DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
50 CFR Part 17
RIN 1018–AI15
Endangered and Threatened Wildlife and Plants: Listing Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod as Endangered With Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to
list the Roswell springsnail (Pyrgulopsis roswellensis), Koster’s tryonia (Tryonia kosteri), Pecos assiminea (Assiminea pecos), and Noel’s amphipod (Gammarus desperatus) as endangered with critical habitat under the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.). These species occur at sinkholes, springs, and associated spring runs and wetland habitats. They are found at two sites in Chaves County, NM, one site in Pecos County, TX, and one site in Reeves County, TX. Pecos assiminea is also known from one area in Coahuila, Mexico.

These three snails and one amphipod have an exceedingly limited distribution and are imperiled by local and regional groundwater depletion, surface and groundwater contamination, oil and gas extraction activities within the supporting aquifer and watershed, and direct loss of their habitat (e.g., through burning or removing marsh vegetation, cementing, or filling of habitat). This proposal, if made final, will implement the Federal protection and recovery provisions of the Act for these invertebrate species.

DATES: We will accept comments from all interested parties until April 15, 2002. Public hearing requests must be received by March 29, 2002.

ADDRESSES: Comments and materials concerning this proposal should be sent to the Field Supervisor, New Mexico Ecological Services Field Office, U.S. Fish and Wildlife Service, 2105 Osuna NE, Albuquerque, NM 87113. Comments and materials received, as well as supporting documentation used in the preparation of this proposed rule, will be available for public inspection, by appointment, during normal business hours at the above address.

FOR FURTHER INFORMATION CONTACT: Joy Nicholopoulos, Field Supervisor, New Mexico Ecological Services Field Office at the above address (telephone 505/346–2525; facsimile 505/346–2542).

SUPPLEMENTARY INFORMATION:

Background

Springsnails

The Permian Basin of the southwestern United States contains one of the largest carbonate (limestone) deposits in the world (New Mexico Department of Game and Fish (NMDGF) 1998). Within the Permian Basin of the Southwestern United States lies the Roswell Basin. Located in southeastern New Mexico, this Basin has a surface area of approximately 12,000 square miles and generally begins north of Roswell, NM, and runs to the southeast of Carlsbad, NM. The Roswell Basin contains two major aquifers; a deep artesian aquifer, and a shallow surficial aquifer. Water in the springs originates from both the deep aquifer and the shallow aquifer. Here, the action of water on soluble rocks (e.g., limestone and dolomite) has formed abundant “karst” features such as sinkholes, caverns, springs, and underground streams (White et al. 1995). These hydrogeological formations create unique settings harboring diverse assemblages of flora and fauna. The isolated limestone and gypsum springs, seeps, and wetlands located in and around Roswell, NM, and Pecos and Reeves Counties, TX, provide the last known habitats in the world for several endemic species of mollusks and crustaceans. These species include the Roswell springsnail and Koster’s tryonia of the freshwater snail family Hydrobiidae, and Pecos assiminea of the family Assimineidae. These snails are distributed in isolated, geographically separate populations, and these species likely evolved from parent species that once enjoyed a wide distribution during wetter, cooler climates of the Pleistocene. Such divergence has been well-documented for aquatic and terrestrial macroinvertebrate groups within arid ecosystems of western North America (e.g., Taylor 1987; Metcalf and Smartt 1997; Bowman 1981; Cole 1985).

North American snails of the family Hydrobiidae inhabit a great diversity of aquatic systems from surface to cave habitats, small springs to large rivers, and high energy riffles to slack water pools (Wu et al. 1997). Snails of the family Assimineidae are typically found in coastal brackish waters or along tropical and temperate seacoasts worldwide (Taylor 1987). Inland species of the genus Assiminea are known from around the world, and in North America they occur in California (Death Valley National Monument), Utah, New Mexico, Texas (Pecos and Reeves Counties), and Mexico (Bolsón de Cuatro Ciénegas).

The Roswell springsnail, Koster’s tryonia, and Pecos assiminea are all aquatic species. These snails have lifespans of 9 to 15 months and reproduce several times during the spring through fall breeding season (Taylor 1987; Pennak 1989; Brown 1991). Snails of the family Hydrobiidae are sexually dimorphic with females being characteristically larger and longer-lived than males. As with other snails in the family, the Roswell springsnail and Koster’s tryonia are completely aquatic but can survive in seepage areas, as long as flows are perennial and within the species’ physiological tolerance limit. These two snails occupy spring heads and runs with variable water temperatures (10 to 20 °C) and slow to moderate water velocities over compact substrate ranging from deep organic silts to gypsum sands and gravel and compact substrate (NMDGF 1998). Conversely, the Pecos assiminea seldom occurs immersed in water, but prefers a humid microhabitat created by wet mud or beneath vegetation mats, typically within a few centimeters (cm) of running water.

