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Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Newcomb's Snail; Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

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RIN 1018–AH95

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Newcomb's Snail

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), designate critical habitat for the Newcomb's snail *(Erinna newcombi)* pursuant to the Endangered Species Act of 1973, as amended (Act). The designated critical habitat consists of eight stream segments and associated tributaries, springs and seeps, and adjacent riparian areas on the island of Kauai, Hawaii, totaling 19.76 kilometers (12.28 miles) of stream channel and 1,812 hectares (4,479 acres).

Critical habitat identifies specific areas, both occupied and unoccupied, that are essential to the conservation of a listed species and that may require special management considerations or protection. All areas designated as critical habitat for the Newcomb's snail contain the primary constituent elements (habitat components) essential for the conservation of the species. This final rule takes into consideration the potential economic and other effects of designating critical habitat for the Newcomb's snail.

We solicited data and comments from the public on all aspects of the proposed rule and draft economic analysis. We revised the proposal and the draft economic analysis to incorporate or address new information received from public comments on the proposed critical habitat designation and the draft economic analysis on the proposed designation and new scientific and commercial information made available since the proposal was published.

DATES: This rule is effective September 19, 2002.

ADDRESSES: Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection, by appointment, during normal business hours at the Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Room 3–122, Box 50088, Honolulu, HI 96850.

FOR FURTHER INFORMATION CONTACT: Paul Henson, Field Supervisor, Pacific Islands Fish and Wildlife Office, at the above address (telephone: 808/541–3441; facsimile: 808/541–3470).

SUPPLEMENTARY INFORMATION:

Background

The Hawaiian archipelago consists of eight main islands and the numerous shoals and atolls of the northwestern Hawaiian Islands. The islands were formed sequentially by basaltic lava that emerged from the earth's crust located near the current southeastern coast of the island of Hawaii (Stearns 1985). Ongoing erosion has formed steep-walled valleys with well-developed soils and stream systems throughout the chain. Kauai, geologically the oldest and most northwesterly of the eight main islands, is characterized by deep valleys, high rainfall, abundant vegetation, and numerous streams and springs.

The island of Kauai is 1,430 square kilometers (km^2) (552 square miles (mi^2)) in size, the fourth largest of the main Hawaiian islands. Most of the land mass of Kauai was formed between 5.6 and 3.6 million years ago from one or more large shield volcanoes. More recent, secondary eruptions occurred over the eastern portion of the island as recently as the Pleistocene epoch, approximately 0.6 million years ago. Due to the age and climate of the island, Kauai is heavily eroded, with numerous steep, water-carved valleys and gulches.

The prevailing northeasterly trade winds are typically laden with moisture in the central Pacific latitudes where Kauai is located. Substantial precipitation is brought to the windward and interior portions of the island as a result of uplift and cooling of the warm, moist surface airmass as it flows over the steep topography of the island. The high-elevation areas in the vicinity of the Alakai Plateau such as Mt. Waialeale (1,600 meters (m), 5,248 feet (ft)), are among the rainiest places on earth, receiving an average of 11.3 m (444 inches (in)) of precipitation annually (Juvik and Juvik 1998). This large volume of rainwater flows to perennial and intermittent streams and wetlands, and infiltrates into the island's aquifers. The west and southwest coastal areas of the island lie in the rain shadow of the Alakai Plateau and interior uplands, and these areas receive considerably less rain.

Kauai has at least 61 streams that are considered perennial, and a similarly large number of intermittent streams (Hawaii Stream Assessment (HSA)1990). The Hanalei River, for example, is 27 km (17 mi) in length and is the largest stream system in the State by volume, with a long-term mean discharge of 216 cubic feet per second (cfs) (6.12 cubic meters per second (cms), 34-year average calculated from 1964 to 1997). The headwaters of the Hanalei River are near the summit of Mt. Waialeale and the river flows towards Hanalei Bay on the island's north shore. The basalts that form the bulk of the main Hawaiian islands are porous and permeable, which facilitates infiltration and storage of ground water. A lens-shaped body of ground water (the basal lens) exists within these porous basalts at lower elevations. In some areas, the basal lens is partially confined by lower-permeability coastal alluvial and calcareous deposits (''caprock''). Recent ground water investigations in the southern Lihue basin indicate that permeabilities of both the basalt and the younger rock from secondary eruptions are low, which allows the basal ground water lens to thicken and thereby reach greater elevations than on the other Hawaiian islands (Izuka and Gingerich 1998). This causes basal ground water to enter and support stream and spring flow up to relatively high elevations. Because the basal lens ground water reserve is very large in size, streams, springs, and rock seeps (rheocrenes) fed by basal ground water exhibit highly permanent, stable flows. In addition to the basal lens, smaller, perched ground water systems form at higher elevations above dense geologic features of low permeability such as those formed by layers of ash. Ground water bodies may also form within higher elevation geologic formations as a result of confinement by dikes, which are vertical sheets of low-permeability rock that cut through more permeable basalt in some places. Ground water bodies that form behind these perched and dike-confined aquifers contribute water to streams and springs at higher elevations, although these aquifers are smaller in volume than basal systems and their contribution to surface water would be expected to be reduced during prolonged drought (MacDonald *et al.* 1960).

Human-caused modifications to surface and ground water systems on Kauai and throughout Hawaii have profoundly altered natural hydrologic regimes. Plantation irrigation systems, built to support the cultivation of sugar cane over a century ago, transfer large volumes of water out of natural watercourses and into extensive systems of ditches, tunnels, flumes, reservoirs, and ultimately to fields. Historically, stream water diversion structures were typically built to be highly efficient in their ability to entrain water. These

dams usually divert all flowing stream water at moderate to low flows, leaving the stream channel below the dam dry. At least one-third of all Kauai's streams are significantly dewatered for agricultural and industrial water supplies (HSA 1990); in 1994, a total of 224.17 million gallons per day (mgd) was used island-wide for irrigation, and 93.72 mgd was used for generation of hydroelectric power (Wilcox 1996).

Four species of Lymnaeidae snails are native to Hawaii (Morrison 1968, Hubendick 1952). Three of these species are found on two or more of the eight main islands. The fourth species, Newcomb's snail, is restricted to the island of Kauai. Newcomb's snail is unique among the Hawaiian lymnaeids in that the shell spire typically associated with lymnaeids has been substantially reduced. The result is a smooth, black shell formed by a single, oval whorl, 6 millimeters (mm) (0.25 in) long and 3 mm (0.12 in) wide. A similar shell shape is found in a Japanese lymnaeid (Burch 1968), but Burch's study of chromosome number shows that Newcomb's snail has evolutionary ties to the rest of the Hawaiian lymnaeids, all of which are derived from North American ancestors (Patterson and Burch 1978). This parallel evolution of similar shell morphology in Japan and Hawaii from two distinct lineages of lymnaeid snails is of particular scientific interest.

At the present time, there is no generally accepted nomenclature for the genera of Hawaiian lymnaeids, although each of these snail species, including Newcomb's snail, is recognized as a well-defined species. Newcomb's snail was originally described as *Erinna newcombi* in 1855 by H. & A. Adams (see Hubendick 1952). Hubendick (1952) did not feel that the distinctive shell form (described above) and reduced structures of the nervous system of Newcomb's snail warranted a monotypic genus. In fact, Hubendick included all Hawaiian lymnaeids in the genus Lymnaea. Morrison (1968) contradicted Hubendick, and argued that the distinctive shell characters of Newcomb's snail supported the generic name *Erinna*. Burch (1968), Patterson and Burch (1978), Taylor (1988), and Cowie *et al.* (1995) all followed Morrison and referred to Newcomb's snail as *Erinna newcombi*. This is the currently accepted scientific name for Newcomb's snail.

The Newcomb's snail is restricted to freshwater. While the details of its ecology are not well known, Newcomb's snail probably has a life history similar to other members of the family. These snails generally feed on algae and vegetation growing on submerged rocks. Eggs are attached to submerged rocks or vegetation and there are no widely dispersing larval stages; the entire life cycle is tied to the stream system in which the adults live (Baker 1911). Very little is known about the biological or environmental factors that affect population size in Newcomb's snails. Important factors may include annual, multi-year or decadal changes in streams flows, severe-weather high-flow channel-scouring events, or periods of severe or prolonged drought. Dispersal of the snails in both upstream and downstream directions within a stream system probably plays an important function in gene flow and in colonizing or recolonizing suitable habitat, especially microhabitat that is protected from channel scour. Dispersal of the Newcomb's snail between stream systems is likely very infrequent due to their freshwater habitat requirements, and historic dispersal probably relied on long-term erosional events that captured adjacent stream systems. It should be noted that this life history differs greatly from the freshwater Hawaiian neritid snails (*Neritina* spp.), which have marine larvae that colonize streams following a period of oceanic dispersal (Kinzie 1990). It is likely that larvae of these neritid snails can disperse across the oceanic expanses that separate the Hawaiian Islands and colonize streams on any or all of these islands. This dispersal capacity is not available to the Newcomb's snail.

Based on past and recent field observations, the specific habitat requirements of the Newcomb's snail include fast-flowing perennial streams and associated springs, seeps, and vertical-to-overhanging waterfalls (Stephen Miller, U.S. Fish and Wildlife Service *in litt.* 1994a, 1994b; Polhemus *et al.* 1992; Burch 1968; and Hubendick 1952). Surveys of main stream channels of many of the perennial streams of Kauai indicate that the Newcomb's snail is found only in protected areas within main stream channels (Michael Kido, University of Hawaii, *in litt.* 1994). The limited occurrence of this snail in main stream channels is likely due to periodic channel scouring by sediment, rocks, and boulders that are moved downstream during runoff events due to the frequent heavy rains. Consequently, suitable habitat is generally associated with overhanging waterfalls located in the main channel of perennial streams supported by stable ground water input, or with small, spring-fed tributaries. Another common element among the sites harboring snail populations is that the water source appears to be consistent and permanent, even during severe drought.

Five populations of Newcomb's snail were identified and documented in museum records and other literature prior to 1925. These include populations from sites located in Waipahee Stream (a tributary to Kealia Stream), Wainiha River, Hanakapiai Stream, Hanakoa Stream, and Kalalau Stream. Other records that are older and not as well-substantiated in museum collections or other literature include populations in Limahuli Stream and Hanapepe Stream.

At least two of these populations (in Hanakapiai Stream and Hanakoa Stream) are now thought to be extirpated. A population in the Wainiha River was apparently located in about 1987 but has not been revisited since it was found, and its status is unkown (R. Kinzie, pers. comm 2002, *in litt.* 2002). Of the two remaining pre-1925 populations, one (Waipahee Stream) is small and the other (Kalalau Stream) is relatively large (*see* below). Since about 1993, surveys of approximately 50 sites located along numerous streams and their associated tributaries and springs on Kauai have located four previously unknown populations of Newcomb's snail (M. Kido, *in litt.* 1994). The current known range of Newcomb's snail is limited to very small sites located within six stream systems in north- and east-facing drainages on Kauai. They are: Kalalau Stream; Lumahai River; Hanalei River (four subpopulations); Waipahee Stream (a tributary to Kealia Stream); two subpopulations in Makaleha Stream (a tributary to Kapaa Stream); and the North Fork Wailua River (two subpopulations). A few individual snails have been observed in Lumahuli Stream (M. Kido, pers. comm., 2001), but if a viable population occurs there, it has not been located.

No historic information is available on the population size of the Newcomb's snail. However, recent reports indicate that two of the six known populations of the Newcomb's snail are relatively large: the Kalalau Stream and Lumahai River populations. The Kalalau Stream population is found in the northeastern fork of Kalalau Stream on two permanent waterfalls and in the stream reach between the waterfalls. The high density of individuals in this population may be indicative of an undisturbed natural condition. The estimated maximum density at the base of the upper waterfall, including the area behind the falling water, is approximately 800 snails/square meter (m^2) (75 snails/square foot (ft^2)) (S. Miller, *in litt.* 1994b). The total area occupied by these

snails could not be accurately evaluated due to the extreme vertical orientation of the waterfall. Habitat used by these snails may be limited to the lower section of the waterfall that receives a high amount of spray from the falling water. Little information on specific size or area is currently available for the population of the Newcomb's snail from the Lumahai River, although this population has been reported to be large (M. Kido, *in litt.* 1995).

The population in Makaleha Stream is divided into two subpopulations. The subpopulation at the waterfall that forms the head of the main channel of Makaleha Stream is estimated at 30 snails/m^2 (2 to 3 snails/ft^2) distributed over 2 to 3 m^2 (21 to 32 ft^2) (M. Kido, *in litt.* 1994; M. Kido, *in litt.* 1995). This is considerably smaller than the population in Kalalau Stream described above. The reasons for differences in these two populations are not known with certainty, but may be due to the presence or absence of non-native predators and biocontrol agents that feed on lymnaeid snails. The subpopulation that occupies Makaleha Springs (which forms a series of very small tributaries to Makaleha Stream) covers approximately 20 to 30 m^2 (212 to 318 ft^2) (S. Miller, *in litt.* 1994a). Snail densities at this site are difficult to estimate but may be as high as 20 to 30 snails/m^2 (1 to 3 snails/ft^2) (S. Miller, *in litt.* 1994a).

The sizes of three other populations of Newcomb's snail have been characterized as small. The population in the Waipahee tributary of Kealia Stream is estimated to cover 5 to 10 m^2 (53 to 106 ft^2) with a density of approximately 50 to 80 snails/m^2 (4 to 8 snails/ft^2) (Adam Asquith, U.S. Fish and Wildlife Service, *in litt.* 1994a). The population of Newcomb's snail in the Hanalei River is divided into four subpopulations in the upper reach of this river (M. Kido, *in litt.* 1994, 1995). One subpopulation has approximately 10 to 20 snails/m^2 (1 to 2 snails/ft^2) and occupies 2 to 3 m^2 (21 to 32 ft^2) (M. Kido, *in litt.* 1994). A second subpopulation supports approximately 25 snails. The two remaining subpopulations in the Hanalei River are reported to be small with very few snails (M. Kido, *in litt.* 1995). The population found in the North Fork of the Wailua River just upstream of a concrete agricultural water diversion intake, appears to vary over time but was made up of just a few scattered individuals during surveys in 1996 (A. Asquith, *in litt.* 1995). A second, larger subpopulation is reported from the Kawaikini waterfall area in the headwaters of the North Fork Wailua River, but no estimates were made of its population size (M. Kido, *in litt.* 2002).

Based on these data, we estimate that the six known populations of Newcomb's snail have a total of approximately 6,000 to 7,000 individuals. The great majority of these snails, perhaps over 90 percent, are located in the populations found in Kalalau Stream and the Lumahai River.

Previous Federal Action

The February 28, 1996, **Federal Register** Notice of Review of Plant and Animal Taxa That Are Candidates for Listing as Endangered or Threatened Species (61 FR 7596) included Newcomb's snail as a candidate species. Candidates are those species for which we have on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded by other higher priority listing actions. We published a proposed rule on July 21, 1997 (62 FR 38953), to list this species as threatened. On January 26, 2000 (65 FR 4162), we published a final rule determining Newcomb's snail to be a threatened species.

In the final listing rule we determined that designation of critical habitat for the Newcomb's snail would be prudent because such a designation could benefit the species beyond listing as threatened by extending protection under section 7 of the Act to currently unoccupied habitat and by providing informational and educational benefits. Despite the prudency determination, we also indicated that we were not able to develop a proposed critical habitat designation for the Newcomb's snail at that time due to budgetary and workload constraints. However, on June 2, 2000, the U.S. Fish and Wildlife Service was ordered by U.S. District Court in *Center for Biological Diversity* v. *Babbitt*, Civil No. 99–00603 (D. Haw.), to publish the critical habitat designation for Newcomb's snail by February 1, 2002. The plaintiffs and the Service have entered into a consent decree extending this deadline to August 10, 2002. This rule responds to the court's order.

On March 5, 2001, we mailed letters to 104 potentially interested parties informing them that the Service was in the process of designating critical habitat for the Newcomb's snail and requesting from them information concerning the range of the Newcomb's snail, observational life history accounts, current threats, and management activities on lands where Newcomb's snail currently occurs or occurred in the past. The letters contained a fact sheet describing the Newcomb's snail and included a map depicting the current range of the Newcomb's snail. Recipients of these letters included land owners and managers that own and manage land at the two sites where Newcomb's snails are found on private lands, and the various State agencies responsible for managing State of Hawaii lands and water resources at the other locations where the Newcomb's snail is known to occur. We received seven responses to our written request for information: four from various State agencies within the Hawaii Department of Land and Natural Resources (State Historic Preservation Office, Commission on Water Resource Management, Land Division, and the Office of the Chairperson of the Board of Land and Natural Resources), one from the Office of Hawaiian Affairs, one from the Office of the Mayor of Kauai County, and one from a museum-affiliated researcher. The information provided in the responses was considered and incorporated into the process of identifying critical habitat. On March 15, 2001, a public informational meeting was held on Kauai to provide an opportunity for the general public, non-governmental organizations, and representatives from government agencies to meet with Service personnel and discuss the critical habitat designation process. Approximately ten people attended this meeting.

We published a proposed rule to designate critical habitat in the **Federal Register** on January 28, 2002 (67 FR 3849). The public comment period was originally scheduled to end on March 29, 2002. However, on March 29, 2002, we published a combined Notice of Availability for the Draft Economic Analysis and a notification for public hearing (67 FR 15159). This action extended the public comment period to April 29, 2002. The issues raised in the comments received on the proposed rule and our responses are presented later in this document.

Critical Habitat

Critical habitat is defined in section 3(5)(A) of the Act as—(i) the specific areas within the geographic area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by a species at the time it is listed, upon a determination that such areas are essential for the

conservation of the species. ''Conservation'' means the use of all methods and procedures that are necessary to bring an endangered or a threatened species to the point at which listing under the Act is no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against destruction or adverse modification of critical habitat with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferences on Federal actions that are likely to result in the destruction or adverse modification of proposed critical habitat. Aside from the added protection that may be provided under section 7, the Act does not provide other forms of regulatory protection to lands designated as critical habitat. Further, consultation under section 7 of the Act does not apply to activities on private or other non-Federal lands that do not involve a Federal nexus.

However, critical habitat also provides non-regulatory benefits to the species by informing the public and private sectors of areas that are important for species recovery and where conservation actions would be most effective. Designation of critical habitat can help focus conservation activities for a listed species by identifying areas that contain the physical and biological features that are essential for the conservation of that species, and can alert the public as well as land-managing agencies to the importance of those areas. Critical habitat also identifies areas that may require special management considerations or protection, and may help provide protection to areas where significant threats to the species have been identified to help to avoid accidental damage to such areas.

In order to be included in a critical habitat designation, the habitat or its physical or biological features must be ''essential to the conservation of the species.'' Critical habitat designations identify, to the extent known and using the best scientific and commercial data available, habitat areas that provide at least one of the physical or biological features essential to the conservation of the species. These are also known as primary constituent elements, as defined at 50 CFR 424.12(b). Section 3(5)(C) of the Act states that not all areas that can be occupied by a species should be designated as critical habitat unless the Secretary determines that such areas are essential to the conservation of the species. Our regulations (50 CFR 424.12(e)) also state that, ''The Secretary shall designate as critical habitat areas outside the geographic area presently occupied by the species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.''

Section 4(b)(2) of the Act requires that we take into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We may exclude areas from critical habitat designation when the benefits of exclusion outweigh the benefits of including the areas within critical habitat, provided the exclusion will not result in extinction of the species.

Our Policy on Information Standards Under the Endangered Species Act, published on July 1, 1994 (59 FR 34271), provides criteria, establishes procedures, and provides guidance to ensure that decisions made by the Service represent the best scientific and commercial data available. It requires that our biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, use primary and original sources of information as the basis for recommendations to designate critical habitat. When determining which areas are critical habitat, a primary source of information should be the listing rule for the species. Additional information may be obtained from a recovery plan, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, and biological assessments and other unpublished materials.

