoffmannii* | Flowering Plants | 51.54 |
| 502 | Del Mar manzanita | *Arctostaphylos glandulosa ssp. crassifolia* | Flowering Plants | 6.43 |
| 503 | Santa Rosa Island manzanita | *Arctostaphylos confertiflora* | Flowering Plants | 66.65 |
| 504 | Ione manzanita | *Arctostaphylos myrtifolia* | Flowering Plants | 55.96 |
| 505 | Pallid manzanita | *Arctostaphylos pallida* | Flowering Plants | 13.91 |
| 506 | Bear Valley sandwort | *Arenaria ursina* | Flowering Plants | 30.67 |
| 507 | Braunton's milk-vetch | *Astragalus brauntonii* | Flowering Plants | 4.36 |
| 508 | Clara Hunt's milk-vetch | *Astragalus clarianus* | Flowering Plants | 13.77 |
| 509 | Deseret milk-vetch | *Astragalus desereticus* | Flowering Plants | 53.11 |
| 511 | Ventura Marsh Milk-vetch | *Astragalus pycnostachyus var. lanosissimus* | Flowering Plants | 5.30 |
| 512 | Coastal dunes milk-vetch | *Astragalus tener var. titi* | Flowering Plants | 4.89 |
| 513 | Star cactus | *Astrophytum asterias* | Flowering Plants | 34.91 |
| 514 | Nevin's barberry | *Berberis nevinii* | Flowering Plants | 13.94 |
| 515 | Island Barberry | *Berberis pinnata ssp. insularis* | Flowering Plants | 56.51 |
| 516 | Thread-leaved brodiaea | *Brodiaea filifolia* | Flowering Plants | 18.87 |
| 517 | Chinese Camp brodiaea | *Brodiaea pallida* | Flowering Plants | 66.09 |
| 518 | Uhi uhi | *Mezoneuron kavaiense* | Flowering Plants | 11.60 |
| 519 | Mariposa pussypaws | *Calyptridium pulchellum* | Flowering Plants | 36.61 |
| 520 | Stebbins' morning-glory | *Calystegia stebbinsii* | Flowering Plants | 25.53 |
| 521 | White sedge | *Carex albida* | Flowering Plants | 28.97 |
| 522 | Fleshy owl's-clover | *Castilleja campestris ssp. succulenta* | Flowering Plants | 56.68 |
| 523 | Ash-grey paintbrush | *Castilleja cinerea* | Flowering Plants | 24.90 |
| 524 | Soft-leaved paintbrush | *Castilleja mollis* | Flowering Plants | 66.65 |
| 525 | Pine Hill ceanothus | *Ceanothus roderickii* | Flowering Plants | 32.95 |
| 526 | Catalina Island mountain-mahogany | *Cercocarpus traskiae* | Flowering Plants | 8.20 |
| 527 | Hoover's spurge | *Chamaesyce hooveri* | Flowering Plants | 31.90 |
| 528 | Purple amole | *Chlorogalum purpureum* | Flowering Plants | 50.26 |
| 529 | Orcutt's spineflower | *Chorizanthe orcuttiana* | Flowering Plants | 4.53 |
| 530 | Suisun thistle | *Cirsium hydrophilum var. hydrophilum* | Flowering Plants | 30.65 |
| 531 | La Graciosa thistle | *Cirsium loncholepis* | Flowering Plants | 34.12 |
| 532 | Vine Hill clarkia | *Clarkia imbricata* | Flowering Plants | 36.48 |
| 533 | `Oha wai | *Clermontia drepanomorpha* | Flowering Plants | 4.61 |
| 534 | Soft bird's-beak | *Cordylanthus mollis ssp. mollis* | Flowering Plants | 4.99 |
| 538 | No common name | *Delissea undulata* | Flowering Plants | 9.77 |
| 539 | Baker's larkspur | *Delphinium bakeri* | Flowering Plants | 44.75 |
| 540 | Yellow larkspur | *Delphinium luteum* | Flowering Plants | 49.11 |
| 541 | Conejo dudleya | *Dudleya abramsii ssp. parva* | Flowering Plants | 15.50 |
| 542 | Marcescent dudleya | *Dudleya cymosa ssp. marcescens* | Flowering Plants | 5.34 |
| 543 | Santa Cruz Island dudleya | *Dudleya nesiotica* | Flowering Plants | 47.85 |
| 544 | Laguna Beach liveforever | *Dudleya stolonifera* | Flowering Plants | 7.02 |
| 546 | Lompoc yerba santa | *Eriodictyon capitatum* | Flowering Plants | 33.99 |
| 547 | Ione (incl. Irish Hill) buckwheat | *Eriogonum apricum (incl. var. prostratum)* | Flowering Plants | 74.64 |
| 548 | Southern mountain wild-buckwheat | *Eriogonum kennedyi var. austromontanum* | Flowering Plants | 47.50 |
| 549 | `Akoko | *Euphorbia haeleeleana* | Flowering Plants | 1.34 |
| 550 | Pine Hill flannelbush | *Fremontodendron californicum ssp. decumbens* | Flowering Plants | 24.40 |
| 551 | Gentner's Fritillary | *Fritillaria gentneri* | Flowering Plants | 38.02 |
| 552 | Island bedstraw | *Galium buxifolium* | Flowering Plants | 34.18 |
| 553 | El Dorado bedstraw | *Galium californicum ssp. sierrae* | Flowering Plants | 32.93 |
| 554 | Colorado Butterfly plant | *Gaura neomexicana var. coloradensis* | Flowering Plants | 63.38 |
| 555 | Hoffmann's slender-flowered gilia | *Gilia tenuiflora ssp. hoffmannii* | Flowering Plants | 66.65 |
| 556 | Showy stickseed | *Hackelia venusta* | Flowering Plants | 27.80 |
| 557 | Island rush-rose | *Helianthemum greenei* | Flowering Plants | 56.51 |
| 558 | Pecos (=puzzle =paradox) sunflower | *Helianthus paradoxus* | Flowering Plants | 49.87 |
| 559 | Otay tarplant | *Deinandra (=Hemizonia) conjugens* | Flowering Plants | 15.35 |
| 560 | Hau kuahiwi | *Hibiscadelphus giffardianus* | Flowering Plants | 0.68 |
| 561 | Hau kuahiwi | *Hibiscadelphus hualalaiensis* | Flowering Plants | 14.82 |
| 562 | Santa Cruz tarplant | *Holocarpha macradenia* | Flowering Plants | 15.57 |
| 564 | Aupaka | *Isodendrion longifolium* | Flowering Plants | 0.77 |
| 566 | Contra Costa goldfields | *Lasthenia conjugens* | Flowering Plants | 21.20 |
| 568 | Spring Creek bladderpod | *Lesquerella perforata* | Flowering Plants | 46.86 |
| 569 | Zapata bladderpod | *Lesquerella thamnophila* | Flowering Plants | 37.90 |
| 570 | Pitkin Marsh lily | *Lilium pardalinum ssp. pitkinense* | Flowering Plants | 57.90 |
| 571 | San Clemente Island woodland-star | *Lithophragma maximum* | Flowering Plants | 12.95 |
| 573 | Nipomo Mesa lupine | *Lupinus nipomensis* | Flowering Plants | 28.58 |
| 574 | Santa Cruz Island bush-mallow | *Malacothamnus fasciculatus var. nesioticus* | Flowering Plants | 34.18 |
| 576 | Willowy monardella | *Monardella viminea* | Flowering Plants | 9.29 |
| 578 | Few-flowered navarretia | *Navarretia leucocephala ssp. pauciflora (=N. pauciflora)* | Flowering Plants | 9.90 |
| 579 | Many-flowered navarretia | *Navarretia leucocephala ssp. plieantha* | Flowering Plants | 15.04 |
| 580 | Colusa grass | *Neostapfia colusana* | Flowering Plants | 53.07 |
| 581 | No common name | *Neraudia ovata* | Flowering Plants | 15.42 |
| 582 | Hairy Orcutt grass | *Orcuttia pilosa* | Flowering Plants | 48.48 |
| 583 | Slender Orcutt grass | *Orcuttia tenuis* | Flowering Plants | 48.63 |
| 584 | Lau `ehu | *Panicum niihauense* | Flowering Plants | 8.55 |
| 585 | Lake County stonecrop | *Parvisedum leiocarpum* | Flowering Plants | 11.97 |
| 586 | Lyon's pentachaeta | *Pentachaeta lyonii* | Flowering Plants | 13.69 |
| 587 | Island phacelia | *Phacelia insularis ssp. insularis* | Flowering Plants | 64.07 |
| 588 | Yreka phlox | *Phlox hirsuta* | Flowering Plants | 31.80 |
| 591 | No common name | *Phyllostegia parviflora* | Flowering Plants | 13.94 |
| 592 | rough popcornflower | *Plagiobothrys hirtus* | Flowering Plants | 40.96 |
| 593 | Calistoga allocarya | *Plagiobothrys strictus* | Flowering Plants | 10.45 |
| 594 | San Bernardino bluegrass | *Poa atropurpurea* | Flowering Plants | 27.92 |
| 595 | Napa bluegrass | *Poa napensis* | Flowering Plants | 10.45 |
| 596 | Hickman's potentilla | *Potentilla hickmanii* | Flowering Plants | 4.81 |
| 597 | Wahane | *Pritchardia aylmer-robinsonii* | Flowering Plants | 14.41 |
| 598 | Lo`ulu | *Pritchardia remota* | Flowering Plants | 14.41 |
| 599 | Hartweg's golden sunburst | *Pseudobahia bahiifolia* | Flowering Plants | 59.83 |
| 600 | San Joaquin adobe sunburst | *Pseudobahia peirsonii* | Flowering Plants | 55.68 |
| 602 | No common name | *Schiedea hookeri* | Flowering Plants | 8.29 |
| 605 | No common name | *Schiedea sarmentosa* | Flowering Plants | 4.68 |
| 607 | Shrubby reed-mustard | *Schoenocrambe suffrutescens* | Flowering Plants | 50.69 |
| 608 | Layne's butterweed | *Senecio layneae* | Flowering Plants | 24.70 |
| 609 | Santa Cruz Island rockcress | *Sibara filifolia* | Flowering Plants | 14.87 |
| 610 | Keck's Checker-mallow | *Sidalcea keckii* | Flowering Plants | 54.99 |
| 611 | Wenatchee Mountains checkermallow | *Sidalcea oregana var. calva* | Flowering Plants | 24.28 |
| 612 | Kenwood Marsh checker-mallow | *Sidalcea oregana ssp. valida* | Flowering Plants | 17.98 |
| 613 | Spalding's Catchfly | *Silene spaldingii* | Flowering Plants | 23.15 |
| 614 | California taraxacum | *Taraxacum californicum* | Flowering Plants | 20.92 |
| 615 | Ashy dogweed | *Thymophylla tephroleuca* | Flowering Plants | 27.93 |
| 617 | Ko`oloa`ula | *Abutilon menziesii* | Flowering Plants | 7.57 |
| 620 | Northern wild monkshood | *Aconitum noveboracense* | Flowering Plants | 30.25 |
| 621 | Mahoe | *Alectryon macrococcus* | Flowering Plants | 5.70 |
| 624 | South Texas ambrosia | *Ambrosia cheiranthifolia* | Flowering Plants | 19.81 |
| 625 | Little amphianthus | *Amphianthus pusillus* | Flowering Plants | 20.79 |
| 626 | Large-flowered fiddleneck | *Amsinckia grandiflora* | Flowering Plants | 59.84 |
| 627 | Tobusch fishhook cactus | *Sclerocactus brevihamatus ssp. tobuschii* | Flowering Plants | 4.11 |
| 628 | Price's potato-bean | *Apios priceana* | Flowering Plants | 24.49 |
| 629 | McDonald's rock-cress | *Arabis macdonaldiana* | Flowering Plants | 17.59 |
| 630 | Braun's rock-cress | *Arabis perstellata* | Flowering Plants | 37.59 |
| 631 | Dwarf Bear-poppy | *Arctomecon humilis* | Flowering Plants | 61.21 |
| 632 | Presidio Manzanita | *Arctostaphylos hookeri var. ravenii* | Flowering Plants | 2.80 |
| 633 | Sacramento prickly poppy | *Argemone pleiacantha ssp. pinnatisecta* | Flowering Plants | 56.45 |
| 634 | Mauna Loa (=Ka'u) silversword | *Argyroxiphium kauense* | Flowering Plants | 2.31 |
| 636 | Mead's milkweed | *Asclepias meadii* | Flowering Plants | 37.80 |
| 637 | Four-petal pawpaw | *Asimina tetramera* | Flowering Plants | 5.53 |
| 638 | Sentry milk-vetch | *Astragalus cremnophylax var. cremnophylax* | Flowering Plants | 22.94 |
| 639 | Mancos milk-vetch | *Astragalus humillimus* | Flowering Plants | 43.52 |
| 640 | Osterhout milkvetch | *Astragalus osterhoutii* | Flowering Plants | 48.17 |
| 642 | Jesup's milk-vetch | *Astragalus robbinsii var. jesupi* | Flowering Plants | 7.77 |
| 643 | Hairy rattleweed | *Baptisia arachnifera* | Flowering Plants | 3.74 |
| 644 | Virginia round-leaf birch | *Betula uber* | Flowering Plants | 59.82 |
| 645 | Ko`oko`olau | *Bidens micrantha ssp. kalealaha* | Flowering Plants | 7.34 |
| 646 | Ko`oko`olau | *Bidens wiebkei* | Flowering Plants | 2.78 |
| 647 | Sonoma sunshine | *Blennosperma bakeri* | Flowering Plants | 45.87 |
| 648 | No common name | *Bonamia menziesii* | Flowering Plants | 3.43 |
| 649 | Olulu | *Brighamia insignis* | Flowering Plants | 16.86 |
| 650 | Pua `ala | *Brighamia rockii* | Flowering Plants | 1.02 |
| 651 | Texas poppy-mallow | *Callirhoe scabriuscula* | Flowering Plants | 9.07 |
| 652 | Tiburon mariposa lily | *Calochortus tiburonensis* | Flowering Plants | 7.91 |
| 653 | Brooksville bellflower | *Campanula robinsiae* | Flowering Plants | 14.94 |
| 654 | `Awikiwiki | *Canavalia molokaiensis* | Flowering Plants | 2.48 |
| 655 | Small-anthered bittercress | *Cardamine micranthera* | Flowering Plants | 18.49 |
| 656 | Navajo sedge | *Carex specuicola* | Flowering Plants | 40.39 |
| 657 | San Clemente Island indian paintbrush | *Castilleja grisea* | Flowering Plants | 12.95 |
| 658 | Coyote ceanothus | *Ceanothus ferrisae* | Flowering Plants | 24.39 |
| 659 | Kamanomano | *Cenchrus agrimonioides* | Flowering Plants | 2.23 |
| 661 | Fragrant prickly-apple | *Cereus eriophorus var. fragrans* | Flowering Plants | 16.44 |
| 663 | Garber's spurge | *Chamaesyce garberi* | Flowering Plants | 1.09 |
| 664 | 'Akoko | *Euphorbia halemanui* | Flowering Plants | 0.75 |
| 665 | Ewa Plains `akoko | *Euphorbia skottsbergii var. skottsbergii* | Flowering Plants | 3.75 |
| 666 | Sonoma spineflower | *Chorizanthe valida* | Flowering Plants | 38.95 |
| 667 | Chorro Creek bog thistle | *Cirsium fontinale var. obispoense* | Flowering Plants | 35.22 |
| 668 | Fountain thistle | *Cirsium fontinale var. fontinale* | Flowering Plants | 5.23 |
| 669 | Presidio clarkia | *Clarkia franciscana* | Flowering Plants | 4.13 |
| 670 | Pismo clarkia | *Clarkia speciosa ssp. immaculata* | Flowering Plants | 31.50 |
| 671 | `Oha wai | *Clermontia lindseyana* | Flowering Plants | 14.37 |
| 672 | `Oha wai | *Clermontia peleana* | Flowering Plants | 2.47 |
| 673 | `Oha wai | *Clermontia pyrularia* | Flowering Plants | 35.91 |
| 674 | Kauila | *Colubrina oppositifolia* | Flowering Plants | 15.05 |
| 675 | Short-leaved rosemary | *Conradina brevifolia* | Flowering Plants | 28.70 |
| 676 | Apalachicola rosemary | *Conradina glabra* | Flowering Plants | 1.79 |
| 677 | Cumberland rosemary | *Conradina verticillata* | Flowering Plants | 19.15 |
| 678 | Salt marsh bird's-beak | *Cordylanthus maritimus ssp. maritimus* | Flowering Plants | 20.78 |
| 679 | Palmate-bracted bird's beak | *Cordylanthus palmatus* | Flowering Plants | 21.57 |
| 680 | Nellie cory cactus | *Coryphantha minima* | Flowering Plants | 2.34 |
| 681 | Bunched cory cactus | *Coryphantha ramillosa* | Flowering Plants | 1.70 |
| 682 | Lee pincushion cactus | *Coryphantha sneedii var. leei* | Flowering Plants | 82.73 |
| 683 | Sneed pincushion cactus | *Coryphantha sneedii var. sneedii* | Flowering Plants | 63.33 |
| 686 | Haha | *Cyanea shipmanii* | Flowering Plants | 23.54 |
| 689 | Jones Cycladenia | *Cycladenia humilis var. jonesii* | Flowering Plants | 75.93 |
| 692 | No common name | *Delissea rhytidosperma* | Flowering Plants | 4.64 |
| 694 | San Clemente Island larkspur | *Delphinium variegatum ssp. kinkiense* | Flowering Plants | 12.95 |
| 695 | Scrub mint | *Dicerandra frutescens* | Flowering Plants | 28.70 |
| 696 | Lakela's mint | *Dicerandra immaculata* | Flowering Plants | 17.49 |
| 698 | Santa Barbara Island liveforever | *Dudleya traskiae* | Flowering Plants | 39.87 |
| 700 | Nichol's Turk's head cactus | *Echinocactus horizonthalonius var. nicholii* | Flowering Plants | 34.82 |
| 701 | Kuenzler hedgehog cactus | *Echinocereus fendleri var. kuenzleri* | Flowering Plants | 72.60 |
| 702 | Black lace cactus | *Echinocereus reichenbachii var. albertii* | Flowering Plants | 36.90 |
| 703 | Arizona hedgehog cactus | *Echinocereus triglochidiatus var. arizonicus* | Flowering Plants | 83.33 |
| 704 | Davis' green pitaya | *Echinocereus viridiflorus var. davisii* | Flowering Plants | 2.34 |
| 705 | Lloyd's Mariposa cactus | *Echinomastus mariposensis* | Flowering Plants | 3.29 |
| 707 | Zuni fleabane | *Erigeron rhizomatus* | Flowering Plants | 59.35 |
| 708 | Indian Knob mountain balm | *Eriodictyon altissimum* | Flowering Plants | 24.71 |
| 709 | Gypsum wild-buckwheat | *Eriogonum gypsophilum* | Flowering Plants | 82.73 |
| 710 | Cushenbury buckwheat | *Eriogonum ovalifolium var. vineum* | Flowering Plants | 41.34 |
| 711 | San Diego button-celery | *Eryngium aristulatum var. parishii* | Flowering Plants | 11.36 |
| 712 | Contra Costa wallflower | *Erysimum capitatum var. angustatum* | Flowering Plants | 73.71 |
| 713 | Penland alpine fen mustard | *Eutrema penlandii* | Flowering Plants | 56.14 |
| 715 | Hawaiian gardenia (=Na`u) | *Gardenia brighamii* | Flowering Plants | 9.28 |
| 716 | No common name | *Geocarpon minimum* | Flowering Plants | 29.03 |
| 717 | Nohoanu | *Geranium arboreum* | Flowering Plants | 9.85 |
| 718 | Spreading avens | *Geum radiatum* | Flowering Plants | 13.35 |
| 719 | No common name | *Gouania hillebrandii* | Flowering Plants | 3.55 |
| 721 | No common name | *Gouania vitifolia* | Flowering Plants | 8.60 |
| 722 | Honohono | *Haplostachys haplostachya* | Flowering Plants | 27.61 |
| 723 | Harper's beauty | *Harperocallis flava* | Flowering Plants | 1.96 |
| 724 | 'Awiwi | *Kadua cookiana* | Flowering Plants | 7.80 |
| 729 | No common name | *Kadua st.-johnii* | Flowering Plants | 4.65 |
| 730 | Marin dwarf-flax | *Hesperolinon congestum* | Flowering Plants | 16.58 |
| 734 | Dwarf-flowered heartleaf | *Hexastylis naniflora* | Flowering Plants | 25.48 |
| 735 | Kauai hau kuahiwi | *Hibiscadelphus distans* | Flowering Plants | 2.69 |
| 736 | (=Native yellow hibiscus) ma`o hau hele | *Hibiscus brackenridgei* | Flowering Plants | 12.21 |
| 737 | Clay's hibiscus | *Hibiscus clayi* | Flowering Plants | 7.02 |