Gastropods are a class of mollusks with a body divided into a foot and visceral mass and a head which usually bears eyes and tentacles. Like most gastropods, the Roswell springsnail, Koster’s tryonia, and Pecos assiminea feed on algae, bacteria, and decaying organic material (NMDGF 1998). They will also incidentally ingest small invertebrates while grazing on algae and detritus (dead or partially decayed plant materials or animals). These snails are fairly small; Koster’s tryonia is the largest of the three snails, and is about 4 to 4.5 millimeters (mm) (0.16 to 0.18 inches (in)) long with a pale tan shell that is narrowly conical with up to 4 1/4 to 5 3/4 whorls or twists. The Roswell springsnail is 3 to 3.5 mm (0.12 to 0.14 in) long with a narrowly conical tan shell with up to 5 whorls. Pecos assiminea is the smallest of the three with a shell length of 1.55 to 1.87 mm (0.06 to 0.07 in) and a thin, nearly transparent chestnut-brown shell that is regularly conical with up to 4 1/2 strongly incised (shouldered) whorls and a broad oval opening. Although their shells are similar, the Roswell springsnail is distinguished from Koster’s tryonia by a dark, amber operculum (foot disc covering the animal when retracted into the shell) with white spiral streaks, while that of Koster’s tryonia is nearly colorless. The genus Assiminea can be determined from other snail genera by an almost complete lack of tentacles, leaving the eyes within the tips of short eye stalks (Taylor 1987).

Taylor (1987) first described the Roswell springsnail from a “seepage” along the west side of an impoundment in Unit 7 at Bitter Lake National Wildlife Refuge (NWR or Refuge), Chaves County, NM. Since then, Mehlhop (1992, 1993) has documented the species on the Refuge and in March 1995 also found it in a spring on private land east of Roswell (P. Mehlhop, University of New Mexico, pers. comm. 1998). However, the current status of the Roswell springsnail at the spring on private land is unknown, since further access has not been granted. Monitoring efforts at Bitter Lake NWR (1995–1998)
led to the discovery of Roswell springsnail populations in Bitter Creek, the Sago Springs Complex, and a drainage canal along the west shoreline of Unit 6. The Roswell springsnail is currently known only from Bitter Lake NWR with the core population in the Sago Springs Complex and Bitter Creek. The Sago Springs complex is approximately 0.3 km long (1,000 linear feet), half of which is subterranean with flow in the upper reaches restricted to sinkholes. Bitter Creek is six times longer than the Sago Springs Complex and has a total length of 1.8 kilometers (1.1 miles). Monthly monitoring and ecological studies of the Roswell springsnail initiated at Bitter Lake NWR in June 1995 (NMDGF 1998) are ongoing.

Roswell springsnail was formerly known from several other springs in the Roswell area, but these habitats have dried up apparently due to groundwater pumping (Cole 1981; Taylor 1983, 1987). Pleistocene fossils of the Roswell springsnail are known from Berrendo Creek and the Pecos River in Chaves County (Taylor 1987). No populations are currently known from these areas.

Taylor (1987) first reported Koster's tryonia from Sago Spring at Bitter Lake NWR, and another population was documented in 1995 at North Spring on private land east of Roswell. The species was formerly found at several other springs in the Roswell area, but these habitats have since dried up due to groundwater pumping (Cole 1981; Taylor 1983, 1987). Pleistocene fossils of Koster's tryonia are known from North Spring River and South Spring Creek in Chaves County (Taylor 1987).

Monthly monitoring and ecological studies of Koster's tryonia initiated at Bitter Lake NWR in 1995 by the NMDGF indicate the species is most abundant in the Sago Springs Complex and Bitter Creek. It also occurs at the Sago Springs Complex, but in lower numbers. The current status of Koster's tryonia at the spring east of Roswell is unknown. Pecos assiminea is presently known from two sites at Bitter Lake NWR, Chaves County, NM, from a large population at Diamond Y spring and its associated drainage, Pecos County, TX, and at East Sandia Spring, Reeves County, TX. Historically, Pecos assiminea occurred sporadically throughout the Boslón de Cuatro Ciénegas, Coahuila, Mexico (Taylor 1987), but its present status there is unknown.

Monitoring and ecological studies of Pecos assiminea initiated at Bitter Lake NWR in 1995 indicate the snail to be typically absent from substrate samples. Extant populations of Pecos assiminea occur sporadically along Bitter Creek, and a dense population was confirmed on moist vegetation and on muddy surfaces within 1 cm (.39 in) of water in 1999 in an emergent marsh plant community around the perimeter of a sinkhole within the Sago Springs Complex (NMDGF 1999).

Noel's amphipod

Noel's amphipod, in the family Gammaridae, is a small freshwater crustacean. Inland amphipods are sometimes referred to as freshwater shrimp. Noel’s amphipod is brown-green in color with elongate, kidney-shaped eyes, and flanked with red bands along the thoracic and abdominal segments, often with a red dorsal stripe. Males are slightly larger than females, and individuals range from 8.5 to 14.8 mm (0.33 to 0.58 in) long (Cole 1981; 1985).

Amphipods of the family Gammaridae commonly inhabit shallow, cool, well-oxygenated waters of streams, ponds, ditches, sloughs, and springs (Holsinger 1976, Pennak 1989). Because they are light-sensitive, these bottom-dwelling amphipods are active mostly at night and feed on algae, submergent vegetation, and decaying organic matter (Holsinger 1976, Pennak 1989). Young amphipods depend on microbial foods, such as algae and bacteria, associated with aquatic plants (Covic and Thorp 1991). Most amphipods complete their life cycle in one year and breed from February to October, depending on water temperature (Pennak 1978). Amphipods form breeding pairs that remain attached for 1 to 7 days at or near the substrate while continuing to feed and swim (Bousfield 1989). They can produce from 15 to 50 offspring, forming a “brood.” Most amphipods produce one brood but some species produce a series of broods during the breeding season (Pennak 1978).