Section 4 of the Act requires that we designate critical habitat based on what we know at the time of the designation. Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species. For these reasons, critical habitat designations do not signal that habitat outside the designation is unimportant or may not be required for recovery. Areas outside the critical habitat designation will continue to be subject to conservation actions that may be implemented under section 7(a)(1) of the Act and to the regulatory protections afforded by the section 7(a)(2) jeopardy standard and the section 9 prohibitions, as determined on the basis of the best available information at the time of the action. Federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, Habitat Conservation Plans (HCP), or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Methods and Criteria Used To Identify Critical Habitat

As required by the Act and regulations (section 4(b)(2) and 50 CFR 424.12), we used the best scientific information available to determine areas that contain the physical and biological features that are essential for the conservation of the Newcomb's snail. This information included: peer-reviewed scientific publications (Hubendick 1952, Morrison 1968, Patterson and Burch 1978, and Cowie *et al.* 1995); unpublished reports, field notes and correspondence by Service personnel, State agency biologists, and university researchers (M. Kido, *in litt.* 1994, 1995; S. Miller *in litt.* 1994a, 1994b; A. Asquith, *in litt.* 1994, 1995; Donald Heacock, Hawaii Department of Land and Natural Resources Division of Aquatic Resources, *in litt.* 1994; D. Heacock, pers. comm., 2002); information solicited by the Service from Federal, State, and private land managers and land owners prior to development of the draft critical habitat proposal; and comments and testimony obtained after publication of the proposed critical habitat designation for the Newcomb's snail.

Most of the currently occupied Newcomb's snail sites are located in close proximity to one another. For example, the Hanalei river population is located just 3.2 km (2.0 mi) from the North Fork Wailua River population, and the Makaleha Springs population is just 2.5 km (1.6 mi) from the Waipahee Stream population. The exception is the population found in Kalalau Stream, which is located 11.8 km (7.3 mi) from the Lumahai River population, its nearest neighbor. Despite the relatively short straight-line distances between snail populations, the steep, rugged terrain and circular shape of the island creates local topography that allow the sites to be exposed to severe weather and other natural phenomena from markedly different directions. For example, the Hanalei River valley is aligned in a south-to-north direction, while the North Fork Wailua River valley extends from north-to-south. The two Newcomb's snail populations in these drainages are separated by a distance of a few kilometers, however the extremely steep ridgelines between

them are over 900 m (2,953 ft) in elevation. Because the terrain where Newcomb's snails are found is remote and rugged, three of the six known populations (located in Kalalau Stream, Lumahai River, and Waipahee Stream) have not been censused since their initial discovery or rediscovery. Growth rates, life span, reproductive potential, age at first reproduction, dietary needs, and microhabitat preferences are not known. As noted above, accurate population estimates and the natural variability of populations over time are also not available. We are in the process of developing a draft recovery plan for this species, and we anticipate the draft being available for public review and comment by the fall of 2002.

Because of the topography of the island and the prevalent weather patterns, torrential rains that may cause flooding, channel scour, and landslides are usually restricted to one or two quadrants of the island during any single storm event. Recent examples of such recurring natural phenomena include Hurricane Iniki (a category 4 hurricane which devastated the northwest and northern portions of Kauai on September 11, 1992), Hurricane Iwa (November 23, 1982), and the huge upper Olokele Valley landslide of October 31, 1981 (Fitzsimons *et al.* 1993, Jones *et al.* 1984). Each of these events markedly degraded or possibly eliminated large areas of potential Newcomb's snail habitat which had never been surveyed to locate snail populations. In the other extreme, serious drought is a regularly recurring natural phenomenon in the central Pacific (Giambelluca *et al.* 1991). These physical conditions indicate that recovery through protection of the existing populations, plus reestablishment of populations in suitable areas of historical range that provide a wide geographical separation, is necessary for the ensured survival of the species. We therefore find that inclusion of two currently unoccupied areas identified as containing the primary constituent elements is essential to the conservation of the Newcomb's snail. These two sites are located in the northwest quadrant of the island, in drainages between the Lumahai River and Kalalau Stream populations. These two locations are identified as priority recovery units for translocation efforts in the draft Newcomb's snail Recovery Plan currently under preparation by the Service.

Recovery will require restoration of Newcomb's snails to areas of historically occupied habitat either through natural dispersal or translocation. Mere stabilization of Newcomb's snail populations within its currently occupied habitat will not provide long-term conservation for the species. The sub-units currently occupied by known Newcomb's snail populations are not sufficiently dispersed to consider the species safe from extinction. Existing known populations are found in remarkably small areas of only a few square meters of aquatic habitat, each of which is at risk from even a small, localized landslide or high flow event. Recovery actions are likely to include: maintaining existing populations through regulatory mechanisms that protect water resources, watershed protection and stabilization efforts; control of non-native predators; and translocation of snails for the purpose of reestablishing additional self-sustaining populations in the wild. Recovery will require persistence of populations of snails that are geographically separated in natural habitats to reduce the threat of total elimination of entire populations through catastrophic events such as hurricanes, landslides, drought, and predator invasions.

We used several criteria to identify and select sub-units for designation as critical habitat: (1) We began with all locations that are currently confirmed occupied by Newcomb's snail; (2) we then added two locations where Newcomb's snail was found historically but is now thought to be extirpated in the northwest extent of its range. In deciding which unoccupied areas to designate as critical habitat, we gave preference to sites that: (a) Were well documented in museum and other historical records, (b) were most recently known to be occupied, and (c) provided the greatest geographic diversity to the array of locations under consideration for critical habitat. These two sites are on lands that are publicly owned (Na Pali Coast State Park and Hono O Na Pali Natural Area Reserve). These areas are in the northwest quadrant of the island and would presumably be most exposed to severe weather events such as hurricanes from the north and northwest. With the exception of the Kalalau Stream population, all other populations of Newcomb's snails are located in the northeast or southeast quadrants of the island, and these sites would be exposed to severe weather events such as hurricanes primarily from the northeast and east.

Within the critical habitat unit boundaries, only waterbodies containing the primary constituent elements are designated as critical habitat. Existing features and structures within the boundaries of the mapped units, such as dams, ditches, tunnels, flumes, and other human-made features that do not contain the primary constituent elements, are not included as critical habitat. Federal actions limited to those areas, therefore, would not trigger a section 7 consultation unless they affect the species and/or primary constituent elements in adjacent critical habitat.

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12 in determining which areas to designate as critical habitat, we are required to consider those physical and biological features that are essential to the conservation of the species and that may require special management considerations and protection. Such features are termed primary constituent elements, and include but are not limited to: space for individual and population growth and for normal behavior; food, water, air, light, minerals and other nutritional or physiological requirements; cover or shelter; space for breeding and reproduction; and habitats that are protected from disturbance and are representative of the historic geographical and ecological distributions of the species.

The primary constituent elements for the Newcomb's snail are those habitat components that are essential for the primary biological needs of foraging, sheltering, reproduction, and dispersal. These primary constituent elements are found in locations that, as a result of their geologic and hydrologic setting in the landscape, support permanently flowing streams, springs and seeps in mid-elevation locations in valleys on the island of Kauai. The primary constituent elements are: cool, clean, moderate- to fast-flowing water in streams, springs and seeps; their adjacent riparian areas and hydrogeologic features that capture and direct water flow to these spring and stream systems; a perennial flow of water throughout even the most severe drought conditions; and stream channel morphology that provides protection from channel scour by having overhanging waterfalls, protected tributaries, or similar areas. All designated critical habitat areas contain the primary constituent elements for the Newcomb's snail.

Critical Habitat Designation

Three critical habitat units are established with eight stream sub-units within those units. Unit I, entitled the Na Pali Coast Streams, consists of sub-

units identified in Kalalau Stream, Hanakoa Stream, and Hanakapiai Stream. Unit II, entitled the Central Rivers, consists of sub-units identified in Lumahai River and Hanalei River. Unit III, entitled the Eastside Mountain Streams, consists of subunits identified in Waipahee Stream, Makaleha Stream, and North Fork Wailua River. These three units are made up of stream complexes that share similar characteristics (Table 1). Each stream complex shares common topography, watershed characteristics, snail population characteristics, and exposure to natural disasters.

The final designation was reduced from that originally proposed. The proposed designation of critical habitat included nine stream sub-units and 26.29 km (16.35 mi) of stream channel and a total acreage of 2,109 ha (5,212 ac), the final rule includes eight stream sub-units and 19.76 km (12.28 mi) of stream channel and a total acreage of 1,812 ha (4,479 ac). The rationale for altering the final designation from that proposed is discussed in detail below.

Sub-units designated as critical habitat provide the full range of primary constituent elements needed by the Newcomb's snail, including foraging, sheltering, reproduction, and dispersal. Critical habitat is limited to areas that contain primary constituent elements. Critical habitat boundaries were derived using topographical characteristics of the valley and include segments of perennial streams where Newcomb's snails occur or occurred historically, their tributaries, associated springs, and seeps. The upper and lower elevations of critical habitat boundaries were chosen based upon the elevational distribution from each recorded population, or from nearby watersheds where Newcomb's snails are found or were found historically. In addition to segments of perennial streams, their tributaries, and associated springs, and the area of upland riparian habitat where these occur and are necessary to maintain watershed integrity, is included in the designation of critical habitat. The riparian areas are included in this critical habitat designation because the stream and spring systems identified are dependent upon riparian areas for moderating water flow, shading which contribute to cool water temperatures, sediment retention which contributes to water clarity, and nutrient inputs. The boundaries of the riparian areas were delineated and mapped using the known or inferred stream channel elevation contours of the perennial stream segments. Riparian area boundaries were generally broader in larger watersheds which have low-gradient valley floors. These large watersheds also tend to contain more tributary subwatersheds with perennial water flow, as in the case of the Hanalei River where one of these tributaries contains a known subpopulation of Newcomb's snails. The mapped riparian area boundaries were smaller in those stream segments that exhibit narrow valley floors and steep valley walls directly adjacent to the streams (*for example*: Hanakoa and Hanakapiai Streams).

Areas designated as critical habitat for the Newcomb's snail occur in eight separate streams and include the main channel of a named stream, contiguous named and unnamed tributaries, and adjacent springs and seeps, and associated riparian areas (Table 1). Critical habitat includes sub-units under State and private ownership and includes six sites currently known to be occupied (Kalalau Stream, Lumahai River, Hanalei River, Waipahee stream, Makaleha Stream, and North Fork Wailua River) and, in addition, includes two sub-units where the species was known to occur in the early 1900s, but where it is now thought to be extirpated (Hanakoa and Hanakapiai Streams).

TABLE 1.—CRITICAL HABITAT UNITS FOR THE NEWCOMB'S SNAIL BY LOWER AND UPPER BOUNDARY ELEVATIONS IN METERS (M) (FEET (FT)) AND THE LENGTH OF THE STREAM SEGMENTS IN KILOMETERS (KM) (MILES (MI))

Critical habitat stream complex unit	Critical habitat sub-units	Ownership	Lower boundary elevation	Upper boundary elevation	Stream segment length*
I. Na Pali Coast Streams	(a) Kalalau Stream	State—Na Pali Coast State Park.	183 m (600 ft)	488 m (1,600 ft)	1.38 km (0.86 mi)
	(b) Hanakoa Stream	State—Na Pali Coast State Park.	122 m (400 ft)	457 m (1,500 ft)	0.80 km (0.50 mi)
	(c) Hanakapiai Stream	State—Na Pali Coast State Park.	183 m (600 ft)	457 m (1,500 ft)	0.56 km (0.35 mi)
II. Central Rivers	(a) Lumahai River	Private—Kamehameha Schools.	183 m (600 ft)	457 m (1,500 ft)	5.0 km (3.11 mi)
	(b) Hanalei River	State—Halela Forest Reserve.	122 m (400 ft)	457 m (1,500 ft)	7.58 km (4.71 mi)
III. Eastside Mountain Streams.	(a) Waipahee Stream	Private—Cornerstone Hawaii Holdings, LLC.	262 m (680 ft)	366 m (1,200 ft)	1.73 km (1.08 mi)
	(b) Makaleha Stream	State—Kealia Forest Reserve.	183 m (600 ft)	457 m (1,500 ft)	1.59 km (0.99 mi)
	(c) North Fork Wailua River.	State—Lihue-Koloa Forest Reserve.	335 m (1,100 ft)	427 m (1,400 ft)	1.12 km (0.7 mi)
Total					19.76 km (12.28 mi)

*Length of main stream channel, does not include tributaries or springs.

Certain areas with reported, but unconfirmed, populations of the Newcomb's snail have not been designated as critical habitat. We did not designate critical habitat in the Hanapepe Stream system where museum specimens apparently were collected in the 1840s but where no subsequent surveys have been undertaken. Also, we did not designate two areas where new information indicated that Newcomb's snails were observed in recent years, but whose populations have not been confirmed: a population at Kawaikini Falls of the upper North Fork Wailua River, and a population in a spring/tributary adjacent to the Waihina River at an approximate stream channel elevation of 180 to 190 m (590 to 620 ft). These additional sites are on river systems that are already represented in the critical habitat designation, and thus are not essential to the conservation of the

species, or are not designated for the reasons discussed under the section *''Summary of Changes from the Proposed Rule''* below.

Stream reaches are identified using elevations of the stream or tributary channels as upstream and downstream boundaries; these elevations were derived separately for each of the eight reaches and were delineated by recognizing unique physiographic features within each watershed such as waterfalls, small tributaries, and springs. A brief description of each stream reach and reasons for designating it as critical habitat are presented below.

Unit I: Na Pali Coast Streams

Streams in the Na Pali Coast unit are small, short, and flow over steep terrain. These streams are located in the northwest quadrant of the island, and, because they are located in smaller watersheds, they are directly exposed to coastal weather conditions. Rainfall in this area is lower than in the other watersheds designated as critical habitat. The vegetation of the Na Pali Coast Stream Unit consists primarily of mixed-species mesic (moderate moisture) forest composed of native and introduced plant species. The higher elevations are primarily native forest, but the lower elevations are more disturbed and are dominated by introduced plant species. Newcomb's snail is known from three stream sub-units in this unit, Kalalau Stream, Hanakoa Stream, and Hanakapiai Stream. Kalalau Stream is currently occupied. Hanakoa Stream and Hanakapiai Stream were known to harbor Newcomb's snail populations relatively recently but the species is now thought to be extirpated at those sites.

Sub-Unit I(a): Kalalau Stream

Critical habitat for Newcomb's snail is designated for all flowing waters associated with the east fork of Kalalau Stream and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Kalalau Stream location designated includes 1.38 km (0.86 mi) of stream channel and 149 ha (368 ac) and lies within the elevational contours of 183 to 488 m (600 to 1,600 ft). This reach contains one of the two largest known populations of Newcomb's snails, and it contains the largest observed population of snails documented on public lands. At least two large, vertical or overhanging waterfalls in this reach appear to provide important refuge from high, channel-scouring flows (S. Miller, *in litt.* 1994b). This population is currently the most isolated of the known Newcomb's snail populations, and it is separated from the nearest neighboring population, located in Lumahai River, by 11.8 km (7.3 mi). It is the only remaining population in the northwest quadrant of the island.

This sub-unit is essential to the conservation of Newcomb's snail because it has the most robust population of snails ever recorded, as documented in a Service survey conducted in 1994. This sub-unit is required to maintain one of the six known populations of snails. This stream segment is located within the Na Pali Coast State Park. Kalalau Stream has no water diversions.

Sub-Unit I(b): Hanakoa Stream

Critical habitat for Newcomb's snail is designated for all flowing waters associated with Hanakoa Stream and its tributaries, including springs and seeps and riparian habitat necessary to maintain the integrity of the watershed. The Hanakoa Stream location designated includes 0.80 km (0.50 mi) of stream channel and 63 ha (156 ac) and falls within the elevational contours of 122 to 457 m (400 to 1,500 ft). Historical records from the early 1900s indicate that Newcomb's snails were found in this stream; however, a recent survey failed to locate any snails (S. Miller *in litt.* 1994b). This reach is located on the northwest side of the island and is exposed to severe weather approaching from the northwest. Hanakoa Stream was heavily impacted by Hurricane Iniki in 1992 (Fitzsimons *et al.* 1993), prior to surveys intended to locate populations of Newcomb's snail.

This sub-unit is essential to the conservation of Newcomb's snail because the currently known occupied sub-units are not sufficient to provide for the long term conservation of the species alone. The sub-units currently known to be occupied by Newcomb's snail populations are not sufficiently dispersed to consider the species safe from extinction. Existing known populations are found in remarkably small areas of only a few square meters of aquatic habitat, each of which is at risk from even a small, localized landslide or high flow event. Hanakoa Stream also adds to the geographic diversity by adding areas in the northwest quadrant of the island which is likely to be most exposed to severe weather events such as hurricanes from the north and northwest. Currently, the only known occupied site in this quadrant is Kalalau Stream. With the exception of the Kalalau Stream population, all other populations of Newcomb's snails are located in the northeast or southeast quadrants of the island, and these sites would be exposed to severe weather events such as hurricanes primarily from the northeast and east. This location on Hanakapiai stream is within the historical range of Newcomb's snail, is well documented in museum and other historical records, and was most recently known to be occupied compared to other streams (the early 1900's as opposed to Hanapepe Stream where specimens were collected in the 1840's with no additional information available). Additionally, this stream segment is located within the Na Pali Coast State Park and is adjacent to the Honu O Na Pali Natural Area Reserve and has no water diversions which make it less likely to have land use conflicts.

Sub-Unit I(c): Hanakapiai Stream

Critical habitat for Newcomb's snail is designated for all flowing waters associated with Hanakapiai Stream and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Hanakapiai Stream location designated includes 0.56 km (0.35 mi) of stream channel and 35 ha (86 ac) and falls within the elevational contours of 183 to 457 m (600 to 1,500 ft). Historical records indicate that Newcomb's snail occurred in this reach; however, no recent surveys have located snails (M. Kido, *in litt.* 1994; G. Smith, pers. obs. 2002). This reach, like those in Kalalau and Hanakoa streams, is located in the northwest portion of the island and is exposed to severe weather from the north and northwest (Fitzsimons *et al.* 1993).

This sub-unit is essential to the conservation of Newcomb's snail because currently occupied sub-units and the addition of one other unoccupied stream is not sufficiently dispersed to consider the species safe from extinction. As with sub-unit I(b), the addition of Hanakapiai Stream will provide section 7 protections for additional habitat necessary to re-establish the snail in additional streams in this part of the island and once the snails are reestablished, will decrease the risk of losing the presence of snails in the northwest quadrant of the island. Streams in the northwest quadrant of the island are likely to be most exposed to severe weather events such as hurricanes from the north and northwest and currently only contains one occupied location in Kalalau Stream. The five other known occupied stream sub-units are located in the northeast or southeast quadrants of the island, and these sites would be

exposed to severe weather events such as hurricanes primarily from the northeast and east. This location on Hanakoa stream is within the historical range of Newcomb's snail, is well documented in museum and other historical records, and was most recently known to be occupied compared to other streams (the early 1900's as opposed to Hanapepe Stream where specimens were collected in the 1840's with no additional information available). In addition, this stream segment is located within the Na Pali Coast State Park and is adjacent to the Honu O Na Pali Natural Area Reserve and has no water diversions, making it less likely to have conflicting land uses.

Unit II: Central Rivers

The central rivers of Kauai are large relative to other streams in the State, and flow through relatively low-gradient watersheds. These rivers are located in the northern half of the island and, because their headwaters are located well inland and in large valleys, are exposed to weather conditions that are greatly influenced by the surrounding landmass. Rainfall in this area is higher than in the other watersheds designated as critical habitat. The vegetation of the Central Rivers Complex watersheds consists primarily of mixed-species wet and mesic forest composed of native and introduced plant species. The higher elevations are primarily native forest, but the lower elevations are more disturbed and are dominated by introduced plant species. The two sub-units, Lumahai River and Hanalei River are occupied by Newcomb's snail.

Sub-Unit II(a): Lumahai River

Critical habitat for Newcomb's snail is designated for all flowing waters associated with Lumahai River and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Lumahai River location designated includes 5.0 km (3.11 mi) of stream channel and 492 ha (1,216 ac) and falls within the elevational contours of 183 to 457 m (600 to 1,500 ft). One of the largest populations of Newcomb's snails ever documented occurs in this reach of Lumahai River and its tributaries. This stream segment is located on private land. Lumahai River has no water diversions.

This sub-unit is essential to the conservation of Newcomb's snail because it has one of the most robust population of snails ever discovered, as recorded at the time of the discovery of the population by Hawaii Department of Land and Natural Resources division of Aquatic Resources personnel in 1994. This sub-unit is required as critical habitat to conserve one of the six known populations of Newcomb's snails.