| 738 | Koki`o ke`oke`o | *Hibiscus waimeae ssp. hannerae* | Flowering Plants | 1.87 |
| 739 | Slender rush-pea | *Hoffmannseggia tenella* | Flowering Plants | 20.22 |
| 740 | Highlands scrub hypericum | *Hypericum cumulicola* | Flowering Plants | 28.70 |
| 741 | Kula wahine noho | *Isodendrion pyrifolium* | Flowering Plants | 8.44 |
| 742 | Small whorled pogonia | *Isotria medeoloides* | Flowering Plants | 11.66 |
| 744 | Cooley's water-willow | *Justicia cooleyi* | Flowering Plants | 20.48 |
| 745 | Cooke's koki`o | *Kokia cookei* | Flowering Plants | 9.73 |
| 746 | Koki`o | *Kokia drynarioides* | Flowering Plants | 0.85 |
| 747 | Koki`o | *Kokia kauaiensis* | Flowering Plants | 2.56 |
| 748 | Burke's goldfields | *Lasthenia burkei* | Flowering Plants | 18.99 |
| 749 | Barneby ridge-cress | *Lepidium barnebyanum* | Flowering Plants | 9.73 |
| 750 | Lyrate bladderpod | *Lesquerella lyrata* | Flowering Plants | 39.13 |
| 751 | Kodachrome bladderpod | *Lesquerella tumulosa* | Flowering Plants | 73.46 |
| 752 | Scrub blazingstar | *Liatris ohlingerae* | Flowering Plants | 28.70 |
| 753 | Western lily | *Lilium occidentale* | Flowering Plants | 11.91 |
| 754 | Sebastopol meadowfoam | *Limnanthes vinculans* | Flowering Plants | 35.74 |
| 757 | No common name | *Lipochaeta venosa* | Flowering Plants | 61.82 |
| 758 | No common name | *Lobelia niihauensis* | Flowering Plants | 5.06 |
| 760 | San Clemente Island lotus (=broom) | *Acmispon dendroideus var. traskiae (=Lotus d. ssp. traskiae)* | Flowering Plants | 12.95 |
| 761 | White birds-in-a-nest | *Macbridea alba* | Flowering Plants | 1.48 |
| 762 | San Clemente Island bush-mallow | *Malacothamnus clementinus* | Flowering Plants | 12.95 |
| 763 | Walker's manioc | *Manihot walkerae* | Flowering Plants | 32.21 |
| 764 | Mohr's Barbara's buttons | *Marshallia mohrii* | Flowering Plants | 17.40 |
| 766 | Alani | *Melicope haupuensis* | Flowering Plants | 1.20 |
| 767 | Alani | *Melicope knudsenii* | Flowering Plants | 11.89 |
| 769 | Alani | *Melicope mucronulata* | Flowering Plants | 22.51 |
| 775 | Alani | *Melicope zahlbruckneri* | Flowering Plants | 1.93 |
| 776 | Ash Meadows blazingstar | *Mentzelia leucophylla* | Flowering Plants | 2.47 |
| 777 | MacFarlane's four-o'clock | *Mirabilis macfarlanei* | Flowering Plants | 67.76 |
| 778 | No common name | *Polyscias racemosa* | Flowering Plants | 8.33 |
| 779 | No common name | *Neraudia sericea* | Flowering Plants | 8.22 |
| 780 | `Aiea | *Nothocestrum breviflorum* | Flowering Plants | 18.61 |
| 782 | Kulu`i | *Nototrichium humile* | Flowering Plants | 3.55 |
| 783 | Eureka Valley evening-primrose | *Oenothera avita ssp. eurekensis* | Flowering Plants | 2.54 |
| 784 | Antioch Dunes evening-primrose | *Oenothera deltoides ssp. howellii* | Flowering Plants | 42.00 |
| 785 | California Orcutt grass | *Orcuttia californica* | Flowering Plants | 22.71 |
| 786 | San Joaquin Orcutt grass | *Orcuttia inaequalis* | Flowering Plants | 46.11 |
| 787 | Sacramento Orcutt grass | *Orcuttia viscida* | Flowering Plants | 53.37 |
| 788 | Carter's panicgrass | *Panicum fauriei var. carteri* | Flowering Plants | 15.49 |
| 789 | Papery whitlow-wort | *Paronychia chartacea* | Flowering Plants | 21.30 |
| 790 | Furbish lousewort | *Pedicularis furbishiae* | Flowering Plants | 3.32 |
| 791 | Brady pincushion cactus | *Pediocactus bradyi* | Flowering Plants | 54.68 |
| 792 | Knowlton's cactus | *Pediocactus knowltonii* | Flowering Plants | 43.55 |
| 793 | Peebles Navajo cactus | *Pediocactus peeblesianus var. peeblesianus* | Flowering Plants | 65.91 |
| 794 | Siler pincushion cactus | *Pediocactus (=Echinocactus =Utahia) sileri* | Flowering Plants | 73.47 |
| 795 | Makou | *Peucedanum sandwicense* | Flowering Plants | 9.78 |
| 796 | Clay phacelia | *Phacelia argillacea* | Flowering Plants | 60.07 |
| 797 | North Park phacelia | *Phacelia formosula* | Flowering Plants | 72.20 |
| 798 | Texas trailing phlox | *Phlox nivalis ssp. texensis* | Flowering Plants | 11.58 |
| 800 | Kuahiwi laukahi | *Plantago princeps* | Flowering Plants | 7.13 |
| 802 | San Diego mesa-mint | *Pogogyne abramsii* | Flowering Plants | 5.80 |
| 803 | Lewton's polygala | *Polygala lewtonii* | Flowering Plants | 24.57 |
| 804 | Wireweed | *Polygonella basiramia* | Flowering Plants | 28.70 |
| 805 | Sandlace | *Polygonella myriophylla* | Flowering Plants | 26.87 |
| 806 | Po`e | *Portulaca sclerocarpa* | Flowering Plants | 25.57 |
| 807 | Little Aguja (=Creek) Pondweed | *Potamogeton clystocarpus* | Flowering Plants | 8.56 |
| 808 | Lo`ulu | *Pritchardia munroi* | Flowering Plants | 5.73 |
| 809 | Scrub plum | *Prunus geniculata* | Flowering Plants | 24.81 |
| 810 | Kaulu | *Pteralyxia kauaiensis* | Flowering Plants | 1.27 |
| 811 | Arizona Cliffrose | *Purshia (=Cowania) subintegra* | Flowering Plants | 68.59 |
| 812 | Hinckley oak | *Quercus hinckleyi* | Flowering Plants | 5.53 |
| 813 | Autumn Buttercup | *Ranunculus aestivalis (=acriformis)* | Flowering Plants | 86.61 |
| 816 | Chapman rhododendron | *Rhododendron chapmanii* | Flowering Plants | 4.20 |
| 817 | Miccosukee gooseberry | *Ribes echinellum* | Flowering Plants | 11.34 |
| 818 | Bunched arrowhead | *Sagittaria fasciculata* | Flowering Plants | 16.70 |
| 819 | Green pitcher-plant | *Sarracenia oreophila* | Flowering Plants | 24.19 |
| 820 | Dwarf naupaka | *Scaevola coriacea* | Flowering Plants | 2.46 |
| 823 | Northeastern bulrush | *Scirpus ancistrochaetus* | Flowering Plants | 17.11 |
| 824 | Colorado hookless Cactus | *Sclerocactus glaucus* | Flowering Plants | 68.74 |
| 825 | Mesa Verde cactus | *Sclerocactus mesae-verdae* | Flowering Plants | 42.49 |
| 826 | Wright fishhook cactus | *Sclerocactus wrightiae* | Flowering Plants | 73.78 |
| 827 | San Francisco Peaks ragwort | *Packera franciscana* | Flowering Plants | 75.65 |
| 828 | Nelson's checker-mallow | *Sidalcea nelsoniana* | Flowering Plants | 17.88 |
| 829 | No common name | *Silene alexandri* | Flowering Plants | 5.64 |
| 830 | No common name | *Silene lanceolata* | Flowering Plants | 1.40 |
| 831 | Fringed campion | *Silene polypetala* | Flowering Plants | 10.21 |
| 832 | Popolo ku mai | *Solanum incompletum* | Flowering Plants | 36.00 |
| 834 | White-haired goldenrod | *Solidago albopilosa* | Flowering Plants | 17.35 |
| 835 | Short's goldenrod | *Solidago shortii* | Flowering Plants | 43.68 |
| 836 | Gentian pinkroot | *Spigelia gentianoides* | Flowering Plants | 8.19 |
| 837 | Navasota ladies'-tresses | *Spiranthes parksii* | Flowering Plants | 47.89 |
| 838 | No common name | *Stenogyne angustifolia angustifolia* | Flowering Plants | 34.91 |
| 840 | Malheur wire-lettuce | *Stephanomeria malheurensis* | Flowering Plants | 51.75 |
| 841 | Metcalf Canyon jewelflower | *Streptanthus albidus ssp. albidus* | Flowering Plants | 21.18 |
| 842 | Tiburon jewelflower | *Streptanthus niger* | Flowering Plants | 7.91 |
| 843 | Texas snowbells | *Styrax texanus* | Flowering Plants | 3.07 |
| 844 | Eureka Dune grass | *Swallenia alexandrae* | Flowering Plants | 33.33 |
| 845 | No common name | *Tetramolopium arenarium* | Flowering Plants | 36.19 |
| 850 | No common name | *Tetramolopium rockii* | Flowering Plants | 3.82 |
| 852 | Cooley's meadowrue | *Thalictrum cooleyi* | Flowering Plants | 4.99 |
| 853 | Last Chance townsendia | *Townsendia aprica* | Flowering Plants | 81.89 |
| 854 | Hidden Lake bluecurls | *Trichostema austromontanum ssp. compactum* | Flowering Plants | 4.13 |
| 855 | Showy Indian clover | *Trifolium amoenum* | Flowering Plants | 21.57 |
| 856 | Monterey clover | *Trifolium trichocalyx* | Flowering Plants | 2.86 |
| 857 | Persistent trillium | *Trillium persistens* | Flowering Plants | 19.26 |
| 858 | Greene's tuctoria | *Tuctoria greenei* | Flowering Plants | 69.29 |
| 859 | Solano grass | *Tuctoria mucronata* | Flowering Plants | 55.86 |
| 861 | Hawaiian vetch | *Vicia menziesii* | Flowering Plants | 13.12 |
| 862 | No common name | *Vigna o-wahuensis* | Flowering Plants | 16.54 |
| 868 | Dwarf iliau | *Wilkesia hobdyi* | Flowering Plants | 12.19 |
| 869 | A`e | *Zanthoxylum hawaiiense* | Flowering Plants | 20.68 |
| 870 | Texas wild-rice | *Zizania texana* | Flowering Plants | 11.31 |
| 871 | Todsen's pennyroyal | *Hedeoma todsenii* | Flowering Plants | 61.11 |
| 872 | Large-fruited sand-verbena | *Abronia macrocarpa* | Flowering Plants | 48.58 |
| 873 | San Mateo thornmint | *Acanthomintha obovata ssp. duttonii* | Flowering Plants | 39.22 |
| 874 | Round-leaved chaff-flower | *Achyranthes splendens var. rotundata* | Flowering Plants | 1.71 |
| 875 | Sensitive joint-vetch | *Aeschynomene virginica* | Flowering Plants | 2.32 |
| 876 | Sandplain gerardia | *Agalinis acuta* | Flowering Plants | 2.81 |
| 878 | Kearney's blue-star | *Amsonia kearneyana* | Flowering Plants | 45.28 |
| 879 | Morro manzanita | *Arctostaphylos morroensis* | Flowering Plants | 31.33 |
| 880 | Cumberland sandwort | *Arenaria cumberlandensis* | Flowering Plants | 13.94 |
| 881 | Marsh Sandwort | *Arenaria paludicola* | Flowering Plants | 32.22 |
| 882 | `Ahinahina | *Argyroxiphium sandwicense ssp. sandwicense* | Flowering Plants | 15.03 |
| 883 | Pelos del diablo | *Aristida portoricensis* | Flowering Plants | 2.55 |
| 884 | Welsh's milkweed | *Asclepias welshii* | Flowering Plants | 35.59 |
| 885 | Applegate's milk-vetch | *Astragalus applegatei* | Flowering Plants | 49.93 |
| 886 | Coachella Valley milk-vetch | *Astragalus lentiginosus var. coachellae* | Flowering Plants | 9.88 |
| 887 | Fish Slough milk-vetch | *Astragalus lentiginosus var. piscinensis* | Flowering Plants | 62.51 |
| 888 | Heliotrope milk-vetch | *Astragalus montii* | Flowering Plants | 92.09 |
| 889 | Encinitas baccharis | *Baccharis vanessae* | Flowering Plants | 11.87 |
| 890 | Palo de ramon | *Banara vanderbiltii* | Flowering Plants | 1.18 |
| 891 | Decurrent false aster | *Boltonia decurrens* | Flowering Plants | 17.04 |
| 892 | Florida bonamia | *Bonamia grandiflora* | Flowering Plants | 24.90 |
| 893 | Vahl's boxwood | *Buxus vahlii* | Flowering Plants | 1.84 |
| 894 | Capa rosa | *Callicarpa ampla* | Flowering Plants | 2.27 |
| 896 | Palma de manaca | *Calyptronoma rivalis* | Flowering Plants | 4.26 |
| 897 | San Benito evening-primrose | *Camissonia benitensis* | Flowering Plants | 52.68 |
| 898 | Tiburon paintbrush | *Castilleja affinis ssp. neglecta* | Flowering Plants | 33.06 |
| 899 | Golden Paintbrush | *Castilleja levisecta* | Flowering Plants | 7.61 |
| 900 | No common name | *Chamaecrista glandulosa var. mirabilis* | Flowering Plants | 2.46 |
| 901 | Pygmy fringe-tree | *Chionanthus pygmaeus* | Flowering Plants | 26.31 |
| 902 | Howell's spineflower | *Chorizanthe howellii* | Flowering Plants | 6.08 |
| 903 | Monterey spineflower | *Chorizanthe pungens var. pungens* | Flowering Plants | 25.92 |
| 904 | Florida golden aster | *Chrysopsis floridana* | Flowering Plants | 19.62 |
| 905 | Pitcher's thistle | *Cirsium pitcheri* | Flowering Plants | 5.60 |
| 906 | Sacramento Mountains thistle | *Cirsium vinaceum* | Flowering Plants | 56.45 |
| 907 | Pigeon wings | *Clitoria fragrans* | Flowering Plants | 26.59 |
| 908 | No common name | *Cordia bellonis* | Flowering Plants | 1.64 |
| 909 | Palo de nigua | *Cornutia obovata* | Flowering Plants | 4.24 |
| 910 | Cochise pincushion cactus | *Coryphantha robbinsiorum* | Flowering Plants | 38.52 |
| 911 | Pima pineapple cactus | *Coryphantha scheeri var. robustispina* | Flowering Plants | 32.64 |
| 913 | Terlingua Creek cat's-eye | *Cryptantha crassipes* | Flowering Plants | 2.34 |
| 914 | Okeechobee gourd | *Cucurbita okeechobeensis ssp. okeechobeensis* | Flowering Plants | 7.41 |
| 916 | aku aku | *Cyanea platyphylla* | Flowering Plants | 5.19 |
| 917 | Haha | *Cyanea stictophylla* | Flowering Plants | 12.00 |
| 919 | Ha`iwale | *Cyrtandra giffardii* | Flowering Plants | 2.01 |
| 920 | Leafy prairie-clover | *Dalea foliosa* | Flowering Plants | 24.00 |
| 921 | No common name | *Daphnopsis hellerana* | Flowering Plants | 1.87 |
| 922 | Beautiful pawpaw | *Deeringothamnus pulchellus* | Flowering Plants | 10.27 |
| 923 | Rugel's pawpaw | *Deeringothamnus rugelii* | Flowering Plants | 5.76 |
| 924 | Smooth coneflower | *Echinacea laevigata* | Flowering Plants | 18.92 |
| 925 | Chisos Mountain hedgehog Cactus | *Echinocereus chisoensis var. chisoensis* | Flowering Plants | 2.34 |
| 927 | Santa Ana River woolly-star | *Eriastrum densifolium ssp. sanctorum* | Flowering Plants | 22.12 |
| 928 | Parish's daisy | *Erigeron parishii* | Flowering Plants | 19.51 |
| 929 | Scrub buckwheat | *Eriogonum longifolium var. gnaphalifolium* | Flowering Plants | 25.75 |
| 930 | Clay-Loving wild buckwheat | *Eriogonum pelinophilum* | Flowering Plants | 50.86 |
| 931 | Loch Lomond coyote thistle | *Eryngium constancei* | Flowering Plants | 7.53 |
| 932 | Snakeroot | *Eryngium cuneifolium* | Flowering Plants | 37.56 |
| 933 | Menzies' wallflower | *Erysimum menziesii* | Flowering Plants | 13.00 |
| 934 | Ben Lomond wallflower | *Erysimum teretifolium* | Flowering Plants | 3.58 |
| 935 | Minnesota dwarf trout lily | *Erythronium propullans* | Flowering Plants | 20.43 |
| 936 | Uvillo | *Eugenia haematocarpa* | Flowering Plants | 2.47 |
| 937 | Telephus spurge | *Euphorbia telephioides* | Flowering Plants | 1.39 |
| 939 | Nohoanu | *Geranium multiflorum* | Flowering Plants | 6.25 |
| 940 | Monterey gilia | *Gilia tenuiflora ssp. arenaria* | Flowering Plants | 24.03 |
| 941 | Ash Meadows gumplant | *Grindelia fraxinipratensis* | Flowering Plants | 11.33 |
| 942 | Higo Chumbo | *Harrisia portoricensis* | Flowering Plants | 0.53 |
| 943 | Roan Mountain bluet | *Hedyotis purpurea var. montana* | Flowering Plants | 15.24 |
| 945 | Schweinitz's sunflower | *Helianthus schweinitzii* | Flowering Plants | 24.92 |
| 946 | Swamp pink | *Helonias bullata* | Flowering Plants | 8.43 |
| 947 | Koki`o ke`oke`o | *Hibiscus arnottianus ssp. immaculatus* | Flowering Plants | 2.10 |
| 950 | Dwarf lake iris | *Iris lacustris* | Flowering Plants | 5.73 |
| 951 | Hilo ischaemum | *Ischaemum byrone* | Flowering Plants | 2.28 |
| 952 | Aupaka | *Isodendrion hosakae* | Flowering Plants | 78.51 |
| 953 | Beach jacquemontia | *Jacquemontia reclinata* | Flowering Plants | 2.97 |
| 956 | No common name | *Lepanthes eltoroensis* | Flowering Plants | 3.90 |
| 957 | Prairie bush-clover | *Lespedeza leptostachya* | Flowering Plants | 18.21 |
| 958 | San Bernardino Mountains bladderpod | *Lesquerella kingii ssp. bernardina* | Flowering Plants | 25.37 |
| 959 | Heller's blazingstar | *Liatris helleri* | Flowering Plants | 12.86 |
| 960 | Pondberry | *Lindera melissifolia* | Flowering Plants | 5.77 |
| 961 | Nehe | *Lipochaeta kamolensis* | Flowering Plants | 0.87 |
| 962 | Nehe | *Lipochaeta micrantha* | Flowering Plants | 2.88 |
| 966 | Clover lupine | *Lupinus tidestromii* | Flowering Plants | 19.92 |
| 967 | Rough-leaved loosestrife | *Lysimachia asperulaefolia* | Flowering Plants | 4.88 |
| 969 | Michigan monkey-flower | *Mimulus michiganensis* | Flowering Plants | 3.79 |
| 972 | Spreading navarretia | *Navarretia fossalis* | Flowering Plants | 34.12 |
| 974 | Britton's beargrass | *Nolina brittoniana* | Flowering Plants | 25.75 |
| 975 | Palo de rosa | *Ottoschulzia rhodoxylon* | Flowering Plants | 2.35 |
| 976 | Canby's dropwort | *Oxypolis canbyi* | Flowering Plants | 7.43 |
| 977 | Fassett's locoweed | *Oxytropis campestris var. chartacea* | Flowering Plants | 8.03 |
| 978 | Blowout penstemon | *Penstemon haydenii* | Flowering Plants | 82.39 |
| 979 | White-rayed pentachaeta | *Pentachaeta bellidiflora* | Flowering Plants | 4.73 |
| 980 | Wheeler's peperomia | *Peperomia wheeleri* | Flowering Plants | 1.05 |
| 982 | Godfrey's butterwort | *Pinguicula ionantha* | Flowering Plants | 1.94 |
| 984 | Eastern prairie fringed orchid | *Platanthera leucophaea* | Flowering Plants | 14.34 |
| 985 | Chupacallos | *Pleodendron macranthum* | Flowering Plants | 2.44 |
| 986 | Mann's bluegrass | *Poa mannii* | Flowering Plants | 0.51 |
| 988 | Otay mesa-mint | *Pogogyne nudiuscula* | Flowering Plants | 22.78 |