Noel’s amphipod is one of three species of endemic amphipods of the Pecos River Basin occurring from Roswell, NM, south to Fort Stockton, TX, known collectively as the Gammarus-pecos complex (Cole 1985). Noel’s amphipod is currently known from only three sites at Bitter Lake NWR. These sites include the Sago Springs Complex, Bitter Creek, and along a drainage canal near impoundment 6 on the Refuge. Noel’s amphipod was first described by Cole (1981) from a 1967 collection of amphipods taken from North Spring, east of Roswell. Based on morphological similarities, specimens collected from Lander Springbrook near Roswell were also identified as Noel’s amphipod (Cole 1981). The amphipod was extirpated from Lander Springbrook between 1951 and 1960, and the North Spring population was lost between 1978 and 1988. Both incidences of extirpation were attributed to regional ground water depletions and habitat alterations (spring channelization) respectively (Cole 1981, 1988).

Previous Federal Actions

On November 22, 1985, we received a petition from Mr. Harold F. Olson, Director of the NMDGF, to add 11 species of New Mexican mollusks to the Federal list of endangered and threatened wildlife. Roswell springsnail (Pyrgulopsis roswellensis formerly Fontelicella sp. (Hershler 1994)), Koster’s tryonia, and Pecos assiminea were among the 11 species. We determined the petition presented substantial information that the requested action may be warranted and published a positive 90-day petition finding in the Federal Register on August 20, 1986 (51 FR 22871). A subsequent 12-month petition finding published in the Federal Register on July 1, 1987 (52 FR 24485) concluded that the petitioned action was warranted but precluded by other higher priority listing actions. This proposed rule constitutes our 12-month recycled petition finding for the Roswell springsnail, Koster’s tryonia, and Pecos assiminea. This proposed rule includes a proposal for Noel’s amphipod, which has recently been made a candidate for listing since this species shares the same threats and management needs.

We identified the Noel’s amphipod as a Category 2 species in our notices of review for animals published in the Federal Register on May 22, 1984 (49 FR 21664), January 6, 1989 (54 FR 554), November 21, 1991 (56 FR 58804), and November 15, 1994 (59 FR 58982). Before 1996, a Category 2 species was one that we were considering for possible addition to the Federal List of Endangered and Threatened Wildlife, but for which conclusive data on biological vulnerability and threats were not currently available to support a proposed rule. We discontinued designation of Category 2 species in the Federal Register in the February 28, 1996, notice of review (61 FR 7956).

The springsnails were included as category 1 candidate species in our comprehensive invertebrate Notice of Review published in the Federal Register on May 22, 1984 (49 FR 21664). Category 1 candidate species were those for which we had on file substantial information on biological vulnerability and threats to designate them as threatened or endangered. On November 21, 1991,
springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod are important ecological barometers of water quality because they are very sensitive to oxygen levels, water temperature, sediments, and contaminants (Quarles 1983, Eisler 1987, Arritt 1998, NMDGF 1998, 1999). Their presence often indicates a pristine spring or watercourse.

These four species depend upon water for their survival. Therefore, aquifer drawdown and contamination are among the most serious threats to these species. In order to assess the potential for water quality contamination, a study was completed in September 1999 to determine the sources of water for the springs at Bitter Lake NWR. This study (Balleau et al. 1999) reported that the source of water that will reach the Refuge springs over time periods ranging from 10 to 500 years includes a broad area beginning west of Roswell near Eightmile Draw, extending to the northeast to Salt Creek, and southeast to the Refuge. This broad area sits within a portion of the Roswell Basin and contains a mosaic of Federal, State, and private lands with multiple land uses including expanding urban development. Some of this development includes the installation of subsurface septic tanks, which can be a source of sewage contamination (McQuillan et al. 1989). Since this area delineates the ground water source area of surface water on the Refuge, it likewise represents pathways for contaminants to enter the species’ habitat.

Contamination of ground water sources from industry and commercial operations in and around Roswell is well documented. For example, perchloroethylene (PCE) was discovered in the McGaffey and Main ground water plume in Roswell in 1994 (Environmental Protection Agency (EPA) 2001). It is suspected that a dry cleaning facility that operated from 1956 to 1963 is the source of the PCE. The New Mexico Environment Department subsequently detected PCE in 13 of 16 groundwater wells in a 1995 investigation (EPA 2001). This ground plume contamination was proposed for addition to the EPA’s National Priority List on September 13, 2001 (66 FR 47612). This list assists the EPA in determining national priority sites that warrant further investigation of the nature and extent of environmental risks associated with the release of hazardous substances. It is not known whether this ground water plume will affect water quality on the Refuge or whether this contamination would impact these invertebrate species. However, portions of the shallow alluvial aquifer underlying Roswell are a source zone for many different contaminants that could eventually reach the Bitter Lakes spring complex (Balleau et al. 1999). We do not have specific documentation of adverse impacts associated with chronic or episodic chemical contaminant events to these species. However, such events have been implicated in similar aquatic organisms sharing common characteristics (e.g. Higgins’ eye mussel (Lampsilis higginsii)) (Service 1999).