Sub-Unit II(b): Hanalei River

Critical habitat for Newcomb's snail is designated for all flowing waters associated with the Hanalei River and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Hanalei River location designated includes 7.58 km (4.71 mi) of stream channel and 876 ha (2,165 ac) and falls within the elevational contours of 122 to 457 m (400 to 1,500 ft), excluding ditches and flumes. The four sub-populations found within this stream system represent the largest number of Newcomb's snail sub-populations occurring within a single watershed. Segments of several named tributaries to the Hanalei River are included in this designation, and these include Kaapoko, Kaiwa, and Waipunaea Streams. This stream segment is located within the Halela Forest Reserve on State lands.

The critical habitat that contains the Hanalei River subpopulations of Newcomb's snail is essential to the conservation of the species because this area is needed to maintain one of the six existing known populations of snails.

A complex of stream diversion works that includes dams, ditches and tunnels, is found at the 378 m (1,240 ft) elevation of the Hanalei River, in the vicinity of the upper two main-channel Hanalei River sub-populations and upstream of the Kaapoko tributary sub-population at an elevation of 396 m (1,300 ft). These dams and associated ditches and tunnels historically diverted large volumes of water out of Kaapoko tributary and the Hanalei River to watersheds in the southeast portion of the island for irrigation use. Typical diversion structures in Hawaiian streams completely divert all of a stream's flowing water during moderate- to low-flow periods, leaving the stream channel below the dam completely dry. The water diversion structures and associated ditches and tunnels in the upper Hanalei River and its tributaries have been in disrepair since the early 1990s. Although these human-made features locally alter flow characteristics, no water is currently diverted out of the Hanalei watershed.

Unit III: Eastside Mountain Streams

The streams designated as critical habitat in this area flow towards the east and southeast portions of the island and are intermediate in size. Rainfall is moderate in comparison to the other sub-units designated as critical habitat. All three of the sub-units included in this stream complex, Waipahee Stream, Makaleha Stream, and North Fork Wailua River, are occupied by populations of snails. The vegetation of the Eastside Mountain Stream watersheds consists primarily of mixed-species wet forest composed of native and introduced plant species. The higher elevations are primarily native forest, but the lower elevations are more disturbed and are dominated by introduced plant species.

Sub-Unit III(a): Waipahee Stream (Tributary to Kealia Stream)

Critical habitat for Newcomb's snail is designated for all flowing waters associated with Waipahee Stream and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Waipahee Stream location in the proposed rule included 2.41 km (1.50 mi) of stream channel and 106 ha (262 ac). Due to new information received during the comment period, indicating that some of the area originally proposed does not contain the primary constituent element of perennial flow, we reduced the size of this designation by 0.68 km (0.43 mi) of stream channel and 40 ha (99 ac). The Waipahee Stream location designated now includes 1.73 km (1.08 mi) of stream channel and 66 ha (163 ac) and falls within the elevational contours of 262 to 366 m (680 to 1,200 ft). Newcomb's snail was historically known to occur in Waipahee Stream, and a survey has confirmed the presence of Newcomb's snails within this reach (A. Asquith, in litt. 1994a).

The location designated on Waipahee Stream is occupied by Newcomb's snail and is essential to the conservation of the species because this area is needed to maintain one of the six existing populations of snails.

Waipahee Stream is located on private land that, in areas below the 262 m (680 ft) elevation and outside of designated critical habitat, is undergoing a transition in use from commercial plantation-style sugarcane agriculture to pasture, forestry, diversified crops, and ''ecotourism'' use. Higher elevation areas (above the 262 m (680 ft) elevation) of these private lands, such as where Newcomb's snails are found, are not used for agriculture and are relatively undisturbed. Water is diverted from Kealia Stream at several locations at lower elevations (below the 262 m (680 ft) elevation) outside of the designated critical habitat location.

Sub-Unit III(b): Makaleha Stream (Tributary to Kapaa Stream)

Critical habitat for Newcomb's snail is designated for all flowing waters associated with Makaleha Stream and its tributaries, including Makaleha Springs, other springs, and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The Makaleha Stream location designated includes 1.59 km (0.99 mi) of stream channel and 95 ha (235 ac) and falls within the elevational contours of 183 to 457 m (600 to 1,500 ft). The Makaleha Stream and Makaleha Springs Newcomb's snail populations have been surveyed several times in recent years. Two subpopulations are known to occur within this reach. Newcomb's snails are found within the complex of small tributary streams originating from Makaleha Springs, and a small number of snails are found upstream of the springs at a waterfall located in the Makaleha Stream main channel. This stream segment is located within the Kealia Forest Reserve on State lands.

The critical habitat that contains the Makaleha Stream population of Newcomb's snail is essential to the conservation of the species because this area is needed to maintain one of the six existing populations of snails.

Water is diverted from Makaleha Stream and Kapaa Stream at several locations at lower elevations (below 183 m (600 ft) elevation) and outside of designated critical habitat locations.

Sub-Unit III(c): North Fork Wailua River

Critical habitat for Newcomb's snail is designated for all flowing waters associated with the North Fork of the Wailua River and its tributaries, including springs and seeps, and riparian habitat necessary to maintain the integrity of the watershed. The North Fork Wailua location in the proposed rule included 1.71 km (1.06 mi) of stream channel and 64 ha (158 ac). Due to new information received during the comment period indicating that some of the area we proposed did not contain the primary constituent element of perennial flow, we reduced this designation by 0.59 km (0.37 mi) of stream channel and 28 ha (68 ac). The North Fork Wailua River location designated now includes 1.12 km (0.7 mi) of stream channel and 36 ha (90 ac) and falls within the elevational contours of 335 to 427 m (1,100 to 1,400 ft). This population was discovered in 1995 and has fluctuated in size in subsequent observations (A. Asquith, *in litt.* 1995). This stream segment is located within the Lihue-Koloa Forest Reserve on State lands. A water diversion exists just downstream of the critical habitat boundary.

The location designated as critical habitat in the North Fork Wailua River is occupied by Newcomb's snail and is essential to the conservation of the species because this area is needed to maintain one of the six known populations of snails.

Effects of Critical Habitat Designation

Section 7—Consultation

The regulatory effects of a critical habitat designation under the Act are triggered through the provisions of section 7, which applies only to activities conducted, authorized, or funded by a Federal agency (Federal actions). Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR 402. Individuals, organizations, States, local governments, and other non-Federal entities are not affected by the designation of critical habitat unless their actions occur on Federal lands, require Federal authorization, or involve Federal funding.

Section 7(a)(2) of the Act requires Federal agencies, including us, to insure that their actions are not likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat. This requirement is met through section 7 consultation under the Act. Our regulations define ''jeopardize the continued existence'' as to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). ''Destruction or adverse modification of designated critical habitat'' is defined as a direct or indirect alteration that appreciably diminishes the value of the critical habitat for both the survival and recovery of the species (50 CFR 402.02). Such alterations include, but are not limited to, adverse changes to the physical or biological features, i.e., the primary constituent elements, that were the basis for determining the habitat to be critical.

The relationship between a species' survival and its recovery has been a source of confusion to some in the past. We believe that a species' ability to recover depends on its ability to survive into the future when its recovery can be achieved; thus, the concepts of long-term survival and recovery are intricately linked. However, in the March 15, 2001, decision of the United States Court of Appeals for the Fifth Circuit (*Sierra Club* v. *U.S. Fish and Wildlife Service et al.*, 245 F.3d 434) regarding our previous not prudent finding, the Court found our definition of destruction or adverse modification as currently contained in 50 CFR 402.02 to be invalid. In response to this decision, we are reviewing the regulatory definition of adverse modification in relation to the conservation of the species.

Section 7(a)(4) requires Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat. Conference reports provide conservation recommendations to assist the agency in eliminating conflicts that may be caused by the proposed action. The conservation recommendations in a conference report are advisory.

We may issue a formal conference report, if requested by the Federal action agency. Formal conference reports include an opinion that is prepared according to 50 CFR 402.14, as if the species was listed or critical habitat designated. We may adopt the formal conference report as the biological opinion when the species is listed or critical habitat designated, if no substantial new information or changes in the action alter the content of the opinion (*see* 50 CFR 402.10(d)).

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species nor to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. This consultation assists Federal action agencies in ensuring that the permitted actions do not destroy or adversely modify critical habitat.

If we issue a biological opinion concluding that a project is likely to result in jeopardizing a listed species or the destruction or adverse modification of critical habitat, we would also provide reasonable and prudent alternatives to the project, if any are identifiable. Reasonable and prudent alternatives are defined at 50 CFR 402.02 as alternative actions identified during consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and

technologically feasible, and that the Director believes would avoid jeopardy or the destruction or adverse modification of critical habitat. Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where critical habitat is subsequently designated and the Federal agency has retained discretionary involvement or control over the action or such discretionary involvement or control is authorized by law. Consequently, some Federal agencies may request reinitiation of consultation with us on actions for which formal consultation has been completed if those actions may affect designated critical habitat.

Activities on Federal lands that may affect the Newcomb's snail or its critical habitat would require section 7 consultation; however, no populations of Newcomb's snail are known to exist on Federal land. Activities on private or State lands requiring a permit from a Federal agency, such as a permit from the U.S. Army Corps of Engineers (ACOE) under section 404 of the Clean Water Act, or some other Federal action, including funding (*e.g.,* from the Federal Highway Administration, Federal Aviation Administration, Federal Emergency Management Agency, or Natural Resources Conservation Service) which may affect a listed species or its critical habitat will be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat and actions on non-Federal lands that are not federally funded or permitted do not require section 7 consultation.

Section 4(b)(8) of the Act requires us to evaluate briefly in any proposed or final regulation that designates critical habitat those activities involving a Federal action that may adversely modify such habitat or that may be affected by such designation. Activities that may result in the destruction or adverse modification of critical habitat include those that alter the primary constituent elements to an extent that the value of critical habitat for the conservation of the Newcomb's snail is appreciably reduced. We note that such activities may also jeopardize the continued existence of the species. Activities that may directly or indirectly adversely affect critical habitat include, but are not limited to:

(1) Destroying or degrading Newcomb's snail habitat (as defined in the primary constituent elements discussion) through activities adjacent to or upstream of Newcomb's snail habitat. Such activities may include reduction or redirection of stream or spring water flow, dam construction, channel alteration or realignment, substrate alteration, or other direct means (*e.g.,* pesticide or herbicide application, waste discharge, ground water withdrawal, ground water contamination, reduction of ground water recharge, *etc.*).

(2) Appreciably decreasing habitat value or quality through indirect effects (*e.g.,* introduction or promotion of invasive plant species, watershed degradation through overgrazing, augmentation of feral ungulate populations, an altered fire regime, or other activities that degrade water quality or quantity to an extent that it detrimentally affects stream structure and function).

If you have questions regarding whether specific activities will constitute adverse modification of critical habitat, contact the Field Supervisor, Pacific Islands Ecological Services Field Office (*see* **FOR FURTHER INFORMATION CONTACT** section). Requests for copies of the regulations on listed wildlife and plants and inquiries about prohibitions and permits should be directed to the U.S. Fish and Wildlife Service, Endangered Species Act Section 10 Program at the same address.

Application of the Section 3(5)(A) Criteria Regarding Special Management Considerations or Protection

Areas containing the primary constituent elements that are under management to fully address the conservation needs of the Newcomb's snail and that do not require additional special management or protection do not meet the definition of critical habitat in section 3(5)(A)(i) of the Act and would not be included in this critical habitat designation. Special management and protection are not required if adequate management and protection are already in place. Adequate special management or protection is provided by a legally operative plan/agreement that addresses the maintenance and improvement of the primary constituent elements important to the species and manages for the long-term conservation of the species.

To determine if a plan provides adequate management or protection we consider: (1) Whether a current plan specifies the management actions and whether such actions provide sufficient conservation benefit to the species; (2) whether the plan provides assurances that the conservation management strategies will be implemented; and (3) whether the plan provides assurances that the conservation management strategies will be effective. In determining if management strategies are likely to be implemented, we consider whether: (a) A management plan or agreement exists that specifies the management actions being implemented or to be implemented; (b) the plan includes a timely schedule for implementation; (c) there is a high probability that the funding source(s) or other resources necessary to implement the actions will be available; and (d) the party(ies) have the authority and long-term commitment to the agreement or plan to implement the management actions, as demonstrated, for example, by a legal instrument providing enduring protection and management of the lands. In determining whether an action is likely to be effective, we consider whether: (a) The plan specifically addresses the management needs, including reduction of threats to the species; (b) such actions have been successful in the past; (c) the plan includes provisions for monitoring and assessment of the effectiveness of the management actions; and (d) adaptive management principles have been incorporated into the plan.

Based on information provided to us by land owners and managers to date, several areas are covered under current management plans and are being managed in a manner that meets some of the conservation needs of the Newcomb's snail. For example, in the case of most state-owned and managed Forest Reserves and certain areas within State Parks, hunting of feral ungulates is a management action that is undertaken to maintain the integrity of the watersheds by retaining vegetative cover, reducing the effects of overgrazing on forest vegetation and soils, and subsequently limiting transport of sediments into streams. Despite the beneficial results of some management plans currently under implementation, we find that at no site does the current management adequately reduce the primary threats to this species, nor did any land owner or land manager expect that their actions were sufficient for consideration for exclusion under 3(5)(A)(i) of the Act.

Habitat Conservation Plans

Since there are no approved HCPs in which the Newcomb's snail is a covered species or other conservation plans that are currently completed that specifically address the Newcomb's snail, we did

not exclude any lands from this critical habitat designation pursuant to section 4(b)(2) of the Act on this basis.

However, we believe that in many instances the benefits of excluding HCPs from critical habitat designations will outweigh the benefits of including them. We will provide technical assistance and work closely with applicants throughout the development of any future HCPs to identify lands essential for the long-term conservation of the Newcomb's snail and appropriate management for those areas. The take minimization and mitigation measures provided under such HCPs may protect the essential habitat lands designated as critical habitat in this rule. Furthermore, we will complete intra-Service consultation on our issuance of section 10(a)(1)(B) permits for these HCPs to ensure permit issuance will not destroy or adversely modify critical habitat. If an HCP that addresses the Newcomb's snail as a covered species is ultimately approved, the Service may reassess the critical habitat boundaries in light of the HCP.

Summary of Comments and Recommendations

In the proposed rule published on January 28, 2002, (67 FR 3849) we requested all interested parties to submit comments on the specifics of the proposal including information related to biological justification, policy, economics, and proposed critical habitat boundaries. The comment period was scheduled to close on March 29, 2002. The comment period was extended until April 29, 2002 (67 FR 15159) to allow for additional comments on the proposed designation, and comments on the draft economic analysis (EA) of the proposed critical habitat.

We contacted all appropriate State and Federal agencies, county governments, elected officials, the Office of Hawaiian Affairs, and other interested parties and invited them to comment. In addition, we invited public comment through the publication of legal notices in two newspapers: the Honolulu Advertiser and the Garden Isle on March 29, 2002. We provided notification of the draft EA through telephone calls, letters, and news releases faxed and/or mailed to affected elected officials, media outlets, local jurisdictions, and interest groups. We also published the draft EA and associated material on our Region 1 Fish and Wildlife Office Internet site following its release on March 29, 2002. In addition to inviting public comment on the proposed designation and the draft EA analysis on the proposed designation, the latter notices announced the date and time of a public hearing on the proposed designation. The hearing was held on April 17, 2002, in Lihue, Kauai from 6:00 p.m. to 8:00 p.m. Transcripts of this hearing are available for inspection (see **ADDRESSES** section). The hearing was attended by approximately 15 people, and 9 persons provided oral testimony. Immediately prior to the hearing, Service staff presented informational materials to the public and were available for an informal question and answer session. Approximately 15 people attended the question and answer session.

Six biologists, with expertise in the fields of malacology (the study of mollusks) and stream ecology of Hawaii, provided scientific and technical peer review for the designation of critical habitat for the Newcomb's snail; all six responded with written comments. Four of the six expressed clear support for the designation, though they recognized the limitations of scientific knowledge of life history and population characteristics of Newcomb's snail. The remaining two scientific reviewers were of the opinion that, due to the lack of detailed distribution, life history, and population data for the species, the proposal could not be objectively reviewed. Three of the six stated that their review was made difficult by a lack of adequate scientific documentation specifically regarding threats due to predation and habitat degradation. Four of the reviewers supported including additional historically occupied sites because Newcomb's snail is cryptic and populations are highly localized; these reviewers felt that there was a high likelihood of undiscovered populations existing in these areas, and that there was a strong possibility of reconfirming occupation by snails of historically documented sites. One reviewer reported a population of Newcomb's snail previously unknown to the Service. This population was observed in the Wainiha river watershed in the late 1980s, downstream of the existing hydroelectric diversion. These snails were not found in the main river channel but in a spring-fed tributary. Two of the reviewers suggested specific locations where critical habitat should have been expanded; in one case this was to protect additional watershed areas upstream of the current boundaries. The other reviewer specifically suggested expanding the critical habitat to include the Wainiha River downstream of the hydroelectric diversion dam to protect the population of Newcomb's snails reported from that location. Our responses to these comments are either addressed in the text or below.

We received a total of 1,818 comment letters/testimonies, during the public comment period, a large number of these (1,800) were similar in nature and appeared to be from an organized mass mailing. Comments were received from a variety of State and local agencies, and separate private organizations or individuals. Of these 1,818 comments, 1,808 were in favor of the designation, 9 against it, and 1 was neutral. We reviewed all comments received for substantive issues and comments, and new information regarding the Newcomb's snail. Similar comments were grouped into three general issues relating specifically to the proposed critical habitat determination and draft EA on the proposed determination. Comments have been incorporated directly into the final rule or final addendum to the economic analysis or addressed in the following summary.

Issue 1. Biological Justification and Methodology

1. *Comment:* The majority of peer reviewers noted the lack of knowledge regarding basic biology of the species. Two of the scientific reviewers noted that little peer-reviewed biological and ecological information is available for the Newcomb's snail, and that much of the technical information used for the critical habitat designation is based on unpublished reports and field observations by Service staff, State biologists, and university researchers.

Our Response: As noted in the Background section of this rule, the Service recognizes the limited amount of scientific data available for this species, especially the very limited amount of information that is available in a peer-reviewed format. However, we are currently under court order to proceed with the designation of critical habitat. *Center for Biological Diversity* v. *Babbitt,* Civil No. 99–00603 (D. Haw. June 2, 2002). The Endangered Species Act requires us to use the best available scientific and commercial information in undertaking species listing and recovery actions, including the designation of critical habitat as set forth in this rule. Prior to the rulemaking process associated with listing the Newcomb's snail as threatened, the Service participated in or led a number of reconnaissance surveys in numerous watersheds on Kauai to document presence or absence of Newcomb's snails at these locations. In addition, our natural resource partners, including the University of Hawaii Sea Grant College Program, the State of Hawaii Department of Land and

Natural Resources Division of Aquatic Resources, and the University of Hawaii Stream Research Center, have provided us reports of field observations at many sites on Kauai including data from visits to at least 20 streams in watersheds across the island. While we acknowledge the lack of peer-reviewed published information regarding the Newcomb's snail, we have used the best scientific and commercial data available to identify and delineate the critical habitat boundaries.

2. *Comment:* Many areas of potential but unsurveyed critical habitat exist on Kauai. More specifically, several peer reviewers noted this as follows: (1) A thorough investigation should be conducted to determine whether other populations exist that may require critical habitat designation; (2) existing but undocumented populations should not be left out of critical habitat designation; (3) populations of snails could well have simply been missed during recent surveys.

Our Response: Because Newcomb's snail is small and somewhat cryptic, we acknowledge that there is some probability that new populations will be discovered. However, the process by which we analyzed current and historical distribution patterns and subsequently designated critical habitat was focused on determining and mapping those areas that are essential to the conservation of the species, based upon the best available scientific information. If undocumented populations are confirmed or additional populations are discovered in the future that lead us to reconsider critical habitat boundaries, we may revise the critical habitat designation if such action is supported by this new information and funding is available.

3. *Comment:* Several peer reviewers indicated that biological and hydrological processes outside of the critical habitat boundaries could have impacts to the Newcomb's snail. More specifically, these comments were: (1) Indirect effects of habitat alteration, especially activities that may promote expansion of non-native species that could potentially prey on the snail should be considered; (2) ground water withdrawals could have a negative effect on habitat requirements of the snail, and a recent U.S. Geological Survey (USGS) survey report discussing ground water withdrawals should provide useful information; (3) water development at a site out of the designated critical habitat area could still have detrimental effects on the life-history requirements of the target species; and (4) a more detailed discussion and justification is needed for including only mid-elevation locations, upper elevational changes could jeopardize the mid-elevation habitats and associated proximal scale primary constituent elements; as a result, inclusion of upper elevational linkage is important for maintaining sites without present snail occupation.