| 989 | Tiny polygala | *Polygala smallii* | Flowering Plants | 4.50 |
| 990 | Maguire primrose | *Primula maguirei* | Flowering Plants | 50.85 |
| 991 | Harperella | *Ptilimnium nodosum* | Flowering Plants | 16.94 |
| 992 | Michaux's sumac | *Rhus michauxii* | Flowering Plants | 17.32 |
| 993 | Lanai sandalwood (=`iliahi) | *Santalum haleakalae var. lanaiense* | Flowering Plants | 0.59 |
| 994 | Alabama canebrake pitcher-plant | *Sarracenia rubra ssp. alabamensis* | Flowering Plants | 18.83 |
| 995 | Mountain sweet pitcher-plant | *Sarracenia rubra ssp. jonesii* | Flowering Plants | 15.90 |
| 996 | American chaffseed | *Schwalbea americana* | Flowering Plants | 7.24 |
| 997 | Florida skullcap | *Scutellaria floridana* | Flowering Plants | 1.48 |
| 998 | Large-flowered skullcap | *Scutellaria montana* | Flowering Plants | 18.17 |
| 999 | Ohai | *Sesbania tomentosa* | Flowering Plants | 10.81 |
| 1000 | Pedate checker-mallow | *Sidalcea pedata* | Flowering Plants | 24.34 |
| 1001 | No common name | *Silene hawaiiensis* | Flowering Plants | 19.25 |
| 1002 | Erubia | *Solanum drymophilum* | Flowering Plants | 3.24 |
| 1003 | Houghton's goldenrod | *Solidago houghtonii* | Flowering Plants | 6.10 |
| 1004 | Blue Ridge goldenrod | *Solidago spithamaea* | Flowering Plants | 12.94 |
| 1005 | Cobana negra | *Stahlia monosperma* | Flowering Plants | 1.59 |
| 1006 | Palo colorado | *Ternstroemia luquillensis* | Flowering Plants | 3.90 |
| 1007 | No common name | *Ternstroemia subsessilis* | Flowering Plants | 3.90 |
| 1008 | Howell's spectacular thelypody | *Thelypodium howellii spectabilis* | Flowering Plants | 25.39 |
| 1009 | Slender-petaled mustard | *Thelypodium stenopetalum* | Flowering Plants | 24.34 |
| 1010 | Kneeland Prairie penny-cress | *Thlaspi californicum* | Flowering Plants | 10.41 |
| 1011 | Santa Cruz Island fringepod | *Thysanocarpus conchuliferus* | Flowering Plants | 34.18 |
| 1012 | Bariaco | *Trichilia triacantha* | Flowering Plants | 1.27 |
| 1013 | Red Hills vervain | *Verbena californica* | Flowering Plants | 72.65 |
| 1014 | Wide-leaf warea | *Warea amplexifolia* | Flowering Plants | 24.46 |
| 1015 | Carter's mustard | *Warea carteri* | Flowering Plants | 16.61 |
| 1017 | Tennessee yellow-eyed grass | *Xyris tennesseensis* | Flowering Plants | 16.91 |
| 1019 | Seabeach amaranth | *Amaranthus pumilus* | Flowering Plants | 1.90 |
| 1020 | Holmgren milk-vetch | *Astragalus holmgreniorum* | Flowering Plants | 88.24 |
| 1021 | Peirson's milk-vetch | *Astragalus magdalenae var. peirsonii* | Flowering Plants | 0.83 |
| 1022 | Springville clarkia | *Clarkia springvillensis* | Flowering Plants | 39.93 |
| 1023 | Pennell's bird's-beak | *Cordylanthus tenuis ssp. capillaris* | Flowering Plants | 10.63 |
| 1024 | Longspurred mint | *Dicerandra cornutissima* | Flowering Plants | 22.33 |
| 1025 | Verity's dudleya | *Dudleya verityi* | Flowering Plants | 5.80 |
| 1026 | Steamboat buckwheat | *Eriogonum ovalifolium var. williamsiae* | Flowering Plants | 14.48 |
| 1027 | Mexican flannelbush | *Fremontodendron mexicanum* | Flowering Plants | 18.34 |
| 1028 | Virginia sneezeweed | *Helenium virginicum* | Flowering Plants | 33.43 |
| 1029 | White bladderpod | *Lesquerella pallida* | Flowering Plants | 11.18 |
| 1030 | Huachuca water-umbel | *Lilaeopsis schaffneriana var. recurva* | Flowering Plants | 48.21 |
| 1031 | Scrub lupine | *Lupinus aridorum* | Flowering Plants | 24.25 |
| 1032 | No common name | *Cyperus pennatiformis* | Flowering Plants | 2.20 |
| 1033 | No common name | *Myrcia paganii* | Flowering Plants | 3.09 |
| 1034 | San Rafael cactus | *Pediocactus despainii* | Flowering Plants | 82.75 |
| 1035 | Winkler cactus | *Pediocactus winkleri* | Flowering Plants | 76.43 |
| 1036 | Ruth's golden aster | *Pityopsis ruthii* | Flowering Plants | 11.98 |
| 1037 | Barneby reed-mustard | *Schoenocrambe barnebyi* | Flowering Plants | 76.81 |
| 1038 | Hayun Iagu (=(Guam) Tronkon guafi (Rota)) | *Serianthes nelsonii* | Flowering Plants | 2.38 |
| 1039 | Virginia spiraea | *Spiraea virginiana* | Flowering Plants | 15.38 |
| 1040 | Palo de jazmin | *Styrax portoricensis* | Flowering Plants | 3.16 |
| 1041 | Running buffalo clover | *Trifolium stoloniferum* | Flowering Plants | 29.46 |
| 1042 | Relict trillium | *Trillium reliquum* | Flowering Plants | 12.62 |
| 1045 | Texas prairie dawn-flower | *Hymenoxys texana* | Flowering Plants | 24.79 |
| 1046 | Garrett's mint | *Dicerandra christmanii* | Flowering Plants | 37.56 |
| 1047 | Water howellia | *Howellia aquatilis* | Flowering Plants | 24.56 |
| 1048 | Alabama leather flower | *Clematis socialis* | Flowering Plants | 20.67 |
| 1050 | Haha | *Cyanea hamatiflora ssp. carlsonii* | Flowering Plants | 10.51 |
| 1053 | Slender-horned spineflower | *Dodecahema leptoceras* | Flowering Plants | 22.35 |
| 1055 | Kern mallow | *Eremalche kernensis* | Flowering Plants | 39.21 |
| 1056 | San Mateo woolly sunflower | *Eriophyllum latilobum* | Flowering Plants | 10.92 |
| 1058 | Mountain golden heather | *Hudsonia montana* | Flowering Plants | 11.49 |
| 1059 | Lakeside daisy | *Hymenoxys herbacea* | Flowering Plants | 7.79 |
| 1060 | Holei | *Ochrosia kilaueaensis* | Flowering Plants | 10.94 |
| 1061 | Dudley Bluffs twinpod | *Physaria obcordata* | Flowering Plants | 95.82 |
| 1063 | Lo`ulu | *Pritchardia schattaueri* | Flowering Plants | 6.16 |
| 1064 | Kral's water-plantain | *Sagittaria secundifolia* | Flowering Plants | 11.72 |
| 1065 | Ma`oli`oli | *Schiedea apokremnos* | Flowering Plants | 2.71 |
| 1066 | No common name | *Schiedea haleakalensis* | Flowering Plants | 1.83 |
| 1068 | No common name | *Schiedea lydgatei* | Flowering Plants | 3.91 |
| 1069 | No common name | *Schiedea spergulina var. leiopoda* | Flowering Plants | 10.67 |
| 1070 | No common name | *Schiedea spergulina var. spergulina* | Flowering Plants | 10.67 |
| 1072 | No common name | *Schoepfia arenaria* | Flowering Plants | 1.95 |
| 1073 | Ute ladies'-tresses | *Spiranthes diluvialis* | Flowering Plants | 73.31 |
| 1074 | Munz's onion | *Allium munzii* | Flowering Plants | 24.98 |
| 1075 | No common name | *Schiedea viscosa* | Flowering Plants | 5.86 |
| 1076 | Shale barren rock cress | *Arabis serotina* | Flowering Plants | 6.63 |
| 1077 | Texas ayenia | *Ayenia limitaris* | Flowering Plants | 21.45 |
| 1078 | California jewelflower | *Caulanthus californicus* | Flowering Plants | 51.47 |
| 1079 | Penland beardtongue | *Penstemon penlandii* | Flowering Plants | 53.82 |
| 1080 | Western prairie fringed Orchid | *Platanthera praeclara* | Flowering Plants | 47.49 |
| 1081 | Butte County meadowfoam | *Limnanthes floccosa ssp. californica* | Flowering Plants | 43.15 |
| 1082 | Bakersfield cactus | *Opuntia treleasei* | Flowering Plants | 44.64 |
| 1085 | No common name | *Aristida chaseae* | Flowering Plants | 3.28 |
| 1086 | Cushenbury milk-vetch | *Astragalus albens* | Flowering Plants | 32.68 |
| 1087 | Guthrie's (=Pyne's) ground-plum | *Astragalus bibullatus* | Flowering Plants | 27.60 |
| 1088 | Shivwits milk-vetch | *Astragalus ampullarioides* | Flowering Plants | 42.29 |
| 1089 | Triple-ribbed milk-vetch | *Astragalus tricarinatus* | Flowering Plants | 6.92 |
| 1090 | San Jacinto Valley crownscale | *Atriplex coronata var. notatior* | Flowering Plants | 31.37 |
| 1091 | No common name | *Auerodendron pauciflorum* | Flowering Plants | 2.14 |
| 1092 | No common name | *Catesbaea melanocarpa* | Flowering Plants | 2.90 |
| 1093 | Awiwi | *Centaurium sebaeoides* | Flowering Plants | 1.62 |
| 1095 | Ben Lomond spineflower | *Chorizanthe pungens var. hartwegiana* | Flowering Plants | 3.58 |
| 1096 | Morefield's leather flower | *Clematis morefieldii* | Flowering Plants | 21.58 |
| 1098 | `Oha wai | *Clermontia oblongifolia ssp. mauiensis* | Flowering Plants | 1.30 |
| 1100 | Haha | *Cyanea copelandii ssp. copelandii* | Flowering Plants | 1.37 |
| 1103 | Haha | *Cyanea mannii* | Flowering Plants | 0.93 |
| 1108 | Pu`uka`a | *Cyperus trachysanthos* | Flowering Plants | 4.21 |
| 1110 | Ha`iwale | *Cyrtandra limahuliensis* | Flowering Plants | 1.50 |
| 1111 | Ha`iwale | *Cyrtandra tintinnabula* | Flowering Plants | 11.50 |
| 1114 | Na`ena`e | *Dubautia plantaginea ssp. humilis* | Flowering Plants | 8.67 |
| 1115 | Santa Clara Valley dudleya | *Dudleya setchellii* | Flowering Plants | 19.94 |
| 1116 | Nioi | *Eugenia koolauensis* | Flowering Plants | 3.58 |
| 1117 | Mehamehame | *Flueggea neowawraea* | Flowering Plants | 7.77 |
| 1119 | Gaviota Tarplant | *Deinandra increscens ssp. villosa* | Flowering Plants | 33.45 |
| 1120 | Holy Ghost ipomopsis | *Ipomopsis sancti-spiritus* | Flowering Plants | 57.20 |
| 1122 | Beach layia | *Layia carnosa* | Flowering Plants | 20.43 |
| 1123 | San Joaquin wooly-threads | *Monolopia (=Lembertia) congdonii* | Flowering Plants | 47.74 |
| 1125 | Dudley Bluffs bladderpod | *Lesquerella congesta* | Flowering Plants | 96.78 |
| 1126 | Kincaid's Lupine | *Lupinus sulphureus ssp. kincaidii* | Flowering Plants | 19.83 |
| 1127 | No common name | *Lyonia truncata var. proctorii* | Flowering Plants | 3.28 |
| 1130 | Santa Cruz Island malacothrix | *Malacothrix indecora* | Flowering Plants | 56.51 |
| 1131 | No common name | *Cyperus fauriei* | Flowering Plants | 16.03 |
| 1132 | Alani | *Melicope adscendens* | Flowering Plants | 42.21 |
| 1134 | Cushenbury oxytheca | *Oxytheca parishii var. goodmaniana* | Flowering Plants | 36.78 |
| 1136 | Kiponapona | *Phyllostegia racemosa* | Flowering Plants | 29.36 |
| 1137 | No common name | *Phyllostegia velutina* | Flowering Plants | 11.28 |
| 1138 | No common name | *Phyllostegia warshaueri* | Flowering Plants | 3.07 |
| 1140 | Kuahiwi laukahi | *Plantago hawaiensis* | Flowering Plants | 1.11 |
| 1141 | Hala pepe | *Pleomele hawaiiensis* | Flowering Plants | 32.05 |
| 1142 | Lo`ulu | *Pritchardia maideniana* | Flowering Plants | 11.44 |
| 1143 | Lo`ulu | *Pritchardia napaliensis* | Flowering Plants | 7.79 |
| 1145 | Gambel's watercress | *Rorippa gambellii* | Flowering Plants | 29.47 |
| 1147 | No common name | *Schiedea kauaiensis* | Flowering Plants | 1.25 |
| 1149 | Clay reed-mustard | *Schoenocrambe argillacea* | Flowering Plants | 75.39 |
| 1150 | Leedy's roseroot | *Rhodiola integrifolia ssp. leedyi* | Flowering Plants | 62.87 |
| 1151 | `Anunu | *Sicyos albus* | Flowering Plants | 2.39 |
| 1153 | White irisette | *Sisyrinchium dichotomum* | Flowering Plants | 18.04 |
| 1154 | No common name | *Spermolepis hawaiiensis* | Flowering Plants | 5.21 |
| 1158 | No common name | *Vernonia proctorii* | Flowering Plants | 3.28 |
| 1159 | A`e | *Zanthoxylum dipetalum var. tomentosum* | Flowering Plants | 12.59 |
| 1160 | No common name | *Cranichis ricartii* | Flowering Plants | 0.54 |
| 1162 | No common name | *Ilex sintenisii* | Flowering Plants | 3.53 |
| 1164 | California seablite | *Suaeda californica* | Flowering Plants | 21.51 |
| 1165 | Etonia rosemary | *Conradina etonia* | Flowering Plants | 9.43 |
| 1166 | Vail Lake ceanothus | *Ceanothus ophiochilus* | Flowering Plants | 19.31 |
| 1167 | San Francisco lessingia | *Lessingia germanorum (=L.g. var. germanorum)* | Flowering Plants | 2.80 |
| 1168 | Santa Monica Mountains dudleyea | *Dudleya cymosa ssp. ovatifolia* | Flowering Plants | 6.83 |
| 1169 | No common name | *Eugenia woodburyana* | Flowering Plants | 1.14 |
| 1170 | Island malacothrix | *Malacothrix squalida* | Flowering Plants | 34.18 |
| 1171 | Yadon's piperia | *Piperia yadonii* | Flowering Plants | 20.80 |
| 1172 | Canelo Hills ladies'-tresses | *Spiranthes delitescens* | Flowering Plants | 58.80 |
| 1173 | Big-leaved crownbeard | *Verbesina dissita* | Flowering Plants | 6.05 |
| 1174 | Desert yellowhead | *Yermo xanthocephalus* | Flowering Plants | 99.22 |
| 1178 | Kamakahala | *Labordia tinifolia var. wahiawaensis* | Flowering Plants | 1.43 |
| 1185 | Haha | *Cyanea copelandii ssp. haleakalaensis* | Flowering Plants | 1.37 |
| 1186 | Haha | *Cyanea hamatiflora ssp. hamatiflora* | Flowering Plants | 10.51 |
| 1188 | `Oha wai | *Clermontia samuelii* | Flowering Plants | 0.51 |
| 1189 | Golden sedge | *Carex lutea* | Flowering Plants | 1.68 |
| 1190 | Santa Cruz cypress | *Cupressus abramsiana* | Conifers and Cycads | 4.34 |
| 1191 | Florida torreya | *Torreya taxifolia* | Conifers and Cycads | 7.32 |
| 1192 | Gowen cypress | *Cupressus goveniana ssp. goveniana* | Conifers and Cycads | 6.36 |
| 1195 | American hart's-tongue fern | *Asplenium scolopendrium var. americanum* | Ferns and Allies | 5.64 |
| 1199 | Louisiana quillwort | *Isoetes louisianensis* | Ferns and Allies | 11.56 |
| 1203 | Black spored quillwort | *Isoetes melanospora* | Ferns and Allies | 23.06 |
| 1204 | Mat-forming quillwort | *Isoetes tegetiformans* | Ferns and Allies | 17.20 |
| 1209 | Alabama streak-sorus fern | *Thelypteris pilosa var. alabamensis* | Ferns and Allies | 11.10 |
| 1219 | Florida perforate cladonia | *Cladonia perforata* | Lichens | 18.48 |
| 1220 | Rock gnome lichen | *Gymnoderma lineare* | Lichens | 11.43 |
| 1221 | Everglade snail kite | *Rostrhamus sociabilis plumbeus* | Birds | 13.23 |
| 1225 | Bradshaw's desert-parsley | *Lomatium bradshawii* | Flowering Plants | 22.84 |
| 1228 | Knieskern's Beaked-rush | *Rhynchospora knieskernii* | Flowering Plants | 2.56 |
| 1231 | Beautiful goetzea | *Goetzea elegans* | Flowering Plants | 2.64 |
| 1233 | Willamette daisy | *Erigeron decumbens* | Flowering Plants | 23.18 |
| 1234 | Florida ziziphus | *Ziziphus celata* | Flowering Plants | 28.70 |
| 1235 | Avon Park harebells | *Crotalaria avonensis* | Flowering Plants | 28.70 |
| 1236 | San Miguel Island Fox | *Urocyon littoralis littoralis* | Mammals | 33.50 |
| 1237 | Santa Catalina Island Fox | *Urocyon littoralis catalinae* | Mammals | 7.25 |
| 1238 | Santa Cruz Island Fox | *Urocyon littoralis santacruzae* | Mammals | 34.21 |
| 1239 | Santa Rosa Island Fox | *Urocyon littoralis santarosae* | Mammals | 66.64 |
| 1240 | Columbia Basin Pygmy Rabbit | *Brachylagus idahoensis* | Mammals | 6.22 |
| 1245 | Pecos assiminea snail | *Assiminea pecos* | Snails | 36.32 |
| 1246 | Roswell springsnail | *Pyrgulopsis roswellensis* | Snails | 80.46 |
| 1247 | Koster's springsnail | *Juturnia kosteri* | Snails | 80.46 |
| 1249 | [Unnamed] pomace fly | *Drosophila heteroneura* | Insects | 4.33 |
| 1251 | [Unnamed] pomace fly | *Drosophila mulli* | Insects | 4.04 |
| 1258 | [Unnamed] pomace fly | *Drosophila ochrobasis* | Insects | 1.94 |
| 1261 | Noel's Amphipod | *Gammarus desperatus* | Crustaceans | 80.46 |
| 1262 | Large-flowered woolly Meadowfoam | *Limnanthes floccosa ssp. grandiflora* | Flowering Plants | 48.90 |
| 1263 | Cook's lomatium | *Lomatium cookii* | Flowering Plants | 23.07 |
| 1264 | No common name | *Nesogenes rotensis* | Flowering Plants | 2.35 |
| 1266 | No common name | *Tabernaemontana rotensis* | Flowering Plants | 2.35 |
| 1267 | Scotts Valley Polygonum | *Polygonum hickmanii* | Flowering Plants | 5.40 |
| 1283 | Parachute beardtongue | *Penstemon debilis* | Flowering Plants | 59.99 |
| 1358 | Magnificent ramshorn | *Planorbella magnifica* | Snails | 1.99 |
| 1369 | Fuzzy pigtoe | *Pleurobema strodeanum* | Clams | 11.18 |
| 1378 | Scotts Valley spineflower | *Chorizanthe robusta var. hartwegii* | Flowering Plants | 5.41 |
| 1380 | San Bernardino springsnail | *Pyrgulopsis bernardina* | Snails | 40.68 |
| 1400 | Texas golden Gladecress | *Leavenworthia texana* | Flowering Plants | 9.09 |
| 1415 | White fringeless orchid | *Platanthera integrilabia* | Flowering Plants | 19.28 |
| 1450 | Highlands tiger beetle | *Cicindelidia highlandensis* | Insects | 28.70 |
| 1497 | Hala pepe | *Pleomele fernaldii* | Flowering Plants | 1.87 |
| 1502 | `Akoko | *Euphorbia eleanoriae* | Flowering Plants | 2.94 |
| 1509 | Chum salmon | *Oncorhynchus keta* | Fishes | 4.63 |
| 1559 | Fluted kidneyshell | *Ptychobranchus subtentum* | Clams | 28.97 |
| 1607 | `Akoko | *Euphorbia remyi var. remyi* | Flowering Plants | 1.48 |
| 1623 | `Anunu | *Sicyos macrophyllus* | Flowering Plants | 19.81 |
| 1632 | San Fernando Valley Spineflower | *Chorizanthe parryi var. fernandina* | Flowering Plants | 23.17 |