Any springsnails remaining at North Spring, which is surrounded by a golf course, are threatened by pesticide or herbicide use for landscaping or maintenance and springhead alteration, which includes piping, damming, or pooling spring outflow (NMDGF 1999). Populations of Roswell springsnail and Koster’s tryonia at North Spring are reduced due to springhead modification (Landye 1981), regional groundwater depletion (Taylor 1987, NMDGF 1988), and recent observed reductions in springhead flow (Arritt 1998). The area of the historic Lander Springbrook (the first record of what was later identified as Noel’s amphipod was discovered at Lander Springbrook) is believed to have existed near South Spring acres, where this historic spring joined the South Spring River. This area was visited in 1995 and found to be dry (William Radke, pers. comm. 2000). Given that the amphipod cannot survive outside of an aquatic environment, this population has likely been extirpated.

Oil drilling occurs throughout the Roswell Basin. This activity and associated actions can threaten the water quality of the aquifer on which these species depend. For example, oil and other contaminants from drilling activities throughout the basin could enter the aquifer supplying the springs inhabited by all four species when the limestone layers are pierced by drilling activities. There are at least 190 oil wells in the area surrounding Bitter Lake NWR that are potential sources of contamination. The total number of wells that could potentially contaminate the groundwater water supply that is the source of water on the Refuge has not been quantified. According to Go-Tech, which is a database of oil and gas development and exploration actions in New Mexico, currently 23 “intentions to drill” (pursuit of required permits has been initiated by an applicant) are under way for oil or natural gas on Federal lands in Chavez County, 16 on State lands and 7 on private land (Go-Tech 2001). The Bureau of Land Management (BLM) continually receives requests for oil and gas development on public lands immediately adjacent to the Refuge. In March 2000 there were at
least 36 oil wells in the immediate vicinity of the Refuge (New Mexico Bureau of Mines and Minerals 2000). To remediate (clean) the aquifer would be extremely difficult should it become contaminated by oil, chemicals, or organics like nitrates. In most cases contamination of an underground aquifer by agricultural, industrial, or domestic sources is treated at the source. When a contamination site is discovered, techniques are used to address the source of the contamination. Rarely do remediation efforts pump water from the aquifer and treat it before sending it back. This is largely because these techniques are very costly and difficult to apply (Sarah McGrath, New Mexico State Ground Water Bureau, pers. comm. 2001). Because these invertebrate species are sensitive to contaminants, efforts to clean up pollution source sites after the aquifer has been contaminated may not be sufficient to protect the aquatic habitat on which these species depend.

Operations associated with oil and gas drilling, extraction, transfer, and refining are also potential threats to these species (Jercinovic 1982, 1984; Longmire 1983; Quarles 1983; Boyer 1986; Green and Trett 1989; Service 1997). Such extractive processes and industry operations are known to deplete groundwater aquifers and to contaminate ground and surface waters (Hennighausen 1969; Jercinovic 1982, 1984; Longmire 1983; Quarles 1983; Boyer 1986; Richard 1986a, 1986b; Rail 1989; Richard and Boehm 1989a, 1989b; Jones and Balleau 1996; Martinez et al. 1998). This groundwater depletion and ground and surface water contamination can adversely impact aquatic mollusks (Eisler 1987, Havlik and Marking 1987, Green and Trett 1989), and threaten Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod populations at Bitter Lake NWR (USFWS 1997).

Oil and gas development along with the depletion of groundwater in the Pecos River valley also poses a threat to the populations of Pecos assiminea at the Diamond Y Springs Complex. According to Veni (1991), over-pumping of the Pecos aquifer has dried out other springs in the region, and the flow at Diamond Y spring is potentially threatened by groundwater withdrawal and contamination from agricultural and oil and gas industries within its drainage area. Reductions in endangered spring snail populations in other parts of the country due to reductions in water quality resulting from contamination with agricultural pesticides and herbicides are well documented (Frest and Johannes 1992, Mladenka 1992). There is evidence that colonies of Utah valvata (Valvata utahensis) and Bliss Rapids snail (Taylorconcha serpenticoila) have recently declined or have been eliminated at several sites from changes in water quality due to agricultural and aquaculture wastewater originating outside the area (Frest and Johannes 1992). These two species are similar to the three snail species addressed in this proposal for listing, and as a result the three snail species could also be expected to experience adverse effects in response to environmental contaminants. Waste water from concentrated animal areas (i.e., dairies, feed lots, chicken farms), septic tanks, and agricultural uses is a known contributor of nitrates to surface and underground water sources. Nitrate levels in the underground aquifer near Roswell are known to be high. A significant source of the nitrates comes from surrounding dairy farms (Sarah McGrath, New Mexico State Ground Water bureau, pers. comm. 2001). The effects of nitrates on aquatic species are not entirely known because several outcomes may result from high level nitrate contamination in aquatic systems. One outcome includes increased growth of algae resulting from increased nutrients in the aquatic system. Too much algae in an aquatic environment could result in periods of low oxygen (resulting from increased respiration by algae) and in extreme cases this could be lethal to the snails and the amphipod. Also the type and amount of algae could change from more benign species to species which release phytotoxins into the environment and are lethal to some aquatic species. Elevated nutrient conditions favor blue-green algae which is a phytotoxin emitter. Should ammonia be a part of the pollution coming from industrial sites, agricultural areas, or domestic sources (i.e. septic tanks) this is a known acute toxin to aquatic life (Joel Lusk, USFWS, pers. comm., 2001). At least two dairy farms are currently required to do remediation for their contribution of nitrates to water pollution, both surface and underground (Sarah McGrath, New Mexico State Ground Water bureau, pers. comm. 2001). In addition, Diamond Y spring provides essential wetland habitat for several other rare and/or declining species such as the federally endangered Leon Springs pupfish (Cyprinodon bovinus) and federally threatened Pecos sunflower (Helianthus paradoxus).