Our Response: We concur with the reviewers on the importance of these biological and hydrological processes for creating and maintaining habitat essential to the survival and conservation of the Newcomb's snail. We considered the importance of these processes, as well as the contribution of ground water in supporting stream ecosystems, when delineating the boundaries of critical habitat for this final designation We included the areas within and adjacent to the stream channels, springs, seeps and tributaries that provide for those biological and hydrological processes which are essential for the conservation of the Newcomb's snail.

4. *Comment:* One peer reviewer noted the following: (1) Habitat requirements are limited to generalized observations and are speculative on what may eventually be essential for the recovery of the species; (2) habitat features that are essential to the conservation of the snail are so generalized that they can be applied to almost any of the native stream animals, i.e., they are essential to all native stream animals; (3) designation of such large areas does not identify the habitat features essential to the conservation and recovery of the species.

Our Response: Both historical and current observations of Newcomb's snails in their natural habitats were used to infer a reasonable interpretation and description of the primary constituent elements required by the Newcomb's snail for its existence. Many, but not all, elements are shared by other aquatic organisms. The combination of the primary constituent elements for Newcomb's snail, and other hydrologic, elevational, and topographic characteristics that we evaluated, effectively narrowed the number of potential sites for consideration for critical habitat on Kauai to relatively few streams.

5. *Comment:* Two of the peer reviewers noted that some of the predators described in the proposal as potential threats may not co-occur with Newcomb's snail, and one specifically noted that predatory snails could extirpate small aggregations of Newcomb's snail in a very short time once the predator located them.

Our Response: Newcomb's snails are in fact found sympatrically with the introduced predator species in question, although not at every location where the snails are found. The snail populations in Makaleha Stream, North Fork Wailua River, and the Hanalei River are most likely to co-occur with these predators such as the introduced swordtail *Xiphophorous spp.* and the frogs *Rana spp.,* which prefer pool habitat. The populations found in Lumahai River and Kalalau Stream are less likely to encounter these predators because they are found in small tributaries, seeps and springs, or on protected rock surfaces under waterfalls. We note that a study on introduced rainbow trout diets in streams of the Kokee area of Kauai undertaken by the Bishop Museum (Englund *et al.* 2000) identified that Lymnaeid snails numerically made up the third largest dietary component of 80 trout whose stomach contents were analyzed, many of these Lymnaeids share similar life history and microhabitat preferences with the Newcomb's snail. In the report, the authors acknowledge that native populations of Lymnaeids could be affected by trout predation, but because the snails from the trout diet study were not identified to species, no definitive conclusions could be drawn. Terrestrial predators, such as rosey wolf snail (*Euglandina rosea*) and the introduced Sciomyzid marsh flies, are very widespread and have probably dispersed throughout the Newcomb's snail current and historic range. Therefore, despite the fact that not every predator listed as a potential threat co-occurs with the Newcomb's snail at every site, predation by introduced species is a concern in every critical habitat unit.

6. *Comment:* The degree of genetic flow between populations can be reasonably assumed to be very low. Straight-line map distances are not related to the dispersal abilities of the snails. In addition, inclusion of scientifically based inferences would improve the proposal justification. It is reasonable to assume the Newcomb's snail is hermaphroditic with a potential of more than one generation per year.

Our Response: It is reasonable to make the assumption that genetic flow between either sub-populations within a watershed or populations between watersheds occurs at a very low rate. In the Background section of this rule we report straight-line distances between several occupied sites along with the marked elevational changes of the ridgelines between the sites. By calling attention to the steep terrain, we illustrate the degree of physical (and resulting genetic) separation between the snails inhabiting these locations. It

is beyond the scope of this discussion to speculate on whether Newcomb's snail is dioecious (two sexes), or hermaphroditic (either concurrently or sequentially) or if the snail exhibits a semelparous (reproduce once then die) or other type of life history pattern, additional studies need to be conducted to answer these questions.

7. *Comment:* Several comments questioned the utility of designating critical habitat for recovery of the Newcomb's snail. These comments were: (1) Designations will not lead to recovery of the species; (2) designation of large tracts of land or water will not ensure benefit or recovery to a threatened or endangered species; and (3) designation of critical habitat will not do anything to accomplish the desired purpose of saving the species.

Our Response: Critical habitat designation is one of a number of conservation tools established in the Act that can play an important role in the recovery of a species. For a Federal action to adversely modify critical habitat, the action would have to adversely affect the critical habitat's constituent elements or their management in a manner likely to appreciably diminish or preclude the role of that habitat in the conservation of the species. Designation of critical habitat is a way to guide Federal agencies in evaluating their actions, in consultation with the Service, such that their actions do not hamper conservation of listed species. There also are educational or informational benefits to the designation of critical habitat. Education benefits include the notification of land owners, land managers, and the general public of the importance of protecting the habitat of these species and dissemination of information regarding their essential habitat requirements.

8. *Comment:* How can the Service know an area is essential to the conservation of the species when the area does not currently support many, if any, individuals?

Our Response: Determination of critical habitat areas essential to the conservation of Newcomb's snail is not dependent upon current population size at any one location. Our analysis used historical information as an indicator of past population distribution, and further considered the degree of threat to these locations due to the random occurrence of natural disasters such as hurricanes, drought, and catastrophic landslides. The ultimate goal of our analysis was to designate only areas that are required for the conservation of the snail despite the potential for local extirpations of one or more individual populations. Critical habitat designation resulted from the consideration of topographic and hydrologic features at individual sites in light of the threat of elimination of one or more entire populations.

9. *Comment:* One commentor stated that Newcomb's snail was not found on a 1998 survey which included the area around Waipahee Stream on the Cornerstone Hawaii Holdings, LLC property. They were also unaware of any information that showed that the snail had been found to exist anywhere on the property or on lands adjacent to the property. They also stated that they were unaware of any information that the property was within either the current or historic range of Newcomb's snail. The commentor also stated that they were unaware of any attempts being made by the Service or any other governmental agency to enter the property to gather scientific data, and that there was no reason to believe that excluding the property from critical habitat designation would lead to the snail's extinction.

Our Response: Our records indicate that Newcomb's snails were observed in springs and tributaries adjacent to Waipahee Stream historically (circa 1910) and again in 1994 by Service and State of Hawaii Department of Land and Natural Resources, Division of Aquatic Resources personnel. The 1998 wildlife survey report mentioned by the commenter was focused on terrestrial wildlife and was not an aquatic organism survey, therefore was not designed to evaluate the presence or absence of Newcomb's snails. Waipahee Stream is one of only six watersheds known with certainty to harbor extant populations of Newcomb's snails. This fact, along with the physiographic position of the Waipahee watershed on the island, indicates that the location is essential to the conservation of the Newcomb's snail. Service biologists will coordinate with the landowner to collect scientific data as time and resources allow.

10. *Comment:* The North Fork Wailua River, Hanalei River, and Wainiha River are not essential to the conservation of the species.

Our Response: The North Fork Wailua River and the Hanalei River are two of only six watersheds known with certainty to harbor current populations of Newcomb's snails. When evaluating the needs of a species known from only a few populations, this fact alone indicates that the areas should receive special consideration and may be essential to the species conservation. Our analysis, based upon the topographic and landscape-level features of the island, coupled with the probability of threat from natural disasters have led us to conclude that these sites are essential to the conservation of the species. The potential value of the Wainiha River watershed for the recovery of the Newcomb's snail is also high; however, our reevaluation of the critical habitat sub-unit at that location led us to the conclusion that the sub-unit should be excluded based upon economic and other relevant impacts, consistent with section 4(b)(2) of the Act.

11. *Comment:* Several commenters addressed the scientific basis for the critical habitat designations. These comments were: (1) The science must be better known before the Service can designate critical habitat; (2) critical habitat designation should be reconsidered until the scientific details are available; (3) the Service should revisit the Wailua River with an independent aquatic biologist to confirm Newcomb's snail findings; (4) the proposed designations are overly broad and not based on sound science; and (5) there was a lack of peer review of the data.

Our Response: In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12, we used the best available information in designating critical habitat. Our analysis incorporated virtually all published and unpublished scientific studies on the Newcomb's snail, as well as field notes and other information such as photos, sketches, and maps produced by Service and State agency biologists and university researchers. Service biologists also examined museum collections and catalogs and corresponded with museum-affiliated researchers at the National Museum of Natural History (Smithsonian) and the British Museum of Natural History regarding early collections and locality information associated with the Newcomb's snail. During the development of the proposed designation and following its publication during the extended comment period, we solicited biological data and public participation in the rule-making process. In accordance with our policy on peer review published on July 1, 1994 (59 FR 34270), we solicited the expert opinions of appropriate and independent specialists regarding the proposed rule. We solicited comments from six biologists with expertise in the fields of malacology (the study of mollusks) and stream ecology of Hawaii. They provided scientific and technical peer review for the designation of critical habitat for the Newcomb's snail; all six responded with written

comments. Four of the six expressed clear support for the designation.

The purpose of this peer review was to ensure that our designation methodology for Newcomb's snail critical habitat was based on scientifically sound data, assumptions, and analyses. The comments of all of the peer reviewers were taken into consideration in the development of this final designation. We are currently unable to conduct more detailed research, such as a population viability analysis, for the Newcomb's snail due to time and funding constraints. We are required under a court-approved settlement agreement to finalize this designation by August 10, 2002. We will continue to monitor the species and collect new information as time and resources allow. If supported by new information, we may revise the critical habitat designation in the future.

12. *Comment:* Several comments addressed the designation of the North Fork Wailua River sub-unit citing the lack of specific information that designation of the sub-unit would lead to Newcomb's snail recovery. These comments were: (1) That it is premature to conclude the North Fork Wailua River has a significant snail population or that it would be a suitable place for rehabilitation of the species; (2) an investigation should be made as to why the population declined in the North Fork Wailua River and if the snails ever lived here in great numbers to evaluate whether any habitat alteration would make any difference; and (3) how can the North Fork Wailua River become a place of restoration for the snails when they are impacted by frequent floods, landslides, and hurricanes.

Our Response: The North Fork Wailua River is one of only six watersheds known with certainty to harbor extant populations of Newcomb's snails. This fact alone indicates that the area is of considerable importance to conservation of the species. Anecdotal evidence indicates that of all snail populations observed, the population found in the North Fork Wailua River appears to be the most variable over time, perhaps due to localized stream channel topography which leads to frequent displacement of individuals due to recurring floods and resulting channel scour. However, only through a snail population monitoring program at this site can the suspected population variability be confirmed. Even if this is the case, the stream habitats occupied by Newcomb's snails frequently undergo considerable physical change due to the effects of floods and Newcomb's snail populations are expected to vary in response to these naturally occurring environmental events. The Newcomb's snails found in the North Fork of the Wailua River are located in the southwest extreme of the known range of the species, and considering the risk of catastrophic events occurring in one or more of the watersheds known to harbor Newcomb's snails, it is considered essential to the conservation of the species.

13. *Comment:* Several comments contrasted hydrologic conditions upstream and downstream of the water diversion structure located in the North Fork Wailua River. These comments were: (1) downstream of the diversion in the North Fork Wailua River does not contain the primary constituent elements; and (2) critical habitat for North Fork Wailua River should exclude the stream reach and tributary area below the ditch intake and diversion and critical habitat should not include any area downstream of a line drawn perpendicular to the centerline of the stream at the upstream end of the pool formed by the diversion dam.

Our Response: In response to our request for information regarding Newcomb's snail biology, and current or historical distribution, we obtained and analyzed new information that demonstrated complete dewatering of the reach below the water diversion structure located in the originally proposed critical habitat sub-unit on the North Fork Wailua River. Because a perennial instream flow of cool, clean water is considered to be an important primary constituent element for the Newcomb's snail, the dewatered reaches do not contain the primary constituent elements required and therefore do not meet the definition of critical habitat and are not essential for the conservation of the species. We modified the lower boundary of the sub-unit to only include the stream channel and adjacent area upstream of the diversion structure where stream flow is continuous. A similar modification was made to the Waipahee Stream sub-unit, based on the same rationale.

14. *Comment:* One peer reviewer reported a population of Newcomb's snails in the Wainiha River Valley. This population is reported to be downstream of the hydropower diversion in a tributary spring and seep area, not in the main channel of the river. The observation of this population of snails was in the late 1980s. As a result, it was suggested that we extend the lower elevational boundary for the originally proposed Wainiha River sub-unit from 244 m elevation to the 200 m elevation. Another commenter, who is affiliated with a university stream research institute, reported a population was observed in Kawaikini Falls in about 1997. The commenter recommended protecting the Kawaikini Falls population and the entire stream continuum down to the diversion weir, by extending the boundaries of the North Fork Wailua River sub-unit to include the entire stream from the point of diversion (approximately 326 m elevation) to the base of Mt. Waialeale/Mt. Kawaikini including all tributaries entering the main channel in the region.

Our Response: The Service believes that larger stream systems such as the North Fork Wailua River and the central rivers of Kauai such as Wainiha, Lumahai and Hanalei may harbor additional populations of Newcomb's snails because of these watersheds' large size and numerous hydrologic features such as mid-channel bedrock areas and seeps and springs that could support habitat for snails and the Service recognizes that additional survey efforts are needed to determine with certainty the existence of Newcomb's snails in the majority of potential habitat on Kauai, especially historically occupied areas that have not been resurveyed for many years. However, as noted elsewhere in this rule, in determining critical habitat in occupied habitat, we relied on well-documented observations of snail populations from recent years. While the reports provided by the commenters are useful in focusing future survey efforts, no verified collections or other supporting information (specific location data or photographs) accompanied the reports of Newcomb's snail populations previously unknown to the Service. Moreover, the proposed critical habitat sub-unit in the Wainiha River watershed was excluded from critical habitat designation as described in Exclusions Under 4(b)(2). The report of a sub-population in the upstream reaches of the North Fork Wailua River suggests that habitat conditions are adequate for Newcomb's snail in a variety of locations within that watershed; however, based on elevation and topography we believe the core area of suitable habitat to be demarcated by the critical habitat boundaries as presented in this rule.

In addition, an important consideration in delineating critical habitat was to create an adequate geographical configuration of critical habitat units which would eliminate the threat of extinction caused by natural disaster. This was accomplished by identifying multiple critical habitat units in different regions of the island. The resulting geographic array includes watersheds immediately to the east and immediately to the west of the Wainiha River, and includes a sub-unit in the

North Fork Wailua River Watershed approximately 3 km (1.9 mi) downstream of Kawaikini Falls. The two unoccupied units included in this rule, Sub-Unit I(b), Hanakoa Stream, and Sub-Unit I(c), Hanakapiai Stream are located in an area that is represented by only one occupied stream which would be inadequate to buffer against a natural disaster that occurred there.

15. *Comment:* Some commenters suggested that critical habitat boundaries be expanded to include Hanapepe Stream, because of a reported historical observation of Newcomb's snails in that watershed, and they requested that we designate habitat in the southern part of the island as well as the north and northeast.

Our Response: The critical habitat boundaries are based primarily upon the current distribution of Newcomb's snails, as documented by Service personnel and our natural resource and conservation partners in recent years. The degree to which historically occupied sites were considered was dependent upon the geographic location of the sites, the dates of last observation of the snails, and the ability of our staff to independently verify historical observations through review of historical records and examination of museum collections. We placed greater emphasis on more recent, well-documented historical observations that included site-specific locality information. Our correspondence with malacologists at the National Museum of Natural History did reveal a very early collection of Newcomb's snail from the Hanapepe watershed. The collection appears to have been made in about 1840 by members of the the U.S. Exploring Expedition (the Wilkes Expedition), approximately 25 years prior to the species being described. Service biologists examined the locality information associated with the specimen label and determined that it is insufficient to adequately describe where in the watershed the collection was made. We are not aware of any other historical or recent additional surveys or collections in the Hanapepe watershed to confirm the existence of Newcomb's snail. The Service recognizes that this new information is important because it indicates that the historical range of Newcomb's snail included sites somewhere along the course of the Hanapepe River. However, the critical habitat boundaries were based on currently occupied sites, or on well-documented observations confirming sites that were occupied at least through the 1910s or 1920s, as shown by detailed museum records. Other critical habitat units were chosen to create an array of multiple discrete populations across the island to reduce the risk of extinction due to catastrophic natural events such as hurricanes and enhance recovery. Our conclusion is that eight sites located in three physiographic provinces of the island are sufficient to achieve these goals.

16. *Comment:* Multiple commentors stated that the critical habitat designation should include all areas where Newcomb's snail formerly existed. Also, multiple commentors requested that unoccupied areas that are suitable for reintroduction of Newcomb's snail be designated critical habitat to reduce the risk of extinction.

Our Response: Historical distribution was an important factor in evaluating critical habitat for the Newcomb's snail, and especially the locations where Newcomb's snail have not been recorded in recent surveys and could be locally extirpated. Our requirement for establishing critical habitat is to designate only those areas that are essential for the conservation of the species, and this was accomplished by designating critical habitat sub-units within the six known watersheds where Newcomb's snail are found and in two of the watersheds where they may have been extirpated in recent years. This approach provides an array of critical habitat sub-units in three quadrants of the island. This approach will reduce the extinction risk due to the probability that entire populations will be eliminated due to the random occurrence of a localized natural disaster such as a hurricane or major landslide.

17. *Comment:* Other potential habitat may in time become essential to the survival of Newcomb's snail. Certain habitat types or geographical areas may be of greater importance to the species during different phases of its life history.

Our Response: We agree. As new information about the biology and life history of Newcomb's snail becomes available, we may revise the critical habitat designation in the future if new information supports a change in the critical habitat designation and funding is available.

18. *Comment:* Broad habitat-based conservation approaches to species recovery may be inappropriate for a small island State such as Hawaii.

Our Response: We are directed to use the best available information in undertaking species listing and recovery actions, including the designation of critical habitat. With very few exceptions, the scientifically accepted approach for protecting threatened or endangered species, including Newcomb's snail, is to employ habitat-based conservation strategies as a part of recovery planning and implementation. Establishing effective conservation measures on a small and isolated landmass such as Kauai requires conservation of habitat as well as control of other potential threats such as invasive species and introduced predators. Critical habitat designation is one mechanism by which potential changes to habitats resulting from federally funded or permitted projects can be reviewed.

19. *Comment:* Two commentors suggested that the Service describe the critical habitat designations in ''ahupuaa'' terms, and that the Service should take a watershed approach.

Our Response: The ahupuaa concept is that the basic management unit for natural resources, such as land and water, be demarcated roughly along watershed boundaries that extend from the mountains to the sea. This approach was used by ancient Hawaiians and is gaining renewed acceptance under current natural resources management schemes. By definition, critical habitat is only the area that is identified to be essential for the conservation of a species. In the case of Newcomb's snail, critical habitat units include distinct stream segments and portions of the adjacent associated riparian areas. We recommend that critical habitat unit boundaries be incorporated into larger landscape-level natural resource planning and watershed management that employ the ahupuaa concept.

20. *Comment:* Protecting critical habitat is essential not only for the recovery of this species, but also to protect the ecosystem on which Newcomb's snail relies for its long-term survival and recovery.

Our Response: We agree, however our designation of critical habitat is limited to the areas of habitat we conclude are essential for the conservation of the Newcomb's snail. Larger-scale ecosystem protection efforts should be addressed through other means.

21. *Comment:* Agricultural lands and areas supporting agricultural lands, including streams used for irrigation and hydropower generation, should be excluded from designation because the benefits of exclusion would far outweigh the benefits of designation, and exclusion would not result in the extinction of the species.

Our Response: No agricultural lands are included in the designation of critical habitat for Newcomb's snail. Also, no operating water diversion structures that remove water from stream channels for agricultural use are included in the designation.

Agricultural areas and water diversions are located downstream of the critical habitat sub-units established by this rule. Since no Federal actions associated with agriculture and its supporting infrastructure, such as stream water used for irrigation, were identified within the designated critical habitat units, we did not determine if the benefits of excluding any area associated with agriculture would outweigh the benefits of designation.

22. *Comment:* Critical habitat is going to prevent or very seriously impede any development of hydroelectric power.

Our Response: There are currently seven hydropower plants operating on the island of Kauai. These plants range in size from 0.5 to 3.8 megawatts and the latest was built in 1930. Since that time, while several power plants were proposed in the 1980s, none have been built and only one received all of the permits necessary to begin construction. The economic analysis also identified another potential project outside of critical habitat. This project, along with the one formerly permitted but not built are further discussed below and were covered in the economic analysis.