| 1645 | Kampua`a | *Kadua (=Hedyotis) fluviatilis* | Flowering Plants | 1.69 |
| 1678 | Bracted twistflower | *Streptanthus bracteatus* | Flowering Plants | 12.92 |
| 1680 | Alabama lampmussel | *Lampsilis virescens* | Clams | 28.18 |
| 1707 | Yosemite toad | *Anaxyrus canorus* | Amphibians | 49.43 |
| 1709 | `Ohe | *Joinvillea ascendens ascendens* | Flowering Plants | 6.52 |
| 1710 | Fleshy-fruit gladecress | *Leavenworthia crassa* | Flowering Plants | 44.20 |
| 1737 | California condor | *Gymnogyps californianus* | Birds | 48.65 |
| 1740 | Mountain yellow-legged frog | *Rana muscosa* | Amphibians | 42.94 |
| 1760 | `Aiea | *Nothocestrum latifolium* | Flowering Plants | 6.12 |
| 1769 | Sei whale | *Balaenoptera borealis* | Mammals | 0.86 |
| 1783 | Northern Mexican gartersnake | *Thamnophis eques megalops* | Reptiles | 49.53 |
| 1831 | Short's bladderpod | *Physaria globosa* | Flowering Plants | 38.39 |
| 1849 | Meltwater lednian stonefly | *Lednia tumana* | Insects | 22.04 |
| 1862 | Fragile tree snail | *Samoana fragilis* | Snails | 2.38 |
| 1881 | Whorled Sunflower | *Helianthus verticillatus* | Flowering Plants | 17.33 |
| 1897 | Clubshell | *Pleurobema clava* | Clams | 28.18 |
| 1905 | Oyster mussel | *Epioblasma capsaeformis* | Clams | 28.18 |
| 1934 | Spotfin Chub | *Erimonax monachus* | Fishes | 11.47 |
| 1935 | Whitebark pine | *Pinus albicaulis* | Conifers and Cycads | 46.19 |
| 1984 | Hermes copper butterfly | *Lycaena hermes* | Insects | 11.47 |
| 2036 | Ma`oli`oli | *Schiedea pubescens* | Flowering Plants | 11.06 |
| 2118 | `Awikiwiki | *Canavalia napaliensis* | Flowering Plants | 10.62 |
| 2142 | Colorado pikeminnow (=squawfish) | *Ptychocheilus lucius* | Fishes | 75.89 |
| 2192 | Dromedary pearlymussel | *Dromus dromas* | Clams | 28.18 |
| 2211 | Aboriginal Prickly-apple | *Harrisia (=Cereus) aboriginum (=gracilis)* | Flowering Plants | 10.19 |
| 2308 | Cracking pearlymussel | *Hemistena lata* | Clams | 28.18 |
| 2316 | Yellow blossom (pearlymussel) | *Epioblasma florentina florentina* | Clams | 28.18 |
| 2389 | Washington ground squirrel | *Urocitellus washingtoni* | Mammals | 6.42 |
| 2448 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 20.93 |
| 2458 | Webber Ivesia | *Ivesia webberi* | Flowering Plants | 53.39 |
| 2510 | North Atlantic Right Whale | *Eubalaena glacialis* | Mammals | 1.52 |
| 2514 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 44.20 |
| 2528 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 20.41 |
| 2561 | Interrupted (=Georgia) Rocksnail | *Leptoxis foremani* | Snails | 17.88 |
| 2567 | Skiff milkvetch | *Astragalus microcymbus* | Flowering Plants | 77.32 |
| 2599 | Woundfin | *Plagopterus argentissimus* | Fishes | 77.06 |
| 2682 | Makou | *Ranunculus hawaiensis* | Flowering Plants | 20.70 |
| 2683 | `Ala `ala wai nui | *Peperomia subpetiolata* | Flowering Plants | 14.62 |
| 2730 | Chapin Mesa milkvetch | *Astragalus schmolliae* | Flowering Plants | 11.26 |
| 2767 | Stephan's Riffle beetle | *Heterelmis stephani* | Insects | 60.00 |
| 2778 | Kamakahala | *Labordia helleri* | Flowering Plants | 0.88 |
| 2780 | Fremont County rockcress | *Boechera pusilla* | Flowering Plants | 95.87 |
| 2810 | Slickspot peppergrass | *Lepidium papilliferum* | Flowering Plants | 77.85 |
| 2823 | Franciscan manzanita | *Arctostaphylos franciscana* | Flowering Plants | 2.25 |
| 2842 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 41.39 |
| 2859 | Band-rumped storm-petrel | *Oceanodroma castro* | Birds | 6.32 |
| 2860 | Haha | *Cyanea obtusa* | Flowering Plants | 28.42 |
| 2862 | Icebox Cave beetle | *Pseudanophthalmus frigidus* | Insects | 10.44 |
| 2917 | Texas Hornshell | *Popenaias popei* | Clams | 23.43 |
| 2934 | No common name | *Phyllostegia bracteata* | Flowering Plants | 0.81 |
| 2956 | Yellowfin madtom | *Noturus flavipinnis* | Fishes | 11.47 |
| 3049 | Na`ena`e | *Dubautia plantaginea magnifolia* | Flowering Plants | 0.51 |
| 3054 | Lo`ulu | *Pritchardia lanigera* | Flowering Plants | 19.51 |
| 3096 | Finback whale | *Balaenoptera physalus* | Mammals | 12.23 |
| 3116 | Ihi | *Portulaca villosa* | Flowering Plants | 8.97 |
| 3133 | Bowhead whale | *Balaena mysticetus* | Mammals | 1.32 |
| 3154 | Ho`awa | *Pittosporum napaliense* | Flowering Plants | 8.03 |
| 3194 | Roy Prairie pocket gopher | *Thomomys mazama glacialis* | Mammals | 6.91 |
| 3199 | Blue whale | *Balaenoptera musculus* | Mammals | 1.72 |
| 3226 | Finerayed pigtoe | *Fusconaia cuneolus* | Clams | 28.18 |
| 3271 | Narrow-headed gartersnake | *Thamnophis rufipunctatus* | Reptiles | 78.59 |
| 3280 | Zuni bluehead Sucker | *Catostomus discobolus yarrowi* | Fishes | 40.64 |
| 3292 | Makou | *Ranunculus mauiensis* | Flowering Plants | 22.29 |
| 3318 | Guadalupe fur seal | *Arctocephalus townsendi* | Mammals | 0.88 |
| 3364 | Rough hornsnail | *Pleurocera foremani* | Snails | 18.13 |
| 3379 | Louisville Cave beetle | *Pseudanophthalmus troglodytes* | Insects | 11.73 |
| 3388 | Papala | *Charpentiera densiflora* | Flowering Plants | 5.08 |
| 3398 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 63.37 |
| 3412 | Dakota Skipper | *Hesperia dacotae* | Insects | 33.27 |
| 3497 | Roundtail chub | *Gila robusta* | Fishes | 51.02 |
| 3525 | Rush Darter | *Etheostoma phytophilum* | Fishes | 24.29 |
| 3532 | Gopher tortoise | *Gopherus polyphemus* | Reptiles | 8.30 |
| 3592 | No common name | *Phyllostegia brevidens* | Flowering Plants | 11.19 |
| 3596 | Sharpnose Shiner | *Notropis oxyrhynchus* | Fishes | 23.42 |
| 3628 | Relict leopard Frog | *Lithobates onca* | Amphibians | 61.33 |
| 3645 | Rabbitsfoot | *Quadrula cylindrica cylindrica* | Clams | 23.75 |
| 3654 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 21.04 |
| 3670 | Rattlesnake-master borer moth | *Papaipema eryngii* | Insects | 20.33 |
| 3671 | No common name | *Agave eggersiana* | Flowering Plants | 1.66 |
| 3722 | Louisiana pine snake | *Pituophis ruthveni* | Reptiles | 15.13 |
| 3784 | No common name | *Sanicula sandwicensis* | Flowering Plants | 20.69 |
| 3833 | Georgia pigtoe | *Pleurobema hanleyianum* | Clams | 16.67 |
| 3842 | Anthony's riversnail | *Athearnia anthonyi* | Snails | 28.17 |
| 3849 | Jemez Mountains salamander | *Plethodon neomexicanus* | Amphibians | 59.11 |
| 3871 | `Akoko | *Euphorbia remyi var. kauaiensis* | Flowering Plants | 1.48 |
| 3879 | Arkansas darter | *Etheostoma cragini* | Fishes | 56.75 |
| 3990 | No common name | *Gonocalyx concolor* | Flowering Plants | 0.81 |
| 3999 | Ufa-halomtano | *Heritiera longipetiolata* | Flowering Plants | 2.33 |
| 4000 | Hawaiian picture-wing fly | *Drosophila digressa* | Insects | 3.50 |
| 4007 | No common name | *Pittosporum hawaiiense* | Flowering Plants | 11.83 |
| 4042 | Choctaw bean | *Villosa choctawensis* | Clams | 9.07 |
| 4064 | Gunnison sage-grouse | *Centrocercus minimus* | Birds | 64.93 |
| 4086 | Neosho Mucket | *Lampsilis rafinesqueana* | Clams | 57.56 |
| 4090 | Oregon spotted frog | *Rana pretiosa* | Amphibians | 32.58 |
| 4093 | green sturgeon | *Acipenser medirostris* | Fishes | 31.21 |
| 4112 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 25.70 |
| 4162 | Chupadera springsnail | *Pyrgulopsis chupaderae* | Snails | 66.88 |
| 4179 | Fickeisen plains cactus | *Pediocactus peeblesianus fickeiseniae* | Flowering Plants | 46.84 |
| 4210 | Altamaha Spinymussel | *Elliptio spinosa* | Clams | 7.23 |
| 4228 | Penasco least chipmunk | *Tamias minimus atristriatus* | Mammals | 64.73 |
| 4237 | Elfin-woods warbler | *Dendroica angelae* | Birds | 1.52 |
| 4248 | Grotto Sculpin | *Cottus specus* | Fishes | 33.50 |
| 4274 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 43.01 |
| 4296 | Streaked Horned lark | *Eremophila alpestris strigata* | Birds | 12.78 |
| 4300 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 56.11 |
| 4369 | Red wolf | *Canis rufus* | Mammals | 0.92 |
| 4411 | Alabama pearlshell | *Margaritifera marrianae* | Clams | 11.15 |
| 4431 | Pearl darter | *Percina aurora* | Fishes | 12.36 |
| 4479 | Phantom Springsnail | *Pyrgulopsis texana* | Snails | 3.95 |
| 4490 | Spectaclecase (mussel) | *Cumberlandia monodonta* | Clams | 20.25 |
| 4496 | Yellowfin madtom | *Noturus flavipinnis* | Fishes | 28.23 |
| 4508 | Miami Blue Butterfly | *Cyclargus (=Hemiargus) thomasi bethunebakeri* | Insects | 4.65 |
| 4533 | No common name | *Phyllostegia floribunda* | Flowering Plants | 4.89 |
| 4565 | White Bluffs bladderpod | *Physaria douglasii ssp. tuplashensis* | Flowering Plants | 3.36 |
| 4589 | Ko`oko`olau | *Bidens micrantha ctenophylla* | Flowering Plants | 9.97 |
| 4679 | Whooping crane | *Grus americana* | Birds | 50.06 |
| 4719 | Sperm whale | *Physeter catodon (=macrocephalus)* | Mammals | 3.01 |
| 4724 | Pagosa skyrocket | *Ipomopsis polyantha* | Flowering Plants | 57.78 |
| 4766 | Three Forks Springsnail | *Pyrgulopsis trivialis* | Snails | 99.27 |
| 4773 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 37.70 |
| 4799 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 6.67 |
| 4889 | Guam rail | *Rallus owstoni* | Birds | 2.38 |
| 4910 | Salt Creek Tiger beetle | *Cicindela nevadica lincolniana* | Insects | 25.06 |
| 4992 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 20.30 |
| 5064 | Clifton Cave beetle | *Pseudanophthalmus caecus* | Insects | 67.34 |
| 5065 | Black warrior (=Sipsey Fork) Waterdog | *Necturus alabamensis* | Amphibians | 20.10 |
| 5067 | Bartram's hairstreak Butterfly | *Strymon acis bartrami* | Insects | 1.21 |
| 5153 | Big Sandy crayfish | *Cambarus callainus* | Crustaceans | 11.64 |
| 5168 | Mariana wandering butterfly | *Vagrans egistina* | Insects | 2.35 |
| 5180 | Chum salmon | *Oncorhynchus keta* | Fishes | 11.42 |
| 5186 | Nanu | *Gardenia remyi* | Flowering Plants | 6.56 |
| 5210 | New Mexico meadow jumping mouse | *Zapus hudsonius luteus* | Mammals | 57.38 |
| 5212 | Northern Wormwood | *Artemisia campestris var. wormskioldii* | Flowering Plants | 7.55 |
| 5265 | Coho salmon | *Oncorhynchus (=Salmo) kisutch* | Fishes | 11.37 |
| 5273 | Florida prairie-clover | *Dalea carthagenensis floridana* | Flowering Plants | 1.11 |
| 5281 | Snuffbox mussel | *Epioblasma triquetra* | Clams | 21.85 |
| 5334 | `Ena`ena | *Pseudognaphalium (=Gnaphalium) sandwicensium var. molokaiense* | Flowering Plants | 5.73 |
| 5434 | Georgetown Salamander | *Eurycea naufragia* | Amphibians | 35.15 |
| 5468 | Frisco buckwheat | *Eriogonum soredium* | Flowering Plants | 94.45 |
| 5610 | Island marble Butterfly | *Euchloe ausonides insulanus* | Insects | 5.15 |
| 5623 | Humpback whale | *Megaptera novaeangliae* | Mammals | 0.92 |
| 5658 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 22.96 |
| 5709 | No common name | *Platydesma remyi* | Flowering Plants | 3.13 |
| 5714 | Kenk's amphipod | *Stygobromus kenki* | Crustaceans | 7.55 |
| 5715 | Cumberlandian combshell | *Epioblasma brevidens* | Clams | 28.18 |
| 5718 | Cumberland monkeyface (pearlymussel) | *Quadrula intermedia* | Clams | 28.18 |
| 5719 | Cumberland darter | *Etheostoma susanae* | Fishes | 13.97 |
| 5815 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 33.08 |
| 5833 | Shiny pigtoe | *Fusconaia cor* | Clams | 28.18 |
| 5856 | Turgid blossom (pearlymussel) | *Epioblasma turgidula* | Clams | 28.18 |
| 5981 | Smoky madtom | *Noturus baileyi* | Fishes | 11.47 |
| 5989 | Olive ridley sea turtle | *Lepidochelys olivacea* | Reptiles | 5.21 |
| 6062 | Rayed Bean | *Villosa fabalis* | Clams | 22.29 |
| 6097 | Black pine snake | *Pituophis melanoleucus lodingi* | Reptiles | 12.24 |
| 6138 | Phantom Tryonia | *Tryonia cheatumi* | Snails | 3.95 |
| 6176 | No common name | *Festuca hawaiiensis* | Flowering Plants | 48.30 |
| 6220 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 8.33 |
| 6223 | Tubercled blossom (pearlymussel) | *Epioblasma torulosa torulosa* | Clams | 28.18 |
| 6257 | No common name | *Stenogyne cranwelliae* | Flowering Plants | 4.27 |
| 6297 | Gila chub | *Gila intermedia* | Fishes | 67.54 |
| 6346 | Austin blind Salamander | *Eurycea waterlooensis* | Amphibians | 13.94 |
| 6490 | Umtanum Desert buckwheat | *Eriogonum codium* | Flowering Plants | 5.49 |
| 6503 | Duskytail darter | *Etheostoma percnurum* | Fishes | 11.47 |
| 6534 | Tapered pigtoe | *Fusconaia burkei* | Clams | 10.39 |
| 6557 | diamond Darter | *Crystallaria cincotta* | Fishes | 3.02 |
| 6578 | Coho salmon | *Oncorhynchus (=Salmo) kisutch* | Fishes | 28.25 |
| 6617 | Neches River rose-mallow | *Hibiscus dasycalyx* | Flowering Plants | 31.32 |
| 6618 | Xantus'sMurrelet | *Synthliboramphus hypoleucus* | Birds | 10.26 |
| 6620 | Sonoyta mud turtle | *Kinosternon sonoriense longifemorale* | Reptiles | 22.38 |
| 6662 | Yellowcheek Darter | *Etheostoma moorei* | Fishes | 15.39 |
| 6672 | Georgia rockcress | *Arabis georgiana* | Flowering Plants | 13.06 |
| 6739 | Huachuca springsnail | *Pyrgulopsis thompsoni* | Snails | 42.25 |
| 6782 | Guadalupe fescue | *Festuca ligulata* | Flowering Plants | 4.21 |
| 6841 | Slabside Pearlymussel | *Pleuronaia dolabelloides* | Clams | 28.67 |
| 6843 | Sockeye salmon | *Oncorhynchus (=Salmo) nerka* | Fishes | 1.36 |
| 6870 | Popolo | *Solanum nelsonii* | Flowering Plants | 3.84 |
| 6901 | Yellow-billed Cuckoo | *Coccyzus americanus* | Birds | 47.03 |
| 6966 | Coho salmon | *Oncorhynchus (=Salmo) kisutch* | Fishes | 17.42 |
| 6969 | Haha | *Cyanea marksii* | Flowering Plants | 10.56 |
| 7054 | Acuna Cactus | *Echinomastus erectocentrus var. acunensis* | Flowering Plants | 50.90 |
| 7067 | Holei | *Ochrosia haleakalae* | Flowering Plants | 33.76 |
| 7091 | Winged Mapleleaf | *Quadrula fragosa* | Clams | 28.18 |
| 7115 | Steller sea lion | *Eumetopias jubatus* | Mammals | 3.26 |
| 7116 | Maui reedgrass | *Calamagrostis expansa* | Flowering Plants | 5.05 |
| 7134 | Tatum Cave beetle | *Pseudanophthalmus parvus* | Insects | 41.47 |
| 7150 | Chucky Madtom | *Noturus crypticus* | Fishes | 51.91 |
| 7167 | Kentucky glade cress | *Leavenworthia exigua laciniata* | Flowering Plants | 14.31 |
| 7177 | Narrow pigtoe | *Fusconaia escambia* | Clams | 10.48 |
| 7220 | DeBeque phacelia | *Phacelia submutica* | Flowering Plants | 61.80 |
| 7254 | No common name | *Phyllostegia stachyoides* | Flowering Plants | 12.25 |
| 7264 | Hirst Brothers' Panic grass | *Dichanthelium (=Panicum) hirstii* | Flowering Plants | 2.13 |
| 7280 | `aku | *Cyanea tritomantha* | Flowering Plants | 4.86 |
| 7332 | Spring pygmy sunfish | *Elassoma alabamae* | Fishes | 21.89 |
| 7342 | Whooping crane | *Grus americana* | Birds | 23.06 |
| 7349 | Southern sandshell | *Hamiota australis* | Clams | 10.78 |
| 7363 | Round Ebonyshell | *Fusconaia rotulata* | Clams | 9.89 |
| 7372 | Suwannee moccasinshell | *Medionidus walkeri* | Clams | 11.28 |
| 7482 | Striped newt | *Notophthalmus perstriatus* | Amphibians | 10.82 |
| 7495 | Taylor's (=whulge) Checkerspot | *Euphydryas editha taylori* | Insects | 24.80 |
| 7512 | Cumberland bean (pearlymussel) | *Villosa trabalis* | Clams | 28.18 |
| 7572 | Black-footed ferret | *Mustela nigripes* | Mammals | 73.09 |
| 7590 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 24.68 |
| 7610 | Salado Salamander | *Eurycea chisholmensis* | Amphibians | 39.32 |
| 7617 | Ko`oko`olau | *Bidens campylotheca pentamera* | Flowering Plants | 6.00 |
| 7670 | Smalleye Shiner | *Notropis buccula* | Fishes | 28.10 |
| 7800 | Eastern Massasauga (=rattlesnake) | *Sistrurus catenatus* | Reptiles | 14.44 |
| 7805 | `Awikiwiki | *Canavalia pubescens* | Flowering Plants | 6.95 |
| 7816 | Sheepnose Mussel | *Plethobasus cyphyus* | Clams | 16.30 |
| 7834 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 10.31 |
| 7847 | Ozark Hellbender | *Cryptobranchus alleganiensis bishopi* | Amphibians | 24.79 |
| 7855 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 42.48 |
| 7886 | No common name | *Polyscias bisattenuata* | Flowering Plants | 4.88 |
| 7892 | Haha | *Cyanea asplenifolia* | Flowering Plants | 2.13 |
| 7949 | Southern kidneyshell | *Ptychobranchus jonesi* | Clams | 10.24 |
| 7989 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 63.33 |