East and West Sandia Springs are at the base of the Davis Mountains just east of Balmorhea, TX, and are part of the Balmorhea Spring Complex, the largest remaining desert spring system in Texas where the Pecos assiminea is found. West Sandia Spring has ceased flowing in recent times (Chris Perez, USFWS, pers. comm.). East Sandia Spring discharges at an elevation of 977 meters (3,224 feet (ft)) from alluvial sand and gravel, but the water is likely derived from Comanchean limestone underlying the alluvium (clay, silt, sand, and other similar material deposited by running water) (Brune 1981). Brune (1981) noted that flows from Sandia Springs were declining. According to Schuster (1997), the combined discharge of the Toyah basin springs from 1990 to 1996, which includes East Sandia Spring, shows an overall declining trend. The small flow from these springs is used by the local farming community for agricultural irrigation (Schuster 1997).

Finally, the range reduction trend in these snail species (e.g., by extirpation of once widely distributed but localized populations) is supported by the Pecos assiminea fossil record in conjunction with re-inventory of known site occurrences in which no individuals were detected (Noel 1954; Taylor 1987; Mehlhop 1992, 1993; NMDGF 1999). Fossil records indicate that at least one or more of these snail species were historically found at Berrendo Creek, North Spring, and South Spring Rivers and along the Pecos River (NMDGF 1999). This evidence suggests an apparent historical decline in the numbers, range, and distribution of these species.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

We are unaware of threats to these four species from this factor. Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod may occasionally be collected as specimens for scientific study, but these uses probably have a negligible effect on total population numbers. All of these species are currently not known to be of commercial value, and overutilization has not been documented. However, as their rarity becomes known, they may become more attractive to collectors. Although scientific collecting is not presently identified as a threat, unregulated collecting by private and institutional collectors could pose a threat to these locally restricted populations. We are aware of overcollection being a potential threat with other snails (e.g., armored snail (Pyrgulopsis (Margaritifera) pachyta) (65 FR 10033); Bruneau hot springsnail (Pyrgulopsis bruneauensis) (58 FR
springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod because these federally listed fish are not found in all the springs the snails or amphipod inhabit. For example, Pecos assiminea does not normally occur directly within submerged habitats. It is most commonly found in moist soil or vegetation along the periphery of standing water. As a result, this habitat may not be afforded protection under current management actions or consultations which address conservation for listed fish species in the same area.

Federal water-rights for the Bitter Lake NWR were secured in 1996 (USDI 1996). This acquisition should ensure minimum surface water discharge of Bitter Creek. However, if this water is contaminated, the Federal water right does not provide the required protection for these species.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Since these species inhabit only a few sites, there is a high probability that human-caused or natural events could destroy a significant portion of their remaining populations and habitat. Prolonged drought, for instance, could adversely impact populations by reducing groundwater recharge while increasing salinity and contaminant concentrations (NMDGF 1998).

Fire, particularly during the winter months, will allow ash, sediment, salts and nutrients to more readily enter the aquatic habitat via precipitation and wind. Ash consists of carbon, soots, and other organic compounds that, upon entering the water column, provide a food source for bacteria and algae. With the addition of associated nutrients, and water temperature increases from the loss of streamside vegetation, populations of bacteria and algae will expand causing oxygen depletions. As a result, some invertebrates may perish in the affected areas due to smothering the invertebrates. As a result, some invertebrates may perish in the aquatic habitat via precipitation and wind. Ash consists of carbon, soots, and other organic compounds that, upon entering the water column, provide a food source for bacteria and algae. With the addition of associated nutrients, and water temperature increases from the loss of streamside vegetation, populations of bacteria and algae will expand causing oxygen depletions. As a result, some invertebrates may perish in the affected areas due to smothering the invertebrates.