Federal Energy Regulatory Commission (FERC) records indicate that they have accepted a preliminary permit application for a hydropower project on the South Fork of the Wailua River. This is the only hydropower development proposal in existence on Kauai at this time, and the planning for this project will not be affected by designation of critical habitat. We are not aware of any current plans for hydroelectric plants on the streams that are being designated as critical habitat.

We are aware, however, of a plan that was proposed in the early 1980s by Alexander and Baldwin (A&B). A&B planned for a second power plant in the Wainiha Valley, upstream from their current operating plant. Apparently, A&B secured all of the permits necessary at that time to construct the project but at the last minute the company decided to invest their funds in an alternative project (a coffee company). Since that time, all of the approvals and permits that were obtained have expired.

Our economic analysis considered the feasibility of this project under current market conditions and concluded that the project is no longer feasible. The analysis also concluded that it was unlikely that any additional new hydropower projects would be considered and approved given existing environmental protection standards for the area, likely public opposition over stream diversions, and the resulting difficulties in obtaining approvals and permits. Furthermore, because the island has adequate electrical capacity for the foreseeable future, the energy price such a potential project would receive from Kauai Electric would likely be about seven cents per kWh, which would reflect avoided fuel costs but not capital costs. Consequently, the current market conditions make the feasibility of the previously planned project by A&B seem unlikely in today's climate.

Furthermore, all sites designated as critical habitat for Newcomb's snail are located in the State Conservation District, a land use status which greatly restricts the range of possible economic activities that may take place on those lands. Considering the existing land use designation under State law, and that no hydropower development has occurred at any site on the island in many decades, the economic forces and existing environmental and cultural concerns make it very unlikely that new hydropower projects will be approved, regardless of the status of lands with regard to critical habitat designation. Even if a hydroelectric project is proposed in designated critical habitat, and a FERC permit is required, section 7 consultation would not substantially affect such a project unless it jeopardizes the continued existence of the species or results in adverse modification of critical habitat, and even then, we would try to propose reasonable and prudent alternatives consistent with the purpose of the project.

23. *Comment:* How can the Service propose critical habitat or introduce snails in areas with water diversion when it appears likely that the snails will move within the stream?

Our Response: There are two potential types of snail movements that may occur. One is over geologic or evolutionary time-scales (tens or hundreds of thousands of years) where Newcomb's snails may move within stream systems, and that these movements would result in colonization of new areas of suitable habitat over very long periods of time. The second potential type of movement may come from the unlikely times when snails are involuntarily dislodged and may float downstream. We have no information to either support or refute the premise that this snail movement results in new areas being colonized over shorter time periods (decades or centuries). For this reason, whether or not snails might move within a stream in the event of a translocation experiment cannot be ascertained. Water diversion systems including dams, ditches and tunnels are human-made and are not expected to contain the primary constituent elements for the Newcomb's snail, and therefore, these structures are explicitly excluded from critical habitat designation.

24. *Comment:* Concern was expressed by two commenters about the potential for reintroduction or translocation of Newcomb's snail. These were: (1) that the Service apparently intends to spread Newcomb's snails into some streams where the snails are not known to currently exist; and (2) that the Service needs to provide additional information regarding the mechanism by which reintroduction of endangered or threatened species on privately owned lands would occur.

Our Response: A recovery plan is in development that will specify a range of actions that could be implemented for recovery of the Newcomb's snail. Translocation of snails to sites where snails were found historically, or to areas exhibiting suitable habitat characteristics will likely be a potential action outlined in the recovery plan. However, a variety of considerations will be evaluated prior to implementing any recovery action, such as the likelihood of success of a translocation experiment and its contribution to conservation of the snail. The agreement of participating private landowners, State or local agencies would be essential. The Service does not have authority to access state or private property to translocate a species without approval of the landowner, and would work with any such landowners to develop a mutually agreeable legal framework for partnership. Possible mechanisms could include, for example, development of a safe harbor agreement or designating any translocated population as an experimental population under section 10(j) of the Act. Federal funding may also be provided.

25. *Comment:* One commentor expressed serious concern with the suggestion that translocation experiments may take place in the Wainiha watershed as part of a recovery planning and implementation effort for the Newcomb's snail.

Our Response: As stated above, a recovery plan is in development that will specify a range of actions that could be implemented for recovery of the Newcomb's snail. Translocation of snails to sites where snails were found historically, including sites within the Wainiha watershed, or to other areas exhibiting suitable habitat characteristics, may be a potential action outlined in the recovery plan. Implementation of this or any other element of the recovery plan is not certain, and a variety of factors will be

evaluated prior to implementing any of the recovery actions under consideration. The Wainiha watershed is not included in this designation (*see* Exclusions Under 4(b)(2) below), and access for the purpose of reintroducing of snails into the Wainiha River or any other stream would require permission and cooperation of the landowner.

26. *Comment:* Plans to translocate snails are troubling since populations may be genetically unique and movement between stream systems can be disastrous. The plan is premature and further information is necessary.

Our Response: As explained above, a recovery plan is in development that will specify a range of actions that could be implemented for recovery of the Newcomb's snail. Prior to any translocation the effect upon the genetic structure of isolated sub-populations and the population as a whole will be evaluated in detail.

Issue 2. Policy and Regulations

27. *Comment:* One commentor wanted to be assured that none of their Federal tax dollars would inadvertently be used to aid or abet extinction of any native flora or fauna.

Our Response: Endangered Species Act section 7 consultations, which can be initiated by a Federal action within designated critical habitat, is a mechanism to assure that Federal actions do not jeopardize the continued existence of threatened or endangered species.

28. *Comment:* Hawaiian endangered species do not do well when people have access to them. Whenever Hawaiian endangered species are impacted by human populations, their numbers go down. Public access to critical habitat is going to have to be restricted.

Our Response: Undoubtedly, human activities have had a negative impact to many species in Hawaii. However, numerous threatened and endangered species are currently on the road to recovery through the direct intervention of humans. These include marine and terrestrial vertebrates, plants, and invertebrates. The designation of an area as critical habitat does not in itself restrict public access. The regulatory effect of critical habitat designation is limited to requiring consultation under section 7 of the Act for Federal actions. Since few, if any, Federal actions affect public access to the State and private lands designated as critical habitat for Newcomb's snail, it is unlikely that public access to these areas will be altered.

29. *Comment:* When private landowners are affected by zoning regulations that are perceived as restrictive, voluntary cooperation by private landowners will cease.

Our Response: We understand that there is the possibility of an unfortunate negative reaction from some private landowners for actions that the Service is mandated to undertake by Federal law. The Service strives to minimize the impacts to landowners through a variety of outreach and communication efforts. Economic and other relevant impacts of designation have been analyzed and considered in making this designation of critical habitat. Many threatened and endangered species occur on private lands and the Service recognizes the importance of conservation actions by private landowners. Cooperation from private landowners is an important element of Service conservation efforts, and the Service has had considerable success in developing partnerships with large and small landowners, government agencies, and non-governmental organizations for conservation activities on Kauai, in the State of Hawaii, and throughout the nation.

30. *Comment:* One commenter indicated that designation of critical habitat must accommodate traditional gathering rights of native Hawaiians as reflected in the State constitution.

Our Response: Newcomb's snails are not known to be a resource used traditionally by native Hawaiians. The Service does not anticipate that take of Newcomb's snails for traditional and customary use will occur. However, because traditional gathering does not involve a Federal action, the exercise of traditional gathering rights of native Hawaiians for other aquatic or terrestrial resources is not affected by this rule.

31. *Comment:* One commentor stated that excluding any areas from designation based on current management would violate 16 U.S.C. 1533(a)(3), and further stated that conservation efforts do not alter the habitat's critical nature or the need to ensure its protection. Multiple commentors stated that areas already subject to conservation measures or that may be the subject of conservation agreements in the future should not be excluded from critical habitat.

Our Response: Critical habitat is defined, in part, as areas on which are found the physical or biological features essential to the conservation of the species and which may require special management considerations or protections (16 U.S.C. 1532(5)). We believe that it is reasonable to interpret this provision as excluding areas which do not require special management or protection is already in place. This includes, for example, a legally operative plan/agreement that addresses the maintenance and improvement of the primary constituent elements required by the Newcomb's snail and which also provides certainty in management for the conservation of the species. A variety of specific criteria are used to evaluate whether adequate management and implementation of specified conservation actions are sufficient for lands to be excluded from critical habitat designation on this basis. While we recognize that some of the areas included within the critical habitat boundaries for the Newcomb's snail have some level of management, no management plans or documented conservation activities which specifically recognize and address the Newcomb's snail are in place or underway. Therefore, no lands were excluded on the basis of existing adequate management.

32. *Comment:* The Service did not adequately address the takings of private property as a result of designating critical habitat for the Newcomb's snail. If the critical habitat proposal would require reducing water diversions from any stream, the Service should investigate whether that would take anyone's vested water rights. In addition, if the proposed designation of critical habitat precipitates conversion of agricultural land to conservation land that has no economically beneficial use, then the Federal and State governments will have taken private property.

Our Response: We have assessed the takings implications of this rule in accordance with Executive Order 12630 and have concluded that this rule does not pose significant takings implications. Because no critical habitat sub-unit boundaries are located downstream of existing diversions, no requirements to reduce out-of-stream water use will arise as a result of this rule. Likewise, no land zoned for agriculture is included in the final rule, therefore no agriculture-zoned land could be rezoned for conservation as a result of this rule.

Issue 3. Economics

33. *Comment:* One commentor stated that the draft economic analysis (DEA) fails to satisfy the requirement of section 4 of the Act.

Our Response: We disagree. Section 4(b)(2) of the Act and 50 CFR 424.19 require us to consider the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We published our proposed designation of critical habitat for the Newcomb's snail in the **Federal Register** on January 28, 2002 (67 FR 3849). The draft economic analysis

(DEA) of the proposed critical habitat designation was made available for review and public comment during a 30-day public comment period beginning on March 29, 2002 (67 FR 15159). In the DEA, we performed a comprehensive review of all potential activities that may be impacted by the proposed critical habitat. Where possible we quantified the impacts of critical habitat designation, where this was not possible we qualitatively assessed the impacts. Based on the public comments received during the comment period, a final addendum to the economic analysis of critical habitat of the Newcomb's snail was drafted. The final addendum addresses the concerns raised through the comment period and takes into consideration new information. The draft economic analysis issued in March 2002 as modified by the addendum constitute the economic analysis for this final rule. Please refer to the Economic Analysis section of this final rule for a more detailed discussion of these analyses. Copies of both the economic analysis and the addendum are in the supporting record for this rulemaking and can be inspected by contacting the Pacific Islands Fish and Wildlife Office (refer to the **ADDRESSES** section of this rule).

34. *Comment:* One commentor stated that the Service fails to adequately analyze the economic impact to small entities under the Regulatory Flexibility Act, and the Small Business Regulatory Enforcement Fairness Act. Another commentor stated that the cost to small entities will be substantial and devastating. A third commentor stated that three statements in the rule are erroneous: (1) We are certifying the rule will not have a significant effect on a small number of small entities; (2) we are certifying the proposed designation will not have a significant economic impact on a substantial number of small entities; (3) this proposed rule is not expected to significantly affect energy supplies.

Our Response: Under the Regulatory Flexibility Act (RFA) (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effect of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). No regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities.

The economic analysis found that the only small entity that may be impacted by the designation of critical habitat is the Waipa Foundation. The Foundation is a small community-based corporation and is likely to be considered a small organization under the RFA/SBREFA definition. This would occur if the Waipa Foundation and Kamehameha Schools enters into an agreement with the Nature Conservancy of Hawaii (TNCH) to manage the Lumahai Valley for conservation and educational and cultural benefits. TNCH and the Waipa Foundation may seek funding from the Service to manage the valley, in which case the Service may conduct an internal consultation with a low level of complexity. The DEA states that the estimated cost of time and effort expended for a third-party applicant for a consultation with a low level of complexity is $1,400. Thus, the designation of critical habitat for the snail is not likely to have a significant economic impact on the Waipa Foundation or any other small entity.

Because they are not considered small entities, Federal and State agencies were not included in the RFA/SBREFA analysis. Also, neither of the private land owners affected by this rule are considered small entities: the Kamehameha Schools is a very large educational trust and has extensive land holdings statewide; and Cornerstone Kauai Holdings, Inc. is not considered a small business based upon its revenues resulting from land subdivision and resale (using the U.S. Small Business Administration (SBA) definition of small business). A&B is also not considered to be a small business based on its revenue structure and the corresponding SBA definition of small businesses for their industry sector. TNCH is likely to be involved in section 7 consultations on conservation projects that it undertakes, however TNCH is also a large organization that is dominant in the conservation and land management field in Kauai County.

Existing energy supplies will not be impacted by the critical habitat designation. No hydroelectric facilities lie within any of the eight critical habitat sub-units as designated. The waters entrained into the North Wailua Ditch by the North Fork Wailua River diversion, which is located downstream of critical habitat sub-unit IIIc, are diverted into the Waiahi Stream watershed. A complex of water diversions and ditches from these and adjoining streams are used to operate the Upper and Lower Waiahi Power Plants, which are owned and operated by Kauai Electric. The lower boundary of the North Fork Wailua River critical habitat unit was modified, on the basis of Newcomb's snail habitat requirements, to exclude the North Wailua Ditch diversion structure.

The State of Hawaii Department of Economic Development and Tourism (DBEDT) described the potential for new or expanded hydropower production capacity for Kauai. This agency reports that, because of existing protections and significant environmental concerns, the only location suitable for hydropower development is the Lower Wailua River, a location that would not be effected by the designation of critical habitat in this rule. As stated previously, if a hydroelectric project is proposed in designated critical habitat, and section 7 consultation results in finding such a project jeopardizes the continued existence of the species or results in adverse modification of critical habitat, the Service would try to propose reasonable and prudent alternatives consistent with the purpose of the Act that would allow the project to be completed.

As a result, we are certifying that the final rule will not have a significant effect on a substantial number of small entities and the rule will not significantly affect energy supplies. We are basing our assertion on the information provided in the economic analysis that was prepared for the proposed rule and the addendum to this analysis that was prepared for the final rule, which incorporated new information that was provided during the public comment period.

35. *Comment:* The DEA fails to consider economic impacts of listing and critical habitat that result through interaction with State law, specifically Hawaii's Endangered Species Act. *New Mexico Cattlegrowers Association* v. *U.S. Fish and Wildlife Service* requires consideration of the impact of listing as well as the impact of designating an area as critical habitat. Instead, the analysis is expressly limited to the impact of federal agency consultation under the jeopardy standard. However, since listing triggers listing under State law, the Service must consider the impact of take prohibitions under State law (and consequently federal law which prohibits destruction of plants in knowing violation of State law).

Our Response: The Service is addressing the 10th Circuit's concern that we consider the economic impacts

of designation by addressing all of the economic impacts of critical habitat designation even if they are attributable co-extensively to the listing of the species. In particular, since the only regulatory effect of critical habitat is from applications of section 7, the Service considers the economic impacts of section 7 consultations related to critical habitat even if they are attributable co-extensively to the listed status of the species. In addition, we look at any indirect costs of critical habitat designation such as where critical habitat triggers the applicability of a State or local statute. However, where it is the listing of a species that prompts action at the State or local level, the impacts are not attributable to critical habitat designation and are not appropriately considered in the economic analysis of critical habitat designation. Take prohibitions under Hawaii law are purely attributable to a listing decision and do not co-extensively occur because of critical habitat designations. There are no take prohibitions associated with critical habitat.

36. *Comment:* The DEA fails to consider economic impacts of critical habitat that result through interaction with State law, specifically Hawaii's Land Use Law. Critical habitat could result in downzoning under State law. HRS § 205–2(e) states that conservation districts shall include areas necessary for conserving endangered species. HRS 195D–5.1 states that DLNR shall initiate amendments in order to include the habitat of rare species. Even if DLNR does not act, the Land Use Commission may initiate such changes, or they may be forced by citizen suits. Areas for endangered species are placed in the protected subzone with the most severe restrictions. While existing uses can be grandfathered in, downzoning will prevent landowners from being able to shift uses in the future, reduce market value, and make the land unmortgageable.

Our Response: Economic impacts are not expected to occur as a result of the critical habitat designation due to land being redistricted from the state Agricultural, Rural, or Urban District to the Conservation District. All of the land designated as critical habitat for the Newcomb's snail is currently within the State Conservation District.

37. *Comment:* The DEA fails to consider economic impacts of critical habitat that result through interaction with State law, specifically Hawaii's Environmental Impact Statement Law. HRS 343–5 applies to any use of conservation land, and a full Environmental Impact Statement is required if any of the significance criteria listed in HAR 11–200–12 apply. One of these criteria is that an action is significant if it ''substantially affects a rare, threatened or endangered species or its habitat.'' This will result in costly procedural requirements and delays. However, the DEA does not acknowledge that any impact on endangered species habitat will be deemed to be ''significant.''

Our Response: Adverse impacts on development, including delays for additional studies and agency reviews, increased costs for environmental studies, increased risk of project denials, increased risk of costly mitigation measures, increased risk of litigation over approvals, etc., are not expected since, as discussed in the economic analysis, no development projects are likely to occur within the areas designated as critical habitat for Newcomb's snail. This reflects the facts that (1) the subject land is largely unsuitable for development due to the rugged mountain terrain, lack of access, and remote locations; and (2) existing land-use controls in the Conservation District severely limit development. None of the proposed critical habitat lies within the Special Management Areas designated by Kauai County under the Hawaii's Coastal Zone Management Program (HRS 205A).

38. *Comment:* The DEA fails to consider economic impacts of critical habitat that result through interaction with State law, specifically the State Water Code. HRS 174C–2 states that ''adequate provision shall be made for protection of fish and wildlife. HRS 174C–71 instructs the Commission of Water Resource Management to establish an instream use protection program to protect fish and wildlife. There are water diversion systems in at least four of the proposed units, including two irrigation ditches presently in use and one that is presently unused. However, the DEA does not consider whether designation would trigger State law limits on water diversion, even if they do not involve federal consultations under the ESA. Excluding artificial irrigation structures does not eliminate the economic impacts. If any water diversions will likely be reduced due to critical habitat designation, these economic effects must be considered. In addition, since landowners may depend on water pumped from other watersheds, these effects can be far-reaching.

Our Response: The areas designated as critical habitat for the Newcomb's snail were modified for biological reasons to only include stream channels upstream of operating water diversions (see explanation under Summary of Changes from the Proposed Rule). For this reason it is unlikely that the State would impose restrictions on existing stream diversions in order to restore stream flows. Since no current stream diversions or dewatered reaches downstream from the diversions remain in the critical habitat as modified we would not expect any loss of irrigation water to farmers and ranchers, or a related loss of existing and potential farm and ranch production. Concerns specific to Wainiha Valley no longer apply since critical habitat is no longer proposed for this area.

Further, as discussed in the EA, no known plans exist for new stream diversions for the purpose of hydroelectric power production or irrigation withdrawals in the subject areas. Because of existing and projected market conditions, and the significant environmental and cultural concerns that arose in conjunction with previous hydropower development schemes that were ultimately abandoned, approvals for new stream diversions for new hydropower plants or irrigation withdrawals are unlikely. Therefore potential loss of alternative energy production capacity and, for some private lands, a potential loss in property values, is similarly unlikely.

Instream uses protected by the State Water Code established in HRS 174-C include a variety of uses including recreation, cultural uses and scenic values, in addition to support and propagation of aquatic life. The instream use protection program established by the Water Code and implemented by the Commission on Water Resource Management does not expand in scope within areas designed as critical habitat.

39. *Comment:* One commentor stated that the DEA does not fully examine the indirect impacts on agriculture from designation. One commentor stated that the impact upon farmers who rely on irrigation water or working to obtain irrigation water must be addressed in the EA. One commentor stated that critical habitat designation and the additional restrictions it would place on the community will have a significant economic effect on water resources that directly support the agricultural industry.

Our Response: Our economic analysis considered both the direct and indirect impacts that the rule could have on the agricultural industry and concluded that this industry would not be significantly impacted. First, we are not designating critical habitat on any agricultural lands. Consequently, we do not believe that the designation will have a direct impact on agricultural activities. The

economic analysis also considered whether the agriculture industry could be indirectly affected through changes in their irrigation system resulting from critical habitat designation. The analysis concluded that existing irrigation systems could not be affected because they lie outside and downstream of designated critical habitat. Furthermore, it is unlikely that future irrigation systems will be affected by this rule because there are no currently known plans for new stream diversions and even without the Snail critical habitat, development of new stream diversions in these areas is unlikely given current environmental concerns, likely public opposition to new stream diversions, and difficulty obtaining permits in today's socio-economic climate.