| 7992 | Ostler's peppergrass | *Lepidium ostleri* | Flowering Plants | 94.45 |
| 8083 | Florida leafwing Butterfly | *Anaea troglodyta floridalis* | Insects | 2.26 |
| 8172 | Diminutive Amphipod | *Gammarus hyalleloides* | Crustaceans | 4.00 |
| 8181 | Johnson's seagrass | *Halophila johnsonii* | Flowering Plants | 0.70 |
| 8231 | Jollyville Plateau Salamander | *Eurycea tonkawae* | Amphibians | 24.97 |
| 8241 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 19.69 |
| 8277 | Ko`oko`olau | *Bidens campylotheca waihoiensis* | Flowering Plants | 6.00 |
| 8278 | Sockeye salmon | *Oncorhynchus (=Salmo) nerka* | Fishes | 56.45 |
| 8349 | Purple Cat's paw (=Purple Cat's paw pearlymussel) | *Epioblasma obliquata obliquata* | Clams | 28.18 |
| 8356 | Birdwing pearlymussel | *Lemiox rimosus* | Clams | 28.18 |
| 8386 | Hawaiian (='lo) Hawk | *Buteo solitarius* | Birds | 16.43 |
| 8389 | Pahrump poolfish | *Empetrichthys latos* | Fishes | 48.25 |
| 8392 | Missouri bladderpod | *Physaria filiformis* | Flowering Plants | 36.91 |
| 8395 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 35.46 |
| 8434 | Black mudalia | *Elimia melanoides* | Snails | 36.85 |
| 8442 | Sicklefin redhorse | *Moxostoma sp.* | Fishes | 4.53 |
| 8462 | White Abalone | *Haliotis sorenseni* | Snails | 2.12 |
| 8503 | Casey's June Beetle | *Dinacoma caseyi* | Insects | 8.78 |
| 8561 | Headwater chub | *Gila nigra* | Fishes | 62.55 |
| 8621 | Red knot | *Calidris canutus rufa* | Birds | 36.64 |
| 8683 | Olympia pocket gopher | *Thomomys mazama pugetensis* | Mammals | 13.48 |
| 8684 | Tenino pocket gopher | *Thomomys mazama tumuli* | Mammals | 13.48 |
| 8685 | Yelm pocket gopher | *Thomomys mazama yelmensis* | Mammals | 13.48 |
| 8765 | Berry Cave salamander | *Gyrinophilus gulolineatus* | Amphibians | 27.48 |
| 8861 | Polar bear | *Ursus maritimus* | Mammals | 17.07 |
| 8921 | Boulder darter | *Etheostoma wapiti* | Fishes | 28.90 |
| 8962 | Mariana fruit Bat (=Mariana flying fox) | *Pteropus mariannus mariannus* | Mammals | 1.53 |
| 9021 | Coho salmon | *Oncorhynchus (=Salmo) kisutch* | Fishes | 10.31 |
| 9061 | Spotfin Chub | *Erimonax monachus* | Fishes | 28.90 |
| 9122 | northern aplomado falcon | *Falco femoralis septentrionalis* | Birds | 68.68 |
| 9126 | Killer whale | *Orcinus orca* | Mammals | 1.76 |
| 9220 | Laurel dace | *Chrosomus saylori* | Fishes | 22.43 |
| 9338 | Pariette cactus | *Sclerocactus brevispinus* | Flowering Plants | 51.23 |
| 9432 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 7.40 |
| 9487 | Appalachian monkeyface (pearlymussel) | *Quadrula sparsa* | Clams | 31.92 |
| 9488 | Birdwing pearlymussel | *Lemiox rimosus* | Clams | 31.92 |
| 9489 | Cracking pearlymussel | *Hemistena lata* | Clams | 31.92 |
| 9490 | Cumberland bean (pearlymussel) | *Villosa trabalis* | Clams | 31.92 |
| 9491 | Cumberlandian combshell | *Epioblasma brevidens* | Clams | 31.92 |
| 9492 | Cumberland monkeyface (pearlymussel) | *Quadrula intermedia* | Clams | 31.92 |
| 9493 | Dromedary pearlymussel | *Dromus dromas* | Clams | 31.92 |
| 9494 | Fanshell | *Cyprogenia stegaria* | Clams | 31.92 |
| 9495 | Finerayed pigtoe | *Fusconaia cuneolus* | Clams | 31.92 |
| 9496 | Orangefoot pimpleback (pearlymussel) | *Plethobasus cooperianus* | Clams | 31.92 |
| 9497 | Oyster mussel | *Epioblasma capsaeformis* | Clams | 31.92 |
| 9498 | Ring pink (mussel) | *Obovaria retusa* | Clams | 31.92 |
| 9499 | Rough pigtoe | *Pleurobema plenum* | Clams | 31.92 |
| 9500 | Shiny pigtoe | *Fusconaia cor* | Clams | 31.92 |
| 9501 | White wartyback (pearlymussel) | *Plethobasus cicatricosus* | Clams | 31.92 |
| 9502 | Duskytail darter | *Etheostoma percnurum* | Fishes | 31.91 |
| 9503 | Pygmy madtom | *Noturus stanauli* | Fishes | 31.91 |
| 9504 | Slender chub | *Erimystax cahni* | Fishes | 31.91 |
| 9505 | Spotfin Chub | *Erimonax monachus* | Fishes | 31.91 |
| 9506 | Yellowfin madtom | *Noturus flavipinnis* | Fishes | 31.91 |
| 9507 | Anthony's riversnail | *Athearnia anthonyi* | Snails | 31.91 |
| 9694 | Arizona Treefrog | *Hyla wrightorum* | Amphibians | 42.26 |
| 9707 | Loggerhead sea turtle | *Caretta caretta* | Reptiles | 1.52 |
| 9725 | Florida bonneted bat | *Eumops floridanus* | Mammals | 12.04 |
| 9929 | Gierisch mallow | *Sphaeralcea gierischii* | Flowering Plants | 97.77 |
| 9941 | Loggerhead sea turtle | *Caretta caretta* | Reptiles | 1.52 |
| 9943 | Reticulated flatwoods salamander | *Ambystoma bishopi* | Amphibians | 7.34 |
| 9965 | Wright's marsh thistle | *Cirsium wrightii* | Flowering Plants | 65.86 |
| 9967 | Texas fawnsfoot | *Truncilla macrodon* | Clams | 45.33 |
| 9968 | Texas pimpleback | *Quadrula petrina* | Clams | 23.19 |
| 9969 | Smooth pimpleback | *Quadrula houstonensis* | Clams | 40.01 |
| 10007 | Puerto Rico harlequin butterfly | *Atlantea tulita* | Insects | 3.75 |
| 10010 | Gray wolf | *Canis lupus* | Mammals | 66.08 |
| 10021 | Red-crowned parrot | *Amazona viridigenalis* | Birds | 22.54 |
| 10028 | Frisco clover | *Trifolium friscanum* | Flowering Plants | 85.65 |
| 10034 | Uinta Basin hookless cactus | *Sclerocactus wetlandicus* | Flowering Plants | 63.29 |
| 10037 | Bull Trout | *Salvelinus confluentus* | Fishes | 11.41 |
| 10038 | Texas fatmucket | *Lampsilis bracteata* | Clams | 15.05 |
| 10039 | Golden orb | *Quadrula aurea* | Clams | 33.79 |
| 10043 | Northern Long-Eared Bat | *Myotis septentrionalis* | Mammals | 25.07 |
| 10052 | Rio Grande Silvery Minnow | *Hybognathus amarus* | Fishes | 31.09 |
| 10060 | Kentucky arrow darter | *Etheostoma spilotum* | Fishes | 13.74 |
| 10076 | Vandenberg monkeyflower | *Diplacus vandenbergensis* | Flowering Plants | 39.87 |
| 10077 | Atlantic salmon | *Salmo salar* | Fishes | 2.89 |
| 10124 | Whooping crane | *Grus americana* | Birds | 8.47 |
| 10130 | Arapahoe snowfly | *Arsapnia arapahoe* | Insects | 67.16 |
| 10141 | Sonoran pronghorn | *Antilocapra americana sonoriensis* | Mammals | 33.09 |
| 10144 | beluga whale | *Delphinapterus leucas* | Mammals | 0.54 |
| 10145 | North Pacific Right Whale | *Eubalaena japonica* | Mammals | 1.52 |
| 10147 | Poweshiek skipperling | *Oarisma poweshiek* | Insects | 24.77 |
| 10150 | Eulachon | *Thaleichthys pacificus* | Fishes | 24.82 |
| 10161 | American burying beetle | *Nicrophorus americanus* | Insects | 47.37 |
| 10178 | red tree vole | *Arborimus longicaudus* | Mammals | 7.83 |
| 10223 | haha nui | *Cyanea horrida* | Flowering Plants | 15.51 |
| 10224 | haha | *Cyanea magnicalyx* | Flowering Plants | 4.18 |
| 10229 | sea bean | *Mucuna sloanei persericea* | Flowering Plants | 1.57 |
| 10230 | No common name | *Phyllostegia haliakalae* | Flowering Plants | 13.21 |
| 10231 | No common name | *Phyllostegia pilosa* | Flowering Plants | 10.98 |
| 10234 | No common name | *Stenogyne kauaulaensis* | Flowering Plants | 14.18 |
| 10290 | Robust spineflower | *Chorizanthe robusta var. robusta* | Flowering Plants | 17.68 |
| 10297 | Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | Fishes | 7.44 |
| 10298 | Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | Fishes | 7.44 |
| 10299 | Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | Fishes | 7.44 |
| 10300 | Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | Fishes | 7.44 |
| 10301 | Atlantic sturgeon | *Acipenser oxyrinchus oxyrinchus* | Fishes | 7.44 |
| 10381 | Beared Seal | *Erignathus barbatus* | Mammals | 0.86 |
| 10479 | kookoolau | *Bidens hillebrandiana ssp. hillebrandiana* | Flowering Plants | 1.84 |
| 10480 | haiwale | *Cyrtandra nanawaleensis* | Flowering Plants | 0.99 |
| 10481 | haiwale | *Cyrtandra wagneri* | Flowering Plants | 33.94 |
| 10483 | No common name | *Schiedea diffusa ssp. macraei* | Flowering Plants | 2.78 |
| 10484 | Mexican wolf | *Canis lupus baileyi* | Mammals | 59.99 |
| 10485 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.00 |
| 10517 | Sierra Nevada Yellow-legged Frog | *Rana sierrae* | Amphibians | 49.89 |
| 10583 | Menzies ballart | *Exocarpos menziesii* | Flowering Plants | 26.88 |
| 10584 | No common name | *Santalum involutum* | Flowering Plants | 5.67 |
| 10585 | No common name | *Sicyos lanceoloideus* | Flowering Plants | 0.66 |
| 10588 | No common name | *Cyanea kauaulaensis* | Flowering Plants | 5.58 |
| 10591 | No common name | *Schiedea diffusa subsp. diffusa* | Flowering Plants | 1.94 |
| 10592 | No common name | *Kadua haupuensis* | Flowering Plants | 5.67 |
| 10593 | No common name | *Lepidium orbiculare* | Flowering Plants | 10.48 |
| 10599 | No common name | *Labordia lorenciana* | Flowering Plants | 5.67 |
| 10700 | false killer whale | *Pseudorca crassidens* | Mammals | 2.17 |
| 10719 | Cebello halumtano | *Bulbophyllum guamense* | Flowering Plants | 2.35 |
| 10720 | No common name | *Dendrobium guamense* | Flowering Plants | 3.43 |
| 10723 | No common name | *Maesa walkeri* | Flowering Plants | 2.35 |
| 10724 | No common name | *Nervilia jacksoniae* | Flowering Plants | 2.35 |
| 10728 | No common name | *Tuberolabium guamense* | Flowering Plants | 2.35 |
| 10733 | Scalloped Hammerhead Shark | *Sphyrna lewini* | Fishes | 6.93 |
| 10734 | Scalloped Hammerhead Shark | *Sphyrna lewini* | Fishes | 6.93 |
| 10736 | Scalloped Hammerhead Shark | *Sphyrna lewini* | Fishes | 6.93 |
| 10910 | Topeka shiner | *Notropis topeka (=tristis)* | Fishes | 52.22 |
| 11175 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.00 |
| 11176 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.00 |
| 11191 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.57 |
| 11192 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.57 |
| 11193 | Green sea turtle | *Chelonia mydas* | Reptiles | 3.00 |
| 11201 | Guyandotte River crayfish | *Cambarus veteranus* | Crustaceans | 5.96 |
| 11260 | Sierra Nevada red fox | *Vulpes vulpes necator* | Mammals | 42.50 |
| 11262 | longfin smelt | *Spirinchus thaleichthys* | Fishes | 16.32 |
| 11333 | Maui nukupuu | *Hemignathus affinis* | Birds | 5.58 |
| NMFS125 | grouper Nassau | *Epinephelus striatus* | Fishes | 2.53 |
| NMFS134 | grouper Gulf | *Mycteroperca jordani* | Fishes | 8.25 |
| NMFS137 | cusk | *Brosme brosme* | Fishes | 11.24 |
| NMFS139 | seahorse dwarf | *Hippocampus zosterae* | Fishes | 23.07 |
| NMFS159 | seal Pacific harbor (1 candidate DPS) | *Phoca vitulina richardii* | Mammals | 33.07 |
| NMFS166 | shad Alabama | *Alosa alabamae* | Fishes | 17.84 |
| NMFS173 | ray reef manta | *Manta alfredi* | Fishes | 26.41 |
| NMFS174 | ray giant manta | *Manta birostris* | Fishes | 26.41 |
| NMFS175 | shark oceanic whitetip | *Carcharhinus longimanus* | Fishes | 26.41 |
| NMFS178 | whale Bryde's (1 candidate DPS) | *Balaenoptera edeni* | Mammals | 26.41 |
| NMFS180 | whale humpback (4 DPSs) | *Megaptera novaeangliae* | Mammals | 0.92 |
| NMFS181 | whale humpback (4 DPSs) | *Megaptera novaeangliae* | Mammals | 0.92 |

**Supplemental Table B 4-4.2. Species with critical habitat overlapping with use sites for cattle ear tags.**

| **EntityID** | **Common Name** | **Scientific Name** | **Taxon** | **% Overlap** |
| --- | --- | --- | --- | --- |
| 12 | Gray wolf | *Canis lupus* | Mammals | 0.61 |
| 16 | Morro Bay kangaroo rat | *Dipodomys heermanni morroensis* | Mammals | 6.74 |
| 18 | Jaguar | *Panthera onca* | Mammals | 79.50 |
| 24 | Canada Lynx | *Lynx canadensis* | Mammals | 17.74 |
| 27 | Virginia big-eared bat | *Corynorhinus (=Plecotus) townsendii virginianus* | Mammals | 9.49 |
| 33 | Woodland caribou | *Rangifer tarandus caribou* | Mammals | 0.87 |
| 34 | Choctawhatchee beach mouse | *Peromyscus polionotus allophrys* | Mammals | 0.84 |
| 37 | Fresno kangaroo rat | *Dipodomys nitratoides exilis* | Mammals | 72.65 |
| 41 | Alabama beach mouse | *Peromyscus polionotus ammobates* | Mammals | 0.93 |
| 43 | Mount Graham red squirrel | *Tamiasciurus hudsonicus grahamensis* | Mammals | 100.42 |
| 52 | Preble's meadow jumping mouse | *Zapus hudsonius preblei* | Mammals | 51.80 |
| 54 | St. Andrew beach mouse | *Peromyscus polionotus peninsularis* | Mammals | 0.96 |
| 56 | Peninsular bighorn sheep | *Ovis canadensis nelsoni* | Mammals | 5.96 |
| 57 | Sierra Nevada bighorn sheep | *Ovis canadensis sierrae* | Mammals | 7.86 |
| 58 | Buena Vista Lake ornate Shrew | *Sorex ornatus relictus* | Mammals | 3.69 |
| 63 | San Bernardino Merriam's kangaroo rat | *Dipodomys merriami parvus* | Mammals | 29.74 |
| 66 | California condor | *Gymnogyps californianus* | Birds | 43.60 |
| 67 | Whooping crane | *Grus americana* | Birds | 17.17 |
| 79 | Palila (honeycreeper) | *Loxioides bailleui* | Birds | 3.16 |
| 110 | Mississippi sandhill crane | *Grus canadensis pulla* | Birds | 3.49 |
| 118 | Mariana (=aga) Crow | *Corvus kubaryi* | Birds | 0.60 |
| 123 | Least Bell's vireo | *Vireo bellii pusillus* | Birds | 15.84 |
| 129 | Mexican spotted owl | *Strix occidentalis lucida* | Birds | 70.23 |
| 130 | Piping Plover | *Charadrius melodus* | Birds | 9.31 |
| 131 | Piping Plover | *Charadrius melodus* | Birds | 0.98 |
| 132 | Western snowy plover | *Charadrius alexandrinus nivosus* | Birds | 11.22 |
| 142 | Northern spotted owl | *Strix occidentalis caurina* | Birds | 20.54 |
| 143 | Marbled murrelet | *Brachyramphus marmoratus* | Birds | 1.44 |
| 145 | Coastal California gnatcatcher | *Polioptila californica californica* | Birds | 22.07 |
| 149 | Southwestern willow flycatcher | *Empidonax traillii extimus* | Birds | 33.07 |
| 166 | New Mexican ridge-nosed rattlesnake | *Crotalus willardi obscurus* | Reptiles | 99.69 |
| 170 | Plymouth Redbelly Turtle | *Pseudemys rubriventris bangsi* | Reptiles | 2.92 |
| 183 | Alameda whipsnake (=striped racer) | *Masticophis lateralis euryxanthus* | Reptiles | 35.77 |
| 185 | Desert tortoise | *Gopherus agassizii* | Reptiles | 16.92 |
| 190 | Houston toad | *Bufo houstonensis* | Amphibians | 23.79 |
| 199 | Frosted Flatwoods salamander | *Ambystoma cingulatum* | Amphibians | 0.61 |
| 203 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 55.83 |
| 204 | Arroyo (=arroyo southwestern) toad | *Anaxyrus californicus* | Amphibians | 37.38 |
| 205 | California red-legged frog | *Rana draytonii* | Amphibians | 39.21 |
| 206 | Chiricahua leopard frog | *Rana chiricahuensis* | Amphibians | 62.36 |
| 207 | Mountain yellow-legged frog | *Rana muscosa* | Amphibians | 6.72 |
| 208 | dusky gopher frog | *Rana sevosa* | Amphibians | 2.11 |
| 209 | Humpback chub | *Gila cypha* | Fishes | 34.48 |
| 212 | Maryland darter | *Etheostoma sellare* | Fishes | 25.81 |
| 215 | Colorado pikeminnow (=squawfish) | *Ptychocheilus lucius* | Fishes | 60.39 |
| 228 | Fountain darter | *Etheostoma fonticola* | Fishes | 12.85 |
| 234 | Woundfin | *Plagopterus argentissimus* | Fishes | 59.10 |
| 235 | Snail darter | *Percina tanasi* | Fishes | 32.16 |
| 236 | Alabama cavefish | *Speoplatyrhinus poulsoni* | Fishes | 22.51 |
| 237 | Spotfin Chub | *Erimonax monachus* | Fishes | 20.81 |
| 238 | Leopard darter | *Percina pantherina* | Fishes | 11.98 |
| 239 | Slackwater darter | *Etheostoma boschungi* | Fishes | 39.84 |
| 242 | Cape Fear shiner | *Notropis mekistocholas* | Fishes | 25.80 |
| 243 | Waccamaw silverside | *Menidia extensa* | Fishes | 4.52 |
| 246 | Slender chub | *Erimystax cahni* | Fishes | 24.46 |
| 247 | Yellowfin madtom | *Noturus flavipinnis* | Fishes | 34.14 |
| 248 | Little Kern golden trout | *Oncorhynchus aguabonita whitei* | Fishes | 28.47 |
| 249 | Bonytail chub | *Gila elegans* | Fishes | 45.25 |
| 250 | San Marcos gambusia | *Gambusia georgei* | Fishes | 12.85 |
| 252 | Alabama sturgeon | *Scaphirhynchus suttkusi* | Fishes | 10.05 |
| 253 | Borax Lake chub | *Gila boraxobius* | Fishes | 74.81 |
| 255 | Sonora chub | *Gila ditaenia* | Fishes | 99.06 |
| 256 | Virgin River Chub | *Gila seminuda (=robusta)* | Fishes | 59.10 |
| 257 | Niangua darter | *Etheostoma nianguae* | Fishes | 43.15 |
| 258 | Smoky madtom | *Noturus baileyi* | Fishes | 0.79 |
| 259 | Yaqui catfish | *Ictalurus pricei* | Fishes | 17.60 |
| 262 | Owens Tui Chub | *Gila bicolor ssp. snyderi* | Fishes | 76.68 |
| 263 | Yaqui chub | *Gila purpurea* | Fishes | 17.60 |
| 266 | Desert dace | *Eremichthys acros* | Fishes | 97.75 |