The Refuge is characterized by sinkhole/karst terrain. This terrain poses safety threats to fire crews and suppression equipment. As a result, fire suppression efforts are largely restricted to established roads. This severely limits management ability to quickly suppress fires that threaten fragile aquatic habitats on the refuge. On March 5, 2000, the Sandhill fire burned 405 hectares (ha) (1,000 acres (ac)) of the western portion of the refuge, including portions of Bitter Creek. Post-fire surveys indicated significant decreases in the invertebrate populations in Bitter Creek as well as decreases in dissolved oxygen levels (Brian Lang, NMDGF, pers. comm. 2000)

The Pecos assiminea may be threatened by competition for resources from the tropical red-rimmed melania snail (Melanoides tuberculata). This exotic snail is abundant at Diamond Y Spring and outcompetes native aquatic snails (Lisa Kiner, pers. comm. 1999).

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by these species in determining these species are vulnerable to extinction throughout all or a significant portion of their ranges. The habitat and range of Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod are threatened with destruction, modification, and curtailment. Existing regulatory mechanisms do not provide adequate protection for these species, and other natural and manmade factors affect their continued existence.

Because each of these four species has a very limited range, their populations are disjunct and isolated from each other, and potential habitat areas are isolated and separated by large areas of unsuitable habitat, these invertebrates are particularly vulnerable to localized extinction should their habitat be degraded or destroyed. Because their mobility is limited, populations will have little opportunity to leave degraded habitat areas in search of suitable habitat. As a result, a single contamination event, or a short period of drawdown in the aquatic habitat where they are found could result in the loss of entire population areas, of which there are few. Therefore, we propose to list the Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod as endangered. A threatened designation would not accurately reflect the population status, restricted distribution, vulnerability, and imminent threats.

General Critical Habitat Principles

Critical habitat is defined in section 3(5)(A) of the Act as—(i) the specific areas within the geographical 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 geographical 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. The term “conservation” as defined in section 3(3) of the Act means “to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary” (i.e., the species is recovered and removed from the list of endangered and threatened species).

Critical habitat receives protection from destruction or adverse modification through required consultation under section 7 of the Act, with regard to actions carried out, funded, or authorized by a Federal agency. Section 7 also requires conferencing on Federal actions that are likely to result in the adverse modification or destruction of proposed critical habitat. Aside from the protection that may be provided under the section 7 adverse modification standard, designation of critical habitat does not provide prohibitions beyond those available from the listing of a species as endangered or threatened.

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 conservation of that species. Designation of critical habitat alerts the public as well as land-managing agencies to the importance of these areas. Critical habitat also identifies areas that may require special management considerations or protection, and may provide protection to areas where significant threats to the species have been identified.

Designating critical habitat does not, in itself, lead to recovery of a listed species. Designation does not create a management plan, establish numerical population goals, prescribe specific management actions (inside or outside of critical habitat), or directly affect areas not designated as critical habitat. Specific management recommendations for areas designated as critical habitat are most appropriately addressed in recovery and management plans, and through section 7 consultation and section 10 permits. Critical habitat identifies specific units that are essential to the conservation of a listed species and that may require special management considerations or protection.

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR part 424.12) state that critical habitat shall be specified to the maximum extent prudent and determinable at the time a species is proposed for listing. When we designate critical habitat at the time of listing we will often not have sufficient information to identify all areas of critical habitat. We are required, nevertheless, to make a decision and thus must base our designations on what, at the time of designation, we know to be critical habitat. Section 4(b)(2) of the Act requires that we base critical habitat proposals upon the best scientific and commercial data available, taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat. We can exclude areas from critical habitat designation if we determine that the benefits of exclusion outweigh the benefits of including the areas as critical habitat, provided the exclusion will not result in the extinction of the species.

Critical habitat designations identify, to the extent known using the best scientific and commercial data available, habitat areas that provide essential life cycle needs of the species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Our regulations 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’ (50 CFR 424.12(e)). Accordingly, when the best available scientific and commercial data do not demonstrate that the conservation needs of the species require designation of critical habitat outside of occupied areas, we will not designate critical habitat in areas outside the geographic area occupied by the species.

The Service’s Policy on Information Standards Under the Endangered Species Act, published in the Federal Register 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 Service biologists, to the extent consistent with the Act and with the use of the best scientific and commercial data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat. 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 opinions or other unpublished materials (i.e., gray literature). Our final determination will be based on the best available scientific information and will take into consideration comments that we receive from peer reviewers and the public.

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, all should understand that critical habitat designations do not signal that habitat outside the geographical area designated 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 of the Act and to the regulatory protections afforded by the section 7(j)(2) jeopardy standard and the section 9 take prohibition, as determined on the basis of the best available information at the time of the action. Additionally, as described in the “Available Conservation Measures” section below, activities occurring within the larger supporting aquifer systems may also adversely modify the proposed critical habitat for these four invertebrate species. We specifically anticipate that federally funded or assisted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy and adverse modification 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, or other species conservation planning efforts if new information available to these planning efforts calls for a different outcome.

Critical habitat designation, by definition, directly affects only Federal agency actions through consultation under section 7(a)(2) of the Act. Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify its critical habitat.

**Prudency Determination**

As mentioned above, section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time the species is determined to be endangered or threatened. Our regulations (50 CFR 424.12(a)(1)) state that the designation
of critical habitat is not prudent when one or both of the following situations exist—(1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to the species, or (2) such designation of critical habitat would not be beneficial to the species.