The analysis also noted that as the sugar plantations shut down on Kauai, large volumes of water are freed for use by other agricultural activities. Replacement agricultural activities use significantly less water than sugarcane. Some of the former sugarcane lands have been replanted in diversified crops which generally use about half as much water per acre as sugarcane. However, most of the former sugarcane lands are now either lie fallow or are used for grazing cattle and are no longer irrigated. Thus, it does not appear likely that there will be an economic need for new diversions to support agricultural activities in the foreseeable future.

40. *Comment:* One commentor was concerned that if water development is restricted due to critical habitat impacts, the additional burden and costs associated with affordable housing and the visitor industry will have a tremendous effect. One commentor stated that there will be a significant socio-economic impact on the community by restricting activities and access to public lands, future water resource developments may be restricted to certain areas and require additional costs which may be passed on to the users, and affordable housing is dependent on the future availability of water resources.

Our Response: Increased restrictions on developing potable water resources, resulting in higher water costs and adverse impacts on affordable housing and the visitor industry are unlikely. Almost all potable water on Kauai is supplied from groundwater since these sources do not require expensive treatment. Existing and future drinking water sources are located downgradient of the areas designated as critical habitat for the Newcomb's snail. In addition, most of the critical habitat units are in areas that are far removed from where new wells are likely to be developed. Critical habitat designation for Newcomb's snail will have no adverse impact on groundwater recharge and will not reduce the sustainable yield of potable water from the aquifer.

Restrictions on access to public lands resulting in socioeconomic costs are also unlikely. Designation of critical habitat would impose no restrictions on access to public lands. However, as noted elsewhere, hiking to these lands is difficult due to their remoteness; some of the units are accessible only by helicopter and are rarely visited. New obligations for how private landowners manage their lands are not expected, however the potential cost of land and stream management under voluntary conservation programs for the snail are addressed in the EA.

41. *Comment:* One commentor stated that the cost of potential citizen suits preventing certain activities or requiring some sort of management in critical habitat was not discussed in the DEA. Another commentor stated that critical habitat designation will bring unnecessary and costly litigation. One commentor stated that proposed critical habitat could entail considerable cost to both the State and private landowners. One commentor stated that critical habitat designation could indirectly result in limitations or special management requirements being established on private lands. These costs should be considered. Costs of delays to projects while surveys, studies, and Service review are undertaken and all potential consequences of designation should be considered, not solely those with the direct jurisdiction of the Service.

Our Response: Some landowners and managers are concerned that this critical habitat designation will directly or indirectly impose new obligations on them with regard to how they must manage their land, even if they do not propose a new project, land use, or activity. However, the Act does not obligate landowners to manage their land to protect critical habitat, nor would landowners and managers be obligated under the Act to participate in projects to recover a species for which critical habitat has been established.

Adverse impacts on development, including delays for additional studies and agency reviews, increased costs for environmental studies, increased risk of project denials, increased risk of costly mitigation measures, increased risk of litigation over approvals, etc., are not expected since, as discussed in the EA, no development projects are likely to occur in the proposed critical habitat. This reflects the facts that the subject land is largely unsuitable for development due to the rugged mountain terrain, lack of access, and remote location; and that existing land-use controls in the Conservation District severely limit development. While it is conceivable that there may initially be an increase in subsequent lawsuits related to the critical habitat designation, it is not possible to predict their number, degree of complexity, or any other associated effect with project delays due to scant historical evidence for the Newcomb's snail.

42. *Comment:* One commentor stated that the DEA has a lack of a thorough benefits analysis. It does not include the benefits of watershed protection and improvement, protection of other stream and riparian biota, and the value of the snail as an indicator of ecological health. Other multiple commentors stated that the DEA ignored the benefit of keeping other native species off the endangered species list, of maintaining water quality and quantity, of promoting ground water recharge, and of preventing siltation of the marine environment, thus protecting coral reefs. Another commentor noted that additional benefits of critical habitat include combating global warming, providing recreational opportunities, attracting ecotourism, and preserving Hawaii's natural heritage. The Service must use the tools available such as a University of Hawaii Secretariat for Conservation Biology study that estimated the value of ecosystem services, to determine the benefits of critical habitat.

Our Response: There is little disagreement in the published economics literature that real social welfare benefits can result from the conservation and recovery of endangered and threatened species. Such benefits have also been ascribed to preservation of open space and biodiversity, both of which are associated with species conservation. Likewise, a regional economy can benefit from the preservation of healthy populations of endangered and threatened species, and the habitat on which these species depend. It is not feasible, however, to fully describe and accurately quantify these benefits in the specific context of the Newcomb's snail critical habitat. For example, most of the studies in the economics literature do not allow for the separation of the benefits of listing (including the Act's take provisions) from the benefits of critical habitat designation. The discussion presented in the DEA and in the Addendum provides examples of potential benefits, which derive primarily from the listing of the species, based on information obtained in the

course of developing the economic analysis. It is not intended to provide a complete analysis of the benefits that could result from section 7 of the Act in general, or of critical habitat designation in particular. In short, the Service believes that the benefits of critical habitat designation are best expressed in biological terms that can be weighed against the expected cost impacts of the rulemaking; our analysis under section 4(b)(2) of the Act focuses this comparison.

Regarding other native aquatic species, the Service believes that five species of concern (four snails and one fish) and one candidate species (a damselfly) may occur within the critical habitat boundaries for the Newcomb's snail. As more is learned about these species (*e.g.,* their populations and trends, ranges, threats to their survival, *etc.*), the Service may list one or more of them as threatened or endangered. As indicated in the economic analysis, the critical habitat designation and listing of the Newcomb's snail are expected to result in few or no modifications to projects or activities over the next ten years. Nevertheless, critical habitat designation may help to educate landowners and organizations about the locations of the Newcomb's snail and where to focus future conservation efforts, including efforts to control non-native predators. Thus, critical habitat designation may indirectly enhance the survival of other native aquatic species that share the same habitat as the Newcomb's snail. If the Service determines that one or more of these species does not need to be added to the threatened and endangered species list, the avoided cost (*i.e.,* economic benefits) could be large. However, the economic value of these indirect benefits to other native aquatic species is not quantified because of a lack of information on: (1) The nature and extent of future conservation projects due to the Newcomb's snail listing and its critical habitat designation, or enhancements to other conservation projects due to the Newcomb's snail; (2) the resulting improvements in stream quality; (3) the nature and extent of the benefits to other native aquatic species (*e.g.,* increases in their populations and ranges); (4) the reduced probability that one or more other species will be listed; (5) the avoided cost of the listing and designation of critical habitat; and (6) the economic value to society of enhanced survival of these species.

In the case of islandwide beneficial impacts, such as water recharge, the proposed Newcomb's snail critical habitat comprises a comparatively small area (less than 3 percent) of the mountainous interior of Kauai. As indicated in the DEA, the critical habitat areas are not subject to development pressures or other significant changes because they are located in the upper headwater reaches of streams. Much of the critical habitat is located in areas of steep slopes, remote locations, and difficult access; some of the units are accessible only by helicopter and are rarely visited. Also, all of the units are in the State Conservation District which severely limits development, most commercial activities, and other changes in land use. Assuming no Newcomb's snail listing and no critical habitat designation, no significant changes are expected in watershed, riparian, or stream conditions. Even with the species listing and critical habitat designation along with related efforts to control threats to the Newcomb's snail, anticipated changes in game-mammal management of surrounding lands (the most liberal hunting is already allowed in these areas in order to reduce ungulate populations), and other related land and stream management are not expected and, no significant changes to the watershed, riparian, or stream conditions are expected. Thus, critical habitat designation for the Newcomb's snail is expected to result in few benefits related to increased groundwater recharge, stream water quality, reduced siltation of nearshore reefs and other marine resources, reduced global warming, increased recreational opportunities, increased ecotourism, *etc.*

The 1999 analysis by University of Hawaii (UH) was, in fact, used in the DEA as a resource document for concepts, and for identifying documents that report the original research on certain subjects. However, the UH study has limited applicability for valuing the benefits of Newcomb's snail critical habitat designation for a number of reasons. First, the UH study had a different purpose, which was to estimate the total value of environmental benefits provided by the entire Koolau Mountains on the island of Oahu versus the value of the more limited benefits provided by the proposed Newcomb's snail critical habitat on the island of Kauai. Consistent with its purpose, the UH study provides no estimates of the changes in environmental conditions resulting from changes in land and stream management due to critical habitat designations. Furthermore, many of the assumptions and much of the analysis in the UH study are not transferable to the economic analysis for the Newcomb's snail critical habitat. For example, the value of water recharge in the UH study reflects projected water supply and demand conditions on Oahu, an island which is 9 percent larger than Kauai but has a population of more than 12 times that of Kauai. Also, the UH benefit analysis of reducing soil runoff is unique to three valleys that drain through partially channelized streams in urban areas into the man-made Ala Wai Canal. Since this canal was designed without adequate flushing from stream or ocean currents, it functions as an unintended settling basin and must undergo expensive dredging periodically. In addition, the recreational and ecotourism values provided in the UH study apply to areas that are accessible to most hikers, which is not the case with most of the Newcomb's snail critical habitat. As mentioned previously, the Newcomb's snail critical habitat units are located in the upper reaches of streams and rivers on Kauai, and the majority of these areas are rarely visited.

43. *Comment:* One commentor stated that the DEA fails to evaluate the practical effect of critical habitat designation will have on Special Management Area permits administered by Kauai County as required by Hawaii's Coastal Zone Management Act. Because these permits will be harder to get, it will result in delays which will cause a decline in property values and may make it impossible to develop.

Our Response: None of the critical habitat designated for the Newcomb's snail lies within the Special Management Areas designated by Kauai County under the Hawaii's Coastal Zone Management Program.

44. *Comment:* The conclusion under E.O. 12866 that the rule will not have an annual economic effect of $100 million or more, or adversely affect in a material way any sector of the economy or State or local governments or communities, is flawed because it does not consider the major adverse impacts from secondary effects.

Our Response: For the reasons explained in our EA, we do not believe that this rule, as designated, will have an annual economic effect of $100 million or more. However, pursuant to Executive Order (E.O.) 12866, Office of Management and Budget (OMB) determined that it raises novel legal or policy issues. Therefore, it is ''a significant regulatory action'' under E.O. 12866, and, as a result, it rule has undergone OMB review.

Both the DEA and the EA addendum provide analysis of the indirect costs associated with designation of critical habitat for the Newcomb's snail in terms

of land management, loss in property values, and impacts to existing and future stream diversions. These indirect costs were considered and those costs that could be quantitatively estimated were addressed in the DEA and the EA addendum. Some potential costs were not estimated because the likelihood of actually incurring the cost is considered to be extremely remote. For a complete listing of all secondary effects considered and any resulting economic impacts, refer to the DEA and the EA addendum under section 3.d Other Costs.

Summary of Changes From the Proposed Rule

Two critical habitat boundaries were modified due to new information received during the comment period. The downstream boundaries of Sub-Unit III(a) (Waipahee Stream) and Sub-Unit III(c) (North Fork Wailua River) were modified after our analysis of this new information.

In both locations, at various times, existing diversion structures completely remove water from the stream to ditch systems. This diverted water flows into a ditch system and is then used for irrigation and hydropower production. These diversion structures were built in the early 1900s during the expansion of the sugar industry in the Hawaiian Islands. At that time, no structural modifications were incorporated into the design of dams and weirs to facilitate passage of aquatic organisms, nor did environmental considerations lead to the maintenance of stream flows in the reaches below the dams. To the contrary, these diversion structures were expressly designed to be as efficient as possible in capturing and diverting as much of the stream flow as possible, particularly during periods of moderate and low flow, when agricultural demand for water resources is high.

The North Fork Wailua River sub-unit is located on State lands. A series of changes to agricultural water needs, ownership of plantation lands, and a transfer of ownership of the island's electrical power utility, have left long-term resolution of future water allocation and operation and maintenance of the ditch system in question. Despite some uncertainty with water use, State agencies charged with licensing the water withdrawals have committed to at least two private entities that this diversion will remain in place and continue to function much as it has historically. A rough, quantitative estimate and analysis of hydrologic characteristics of the diversion operation submitted to the Service by the current water users (Alton Miyamoto, V.P. and General Manager, Kauai Electric, *in litt.* 2002) demonstrated that the reach below the dam is dry approximately 25 percent of the time. Therefore, the area below the dam does not contain the primary constituent element of perennial flow and therefore is not critical habitat.

The Waipahee sub-unit is located on private lands that have already undergone a transition from sugar cane to diversified crops and grazing. The landowner continues to divert water from the stream to maintain reservoirs on the property to support these activities, and in anticipation of unspecified future water needs. Anecdotal evidence indicates that the diversion removes all of the water from the stream during low flow periods at the Waipahee diversion.

Because an ample instream flow of cool, clean water is considered to be one of the primary constituent elements for the Newcomb's snail, and the diversion structures in the proposed Waipahee and North Fork Wailua River sub-units have altered the hydrologic regimes of the reaches below the dams to the extent that no water flows past the dams during biologically significant periods of time, we conclude that the reaches below the diversion structures do not exhibit the primary constituent elements required by the Newcomb's snail and are therefore not essential for its conservation. In both cases, the lower elevation boundary of critical habitat was moved to a location just upstream of the diversion dam, where stream flow is continuous and subject only to natural fluctuation. This resulted in a reduction of 0.68 km (0.43 mi) of stream channel and 40 ha (99 ac) of total area from the final designation for the Waipahee Stream sub-unit and 0.59 km (0.37 mi) of stream channel and 28 ha (68 ac) of total area from the final designation for the North Fork Wailua River sub-unit.

The proposed critical habitat designation in the Wainiha River was excluded based upon the reasons set out below (*see* Exclusions Under Section 4(b)(2) below). Removing the Wainiha sub-unit resulted in removing an additional 5.3 km (3.3 mi) and 229 ha (566 ac) from the final designation of critical habitat.

Economic Analysis

Exclusions Under Section 4(b)(2)

Section 4(b)(2) of the Act requires that we designate critical habitat on the basis of the best scientific and commercial information available, and that we consider the economic and other relevant impacts of designating a particular area as critical habitat. We may exclude areas from critical habitat designation if the benefits of exclusion outweigh the benefits of designation, provided the exclusion will not result in the extinction of the species.

Following the publication of the proposed critical habitat designation, a draft EA was prepared to estimate the potential economic effects of the proposed designation. The draft EA was made available for public review on March 29, 2002 (67 FR 3849). We accepted comments on the draft EA until April 29, 2002. Additionally, we held a public hearing on the proposed designation and the draft EA on April 17, 2002, in Lihue, HI. Following the close of the comment period for the draft EA, a final addendum was completed which incorporated public comments on the draft EA and made any necessary modifications to the economic analysis. The economic analysis for this rule consists of the draft EA as modified by the Addendum to the EA.

Our economic analysis evaluated the section 7 economic effects associated with the listing of the Newcomb's snail as a threatened species under the Act, as well as any potential effects of the critical habitat designation above and beyond those economic impacts associated with listing. To quantify the proportion of total potential economic impacts attributable to the critical habitat designation, the analysis evaluated a ''without critical habitat'' baseline and compared it to a ''with critical habitat'' scenario. The ''without critical habitat'' baseline represented the current and expected economic activity prior to the critical habitat designation, including protections afforded the species under Federal and State laws, as well as other existing land-use restrictions. The difference between the two scenarios measured the net change in economic activity attributable to the designation of critical habitat. The categories of potential costs considered in the analysis included the costs associated with: (1) Conducting section 7 consultations associated with the listing or with the critical habitat, including technical assistance; (2) modifications to projects, activities, or land uses resulting from the section 7 consultations; (3) uncertainty and public perceptions resulting from the designation of critical habitat; and (4) potential offsetting beneficial costs associated with critical habitat including educational benefits. The majority of consultations resulting from the critical habitat designation for the Newcomb's snail are likely to address

conservation actions such as watershed restoration and ecosystem protection. While consultations related to future water management activities, such as hydropower and water diversion, are possible, they are considered unlikely for reasons discussed in the economic analysis.

The addendum to the draft EA estimates that the designation may result in potential economic effects of $28,500 over a 10-year period, and concludes that economic impacts anticipated from the designation of critical habitat for the Newcomb's snail would not be significant. This is a reduction of $5,200 from the costs estimated in the original draft EA, and is due to the exclusion of one of the originally proposed critical habitat sub-units, and the modification of boundaries of two other sub-units. As described in the analyses, direct costs result from conservation projects and secondary costs result from investigations of the implications of critical habitat designation. A more detailed discussion of our economic analysis is contained in the draft EA and the Addendum. Both documents are included in the supporting documentation for this rule making and available for inspection at the Pacific Islands Fish and Wildlife Office (refer to **ADDRESSES** Section).

No critical habitat sub-units proposed in the draft rule were excluded or modified due to economic impacts. However, as described above, section 4(b)(2) of the Act requires us to consider other relevant impacts, in addition to economic impacts, of designating critical habitat. A proposed critical habitat sub-unit located in the Wainiha River Valley was excluded from designation based upon the relevant issue that designation of critical habitat would have a negative effect on the voluntary landowner conservation activities in the Valley, both ongoing and in development. The proposed 566-acre sub-unit is on private lands owned by Alexander and Baldwin, Inc. (A&B). A&B owns a 10,120-acre parcel that encompasses the large and remote central segment of the Wainiha River Valley.

The proposed Wainiha sub-unit is not known to be occupied by Newcomb's snail, although there is a credible report of a population of snails observed downstream of the diversion dam in the late 1980s. The most likely conservation actions in the Wainiha River Valley for the Newcomb's snail would be experimental translocation to establish new populations of Newcomb's snail, and surveys to potentially locate undocumented populations in unsurveyed habitat. Both of these activities would require substantial voluntary cooperation by A&B. Long term conservation in the valley might also include development of a Safe Harbor Agreement or a rule under section 10(j) of the Act (described below), both of which would require considerable landowner support and participation.

(1) Benefits of Inclusion

The benefits of inclusion of the Wainiha River Valley sub-unit within the area designated as critical habitat for the Newcomb's snail would result from the requirement under section 7 of the Act that Federal agencies consult with us to ensure that any proposed actions do not destroy or adversely modify critical habitat. Historically, no consultations have occurred for the Newcomb's snail because the species was listed recently and is only found in remote locations on non-Federal lands where Federal actions are infrequent and therefore rarely trigger section 7 consultations.

Since about 1910, a run-of-the-river hydropower facility has operated in the Wainiha watershed. Currently, this hydropower plant is operated by Kauai Coffee Co., a subsidiary of A&B. The water diversion dam for the hydropower facility is immediately downstream of the boundary of the proposed critical habitat sub-unit for Newcomb's snail. There are no firm plans for new or expanded hydropower in the near future, and neither our draft EA or Addendum found a high probability of such expansion given the State Conservation District zoning of the land, environmental and cultural concerns, and the resulting exhaustive permitting and licencing procedures required for hydropower development.

Although we believe the likelihood of a consultation is remote, in the event that a hydropower development plan is actually proposed for this location, consultation requirements under section 7 of the Act would be triggered as a result of the permitting processes administered by the U.S. Army Corps of Engineers (ACOE) and, potentially, the Federal Energy Regulatory Commission (FERC). The benefit of critical habitat designation would ensure that any permits given by either the ACOE or FERC would not likely destroy or adversely modify any critical habitat. Without critical habitat designation in areas considered unoccupied by the Newcomb's snail, projects would not likely trigger consultation requirements under the Act.

Another benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area, and may focus and contribute to conservation efforts by other parties by clearly delineating areas of high conservation value for certain species. Both of these outcomes are important for the Newcomb's snail. Because little is know of this species' biology and distribution, virtually any information that reaches a wide audience about this species can be considered valuable. Likewise, any information about this species and its habitats that reaches other parties engaged in conservation activities would be considered valuable.