| 272 | Devils River minnow | *Dionda diaboli* | Fishes | 3.66 |
| 273 | Loach minnow | *Tiaroga cobitis* | Fishes | 80.08 |
| 276 | Beautiful shiner | *Cyprinella formosa* | Fishes | 17.60 |
| 279 | Pecos bluntnose shiner | *Notropis simus pecosensis* | Fishes | 65.34 |
| 280 | Big Spring spinedace | *Lepidomeda mollispinis pratensis* | Fishes | 97.91 |
| 281 | Little Colorado spinedace | *Lepidomeda vittata* | Fishes | 70.12 |
| 282 | White River spinedace | *Lepidomeda albivallis* | Fishes | 86.43 |
| 283 | Hiko White River springfish | *Crenichthys baileyi grandis* | Fishes | 94.40 |
| 284 | Railroad Valley springfish | *Crenichthys nevadae* | Fishes | 61.93 |
| 285 | White River springfish | *Crenichthys baileyi baileyi* | Fishes | 97.21 |
| 287 | June sucker | *Chasmistes liorus* | Fishes | 2.84 |
| 288 | Lost River sucker | *Deltistes luxatus* | Fishes | 45.35 |
| 290 | Razorback sucker | *Xyrauchen texanus* | Fishes | 44.64 |
| 291 | Shortnose Sucker | *Chasmistes brevirostris* | Fishes | 60.70 |
| 292 | Warner sucker | *Catostomus warnerensis* | Fishes | 66.87 |
| 293 | Amber darter | *Percina antesella* | Fishes | 26.43 |
| 294 | Conasauga logperch | *Percina jenkinsi* | Fishes | 24.95 |
| 296 | Spikedace | *Meda fulgida* | Fishes | 81.16 |
| 299 | Arkansas River shiner | *Notropis girardi* | Fishes | 55.53 |
| 301 | Bull Trout | *Salvelinus confluentus* | Fishes | 28.71 |
| 305 | Delta smelt | *Hypomesus transpacificus* | Fishes | 22.58 |
| 306 | Tidewater goby | *Eucyclogobius newberryi* | Fishes | 14.89 |
| 309 | Rio Grande Silvery Minnow | *Hybognathus amarus* | Fishes | 30.68 |
| 311 | Topeka shiner | *Notropis topeka (=tristis)* | Fishes | 12.53 |
| 312 | Santa Ana sucker | *Catostomus santaanae* | Fishes | 10.32 |
| 314 | White sturgeon | *Acipenser transmontanus* | Fishes | 2.37 |
| 316 | Vermilion darter | *Etheostoma chermocki* | Fishes | 15.56 |
| 318 | Purple bean | *Villosa perpurpurea* | Clams | 24.41 |
| 344 | Rough rabbitsfoot | *Quadrula cylindrica strigillata* | Clams | 25.93 |
| 353 | Cumberlandian combshell | *Epioblasma brevidens* | Clams | 28.12 |
| 354 | Appalachian elktoe | *Alasmidonta raveneliana* | Clams | 7.68 |
| 355 | Cumberland elktoe | *Alasmidonta atropurpurea* | Clams | 14.97 |
| 357 | Orangenacre mucket | *Lampsilis perovalis* | Clams | 14.50 |
| 358 | Oyster mussel | *Epioblasma capsaeformis* | Clams | 28.12 |
| 365 | Southern acornshell | *Epioblasma othcaloogensis* | Clams | 16.49 |
| 366 | Purple bankclimber (mussel) | *Elliptoideus sloatianus* | Clams | 9.72 |
| 367 | Upland combshell | *Epioblasma metastriata* | Clams | 18.11 |
| 370 | Carolina heelsplitter | *Lasmigona decorata* | Clams | 22.89 |
| 371 | Oval pigtoe | *Pleurobema pyriforme* | Clams | 11.51 |
| 372 | Finelined pocketbook | *Lampsilis altilis* | Clams | 16.70 |
| 373 | Shinyrayed pocketbook | *Lampsilis subangulata* | Clams | 10.98 |
| 375 | Fat threeridge (mussel) | *Amblema neislerii* | Clams | 9.74 |
| 377 | Ovate clubshell | *Pleurobema perovatum* | Clams | 14.79 |
| 378 | Southern clubshell | *Pleurobema decisum* | Clams | 15.48 |
| 379 | Triangular Kidneyshell | *Ptychobranchus greenii* | Clams | 16.25 |
| 380 | Alabama moccasinshell | *Medionidus acutissimus* | Clams | 14.81 |
| 381 | Coosa moccasinshell | *Medionidus parvulus* | Clams | 17.67 |
| 382 | Dark pigtoe | *Pleurobema furvum* | Clams | 15.53 |
| 383 | Southern pigtoe | *Pleurobema georgianum* | Clams | 17.67 |
| 384 | Gulf moccasinshell | *Medionidus penicillatus* | Clams | 11.31 |
| 385 | Ochlockonee moccasinshell | *Medionidus simpsonianus* | Clams | 5.68 |
| 386 | Chipola slabshell | *Elliptio chipolaensis* | Clams | 11.08 |
| 387 | Morro shoulderband (=Banded dune) snail | *Helminthoglypta walkeriana* | Snails | 7.08 |
| 406 | Tumbling Creek cavesnail | *Antrobia culveri* | Snails | 59.14 |
| 426 | Quino checkerspot butterfly | *Euphydryas editha quino (=E. e. wrighti)* | Insects | 21.53 |
| 431 | Oregon silverspot butterfly | *Speyeria zerene hippolyta* | Insects | 2.72 |
| 432 | Palos Verdes blue butterfly | *Glaucopsyche lygdamus palosverdesensis* | Insects | 10.30 |
| 435 | Delta green ground beetle | *Elaphrus viridis* | Insects | 93.27 |
| 436 | Valley elderberry longhorn beetle | *Desmocerus californicus dimorphus* | Insects | 11.14 |
| 438 | Bay checkerspot butterfly | *Euphydryas editha bayensis* | Insects | 57.88 |
| 445 | Hine's emerald dragonfly | *Somatochlora hineana* | Insects | 5.29 |
| 446 | Blackburn's sphinx moth | *Manduca blackburni* | Insects | 2.82 |
| 450 | Fender's blue butterfly | *Icaricia icarioides fenderi* | Insects | 74.46 |
| 451 | Laguna Mountains skipper | *Pyrgus ruralis lagunae* | Insects | 53.81 |
| 453 | Comal Springs riffle beetle | *Heterelmis comalensis* | Insects | 0.74 |
| 454 | Comal Springs dryopid beetle | *Stygoparnus comalensis* | Insects | 2.07 |
| 458 | Zayante band-winged grasshopper | *Trimerotropis infantilis* | Insects | 3.92 |
| 459 | [no common name] Beetle | *Rhadine infernalis* | Insects | 1.48 |
| 460 | Helotes mold beetle | *Batrisodes venyivi* | Insects | 1.41 |
| 461 | [no common name] Beetle | *Rhadine exilis* | Insects | 2.10 |
| 468 | Spruce-fir moss spider | *Microhexura montivaga* | Arachnids | 3.22 |
| 471 | Madla's Cave Meshweaver | *Cicurina madla* | Arachnids | 0.74 |
| 474 | Braken Bat Cave Meshweaver | *Cicurina venii* | Arachnids | 2.76 |
| 477 | Peck's cave amphipod | *Stygobromus (=Stygonectes) pecki* | Crustaceans | 1.45 |
| 482 | Kentucky cave shrimp | *Palaemonias ganteri* | Crustaceans | 0.53 |
| 490 | Conservancy fairy shrimp | *Branchinecta conservatio* | Crustaceans | 92.93 |
| 491 | Longhorn fairy shrimp | *Branchinecta longiantenna* | Crustaceans | 79.91 |
| 492 | Riverside fairy shrimp | *Streptocephalus woottoni* | Crustaceans | 39.23 |
| 493 | Vernal pool fairy shrimp | *Branchinecta lynchi* | Crustaceans | 79.23 |
| 494 | Vernal pool tadpole shrimp | *Lepidurus packardi* | Crustaceans | 85.70 |
| 495 | San Diego fairy shrimp | *Branchinecta sandiegonensis* | Crustaceans | 44.88 |
| 496 | San Diego thornmint | *Acanthomintha ilicifolia* | Flowering Plants | 2.48 |
| 497 | No common name | *Achyranthes mutica* | Flowering Plants | 2.10 |
| 500 | San Diego ambrosia | *Ambrosia pumila* | Flowering Plants | 22.89 |
| 506 | Bear Valley sandwort | *Arenaria ursina* | Flowering Plants | 43.77 |
| 507 | Braunton's milk-vetch | *Astragalus brauntonii* | Flowering Plants | 4.47 |
| 511 | Ventura Marsh Milk-vetch | *Astragalus pycnostachyus var. lanosissimus* | Flowering Plants | 1.04 |
| 514 | Nevin's barberry | *Berberis nevinii* | Flowering Plants | 16.85 |
| 516 | Thread-leaved brodiaea | *Brodiaea filifolia* | Flowering Plants | 38.38 |
| 522 | Fleshy owl's-clover | *Castilleja campestris ssp. succulenta* | Flowering Plants | 92.15 |
| 523 | Ash-grey paintbrush | *Castilleja cinerea* | Flowering Plants | 48.27 |
| 527 | Hoover's spurge | *Chamaesyce hooveri* | Flowering Plants | 88.09 |
| 528 | Purple amole | *Chlorogalum purpureum* | Flowering Plants | 73.39 |
| 530 | Suisun thistle | *Cirsium hydrophilum var. hydrophilum* | Flowering Plants | 14.26 |
| 531 | La Graciosa thistle | *Cirsium loncholepis* | Flowering Plants | 44.56 |
| 533 | `Oha wai | *Clermontia drepanomorpha* | Flowering Plants | 2.10 |
| 534 | Soft bird's-beak | *Cordylanthus mollis ssp. mollis* | Flowering Plants | 2.24 |
| 538 | No common name | *Delissea undulata* | Flowering Plants | 1.67 |
| 539 | Baker's larkspur | *Delphinium bakeri* | Flowering Plants | 16.83 |
| 540 | Yellow larkspur | *Delphinium luteum* | Flowering Plants | 53.60 |
| 546 | Lompoc yerba santa | *Eriodictyon capitatum* | Flowering Plants | 8.80 |
| 548 | Southern mountain wild-buckwheat | *Eriogonum kennedyi var. austromontanum* | Flowering Plants | 44.46 |
| 554 | Colorado Butterfly plant | *Gaura neomexicana var. coloradensis* | Flowering Plants | 94.45 |
| 558 | Pecos (=puzzle =paradox) sunflower | *Helianthus paradoxus* | Flowering Plants | 10.45 |
| 559 | Otay tarplant | *Deinandra (=Hemizonia) conjugens* | Flowering Plants | 30.50 |
| 560 | Hau kuahiwi | *Hibiscadelphus giffardianus* | Flowering Plants | 2.10 |
| 561 | Hau kuahiwi | *Hibiscadelphus hualalaiensis* | Flowering Plants | 0.94 |
| 562 | Santa Cruz tarplant | *Holocarpha macradenia* | Flowering Plants | 47.68 |
| 566 | Contra Costa goldfields | *Lasthenia conjugens* | Flowering Plants | 68.64 |
| 569 | Zapata bladderpod | *Lesquerella thamnophila* | Flowering Plants | 10.24 |
| 576 | Willowy monardella | *Monardella viminea* | Flowering Plants | 12.17 |
| 580 | Colusa grass | *Neostapfia colusana* | Flowering Plants | 89.18 |
| 581 | No common name | *Neraudia ovata* | Flowering Plants | 2.10 |
| 582 | Hairy Orcutt grass | *Orcuttia pilosa* | Flowering Plants | 90.98 |
| 583 | Slender Orcutt grass | *Orcuttia tenuis* | Flowering Plants | 82.90 |
| 586 | Lyon's pentachaeta | *Pentachaeta lyonii* | Flowering Plants | 3.96 |
| 594 | San Bernardino bluegrass | *Poa atropurpurea* | Flowering Plants | 50.89 |
| 610 | Keck's Checker-mallow | *Sidalcea keckii* | Flowering Plants | 90.24 |
| 611 | Wenatchee Mountains checkermallow | *Sidalcea oregana var. calva* | Flowering Plants | 2.34 |
| 614 | California taraxacum | *Taraxacum californicum* | Flowering Plants | 23.97 |
| 621 | Mahoe | *Alectryon macrococcus* | Flowering Plants | 4.80 |
| 626 | Large-flowered fiddleneck | *Amsinckia grandiflora* | Flowering Plants | 90.25 |
| 630 | Braun's rock-cress | *Arabis perstellata* | Flowering Plants | 6.12 |
| 634 | Mauna Loa (=Ka'u) silversword | *Argyroxiphium kauense* | Flowering Plants | 2.10 |
| 635 | `Ahinahina | *Argyroxiphium sandwicense ssp. macrocephalum* | Flowering Plants | 0.83 |
| 645 | Ko`oko`olau | *Bidens micrantha ssp. kalealaha* | Flowering Plants | 1.20 |
| 648 | No common name | *Bonamia menziesii* | Flowering Plants | 1.20 |
| 659 | Kamanomano | *Cenchrus agrimonioides* | Flowering Plants | 1.78 |
| 660 | Spring-loving centaury | *Centaurium namophilum* | Flowering Plants | 0.60 |
| 671 | `Oha wai | *Clermontia lindseyana* | Flowering Plants | 2.34 |
| 673 | `Oha wai | *Clermontia pyrularia* | Flowering Plants | 2.10 |
| 674 | Kauila | *Colubrina oppositifolia* | Flowering Plants | 2.00 |
| 685 | Haha | *Cyanea mceldowneyi* | Flowering Plants | 0.53 |
| 686 | Haha | *Cyanea shipmanii* | Flowering Plants | 2.10 |
| 709 | Gypsum wild-buckwheat | *Eriogonum gypsophilum* | Flowering Plants | 100.87 |
| 710 | Cushenbury buckwheat | *Eriogonum ovalifolium var. vineum* | Flowering Plants | 48.43 |
| 717 | Nohoanu | *Geranium arboreum* | Flowering Plants | 4.75 |
| 736 | (=Native yellow hibiscus) ma`o hau hele | *Hibiscus brackenridgei* | Flowering Plants | 1.25 |
| 767 | Alani | *Melicope knudsenii* | Flowering Plants | 44.79 |
| 769 | Alani | *Melicope mucronulata* | Flowering Plants | 6.50 |
| 775 | Alani | *Melicope zahlbruckneri* | Flowering Plants | 2.10 |
| 779 | No common name | *Neraudia sericea* | Flowering Plants | 1.32 |
| 780 | `Aiea | *Nothocestrum breviflorum* | Flowering Plants | 2.10 |
| 782 | Kulu`i | *Nototrichium humile* | Flowering Plants | 2.19 |
| 786 | San Joaquin Orcutt grass | *Orcuttia inaequalis* | Flowering Plants | 87.53 |
| 787 | Sacramento Orcutt grass | *Orcuttia viscida* | Flowering Plants | 93.20 |
| 827 | San Francisco Peaks ragwort | *Packera franciscana* | Flowering Plants | 75.24 |
| 832 | Popolo ku mai | *Solanum incompletum* | Flowering Plants | 1.97 |
| 840 | Malheur wire-lettuce | *Stephanomeria malheurensis* | Flowering Plants | 90.01 |
| 858 | Greene's tuctoria | *Tuctoria greenei* | Flowering Plants | 90.58 |
| 859 | Solano grass | *Tuctoria mucronata* | Flowering Plants | 65.72 |
| 869 | A`e | *Zanthoxylum hawaiiense* | Flowering Plants | 2.81 |
| 870 | Texas wild-rice | *Zizania texana* | Flowering Plants | 2.10 |
| 871 | Todsen's pennyroyal | *Hedeoma todsenii* | Flowering Plants | 4.30 |
| 884 | Welsh's milkweed | *Asclepias welshii* | Flowering Plants | 19.88 |
| 886 | Coachella Valley milk-vetch | *Astragalus lentiginosus var. coachellae* | Flowering Plants | 6.61 |
| 887 | Fish Slough milk-vetch | *Astragalus lentiginosus var. piscinensis* | Flowering Plants | 69.93 |
| 888 | Heliotrope milk-vetch | *Astragalus montii* | Flowering Plants | 57.95 |
| 903 | Monterey spineflower | *Chorizanthe pungens var. pungens* | Flowering Plants | 15.46 |
| 916 | aku aku | *Cyanea platyphylla* | Flowering Plants | 2.10 |
| 917 | Haha | *Cyanea stictophylla* | Flowering Plants | 2.10 |
| 919 | Ha`iwale | *Cyrtandra giffardii* | Flowering Plants | 2.10 |
| 928 | Parish's daisy | *Erigeron parishii* | Flowering Plants | 39.84 |
| 939 | Nohoanu | *Geranium multiflorum* | Flowering Plants | 0.56 |
| 952 | Aupaka | *Isodendrion hosakae* | Flowering Plants | 2.10 |
| 958 | San Bernardino Mountains bladderpod | *Lesquerella kingii ssp. bernardina* | Flowering Plants | 11.02 |
| 961 | Nehe | *Lipochaeta kamolensis* | Flowering Plants | 2.19 |
| 972 | Spreading navarretia | *Navarretia fossalis* | Flowering Plants | 57.68 |
| 981 | No common name | *Phyllostegia mollis* | Flowering Plants | 1.60 |
| 993 | Lanai sandalwood (=`iliahi) | *Santalum haleakalae var. lanaiense* | Flowering Plants | 4.12 |
| 999 | Ohai | *Sesbania tomentosa* | Flowering Plants | 0.91 |
| 1001 | No common name | *Silene hawaiiensis* | Flowering Plants | 2.10 |
| 1010 | Kneeland Prairie penny-cress | *Thlaspi californicum* | Flowering Plants | 65.03 |
| 1020 | Holmgren milk-vetch | *Astragalus holmgreniorum* | Flowering Plants | 72.74 |
| 1027 | Mexican flannelbush | *Fremontodendron mexicanum* | Flowering Plants | 97.73 |
| 1030 | Huachuca water-umbel | *Lilaeopsis schaffneriana var. recurva* | Flowering Plants | 9.14 |
| 1032 | No common name | *Cyperus pennatiformis* | Flowering Plants | 1.94 |
| 1050 | Haha | *Cyanea hamatiflora ssp. carlsonii* | Flowering Plants | 2.10 |
| 1074 | Munz's onion | *Allium munzii* | Flowering Plants | 10.16 |
| 1081 | Butte County meadowfoam | *Limnanthes floccosa ssp. californica* | Flowering Plants | 90.99 |
| 1086 | Cushenbury milk-vetch | *Astragalus albens* | Flowering Plants | 52.11 |
| 1088 | Shivwits milk-vetch | *Astragalus ampullarioides* | Flowering Plants | 35.48 |
| 1092 | No common name | *Catesbaea melanocarpa* | Flowering Plants | 69.82 |
| 1102 | Haha | *Cyanea glabra* | Flowering Plants | 0.66 |
| 1111 | Ha`iwale | *Cyrtandra tintinnabula* | Flowering Plants | 2.10 |
| 1117 | Mehamehame | *Flueggea neowawraea* | Flowering Plants | 1.44 |
| 1118 | Kopa | *Hedyotis schlechtendahliana var. remyi* | Flowering Plants | 0.63 |
| 1119 | Gaviota Tarplant | *Deinandra increscens ssp. villosa* | Flowering Plants | 50.19 |
| 1126 | Kincaid's Lupine | *Lupinus sulphureus ssp. kincaidii* | Flowering Plants | 76.59 |
| 1132 | Alani | *Melicope adscendens* | Flowering Plants | 2.55 |
| 1134 | Cushenbury oxytheca | *Oxytheca parishii var. goodmaniana* | Flowering Plants | 2.48 |
| 1136 | Kiponapona | *Phyllostegia racemosa* | Flowering Plants | 2.10 |
| 1137 | No common name | *Phyllostegia velutina* | Flowering Plants | 2.10 |
| 1138 | No common name | *Phyllostegia warshaueri* | Flowering Plants | 2.10 |
| 1140 | Kuahiwi laukahi | *Plantago hawaiensis* | Flowering Plants | 2.10 |
| 1141 | Hala pepe | *Pleomele hawaiiensis* | Flowering Plants | 2.10 |
| 1151 | `Anunu | *Sicyos albus* | Flowering Plants | 2.10 |
| 1154 | No common name | *Spermolepis hawaiiensis* | Flowering Plants | 1.22 |
| 1159 | A`e | *Zanthoxylum dipetalum var. tomentosum* | Flowering Plants | 2.10 |
| 1171 | Yadon's piperia | *Piperia yadonii* | Flowering Plants | 0.84 |
| 1174 | Desert yellowhead | *Yermo xanthocephalus* | Flowering Plants | 96.25 |
| 1186 | Haha | *Cyanea hamatiflora ssp. hamatiflora* | Flowering Plants | 0.53 |
| 1189 | Golden sedge | *Carex lutea* | Flowering Plants | 4.08 |
| 1194 | No common name | *Asplenium fragile insulare* | Ferns and Allies | 0.61 |
| 1196 | Asplenium-leaved diellia | *Diellia erecta* | Ferns and Allies | 0.72 |
| 1198 | No common name | *Diplazium molokaiense* | Ferns and Allies | 0.56 |