In the last few years, a series of court decisions have overturned our determinations that designation of critical habitat would not be prudent for a variety of species (e.g., Natural Resources Defense Council v. U.S. Department of the Interior 113 F. 3d 1121 (9th Cir. 1997); Conservation Council for Hawaii v. Babbitt, 2 F. Supp. 2d 1280 (D. Hawaii 1999)). Based on the standards applied in those judicial opinions, we have examined the question of whether critical habitat for these four invertebrate species would be prudent.

Due to the small number of localities for the snails and the amphipod, these species are susceptible to unrestricted collection, vandalism, or other disturbance. However, there is no documentation of collection as a significant threat to any of the species. Additionally, much of the habitat where these invertebrates occur is managed for the benefit of wildlife species where the threat of collection should be reduced. Consistent with recent case law, we must weigh the benefits in proposing to designate critical habitat for the snails and the amphipod against the harm which could be caused by the disclosure of their location. We find that these benefits outweigh the risk of increased collection because the locations are already known and available to the public.

The primary regulatory effect of critical habitat is the section 7 requirement that Federal agencies consult with us to ensure that their proposed actions will not destroy or adversely modify critical habitat. While a critical habitat designation for these species in currently occupied habitat would not be likely to change the section 7 consultation outcome because an action that destroys or adversely modifies such critical habitat would also be likely to result in jeopardy to the species, in some instances section 7 consultation might be triggered only if critical habitat is designated. Examples could include unoccupied habitat or occupied habitat that may become unoccupied in the future. Designating critical habitat may also have some educational or informational benefits. Therefore, we find that critical habitat is prudent for the three snails and the amphipod.

Although we make a detailed determination of the habitat needs of a listed species during the recovery planning process, the Act has no provision to delay designation of critical habitat until such time as a recovery plan is prepared. We reviewed the available information pertaining to habitat characteristics where these species had been recently located. This and other information represent the best scientific and commercial data available, and led us to conclude that the designation of critical habitat is both prudent and determinable for these four invertebrate species. Therefore, we propose to designate critical habitat pursuant to the Act for the springsnails and the amphipod.

**Primary Constituent Elements**

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas to designate as critical habitat, we must consider those physical and biological features (primary constituent elements) essential to the conservation of the species. These primary constituent elements include, but are not limited to, space for individual and population growth and for normal behavior; food, water, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species. The areas we are proposing to designate as critical habitat for the Roswell springsnail, Koster’s tryonia, Pecos assiminea, and Noel’s amphipod provide one or more of the primary constituent elements noted below.

We determined the specific primary constituent elements for Roswell springsnail, Koster’s tryonia, and Noel’s amphipod from data and studies on their general habitat and life history requirements including, but not limited to, Taylor 1987; Pennak 1978, 1989; and NMDGF 1996, 1998, and 1999. These primary constituent elements include those noted above for the Roswell springsnail, Koster’s tryonia, and Noel’s amphipod and, in addition, moist soil at stream or spring run margins with vegetation growing in or adapted to an aquatic or very wet environment, such as salt grass or sedges. The margins of riparian systems that already contain the above necessary elements were included in this proposed designation because Pecos assiminea is found within the mesic (moist) environment directly adjacent to the aquatic habitat. Substrates found in these marginal areas provide for temperatures within the environmental tolerance for this species, and the habitat for sheltering, foraging, and reproduction that the Pecos assiminea requires.

**Proposed Critical Habitat Designation**

In proposing critical habitat for these species, we solicited information from knowledgeable biologists and recommendations contained in State wildlife resource reports (Balleau et al. 1999, NMDGF 1999, NMDGF 1998, Boghici 1997, Jones and Balleau 1996, and Cole 1985). We also reviewed the available literature pertaining to habitat requirements, historic localities, and current localities for these species. The proposed critical habitat described below constitutes our best assessment of areas needed for the conservation of the three springsnails and Noel’s amphipod and is based on the best available scientific and commercial information available. The proposed areas are essential to the conservation of the species because they are within the aquatic environment provides foraging and sheltering habitat, as well as habitat structure necessary for reproduction and successful recruitment of offspring. Water is also the medium necessary to provide the algae, detritus, bacteria, and submersed vegetation on which all four species depend as a food resource. The necessary substrates, silts, cobbles, or gypsum, also provide habitat within the aquatic environment for these species to shelter, reproduce, and forage. Submersed vegetation contributes to the necessary nutrients, detritus, and bacteria on which these species forage. This vegetation also provides sheltering habitat.

We determined the primary constituent elements for Pecos assiminea from data and studies on its general habitat and life history requirements including, but not limited to, Taylor 1987; Pennak 1978, 1989; and NMDGF 1996, 1998, and 1999. These primary constituent elements include those noted above for the Roswell springsnail, Koster’s tryonia, and Noel’s amphipod.
geographical area occupied by these macroinvertebrate populations and because they currently have one or more constituent elements (see description of primary constituent elements, above).

Although these species are unique to only a few sites, important considerations in selection of areas proposed in this rule include factors specific to each geographic area or complex of areas, such as size, connectivity, and habitat diversity, as well as range-wide recovery considerations, such as genetic diversity and representation of all major portions of the species’ historical ranges. The proposed critical habitat designation includes all known populations of Roswell springsnail, Koster’s tryponia, Pecos assiminea, and Noel’s amphipod. Uncertainty of occurrence at other sites may result in small areas of occupied habitat not being included in the designation.