(2) Benefits of Exclusion

The landowner and other interested parties stated that the designation of critical habitat as originally proposed could have a negative impact on future voluntary conservation efforts in Wainiha River Valley, including the reintroduction of Newcomb's snail. Through a voluntary agreement with the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW), A&B allows DOFAW to manage the Wainiha parcel for conservation purposes. Preservation of the parcel, in concert with the surrounding State lands (State-owned Halela Forest Reserve and the Alakai Wilderness Preserve), conserves watershed resources which in turn conserves habitat for Newcomb's snail. This management strategy is consistent with recovery of the species. While DOFAW restricts access to the parcel, they are not conducting management activities at this time. A&B has informed the Service that they are currently negotiating a voluntary conservation easement with TNCH to provide more active management of the valley for watershed protection. A&B has advised the Service that these negotiations, that will benefit Newcomb's snail by protecting its habitat, could be negatively impacted if critical habitat is designated for Newcomb's snail. Although the Service's draft EA did not find it likely, the landowners believe that critical habitat designation will result in State and County permits containing additional requirements and expense for protection of lands designated critical habitat.

Approximately one third, or 12,141 ha (30,000 ac), of the land owned by A&B lies within the State Conservation District. A significant portion of lands under conservation zoning as well as other lands provide habitat for and support resources such as threatened and endangered species and migratory birds. A&B has a history of entering into conservation agreements with various

Federal and State agencies and non-governmental organizations on many of these lands. These arrangements take a variety of forms. They include partnership commitments ranging from simply allowing access to A&B-owned lands for government agency and non-governmental organization conservation partners to undertake surveys and site visits, to more extensive participation such as the provision of staff and funding for more active collaborative conservation partnerships. Ongoing examples of this include cave conservation actions undertaken by Kukuiula Develpment Co., an A&B subsidiary, to preserve cave habitat utilized by endangered cave fauna in the Koloa area of Kauai; and the active participation of the East Maui Irrigation Co., another A&B subsidiary, in the East Maui Watershed Partnership which is a collaborative multi-party organization leading the conservation of land and water resources in the east Maui mountains. Thus, ongoing conservation partnerships with A&B have a proven conservation benefit for threatened and endangered species and other resources.

We believe it is essential for the recovery of Newcomb's snail to build on continued conservation activities with a proven partner. Approximately 80 percent of imperiled species in the United States occur partly or solely on private lands where the Service has little management authority. In addition, recovery actions involving the reintroduction of listed species onto private lands requires the voluntary cooperation of the landowner. Therefore, ''a successful recovery program is highly dependent on developing working partnerships with a wide variety of entities, and the voluntary cooperation of thousands of non-Federal landowners and others is essential to accomplishing recovery for listed species'' (Crouse *et al.* 2002). Because the Federal government owns relatively little land in the State of Hawaii, and because large tracts of land suitable for conservation of threatened and endangered species is owned by private landowners, successful recovery of listed species in Hawaii is especially dependent upon working partnerships and the voluntary cooperation of non-Federal landowners. This is illustrated by the distribution of Newcomb's snail on Kauai: none of the locations known to be occupied by the snail are under Federal ownership, one site where snails are known to occur is on private lands, and one site where the snail was known from historical observations is privately owned (the Wainiha River Valley). The remaining occupied and previously occupied sites are on state-owned lands. Without the cooperation of these non-Federal landowners, neither surveys nor reintroduction of the Newcomb's snail can occur.

Because the recovery plan for the Newcomb's snail is currently being drafted, specific strategies for recovery appropriate for the Wainiha River Valley are not yet in place. However, it is clear that recovery of the species require reproducing, self-sustaining populations of Newcomb's snails located in a geographic array across the landscape, with both population numbers and population locations of sufficient robustness to withstand periodic threats due to natural disaster or biological threats. Since the Newcomb's snail is considered to be extirpated from this area, and natural repopulation is likely not possible without human assistance, the establishment of a non-essential experimental population of Newcomb's snails under section 10(j) of the Act, as well as development of a Safe Harbor Agreement, will be considered in Newcomb's snail recovery planning for the Wainiha River Valley. Several issues will need to be addressed before a decision is made on how best to accomplish this goal, including, for example, the degree of geographic isolation of any translocated population and whether a translocated population would be considered to be essential. The apparent local extinctions of Newcomb's snails in three watersheds in the north and northwest part of its range (Hanakoa Stream, Hanakapiai Stream, and Wainiha River) indicate that active management of threats, and research into the feasibility of reintroductions, may have to occur in the near term. Therefore it is essential for us to maintain all possible options to achieve these goals.

Section 10(j) of the Act enables us to designate certain populations of Federally listed species that are released into the wild as ''experimental.'' The circumstances under which this designation can be applied are: (1) The population is geographically separate from non-experimental populations of the same species (*e.g.*, the population is reintroduced outside the species' current range but within its probable historical range); and (2) we determine that the release will further the conservation of the species. Section 10(j) is designed to increase our flexibility in managing an experimental population by allowing us to treat the population as threatened, regardless of the species' status elsewhere in its range. Threatened status gives us more discretion in developing and implementing management programs and special regulations for a population and allows us to develop any regulations we consider necessary to provide for the conservation of a threatened species. In situations where we have experimental populations, certain section 9 prohibitions (*e.g.,* harm, harass, capture) that apply to endangered and threatened species may no longer apply, and a special rule can be developed that contains the prohibitions and exceptions necessary and appropriate to conserve that species. This flexibility allows us to manage the experimental population in a manner that will ensure that current and future land, water, or air uses and activities will not be unnecessarily restricted and the population can be managed for recovery purposes.

When we designate a population as experimental, section 10(j) of the Act requires that we determine whether that population is either essential or nonessential to the continued existence of the species, based on the best available information. Nonessential experimental populations located outside National Wildlife Refuge System or National Park System lands are treated, for the purposes of section 7 of the Act, as if they are proposed for listing. Thus, for nonessential experimental populations, only two provisions of section 7 would apply outside National Wildlife Refuge System and National Park System lands: section 7(a)(1), which requires all Federal agencies to use their authorities to conserve listed species, and section 7(a)(4), which requires Federal agencies to informally confer with the Service on actions that are likely to jeopardize the continued existence of a proposed species. Section 7(a)(2) of the Act, which requires Federal agencies to ensure that their activities are not likely to jeopardize the continued existence of a listed species, would not apply to the 10(j) population except on National Wildlife Refuge System and National Park System lands. Experimental populations determined to be ''essential'' to the survival of the species would remain subject to the consultation provisions of section 7(a)(2) of the Act.

In order to establish an experimental population we must issue a proposed regulation and consider public comments on the proposed rule prior to publishing a final regulation. In addition, we must comply with the National Environmental Policy Act (NEPA). Also, our regulations require that, to the extent practicable, a regulation issued under section 10(j) of the Act represent an agreement between

the Service, the affected State and Federal agencies, and persons holding any interest in land that may be affected by the establishment of the experimental population (*see* 50 CFR 17.81(d)).

The flexibility gained by establishment of a nonessential experimental population through section 10(j) would be of little value if there is a designation of critical habitat that overlaps it, as Federal agencies would still be required to consult with us on any actions that may affect the designated critical habitat. In effect, the flexibility gained from section 10(j) would be rendered useless by the designation of critical habitat. In fact, section 10(j)(2)(C)(ii)(B) of the Act states that critical habitat shall not be designated under the Act for any experimental population determined to be not essential to the continued existence of a species. Although our draft EA and Addendum conclude that the probability of a Federal action occurring in Wainiha Valley is remote, the decision not to designate critical habitat in this area retains all flexibility provided by section 10(j), if it were to occur.

Both section 10(j) and Safe Harbor Agreements are meant to encourage state, local, and private cooperation through management flexibility. Critical habitat is often viewed negatively by landowners. It is important for recovery of this species that we have the support of A&B when we move towards taking specific recovery actions within the Wainiha River Valley. An important element in the recovery planning process for the Newcomb's snail is that the Service retain the flexibility in management options for reestablishing the species in areas outside of its current occupied range. The benefit of excluding this area from critical habitat is that we would retain this flexibility.

(3) The Benefits of Exclusion Outweigh the Benefits of Inclusion

Based on the above considerations, and consistent with the direction provided in section 4(b)(2) of the Act, the Service has determined that the benefits of excluding Wainiha River Valley as critical habitat for Newcomb's snail outweigh the benefits of including it as critical habitat. This conclusion is based on the following factors:

1. The Wainiha River Valley is currently being managed on a voluntary and cooperative basis with the State of Hawaii to achieve important conservation goals, and A&B is negotiating a longer term agreement with TNC to manage the watershed for conservation. In the past, A&B has cooperated with the Service, the State, and other organizations to implement voluntary conservation activities on their lands that have resulted in tangible conservation benefits.

2. Given the current conservation management regime in place for the Wainiha River Valley, and the likely future conservation management described above, the Service believes the overall benefits of including this unoccupied sub-unit as critical habitat are relatively small. The designation of critical habitat can serve to educate the general public as well as conservation organizations regarding the potential conservation value of an area, but this goal will be effectively accomplished through the identification of this area in the Newcomb's snail recovery plan (USFWS in prep.) and in the management agreements described above. Likewise, there will be little Federal regulatory benefit to the species because, as described in the economic analysis, this proposed critical habitat sub-unit is unlikely to be affected by Federal activities requiring section 7 consultation. The Service is unable to identify any other potential benefits associated with critical habitat for this proposed sub-unit.

3. The proposed Wainiha River Valley critical habitat sub-unit is currently believed to be unoccupied by Newcomb's snail, and any future conservation efforts, such as translocation of snails to unoccupied habitat within the valley, will require the cooperation and good will of A&B. Also, the upper portions of the Valley owned by A&B include relatively pristine native forests. Preservation of these portions of the valley which require ongoing voluntary cooperation with governmental and private entities will protect the watershed and in turn the habitat for the snail.

4. A&B and other members of the public have commented that the designation of critical habitat in Wainiha River Valley will likely have a negative impact on ongoing and future voluntary conservation efforts by A&B in the valley. The Service believes there is a reasonable likelihood that A&B will curtail their current behavior of participating in voluntary conservation efforts on their lands on Kauai.

5. Critical habitat will also limit the management flexibility, including establishing nonessential experimental populations under section 10(j) of the Act or developing a Safe Harbor Agreement, needed to implement recovery actions and other conservation efforts for the Newcomb's snail in the Wainiha River Valley. If critical habitat is designated in this sub-unit we believe that existing and upcoming voluntary conservation programs, such as reintroduction, of Newcomb's snail into the Wainiha watershed will be impaired.

In conclusion, we find that the designation of critical habitat in Wainiha River Valley would most likely have a net negative conservation effect on Newcomb's snail recovery and other conservation activities. As described above, the overall benefits to the species of a critical habitat designation for this sub-unit are relatively small. We believe there is a higher likelihood of beneficial conservation activities occurring in the Wainiha River Valley without designated critical habitat than there would be with designated critical habitat in this location. We reached this conclusion because the landowner will more likely continue and increase their ongoing voluntary conservation efforts in the valley, to the benefit of the Newcomb's snail. Because the ultimate purpose of critical habitat is to contribute to the conservation of listed species, the Service believes it is reasonable and necessary to exclude areas from critical habitat where such designation has a high likelihood of negatively impacting ongoing voluntary conservation activities, and, in this case, the negative impacts outweigh any discernable conservation benefits of designation. Therefore, on balance it is the Service's conclusion that the net benefits of excluding the Wainiha River Valley from critical habitat for the Newcomb's snail outweigh the benefits of including it.

(4) Exclusion of This Sub-Unit Will Not Cause Extinction of the Species

The remaining eight critical habitat sub-units provide adequate habitat for the long term conservation of the species by providing six occupied sub-units and two unoccupied sub-units. These sub-units give protection from stochastic events and provide room for maintenance and expansion of the existing population. There is a much greater likelihood of undertaking conservation actions at this site to prevent extinction, such as translocation of snails to establish an additional population, without the Wainiha River Valley sub-unit being designated as critical habitat. Therefore, the exclusion of the proposed Wainiha River Valley sub-unit, which is not known to be occupied by the species at this time, will not cause the extinction of the Newcomb's snail.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, this document is a significant rule and has been reviewed by OMB, as OMB determined that this rule may raise novel legal or policy issues. As required by E.O. 12866, we have provided a copy of the rule, which describes the need for this action and how the designation meets that need, and the economic analysis, which assess the costs and benefits of this critical habitat designation, to OMB for review.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.,* small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA also amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that rules will not have a significant economic effect on a substantial number of small entities. SBREFA also amended the RFA to require a certification statement. In today's rule, we are certifying that the rule will not have a significant effect on a substantial number of small entities. The following discussion explains the factual basis for this certification.

Small entities include small organizations, such as independent non-profit organizations, small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we consider the types of activities that might trigger regulatory impacts under this rule as well as the types of project modifications that may result. In general, the term significant economic impact is meant to apply to a typical small business firm's business operations.

To determine if the rule would affect a substantial number of small entities, we consider the number of small entities affected within particular types of economic activities (*e.g.,* housing development, grazing, oil and gas production, timber harvesting, *etc.*). We apply the ''substantial number'' test individually to each industry to determine if certification is appropriate. A ''substantial number'' of small entities is more than 20 percent of those small entities affected by the regulation, out of the total universe of small entities in the industry or, if appropriate, industry segment. In some circumstances, especially with proposed critical habitat designations of very limited extent, we may aggregate across all industries and consider whether the total number of small entities affected is substantial. In estimating the numbers of small entities potentially affected, we also consider whether their activities have any Federal involvement; some kinds of activities are unlikely to have any Federal involvement and so will not be affected by critical habitat designation.

The only regulatory effect of the designation of critical habitat is on activities conducted, funded, or permitted by Federal agencies; non-Federal activities are not affected by the designation. In areas where the species is present, Federal agencies are already required to consult with us under section 7 of the Act on activities that they fund, permit, or implement that may affect the Newcomb's snail. Federal agencies must also consult with us if their activities may affect designated critical habitat. When the species is clearly not present, designation of critical habitat could trigger additional review of Federal activities under section 7 of the Act. Because the Newcomb's snail has been listed only a relatively short time and there have been no activities with Federal involvement in these areas during this time, there is no history of consultations based on the listing of this species. Therefore, for the purposes of this review and certification under the RFA, we are assuming that any future consultations in the area designated as critical habitat will be due to the critical habitat designation.

Designation of critical habitat could also require reinitiation of consultation for ongoing Federal activities. However, since the Newcomb's snail has only been listed since January 2000, and there are no consultations involving the species, the requirement to reinitiate consultations for ongoing projects will not affect a substantial number of small entities.

None of the designation is on Federal lands. Six of the eight sites are on lands owned and managed by the State of Hawaii, which is not a small entity for purposes of this analysis. This includes sub-units within the Na Pali Coast State Park, Hono O Na Pali Natural Area Reserve, the Halela Forest Reserve and the Lihue-Koloa Forest Reserve. All of these land areas are primarily managed for conservation of natural resources, including threatened and endangered species.

Two of the eight sub-units of the designation are on private land. On private lands, activities that lack Federal involvement would not be affected by the critical habitat designation. Few, if any, activities of an economic nature currently occur on the private lands in the area encompassed by this designation. These areas are in the State Conservation District and have a very limited range of allowable activities that could occur there under the State Conservation District Use permitting program. Because of the Conservation District zoning, and because the sites are remote and inaccessible, development of commercial or agricultural activities is very unlikely. Therefore, Federal agencies such as the Economic Development Administration, which is occasionally involved in funding municipal projects, is unlikely to be involved in projects in these areas. On the Island of Kauai, previous consultations under section 7 of the Act between us and other Federal agencies most frequently involved the Department of the Navy and ACOE. In the case of ACOE consultations, the applicant is often the County of Kauai which is not considered a small entity as defined here. ACOE consultations involve permits for discharge of fill material in wetlands or waterways and occur due to the presence of threatened or endangered species (primarily the five endangered Hawaiian waterbirds) that spend at least part of their life in aquatic habitats. Because the stream channels designated as Newcomb's snail critical habitat are remote, no consultations due to ACOE permits are anticipated for activities such as road construction. Construction of new diversion structures in the stream segments designated as critical habitat,

or rehabilitation of the abandoned water diversion structures in the Hanalei critical habitat sub-unit, is unlikely because agricultural practices have changed and irrigation demands have greatly diminished, but if such activities do occur and involve discharge of fill, ACOE permitting and section 7 consultation would be required.

Furthermore, we have identified only four entities, of which one may be considered a small entity, that may be affected by the implementation of a critical habitat designation on private lands. The four entities that may be impacted by the critical habitat designation are The Nature Conservancy of Hawaii (TNCH), Kamehameha Schools, Cornerstone Hawaii Holdings, LLC and Waipa Foundation. Critical habitat may impact Kamehameha Schools and Cornerstone Hawaii Holdings, LLC in terms of a slight decrease in value of some land it owns in the Conservation District and possibly expenditures on services to investigate the implications of critical habitat. The RFA/SBREFA defines ''small organization'' as any not-for-profit enterprise that is independently owned and operated and is not dominant in its field (5 U.S.C. 601). TNCH is a large organization that is dominant in the conservation and land management field in Kauai County. Thus, TNCH is not likely to be considered a small organization. Kamhameha Schools is a non-profit, private educational institution which owns a considerable amount of real estate in Hawaii and other states. It is the dominant private trust in Hawaii dedicated to education and thus is not a small organization. The U.S. Small Business Administration defines businesses in the land-subdivision and land-development industry as small if their annual sales are less than $6 million. According to this definition and the information we obtained for our economic analysis, Cornerstone Hawaii Holdings, LLC is not a small business. The only small entity that may be impacted by the designation of critical habitat is the Waipa Foundation. Our EA states that the Waipa Foundation could be impacted if Kamehameha Schools enters into an agreement with TNCH and the Waipa Foundation to manage the Lumahai Valley for conservation and educational and cultural benefits. TNCH and the Waipa Foundation may seek funding from the Service to manage the valley, in which case the Service may conduct an internal consultation with a low level of complexity. TNCH and the Waipa Foundation could be involved in the consultation process, but their involvement would not be mandatory. Most of the cost of the consultation is likely to be borne by TNCH and in addition, Kamehameha Schools and possibly other organizations are likely to provide funding to the Waipa Foundation to help cover some or all of the costs incurred during consultation. Therefore, the designation of critical habitat for the Newcomb's snail is not likely to have a significant economic impact on the Waipa Foundation or any other small entity.

In summary, we have considered whether this rule would result in a significant economic effect on a substantial number of small entities. It would not affect a substantial number of small entities. The entire designation involves six sites on State lands and two sites on privately owned land, all of which are located in areas where likely future land uses are not expected to result in Federal involvement or section 7 consultations except for conservation activities.

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211, which applies to regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. While this has been designated as a significant regulatory action by OMB under E.O. 12866 for the reasons described above, it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. No significant energy production, supply, and distribution facilities are included within designated critical habitat. Further, for the reasons described in the economic analysis, we do not believe that designation of critical habitat for Newcomb's snail will affect future energy production, in particular, hydropower development. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 August 25, 2000 *et seq.*):

(a) This rule will not ''significantly or uniquely'' affect small governments. A Small Government Agency Plan is not required. Small governments will be affected only to the extent that Federal agencies funding, permitting, or authorizing other activities must ensure that their actions will not adversely modify the critical habitat. However, as discussed above, these actions are currently subject to equivalent restrictions through the listing protections of the species, and no further restrictions are anticipated to result from critical habitat designation of occupied areas. In our economic analysis, we evaluated the impact of designating areas where section 7 consultations would not have occurred but for the critical habitat designation and found the direct and indirect costs associated with critical habitat designation to be small in relation to any small governments potentially affected.

(b) For the reasons described in the economic analysis and this final rule, this rule will not produce a Federal mandate on State, local, or tribal governments or the private sector of $100 million or greater in any year. The designation of critical habitat imposes no obligations on State or local governments. Therefore, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act.

Takings

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating critical habitat for the Newcomb's snail in a takings implication assessment. The takings implications assessment concludes that this rule does not pose significant takings implications.

Federalism

In accordance with Executive Order 13132, this final rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with the Department of the Interior and Department of Commerce policy, we requested information from appropriate State resource agencies in Hawaii. The designation of critical habitat for the Newcomb's snail would have little incremental impact on State and local governments and their activities. The EA found that management of game hunting, conservation projects and natural disaster recovery projects may incur direct costs associated with section 7 consultations as a result of this designation. However, the designation may have some benefit to these governments in that the areas essential to the conservation of this species are more clearly defined, and the primary constituent elements of the habitat necessary for the survival of the species are identified. This definition and identification may assist these local

governments in long-range planning rather than waiting for case-by-case section 7 consultation to occur.