| 1205 | Pauoa | *Ctenitis squamigera* | Ferns and Allies | 0.89 |
| 1208 | Wawae`iole | *Huperzia nutans* | Ferns and Allies | 2.51 |
| 1232 | Kamakahala | *Labordia tinifolia var. lanaiensis* | Flowering Plants | 0.57 |
| 1233 | Willamette daisy | *Erigeron decumbens* | Flowering Plants | 85.31 |
| 1246 | Roswell springsnail | *Pyrgulopsis roswellensis* | Snails | 1.90 |
| 1247 | Koster's springsnail | *Juturnia kosteri* | Snails | 1.90 |
| 1248 | [Unnamed] pomace fly | *Drosophila aglaia* | Insects | 2.38 |
| 1249 | [Unnamed] pomace fly | *Drosophila heteroneura* | Insects | 4.50 |
| 1258 | [Unnamed] pomace fly | *Drosophila ochrobasis* | Insects | 0.76 |
| 1261 | Noel's Amphipod | *Gammarus desperatus* | Crustaceans | 2.34 |
| 1262 | Large-flowered woolly Meadowfoam | *Limnanthes floccosa ssp. grandiflora* | Flowering Plants | 91.01 |
| 1263 | Cook's lomatium | *Lomatium cookii* | Flowering Plants | 35.46 |
| 1267 | Scotts Valley Polygonum | *Polygonum hickmanii* | Flowering Plants | 36.24 |
| 1283 | Parachute beardtongue | *Penstemon debilis* | Flowering Plants | 68.13 |
| 1349 | Ha`iwale | *Cyrtandra oxybapha* | Flowering Plants | 2.06 |
| 1369 | Fuzzy pigtoe | *Pleurobema strodeanum* | Clams | 12.02 |
| 1378 | Scotts Valley spineflower | *Chorizanthe robusta var. hartwegii* | Flowering Plants | 36.24 |
| 1400 | Texas golden Gladecress | *Leavenworthia texana* | Flowering Plants | 29.80 |
| 1509 | Chum salmon | *Oncorhynchus keta* | Fishes | 1.02 |
| 1559 | Fluted kidneyshell | *Ptychobranchus subtentum* | Clams | 29.90 |
| 1707 | Yosemite toad | *Anaxyrus canorus* | Amphibians | 48.54 |
| 1710 | Fleshy-fruit gladecress | *Leavenworthia crassa* | Flowering Plants | 64.53 |
| 1740 | Mountain yellow-legged frog | *Rana muscosa* | Amphibians | 7.21 |
| 1783 | Northern Mexican gartersnake | *Thamnophis eques megalops* | Reptiles | 47.22 |
| 1831 | Short's bladderpod | *Physaria globosa* | Flowering Plants | 3.54 |
| 1881 | Whorled Sunflower | *Helianthus verticillatus* | Flowering Plants | 14.01 |
| 1934 | Spotfin Chub | *Erimonax monachus* | Fishes | 20.81 |
| 2448 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 9.18 |
| 2458 | Webber Ivesia | *Ivesia webberi* | Flowering Plants | 70.21 |
| 2514 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 15.90 |
| 2528 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 6.14 |
| 2561 | Interrupted (=Georgia) Rocksnail | *Leptoxis foremani* | Snails | 16.44 |
| 2810 | Slickspot peppergrass | *Lepidium papilliferum* | Flowering Plants | 96.73 |
| 2823 | Franciscan manzanita | *Arctostaphylos franciscana* | Flowering Plants | 7.81 |
| 2842 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 19.83 |
| 2860 | Haha | *Cyanea obtusa* | Flowering Plants | 1.72 |
| 2934 | No common name | *Phyllostegia bracteata* | Flowering Plants | 0.52 |
| 3271 | Narrow-headed gartersnake | *Thamnophis rufipunctatus* | Reptiles | 52.03 |
| 3280 | Zuni bluehead Sucker | *Catostomus discobolus yarrowi* | Fishes | 13.46 |
| 3364 | Rough hornsnail | *Pleurocera foremani* | Snails | 17.23 |
| 3412 | Dakota Skipper | *Hesperia dacotae* | Insects | 61.34 |
| 3525 | Rush Darter | *Etheostoma phytophilum* | Fishes | 24.94 |
| 3596 | Sharpnose Shiner | *Notropis oxyrhynchus* | Fishes | 19.43 |
| 3645 | Rabbitsfoot | *Quadrula cylindrica cylindrica* | Clams | 20.91 |
| 3654 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 8.24 |
| 3833 | Georgia pigtoe | *Pleurobema hanleyianum* | Clams | 15.23 |
| 3849 | Jemez Mountains salamander | *Plethodon neomexicanus* | Amphibians | 69.28 |
| 4042 | Choctaw bean | *Villosa choctawensis* | Clams | 12.02 |
| 4064 | Gunnison sage-grouse | *Centrocercus minimus* | Birds | 65.79 |
| 4086 | Neosho Mucket | *Lampsilis rafinesqueana* | Clams | 52.55 |
| 4090 | Oregon spotted frog | *Rana pretiosa* | Amphibians | 18.85 |
| 4093 | green sturgeon | *Acipenser medirostris* | Fishes | 6.46 |
| 4112 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 16.68 |
| 4210 | Altamaha Spinymussel | *Elliptio spinosa* | Clams | 5.72 |
| 4274 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 14.59 |
| 4296 | Streaked Horned lark | *Eremophila alpestris strigata* | Birds | 27.60 |
| 4411 | Alabama pearlshell | *Margaritifera marrianae* | Clams | 10.91 |
| 4420 | Florida brickell-bush | *Brickellia mosieri* | Flowering Plants | 0.55 |
| 4565 | White Bluffs bladderpod | *Physaria douglasii ssp. tuplashensis* | Flowering Plants | 13.59 |
| 4724 | Pagosa skyrocket | *Ipomopsis polyantha* | Flowering Plants | 32.77 |
| 4766 | Three Forks Springsnail | *Pyrgulopsis trivialis* | Snails | 90.85 |
| 4773 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 72.51 |
| 4799 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 6.95 |
| 4910 | Salt Creek Tiger beetle | *Cicindela nevadica lincolniana* | Insects | 83.07 |
| 4992 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 7.81 |
| 5180 | Chum salmon | *Oncorhynchus keta* | Fishes | 6.35 |
| 5210 | New Mexico meadow jumping mouse | *Zapus hudsonius luteus* | Mammals | 72.98 |
| 5265 | Coho salmon | *Oncorhynchus (=Salmo) kisutch* | Fishes | 13.57 |
| 5434 | Georgetown Salamander | *Eurycea naufragia* | Amphibians | 25.92 |
| 5658 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 28.33 |
| 5719 | Cumberland darter | *Etheostoma susanae* | Fishes | 10.55 |
| 5815 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 33.42 |
| 5981 | Smoky madtom | *Noturus baileyi* | Fishes | 0.79 |
| 6220 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 4.59 |
| 6297 | Gila chub | *Gila intermedia* | Fishes | 68.60 |
| 6490 | Umtanum Desert buckwheat | *Eriogonum codium* | Flowering Plants | 1.68 |
| 6534 | Tapered pigtoe | *Fusconaia burkei* | Clams | 12.34 |
| 6557 | diamond Darter | *Crystallaria cincotta* | Fishes | 33.40 |
| 6617 | Neches River rose-mallow | *Hibiscus dasycalyx* | Flowering Plants | 4.94 |
| 6662 | Yellowcheek Darter | *Etheostoma moorei* | Fishes | 13.42 |
| 6672 | Georgia rockcress | *Arabis georgiana* | Flowering Plants | 5.00 |
| 6841 | Slabside Pearlymussel | *Pleuronaia dolabelloides* | Clams | 29.90 |
| 6901 | Yellow-billed Cuckoo | *Coccyzus americanus* | Birds | 24.23 |
| 7115 | Steller sea lion | *Eumetopias jubatus* | Mammals | 1.74 |
| 7150 | Chucky Madtom | *Noturus crypticus* | Fishes | 54.32 |
| 7167 | Kentucky glade cress | *Leavenworthia exigua laciniata* | Flowering Plants | 9.04 |
| 7177 | Narrow pigtoe | *Fusconaia escambia* | Clams | 11.77 |
| 7206 | Carter's small-flowered flax | *Linum carteri carteri* | Flowering Plants | 0.59 |
| 7220 | DeBeque phacelia | *Phacelia submutica* | Flowering Plants | 94.58 |
| 7349 | Southern sandshell | *Hamiota australis* | Clams | 12.02 |
| 7363 | Round Ebonyshell | *Fusconaia rotulata* | Clams | 11.04 |
| 7495 | Taylor's (=whulge) Checkerspot | *Euphydryas editha taylori* | Insects | 60.48 |
| 7590 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 2.62 |
| 7610 | Salado Salamander | *Eurycea chisholmensis* | Amphibians | 44.82 |
| 7617 | Ko`oko`olau | *Bidens campylotheca pentamera* | Flowering Plants | 0.57 |
| 7670 | Smalleye Shiner | *Notropis buccula* | Fishes | 19.43 |
| 7805 | `Awikiwiki | *Canavalia pubescens* | Flowering Plants | 2.19 |
| 7834 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 4.95 |
| 7949 | Southern kidneyshell | *Ptychobranchus jonesi* | Clams | 11.96 |
| 7989 | Steelhead | *Oncorhynchus (=Salmo) mykiss* | Fishes | 33.41 |
| 8231 | Jollyville Plateau Salamander | *Eurycea tonkawae* | Amphibians | 2.98 |
| 8241 | Chinook salmon | *Oncorhynchus (=Salmo) tshawytscha* | Fishes | 13.74 |
| 8395 | California tiger Salamander | *Ambystoma californiense* | Amphibians | 51.76 |
| 8503 | Casey's June Beetle | *Dinacoma caseyi* | Insects | 1.23 |
| 8683 | Olympia pocket gopher | *Thomomys mazama pugetensis* | Mammals | 3.71 |
| 8684 | Tenino pocket gopher | *Thomomys mazama tumuli* | Mammals | 76.22 |
| 8685 | Yelm pocket gopher | *Thomomys mazama yelmensis* | Mammals | 78.18 |
| 9061 | Spotfin Chub | *Erimonax monachus* | Fishes | 20.81 |
| 9126 | Killer whale | *Orcinus orca* | Mammals | 2.20 |
| 9220 | Laurel dace | *Chrosomus saylori* | Fishes | 20.95 |
| 9504 | Slender chub | *Erimystax cahni* | Fishes | 24.46 |
| 9707 | Loggerhead sea turtle | *Caretta caretta* | Reptiles | 2.16 |
| 9929 | Gierisch mallow | *Sphaeralcea gierischii* | Flowering Plants | 97.73 |
| 9943 | Reticulated flatwoods salamander | *Ambystoma bishopi* | Amphibians | 6.48 |
| 10013 | Black Abalone | *Haliotis cracherodii* | Snails | 0.52 |
| 10076 | Vandenberg monkeyflower | *Diplacus vandenbergensis* | Flowering Plants | 11.01 |
| 10077 | Atlantic salmon | *Salmo salar* | Fishes | 2.95 |
| 10147 | Poweshiek skipperling | *Oarisma poweshiek* | Insects | 36.34 |
| 10150 | Eulachon | *Thaleichthys pacificus* | Fishes | 2.55 |
| 10223 | haha nui | *Cyanea horrida* | Flowering Plants | 0.74 |
| 10228 | haiwale | *Cyrtandra ferripilosa* | Flowering Plants | 0.80 |
| 10290 | Robust spineflower | *Chorizanthe robusta var. robusta* | Flowering Plants | 23.73 |
| 10517 | Sierra Nevada Yellow-legged Frog | *Rana sierrae* | Amphibians | 30.25 |

**Supplemental Table B 4-4.3. Effects determinations for species that could potentially be exposed to diazinon only via cattle ear tag use. The only diazinon use that overlaps with the ranges of these species is cattle ear tags.**

| **Entity ID** | **Common Name** | **Scientific Name** | **Taxon** | **Determination** |
| --- | --- | --- | --- | --- |
| 57 | Sierra Nevada bighorn sheep | *Ovis canadensis sierrae* | Mammals | NLAA |
| 61 | Hualapai Mexican vole | *Microtus mexicanus hualpaiensis* | Mammals | NLAA |
| **79** | **Palila (honeycreeper)** | ***Loxioides bailleui*** | **Birds** | **LAA** |
| **112** | **Hawaii creeper** | ***Oreomystis mana*** | **Birds** | **LAA** |
| 115 | San Clemente loggerhead shrike | *Lanius ludovicianus mearnsi* | Birds | NLAA |
| 116 | San Clemente sage sparrow | *Amphispiza belli clementeae* | Birds | NLAA |
| 146 | Spectacled eider | *Somateria fischeri* | Birds | NLAA |
| 147 | Steller's Eider | *Polysticta stelleri* | Birds | NLAA |
| **198** | **Cheat Mountain salamander** | ***Plethodon nettingi*** | **Amphibians** | **LAA** |
| 211 | Moapa dace | *Moapa coriacea* | Fishes | NLAA |
| 220 | Apache trout | *Oncorhynchus apache* | Fishes | NLAA |
| 226 | Pahranagat roundtail chub | *Gila robusta jordani* | Fishes | NLAA |
| 227 | Kendall Warm Springs dace | *Rhinichthys osculus thermalis* | Fishes | NLAA |
| 265 | Clover Valley speckled dace | *Rhinichthys osculus oligoporus* | Fishes | NLAA |
| 266 | Desert dace | *Eremichthys acros* | Fishes | NLAA |
| 268 | Independence Valley speckled dace | *Rhinichthys osculus lethoporus* | Fishes | NLAA |
| 280 | Big Spring spinedace | *Lepidomeda mollispinis pratensis* | Fishes | NLAA |
| 281 | Little Colorado spinedace | *Lepidomeda vittata* | Fishes | NLAA |
| 282 | White River spinedace | *Lepidomeda albivallis* | Fishes | NLAA |
| 283 | Hiko White River springfish | *Crenichthys baileyi grandis* | Fishes | NLAA |
| 284 | Railroad Valley springfish | *Crenichthys nevadae* | Fishes | NLAA |
| 285 | White River springfish | *Crenichthys baileyi baileyi* | Fishes | NLAA |
| 434 | Pawnee montane skipper | *Hesperia leonardus montana* | Insects | NLAA |
| 488 | Cave crayfish | *Cambarus zophonastes* | Crustaceans | NLAA |
| 506 | Bear Valley sandwort | *Arenaria ursina* | Flowering Plants | NLAA |
| 523 | Ash-grey paintbrush | *Castilleja cinerea* | Flowering Plants | NLAA |
| 526 | Catalina Island mountain-mahogany | *Cercocarpus traskiae* | Flowering Plants | NLAA |
| 533 | `Oha wai | *Clermontia drepanomorpha* | Flowering Plants | NLAA |
| 538 | No common name | *Delissea undulata* | Flowering Plants | NLAA |
| 548 | Southern mountain wild-buckwheat | *Eriogonum kennedyi var. austromontanum* | Flowering Plants | NLAA |
| 560 | Hau kuahiwi | *Hibiscadelphus giffardianus* | Flowering Plants | NLAA |
| 561 | Hau kuahiwi | *Hibiscadelphus hualalaiensis* | Flowering Plants | NLAA |
| 571 | San Clemente Island woodland-star | *Lithophragma maximum* | Flowering Plants | NLAA |
| 597 | Wahane | *Pritchardia aylmer-robinsonii* | Flowering Plants | NLAA |
| 598 | Lo`ulu | *Pritchardia remota* | Flowering Plants | NLAA |
| 605 | No common name | *Schiedea sarmentosa* | Flowering Plants | NLAA |
| 614 | California taraxacum | *Taraxacum californicum* | Flowering Plants | NLAA |
| 634 | Mauna Loa (=Ka'u) silversword | *Argyroxiphium kauense* | Flowering Plants | NLAA |
| 638 | Sentry milk-vetch | *Astragalus cremnophylax var. cremnophylax* | Flowering Plants | NLAA |
| 640 | Osterhout milkvetch | *Astragalus osterhoutii* | Flowering Plants | NLAA |
| 644 | Virginia round-leaf birch | *Betula uber* | Flowering Plants | NLAA |
| 646 | Ko`oko`olau | *Bidens wiebkei* | Flowering Plants | NLAA |
| 657 | San Clemente Island indian paintbrush | *Castilleja grisea* | Flowering Plants | NLAA |
| 664 | 'Akoko | *Euphorbia halemanui* | Flowering Plants | NLAA |
| 673 | `Oha wai | *Clermontia pyrularia* | Flowering Plants | NLAA |
| 680 | Nellie cory cactus | *Coryphantha minima* | Flowering Plants | NLAA |
| 681 | Bunched cory cactus | *Coryphantha ramillosa* | Flowering Plants | NLAA |
| 685 | Haha | *Cyanea mceldowneyi* | Flowering Plants | NLAA |
| 686 | Haha | *Cyanea shipmanii* | Flowering Plants | NLAA |
| 692 | No common name | *Delissea rhytidosperma* | Flowering Plants | NLAA |
| 694 | San Clemente Island larkspur | *Delphinium variegatum ssp. kinkiense* | Flowering Plants | NLAA |
| 704 | Davis' green pitaya | *Echinocereus viridiflorus var. davisii* | Flowering Plants | NLAA |
| 710 | Cushenbury buckwheat | *Eriogonum ovalifolium var. vineum* | Flowering Plants | NLAA |
| 713 | Penland alpine fen mustard | *Eutrema penlandii* | Flowering Plants | NLAA |
| 717 | Nohoanu | *Geranium arboreum* | Flowering Plants | NLAA |
| 735 | Kauai hau kuahiwi | *Hibiscadelphus distans* | Flowering Plants | NLAA |
| 738 | Koki`o ke`oke`o | *Hibiscus waimeae ssp. hannerae* | Flowering Plants | NLAA |
| 746 | Koki`o | *Kokia drynarioides* | Flowering Plants | NLAA |
| 747 | Koki`o | *Kokia kauaiensis* | Flowering Plants | NLAA |
| 760 | San Clemente Island lotus (=broom) | *Acmispon dendroideus var. traskiae (=Lotus d. ssp. traskiae)* | Flowering Plants | NLAA |
| 762 | San Clemente Island bush-mallow | *Malacothamnus clementinus* | Flowering Plants | NLAA |
| 766 | Alani | *Melicope haupuensis* | Flowering Plants | NLAA |
| 775 | Alani | *Melicope zahlbruckneri* | Flowering Plants | NLAA |
| 776 | Ash Meadows blazingstar | *Mentzelia leucophylla* | Flowering Plants | NLAA |
| 778 | No common name | *Polyscias racemosa* | Flowering Plants | NLAA |
| 783 | Eureka Valley evening-primrose | *Oenothera avita ssp. eurekensis* | Flowering Plants | NLAA |
| 791 | Brady pincushion cactus | *Pediocactus bradyi* | Flowering Plants | NLAA |
| 793 | Peebles Navajo cactus | *Pediocactus peeblesianus var. peeblesianus* | Flowering Plants | NLAA |
| 798 | Texas trailing phlox | *Phlox nivalis ssp. texensis* | Flowering Plants | NLAA |
| 808 | Lo`ulu | *Pritchardia munroi* | Flowering Plants | NLAA |
| 810 | Kaulu | *Pteralyxia kauaiensis* | Flowering Plants | NLAA |
| 812 | Hinckley oak | *Quercus hinckleyi* | Flowering Plants | NLAA |
| 827 | San Francisco Peaks ragwort | *Packera franciscana* | Flowering Plants | NLAA |
| 829 | No common name | *Silene alexandri* | Flowering Plants | NLAA |
| 844 | Eureka Dune grass | *Swallenia alexandrae* | Flowering Plants | NLAA |
| 861 | Hawaiian vetch | *Vicia menziesii* | Flowering Plants | NLAA |
| 882 | `Ahinahina | *Argyroxiphium sandwicense ssp. sandwicense* | Flowering Plants | NLAA |
| 884 | Welsh's milkweed | *Asclepias welshii* | Flowering Plants | NLAA |
| 913 | Terlingua Creek cat's-eye | *Cryptantha crassipes* | Flowering Plants | NLAA |
| 925 | Chisos Mountain hedgehog Cactus | *Echinocereus chisoensis var. chisoensis* | Flowering Plants | NLAA |
| 928 | Parish's daisy | *Erigeron parishii* | Flowering Plants | NLAA |