Civil Justice Reform

In accordance with Executive Order 12988, the Department of the Interior's Office of the Solicitor has determined that this rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of the Order. We are designating critical habitat in accordance with the provisions of the Endangered Species Act. The rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the Newcomb's snail.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any information collection requirements for which Office of Management and Budget approval under the Paperwork Reduction Act is required. An agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

We have determined that we do not have to prepare an Environmental Assessment and/or an Environmental Impact Statement as defined by the National Environmental Policy Act of 1969 in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act, as amended. We published a notice outlining our reason for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This rule does not constitute a major Federal action significantly affecting the quality of the human environment.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations With Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes on a government-to-government basis. The designation of critical habitat for the Newcomb's snail does not contain any Tribal lands or lands that we have identified as impacting Tribal trust resources.

References Cited

A complete list of all references cited in this rule is available upon request from the Pacific Islands Fish and Wildlife Office (*see* **ADDRESSES** section).

Author

The primary author of this document is Gordon Smith, Pacific Islands Fish and Wildlife Office (*see* **ADDRESSES** section).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.11(h) revise the entry for ''Snail, Newcomb's'' under ''SNAILS'' to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
SNAILS							
*	*	*	*	*	*		*
Snail, Newcomb's	*Erinna newcombi*	U.S.A. (HI)	Entire	T	680	17.95(f)	N/A
*	*	*	*	*	*		*

3. Amend § 17.95 (f) by adding critical habitat for the Newcomb's snail (*Erinna newcombi*) in the same alphabetical order as this species occurs in § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(f) *Clams and snails.* * * *

Newcomb's Snail (*Erinna newcombi*)

(1) Critical Habitat Units are depicted for the County of Kauai, Hawaii, on the maps below.

(2) Within these areas, the primary constituent elements required by the Newcomb's snail are those habitat components that are essential for the biological needs of foraging, sheltering, reproduction, and dispersal. The primary constituent elements are: cool, clean, moderate-to fast-flowing water in streams, springs, and seeps; their adjacent riparian areas and hydrogeologic features that capture and direct water flow to these spring and stream systems; a perennial flow of water throughout even the most severe drought conditions; and stream channel morphology that provides protection from channel scour by having overhanging waterfalls, protected tributaries, or similar refugia.

(3) Existing human-made features and structures within the boundaries of the mapped units, such as dams, ditches, tunnels, flumes, and other human-made features that do not contain the primary constituent elements, are not included as critical habitat.

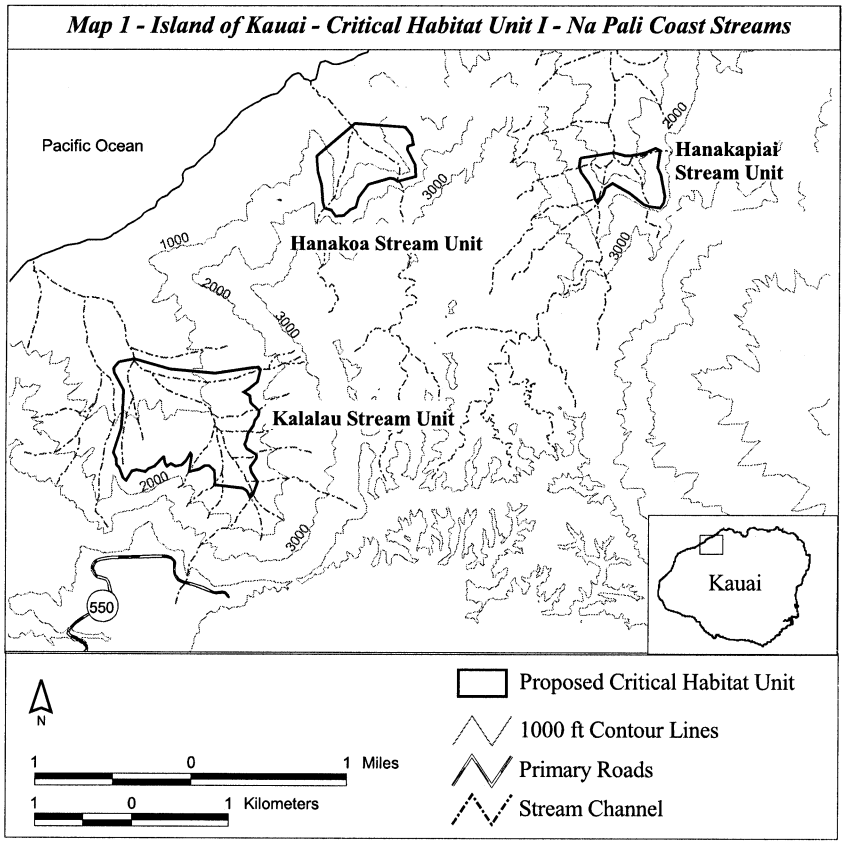
(4) Critical Habitat Unit I—Na Pali Coast Streams—(i) Unit I(a): Kalalau Stream (149 ha; 368 ac). The Kalalau Stream Newcomb's snail critical habitat location consists of all flowing surface waters within 63 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 435010, 2450871; 434991, 2450828; 435008, 2450782; 435112, 2450715; 435107, 2450681; 435044, 2450591; 435058, 2450537; 435120, 2450441; 435078, 2450308; 435048, 2450279;

435017, 2450341; 434968, 2450375; 434678, 2450406; 434682, 2450441; 434678, 2450551; 434618, 2450603; 434578, 2450602; 434518, 2450564; 434418, 2450540; 434444, 2450711; 434428, 2450733; 434388, 2450657; 434338, 2450612; 434278, 2450596; 434228, 2450621; 434188, 2450596; 434166, 2450621; 434159, 2450691; 434148, 2450691; 434058, 2450599; 433995, 2450571; 433968, 2450540; 433878, 2450559; 433825, 2450544; 433767, 2450451; 433738, 2450478; 433700, 2450581; 433670, 2450611; 433670, 2450671; 433633, 2450738; 433715, 2450996; 433732, 2451168; 433740, 2451380; 433642, 2451551; 433633, 2451598; 433688, 2451664; 433842, 2451694; 434206, 2451592; 434680, 2451547; 435053, 2451609; 435129, 2451611; 435147, 2451590; 435114, 2451460; 435048, 2451400; 434973, 2451360; 435041, 2451320; 435043, 2451250; 435134, 2451170; 435126, 2451120; 435089, 2451069; 435075, 2451013; 435018, 2450933; 435010, 2450871;

(ii) Unit I(b): Hanakoa Stream (63 ha; 156 ac). The Hanakoa Stream Newcomb's snail critical habitat location consists of all flowing surface waters within 24 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 435729, 2453628; 435717, 2453789; 436111, 2454127; 436637, 2454087; 436700, 2454008; 436719, 2453907; 436658, 2453889; 436654, 2453857; 436735, 2453697; 436744, 2453577; 436558, 2453527; 436518, 2453555; 436478, 2453559; 436250, 2453496; 436152, 2453358; 436123, 2453263; 436068, 2453238; 435998, 2453171; 435918, 2453168; 435869, 2453229; 435799, 2453248; 435780, 2453320; 435770, 2453490; 435729, 2453628.

(iii) Unit I(c): Hanakapiai Stream (35 ha; 86 ac). The Hanakapiai Stream Newcomb's snail critical habitat location consists of all flowing surface waters within 25 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 438438, 2453772; 438785, 2453827; 438899, 2453794; 438961, 2453796; 439113, 2453829; 439216, 2453871; 439257, 2453846; 439234, 2453666; 439263, 2453606; 439310, 2453377; 439299, 2453306; 439258, 2453253; 439158, 2453265; 439098, 2453290; 438949, 2453407; 438769, 2453508; 438692, 2453457; 438674, 2453387; 438618, 2453307; 438591, 2453347; 438578, 2453417; 438525, 2453507; 438443, 2453622; 438429, 2453677; 438438, 2453772.

(iv) Map 1—Unit I—Na Pali Coast Streams follows:

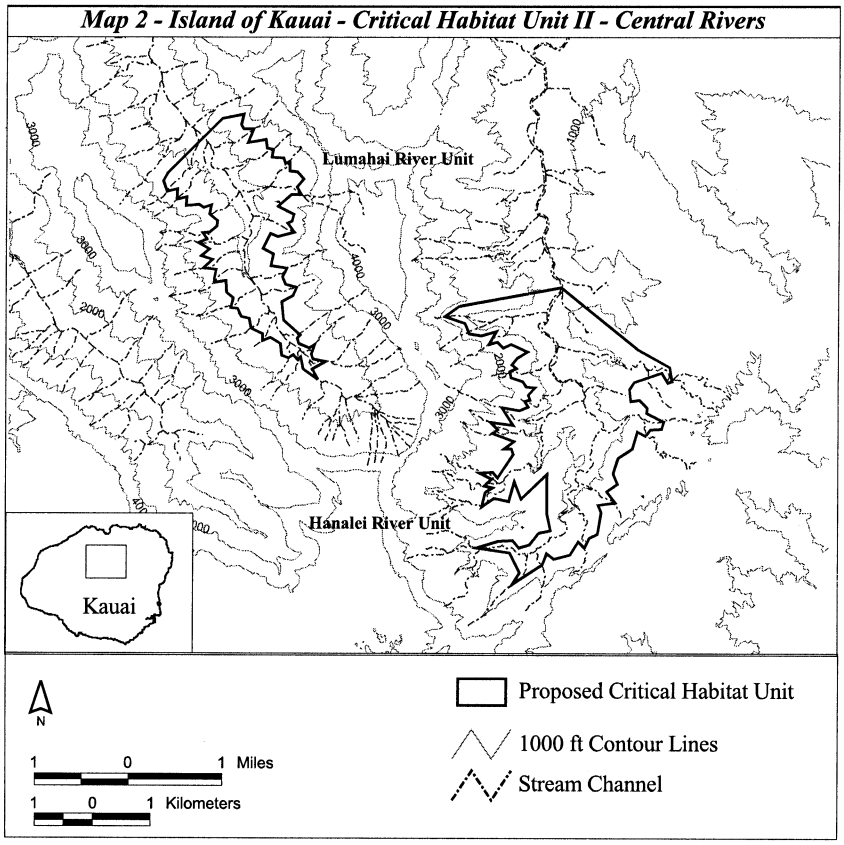


(5) Critical Habitat Unit II—Central Rivers—(i) Unit II(a): Lumahai River (492 ha; 1,216 ac). The Lumahai River Newcomb's snail critical habitat location consists of all flowing surface waters within 89 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 447598, 2445954; 447344, 2446136; 447298, 2446352; 447248, 2446290; 447178, 2446384; 447088, 2446327; 446972, 2446364; 446950, 2446572; 446787, 2446678; 446648, 2446627; 446648, 2446739; 446445, 2446836; 446409, 2447000; 446278, 2447034; 446208, 2447169; 446097, 2447178; 446141, 2447349; 446024, 2447449; 446014, 2447649; 445808, 2447618; 445809, 2447680; 445839, 2447840; 445616, 2447859; 445773, 2448009; 445589, 2448069; 445728, 2448189; 445531, 2448299; 445685, 2448359; 445605, 2448469; 445728, 2448478; 445854, 2448578; 445858, 2448680; 445728, 2448778; 445759, 2448939; 445618, 2448896; 445548, 2448954;

445318, 2448932; 445338, 2449080; 445164, 2449034; 445171, 2449211; 444998, 2449168; 444932, 2449348; 445008, 2449493; 445936, 2450417; 446309, 2450498; 446262, 2450317; 446309, 2450238; 446476, 2450245; 446385, 2450007; 446688, 2450060; 446714, 2449913; 446811, 2449890; 446799, 2449758; 446998, 2449747; 447028, 2449643; 447101, 2449690; 447098, 2449525; 447228, 2449509; 447343, 2449387; 447229, 2449247; 447298, 2449117; 447128, 2449116; 446901, 2448918; 447174, 2448778; 447144, 2448668; 447066, 2448628; 447190, 2448478; 446898, 2448400; 446778, 2448451; 446649, 2448198; 446831, 2448108; 446782, 2447899; 447064, 2447862; 446986, 2447707; 447038, 2447583; 447225, 2447529; 447162, 2447395; 446973, 2447289; 447008, 2446969; 447288, 2446719; 447234, 2446659; 447268, 2446571; 447448, 2446499; 447548, 2446559; 447484, 2446393; 447518, 2446304; 447739, 2446259; 447507, 2446131; 447598, 2445954;

(ii) Unit II(b): Hanalei River (876 ha; 2,165 ac). The Hanalei River Newcomb's snail critical habitat location consists of all flowing surface waters within 91 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 450038, 2447210; 451786, 2447529; 453099, 2446469; 453648, 2446167; 453691, 2445925; 453614, 2445904; 453508, 2446074; 453044, 2445908; 452961, 2445785; 452974, 2445578; 453125, 2445605; 453267, 2445468; 453258, 2445377; 453550, 2445238; 453508, 2445111; 453318, 2445096; 453238, 2444991; 453098, 2445064; 453010, 2444769; 452768, 2444606; 452680, 2444349; 452760, 2444169; 452581, 2444039; 452723, 2443844; 452429, 2443810; 452486, 2443680; 452419, 2443309; 452280, 2443240; 452198, 2443073; 452088, 2443185; 451948, 2442960; 451678, 2442885; 451549, 2442979; 451471, 2442787; 450955, 2442448; 451082, 2442651; 450916, 2442988; 450337, 2443081; 450718, 2443188; 450968, 2443197; 451068, 2443077; 451255, 2443133; 451414, 2443330; 451612, 2443370; 451552, 2443666; 451549, 2444330; 451107, 2443911; 450988, 2444210; 450894, 2443874; 450638, 2443920; 450431, 2443773; 450492, 2444026; 450614, 2444100; 450468, 2444134; 450592, 2444250; 450389, 2444360; 450621, 2444363; 450698, 2444275; 450967, 2444669; 450939, 2444770; 450803, 2444769; 450978, 2444899; 450611, 2445032; 450698, 2445101; 450573, 2445219; 450969, 2445168; 450768, 2445479; 451068, 2445422; 451226, 2445489; 451158, 2445584; 451251, 2445606; 451216, 2445692; 451335, 2445819; 451188, 2445824; 451124, 2445925; 450928, 2445983; 450904, 2446088; 451017, 2446148; 450940, 2446208; 451031, 2446325; 451208, 2446428; 450928, 2446552; 450788, 2446490; 450688, 2446603; 450538, 2446560; 450668, 2446774; 450418, 2446700; 450199, 2446739; 450133, 2446913; 449784, 2447034; 450038, 2447210.

(iii) Map 2—Unit II—Central Rivers—follows:



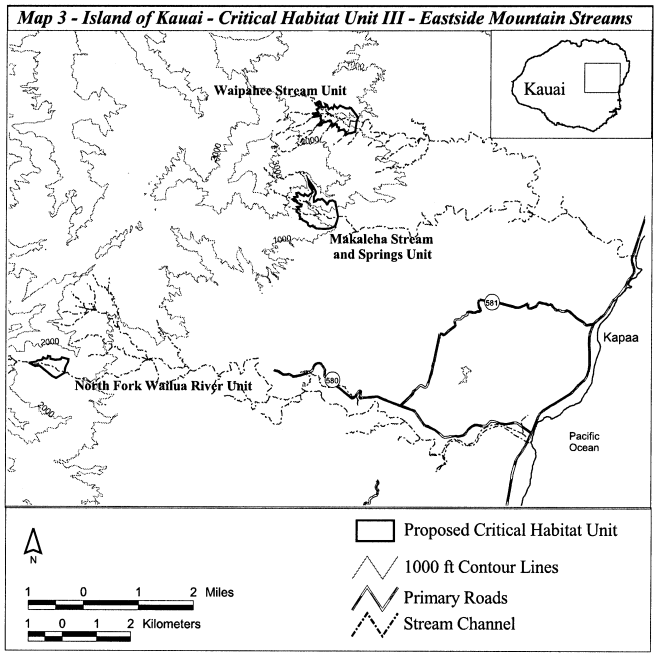
(6) Critical Habitat Unit III—Eastside Mountain Streams—(i) Unit III(a): Waipahee Stream (66 ha; 163 ac). The Waipahee Stream Newcomb's snail critical habitat location consists of all flowing surface waters within 78 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 458921, 2447414; 458943, 2447424; 458998, 2447420; 459102, 2447444; 459044,

2447534; 459104, 2447563; 459108, 2447613; 459085, 2447643; 459100, 2447671; 459118, 2447693; 459108, 2447714; 459078, 2447703; 459048, 2447661; 459028, 2447663; 459017, 2447694; 459045, 2447696; 459054, 2447727; 459118, 2447770; 459164, 2447749; 459191, 2447646; 459231, 2447596; 459309, 2447603; 459321, 2447623; 459306, 2447685; 459351, 2447663; 459398, 2447531; 459478, 2447584; 459518, 2447553; 459568, 2447656; 459586, 2447613; 459648, 2447556; 459738, 2447649; 459918, 2447569; 459998, 2447569; 460018, 2447584; 460048, 2447572; 460055, 2447576; 460261, 2447303; 460229, 2447182; 460178, 2446882; 460172, 2446875; 460058, 2446836; 459978, 2446834; 459906, 2446782; 459887, 2446803; 459902, 2446878; 459848, 2446946; 459818, 2446933; 459778, 2446940; 459694, 2446904; 459702, 2447004; 459648, 2447020; 459638, 2447098; 459608, 2447104; 459508, 2447031; 459502, 2447068; 459448, 2447061; 459500, 2447134; 459467, 2447203; 459445, 2447214; 459408, 2447183; 459388, 2447194; 459318, 2447163; 459268, 2447169; 459248, 2447139; 459218, 2447136; 459182, 2447074; 459148, 2447057; 459078, 2447076; 459083, 2447094; 459148, 2447124; 459185, 2447224; 459166, 2447274; 459178, 2447334; 459118, 2447345; 458948, 2447313; 459001, 2447384; 458928, 2447407.

(ii) Unit III(b): Makaleha Stream (95 ha; 235 ac). The Makaleha Stream Newcomb's snail critical habitat location consists of all flowing surface waters within 68 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 459368, 2444730; 459372, 2444732; 459414, 2444830; 459438, 2444851; 459498, 2444854; 459528, 2444873; 459588, 2444828; 459601, 2444832; 459689, 2444388; 459662, 2444260; 459604, 2444112; 459455, 2444044; 459279, 2444030; 459064, 2444037; 459008, 2444069; 459002, 2444101; 458968, 2444099; 458944, 2444123; 458878, 2444096; 458808, 2444142; 458803, 2444197; 458748, 2444245; 458658, 2444279; 458633, 2444322; 458576, 2444325; 458582, 2444377; 458552, 2444407; 458568, 2444467; 458478, 2444527; 458474, 2444587; 458537, 2444607; 458492, 2444667; 458608, 2444684; 458633, 2444746; 458545, 2444763; 458495, 2444803; 458485, 2444833; 458418, 2444844; 458347, 2444897; 458418, 2444925; 458411, 2444963; 458504, 2444960; 458503, 2444991; 458458, 2445046; 458458, 2445076; 458528, 2445084; 458582, 2445036; 458678, 2444990; 458718, 2445049; 458798, 2444992; 458818, 2444992; 458868, 2445050; 458908, 2445056; 458933, 2445106; 458927, 2445176; 458854, 2445276; 458808, 2445463; 458960, 2445258; 459033, 2445116; 459033, 2445066; 458978, 2444969; 458983, 2444831; 459038, 2444842; 459088, 2444900; 459158, 2444877; 459218, 2444913; 459331, 2444816; 459368, 2444730.

(iii) Unit III(c): North Fork Wailua River (36 ha; 90 ac). The North Fork Wailua River Newcomb's snail critical habitat location consists of all flowing surface waters within 23 boundary points with the following coordinates in UTM Zone 4 with the units in meters using North American Datum of 1983 (NAD83): 450656, 2440137; 450861, 2440154; 450920, 2440206; 450968, 2440196; 451045, 2440217; 451079, 2440286; 451145, 2440241; 451197, 2440262; 451211, 2440324; 451291, 2440314; 451291, 2440244; 451426, 2440217; 451589, 2440237; 451616, 2440286; 451811, 2440230; 451801, 2440139; 451748, 2440049; 451717, 2439976; 451701, 2439841; 451455, 2439688; 451343, 2439745; 450968, 2440043; 450840, 2440040.

(iv) Map 3—Unit III—Eastside Mountain Streams follows:



Dated: August 9, 2002.

David P. Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 02–20696 Filed 8–19–02; 8:45 am]

BILLING CODE 4310–55–P