| 939 | Nohoanu | *Geranium multiflorum* | Flowering Plants | NLAA |
| 941 | Ash Meadows gumplant | *Grindelia fraxinipratensis* | Flowering Plants | NLAA |
| 952 | Aupaka | *Isodendrion hosakae* | Flowering Plants | NLAA |
| 958 | San Bernardino Mountains bladderpod | *Lesquerella kingii ssp. bernardina* | Flowering Plants | NLAA |
| 962 | Nehe | *Lipochaeta micrantha* | Flowering Plants | NLAA |
| 986 | Mann's bluegrass | *Poa mannii* | Flowering Plants | NLAA |
| 1000 | Pedate checker-mallow | *Sidalcea pedata* | Flowering Plants | NLAA |
| 1001 | No common name | *Silene hawaiiensis* | Flowering Plants | NLAA |
| 1009 | Slender-petaled mustard | *Thelypodium stenopetalum* | Flowering Plants | NLAA |
| 1010 | Kneeland Prairie penny-cress | *Thlaspi californicum* | Flowering Plants | NLAA |
| 1028 | Virginia sneezeweed | *Helenium virginicum* | Flowering Plants | NLAA |
| 1050 | Haha | *Cyanea hamatiflora ssp. carlsonii* | Flowering Plants | NLAA |
| 1060 | Holei | *Ochrosia kilaueaensis* | Flowering Plants | NLAA |
| 1066 | No common name | *Schiedea haleakalensis* | Flowering Plants | NLAA |
| 1068 | No common name | *Schiedea lydgatei* | Flowering Plants | NLAA |
| 1079 | Penland beardtongue | *Penstemon penlandii* | Flowering Plants | NLAA |
| 1086 | Cushenbury milk-vetch | *Astragalus albens* | Flowering Plants | NLAA |
| 1103 | Haha | *Cyanea mannii* | Flowering Plants | NLAA |
| 1110 | Ha`iwale | *Cyrtandra limahuliensis* | Flowering Plants | NLAA |
| 1120 | Holy Ghost ipomopsis | *Ipomopsis sancti-spiritus* | Flowering Plants | NLAA |
| 1134 | Cushenbury oxytheca | *Oxytheca parishii var. goodmaniana* | Flowering Plants | NLAA |
| 1138 | No common name | *Phyllostegia warshaueri* | Flowering Plants | NLAA |
| 1140 | Kuahiwi laukahi | *Plantago hawaiensis* | Flowering Plants | NLAA |
| 1147 | No common name | *Schiedea kauaiensis* | Flowering Plants | NLAA |
| 1178 | Kamakahala | *Labordia tinifolia var. wahiawaensis* | Flowering Plants | NLAA |
| 1186 | Haha | *Cyanea hamatiflora ssp. hamatiflora* | Flowering Plants | NLAA |
| 1188 | `Oha wai | *Clermontia samuelii* | Flowering Plants | NLAA |
| 1258 | [Unnamed] pomace fly | *Drosophila ochrobasis* | Insects | NLAA |
| 1502 | `Akoko | *Euphorbia eleanoriae* | Flowering Plants | NLAA |
| 1607 | `Akoko | *Euphorbia remyi var. remyi* | Flowering Plants | NLAA |
| 1623 | `Anunu | *Sicyos macrophyllus* | Flowering Plants | NLAA |
| **1707** | **Yosemite toad** | ***Anaxyrus canorus*** | **Amphibians** | **LAA** |
| 1737 | California condor | *Gymnogyps californianus* | Birds | NLAA |
| 2567 | Skiff milkvetch | *Astragalus microcymbus* | Flowering Plants | NLAA |
| 2682 | Makou | *Ranunculus hawaiensis* | Flowering Plants | NLAA |
| 2683 | `Ala `ala wai nui | *Peperomia subpetiolata* | Flowering Plants | NLAA |
| 2778 | Kamakahala | *Labordia helleri* | Flowering Plants | NLAA |
| 2780 | Fremont County rockcress | *Boechera pusilla* | Flowering Plants | NLAA |
| 2862 | Icebox Cave beetle | *Pseudanophthalmus frigidus* | Insects | See Chapter 4 |
| 2934 | No common name | *Phyllostegia bracteata* | Flowering Plants | NLAA |
| 3049 | Na`ena`e | *Dubautia plantaginea magnifolia* | Flowering Plants | NLAA |
| 3133 | Bowhead whale | *Balaena mysticetus* | Mammals | See Chapter 4 |
| 3784 | No common name | *Sanicula sandwicensis* | Flowering Plants | NLAA |
| 3871 | `Akoko | *Euphorbia remyi var. kauaiensis* | Flowering Plants | NLAA |
| 4179 | Fickeisen plains cactus | *Pediocactus peeblesianus fickeiseniae* | Flowering Plants | NLAA |
| 4766 | Three Forks Springsnail | *Pyrgulopsis trivialis* | Snails | NLAA |
| 5709 | No common name | *Platydesma remyi* | Flowering Plants | NLAA |
| 6176 | No common name | *Festuca hawaiiensis* | Flowering Plants | NLAA |
| 6257 | No common name | *Stenogyne cranwelliae* | Flowering Plants | NLAA |
| 6969 | Haha | *Cyanea marksii* | Flowering Plants | NLAA |
| 7254 | No common name | *Phyllostegia stachyoides* | Flowering Plants | NLAA |
| 8389 | Pahrump poolfish | *Empetrichthys latos* | Fishes | NLAA |
| 8861 | Polar bear | *Ursus maritimus* | Mammals | See Chapter 4 |
| 9001 | Mount Charleston blue butterfly | *Icaricia (Plebejus) shasta charlestonensis* | Insects | NLAA |
| 10144 | beluga whale | *Delphinapterus leucas* | Mammals | See Chapter 4 |
| 10224 | haha | *Cyanea magnicalyx* | Flowering Plants | NLAA |
| 10229 | sea bean | *Mucuna sloanei persericea* | Flowering Plants | NLAA |
| 10234 | No common name | *Stenogyne kauaulaensis* | Flowering Plants | NLAA |
| 10381 | Beared Seal | *Erignathus barbatus* | Mammals | See Chapter 4 |
| 10593 | No common name | *Lepidium orbiculare* | Flowering Plants | NLAA |

**Supplemental Table B 4-4.4. Effects determinations for critical habitat that could potentially be exposed to diazinon only via cattle ear tag use. The only diazinon use that overlaps with the ranges of these species is cattle ear tags.**

| **Entity ID** | **Common Name** | **Scientific Name** | **Taxon** | **Determination** |
| --- | --- | --- | --- | --- |
| **27** | **Virginia big-eared bat** | ***Corynorhinus (=Plecotus) townsendii virginianus*** | **Mammals** | **LAA** |
| 34 | Choctawhatchee beach mouse | *Peromyscus polionotus allophrys* | Mammals | NLAA |
| 54 | St. Andrew beach mouse | *Peromyscus polionotus peninsularis* | Mammals | NLAA |
| 57 | Sierra Nevada bighorn sheep | *Ovis canadensis sierrae* | Mammals | NLAA |
| **79** | **Palila (honeycreeper)** | ***Loxioides bailleui*** | **Birds** | **LAA** |
| 185 | Desert tortoise | *Gopherus agassizii* | Reptiles | NLAA |
| 199 | Frosted Flatwoods salamander | *Ambystoma cingulatum* | Amphibians | NLAA |
| 266 | Desert dace | *Eremichthys acros* | Fishes | NLAA |
| 280 | Big Spring spinedace | *Lepidomeda mollispinis pratensis* | Fishes | NLAA |
| 281 | Little Colorado spinedace | *Lepidomeda vittata* | Fishes | NLAA |
| 282 | White River spinedace | *Lepidomeda albivallis* | Fishes | NLAA |
| 283 | Hiko White River springfish | *Crenichthys baileyi grandis* | Fishes | NLAA |
| 284 | Railroad Valley springfish | *Crenichthys nevadae* | Fishes | NLAA |
| 285 | White River springfish | *Crenichthys baileyi baileyi* | Fishes | NLAA |
| 406 | Tumbling Creek cavesnail | *Antrobia culveri* | Snails | NLAA |
| 431 | Oregon silverspot butterfly | *Speyeria zerene hippolyta* | Insects | NLAA |
| 432 | Palos Verdes blue butterfly | *Glaucopsyche lygdamus palosverdesensis* | Insects | NLAA |
| 446 | Blackburn's sphinx moth | *Manduca blackburni* | Insects | NLAA |
| 460 | Helotes mold beetle | *Batrisodes venyivi* | Insects | See Chapter 4 |
| 474 | Braken Bat Cave Meshweaver | *Cicurina venii* | Arachnids | See Chapter 4 |
| 496 | San Diego thornmint | *Acanthomintha ilicifolia* | Flowering Plants | NLAA |
| 497 | No common name | *Achyranthes mutica* | Flowering Plants | NLAA |
| 506 | Bear Valley sandwort | *Arenaria ursina* | Flowering Plants | NLAA |
| 507 | Braunton's milk-vetch | *Astragalus brauntonii* | Flowering Plants | NLAA |
| 514 | Nevin's barberry | *Berberis nevinii* | Flowering Plants | NLAA |
| 523 | Ash-grey paintbrush | *Castilleja cinerea* | Flowering Plants | NLAA |
| 533 | `Oha wai | *Clermontia drepanomorpha* | Flowering Plants | NLAA |
| 538 | No common name | *Delissea undulata* | Flowering Plants | NLAA |
| 548 | Southern mountain wild-buckwheat | *Eriogonum kennedyi var. austromontanum* | Flowering Plants | NLAA |
| 559 | Otay tarplant | *Deinandra (=Hemizonia) conjugens* | Flowering Plants | NLAA |
| 560 | Hau kuahiwi | *Hibiscadelphus giffardianus* | Flowering Plants | NLAA |
| 561 | Hau kuahiwi | *Hibiscadelphus hualalaiensis* | Flowering Plants | NLAA |
| 576 | Willowy monardella | *Monardella viminea* | Flowering Plants | NLAA |
| 581 | No common name | *Neraudia ovata* | Flowering Plants | NLAA |
| 594 | San Bernardino bluegrass | *Poa atropurpurea* | Flowering Plants | NLAA |
| 614 | California taraxacum | *Taraxacum californicum* | Flowering Plants | NLAA |
| 621 | Mahoe | *Alectryon macrococcus* | Flowering Plants | NLAA |
| 626 | Large-flowered fiddleneck | *Amsinckia grandiflora* | Flowering Plants | NLAA |
| 630 | Braun's rock-cress | *Arabis perstellata* | Flowering Plants | NLAA |
| 634 | Mauna Loa (=Ka'u) silversword | *Argyroxiphium kauense* | Flowering Plants | NLAA |
| 635 | `Ahinahina | *Argyroxiphium sandwicense ssp. macrocephalum* | Flowering Plants | NLAA |
| 645 | Ko`oko`olau | *Bidens micrantha ssp. kalealaha* | Flowering Plants | NLAA |
| 648 | No common name | *Bonamia menziesii* | Flowering Plants | NLAA |
| 659 | Kamanomano | *Cenchrus agrimonioides* | Flowering Plants | NLAA |
| 660 | Spring-loving centaury | *Centaurium namophilum* | Flowering Plants | NLAA |
| 671 | `Oha wai | *Clermontia lindseyana* | Flowering Plants | NLAA |
| 673 | `Oha wai | *Clermontia pyrularia* | Flowering Plants | NLAA |
| 674 | Kauila | *Colubrina oppositifolia* | Flowering Plants | NLAA |
| 685 | Haha | *Cyanea mceldowneyi* | Flowering Plants | NLAA |
| 686 | Haha | *Cyanea shipmanii* | Flowering Plants | NLAA |
| 710 | Cushenbury buckwheat | *Eriogonum ovalifolium var. vineum* | Flowering Plants | NLAA |
| 717 | Nohoanu | *Geranium arboreum* | Flowering Plants | NLAA |
| 767 | Alani | *Melicope knudsenii* | Flowering Plants | NLAA |
| 769 | Alani | *Melicope mucronulata* | Flowering Plants | NLAA |
| 775 | Alani | *Melicope zahlbruckneri* | Flowering Plants | NLAA |
| 779 | No common name | *Neraudia sericea* | Flowering Plants | NLAA |
| 780 | `Aiea | *Nothocestrum breviflorum* | Flowering Plants | NLAA |
| 782 | Kulu`i | *Nototrichium humile* | Flowering Plants | NLAA |
| 827 | San Francisco Peaks ragwort | *Packera franciscana* | Flowering Plants | NLAA |
| 832 | Popolo ku mai | *Solanum incompletum* | Flowering Plants | NLAA |
| 840 | Malheur wire-lettuce | *Stephanomeria malheurensis* | Flowering Plants | NLAA |
| 869 | A`e | *Zanthoxylum hawaiiense* | Flowering Plants | NLAA |
| 871 | Todsen's pennyroyal | *Hedeoma todsenii* | Flowering Plants | NLAA |
| 884 | Welsh's milkweed | *Asclepias welshii* | Flowering Plants | NLAA |
| 888 | Heliotrope milk-vetch | *Astragalus montii* | Flowering Plants | NLAA |
| 916 | aku aku | *Cyanea platyphylla* | Flowering Plants | NLAA |
| 917 | Haha | *Cyanea stictophylla* | Flowering Plants | NLAA |
| 919 | Ha`iwale | *Cyrtandra giffardii* | Flowering Plants | NLAA |
| 928 | Parish's daisy | *Erigeron parishii* | Flowering Plants | NLAA |
| 939 | Nohoanu | *Geranium multiflorum* | Flowering Plants | NLAA |
| 952 | Aupaka | *Isodendrion hosakae* | Flowering Plants | NLAA |
| 958 | San Bernardino Mountains bladderpod | *Lesquerella kingii ssp. bernardina* | Flowering Plants | NLAA |
| 961 | Nehe | *Lipochaeta kamolensis* | Flowering Plants | NLAA |
| 981 | No common name | *Phyllostegia mollis* | Flowering Plants | NLAA |
| 993 | Lanai sandalwood (=`iliahi) | *Santalum haleakalae var. lanaiense* | Flowering Plants | NLAA |
| 1001 | No common name | *Silene hawaiiensis* | Flowering Plants | NLAA |
| 1010 | Kneeland Prairie penny-cress | *Thlaspi californicum* | Flowering Plants | NLAA |
| 1020 | Holmgren milk-vetch | *Astragalus holmgreniorum* | Flowering Plants | NLAA |
| 1027 | Mexican flannelbush | *Fremontodendron mexicanum* | Flowering Plants | NLAA |
| 1032 | No common name | *Cyperus pennatiformis* | Flowering Plants | NLAA |
| 1050 | Haha | *Cyanea hamatiflora ssp. carlsonii* | Flowering Plants | NLAA |
| 1074 | Munz's onion | *Allium munzii* | Flowering Plants | NLAA |
| 1086 | Cushenbury milk-vetch | *Astragalus albens* | Flowering Plants | NLAA |
| 1092 | No common name | *Catesbaea melanocarpa* | Flowering Plants | NLAA |
| 1102 | Haha | *Cyanea glabra* | Flowering Plants | NLAA |
| 1111 | Ha`iwale | *Cyrtandra tintinnabula* | Flowering Plants | NLAA |
| 1117 | Mehamehame | *Flueggea neowawraea* | Flowering Plants | NLAA |
| 1132 | Alani | *Melicope adscendens* | Flowering Plants | NLAA |
| 1134 | Cushenbury oxytheca | *Oxytheca parishii var. goodmaniana* | Flowering Plants | NLAA |
| 1136 | Kiponapona | *Phyllostegia racemosa* | Flowering Plants | NLAA |
| 1137 | No common name | *Phyllostegia velutina* | Flowering Plants | NLAA |
| 1138 | No common name | *Phyllostegia warshaueri* | Flowering Plants | NLAA |
| 1140 | Kuahiwi laukahi | *Plantago hawaiensis* | Flowering Plants | NLAA |
| 1141 | Hala pepe | *Pleomele hawaiiensis* | Flowering Plants | NLAA |
| 1151 | `Anunu | *Sicyos albus* | Flowering Plants | NLAA |
| 1154 | No common name | *Spermolepis hawaiiensis* | Flowering Plants | NLAA |
| 1159 | A`e | *Zanthoxylum dipetalum var. tomentosum* | Flowering Plants | NLAA |
| 1163 | No common name | *Phyllostegia mannii* | Flowering Plants | NLAA |
| 1174 | Desert yellowhead | *Yermo xanthocephalus* | Flowering Plants | NLAA |
| 1186 | Haha | *Cyanea hamatiflora ssp. hamatiflora* | Flowering Plants | NLAA |
| 1194 | No common name | *Asplenium fragile insulare* | Ferns and Allies | NLAA |
| 1196 | Asplenium-leaved diellia | *Diellia erecta* | Ferns and Allies | NLAA |
| 1198 | No common name | *Diplazium molokaiense* | Ferns and Allies | NLAA |
| 1205 | Pauoa | *Ctenitis squamigera* | Ferns and Allies | NLAA |
| 1207 | Wawae`iole | *Huperzia mannii* | Ferns and Allies | NLAA |
| 1208 | Wawae`iole | *Huperzia nutans* | Ferns and Allies | NLAA |
| 1248 | [Unnamed] pomace fly | *Drosophila aglaia* | Insects | NLAA |
| 1249 | [Unnamed] pomace fly | *Drosophila heteroneura* | Insects | NLAA |
| 1258 | [Unnamed] pomace fly | *Drosophila ochrobasis* | Insects | NLAA |
| 1283 | Parachute beardtongue | *Penstemon debilis* | Flowering Plants | NLAA |
| 1349 | Ha`iwale | *Cyrtandra oxybapha* | Flowering Plants | NLAA |
| 1400 | Texas golden Gladecress | *Leavenworthia texana* | Flowering Plants | NLAA |
| **1707** | **Yosemite toad** | ***Anaxyrus canorus*** | **Amphibians** | **LAA** |
| 1710 | Fleshy-fruit gladecress | *Leavenworthia crassa* | Flowering Plants | NLAA |
| 1831 | Short's bladderpod | *Physaria globosa* | Flowering Plants | NLAA |
| 1968 | Haha | *Cyanea kunthiana* | Flowering Plants | NLAA |
| 2860 | Haha | *Cyanea obtusa* | Flowering Plants | NLAA |
| 2934 | No common name | *Phyllostegia bracteata* | Flowering Plants | NLAA |
| 4238 | No common name | *Wikstroemia villosa* | Flowering Plants | NLAA |
| 4766 | Three Forks Springsnail | *Pyrgulopsis trivialis* | Snails | NLAA |
| 6617 | Neches River rose-mallow | *Hibiscus dasycalyx* | Flowering Plants | NLAA |
| 7610 | Salado Salamander | *Eurycea chisholmensis* | Amphibians | NLAA |
| 7617 | Ko`oko`olau | *Bidens campylotheca pentamera* | Flowering Plants | NLAA |
| 7805 | `Awikiwiki | *Canavalia pubescens* | Flowering Plants | NLAA |
| 9001 | Mount Charleston blue butterfly | *Icaricia (Plebejus) shasta charlestonensis* | Insects | NLAA |
| 10223 | haha nui | *Cyanea horrida* | Flowering Plants | NLAA |
| 10228 | haiwale | *Cyrtandra ferripilosa* | Flowering Plants | NLAA |
| **10517** | **Sierra Nevada Yellow-legged Frog** | ***Rana sierrae*** | **Amphibians** | **LAA** |

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15. Reported oral LD90 (0.68 ug a.i./bee) converted to mg a.i./kg by dividing value by 0.128 g bw of bee. [↑](#footnote-ref-15)
16. https://www.scisland.org/aboutsci/score-development-history.pdf [↑](#footnote-ref-16)
17. Concentration based values are used in the previous section for birds. There is a dose-based sublethal threshold available for reptiles exposed to chlorpyrifos; however, that value is not used here. [↑](#footnote-ref-17)
18. The LD50 for the bullfrog is a non-definitive value of >2000 mg a.i./kg-bw reported. The mallard and pheasant LD50 values are 3.54 and 4.33 mg a.i./kg-bw, respectively. [↑](#footnote-ref-18)
19. No data are available to estimate the proportion of pesticide that volatilizes. Available flux data from field studies (Majewski *et al*. 1990) indicate that hourly flux rates from soil are much lower (i.e., <0.000067 to 0.025%). Therefore, a value of 1% is considered conservative. [↑](#footnote-ref-19)
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