We are not including North Spring, Chaves County, NM, as critical habitat because it has been significantly modified by private land uses, it is surrounded by a golf course, and it is unlikely that these species still exist at this site. This site is also isolated from the springsnail populations in Bitter Creek and the Sago Springs Complex, which comprise the core populations of these species. Due to habitat modifications at North Spring, we do not know if the area provides for the essential life cycle needs of these species (i.e., areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)) and, therefore, we are not proposing to include it in the designation. We intend to work with land managers at North Spring to address important conservation needs of any remaining springsnails there.

We propose the following areas as critical habitat for these invertebrate species (see the “Regulation Promulgation” section of this proposed rule for exact boundary descriptions). These proposed critical habitat areas include primary constituent elements that provide for the physiological, behavioral, and ecological requirements essential for the conservation of Roswell springsnail, Koster’s tryponia, Pecos assiminea, and Noel’s amphipod. The proposed designation includes two areas or “complexes” on Bitter Lake NWR, one complex at Diamond Y Spring, associated springs, and a segment of their drainages, and East Sandia Spring. A broad array of sinkholes and spring complexes provide a diversity of habitat types. We are proposing to include these areas in the critical habitat designation to maintain ecological distribution as well as adequate pathways necessary for genetic exchange, thereby fostering genetic diversity and population viability.

1. Sago/Bitter Creek Complex, Bitter Lake NWR, Chaves County, NM. Sago Springs, Bitter Creek, and the adjacent gypsum sinkholes comprise the core population center for all four species. The proposed designation includes all springs, seeps, sinkholes, and outflows surrounding Bitter Creek and the Sago Springs complex. This designation is approximately 245 ha (606 ac).

2. Impoundment Complex, Bitter Lake NWR, Chaves County, NM. This complex includes portions of impoundments 3, 5, 6, 7, 15, and Hunter Marsh. This is a secondary population center for all four invertebrates with Koster’s tryponia being the principal species there. The proposed designation includes all springs, seeps, sinkholes, and outflows surrounding the Refuge impoundments. This designation is approximately 245 ha (606 ac).

3. Diamond Y Springs Complex, Reeves County, TX. This site comprises a major population of Pecos assiminea. The proposed designation includes the Diamond Y Spring and approximately 6.8 km (4.2 mi) of its outflow ending at approximately 0.8 km (0.5 mi) downstream of the State Highway 18 bridge crossing. Also included is approximately 0.8 km (0.5 mi) of Leon Creek upstream of the confluence with Diamond Y Draw. All surrounding riparian vegetation and mesic soil environments within the spring, outflow, and portion of Leon Creek are also proposed for designation as these areas are considered habitat for the Pecos assiminea. This designation is approximately 153.8 ha (380 ac) of aquatic and neighboring mesic habitat.

4. East Sandia Spring, Reeves County, TX. This spring contains a population of Pecos assiminea. The proposed designation includes the springhead itself, surrounding seeps, and all submerged vegetation and moist soil habitat found at the margins of these areas. These areas are considered habitat for the Pecos assiminea. This designation is approximately 6.7 ha (16.5 ac) of aquatic and neighboring upland habitat.

**Land Ownership**

Most of the land included in the designation is within the administrative boundaries of the Bitter Lake NWR. However, within the designation are also private lands associated with the Diamond Y Spring Complex and East Sandia Springs. Both of these springs support populations of the Pecos assiminea. Diamond Y Spring is located in Pecos County, TX, and East Sandia Spring is located in Reeves County, TX. These private lands are managed as a nature preserve by The Nature Conservancy. Surrounding land uses include ranching and irrigated farming.

A general description of land ownership in each area follows.

1. Sago/Bitter Creek Complex-This complex occurs entirely on Bitter Lake NWR (Federal ownership).

2. Impoundment Complex-This complex occurs entirely on Bitter Lake NWR (Federal ownership).

3. Diamond Y Springs Complex-This complex occurs entirely on private lands. Private land in the immediate vicinity of the Diamond Y Springs Complex is managed as a nature preserve by The Nature Conservancy.

4. East Sandia Spring. The site is private land managed as a nature preserve by The Nature Conservancy.

The approximate Federal and private ownership within the boundaries of the critical habitat is shown in Table 1.

**Table 1.—Approximate Critical Habitat by Land Ownership and State in Hectares (Acres)**

<table>
<thead>
<tr>
<th></th>
<th>New Mexico</th>
<th>Texas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Land (National Wildlife Refuge)</td>
<td>456 ha (1,127 ac)</td>
<td>None</td>
<td>456 ha (1,127 ac)</td>
</tr>
<tr>
<td>Private Land</td>
<td>None</td>
<td>160.5 ha (396.5 ac)</td>
<td>160.5 ha (396.5 ac)</td>
</tr>
<tr>
<td>Total</td>
<td>None</td>
<td>616.5 ha (1,523.5 ac)</td>
<td>616.5 ha (1,523.5 ac)</td>
</tr>
<tr>
<td>Total critical habitat units</td>
<td>None</td>
<td>None</td>
<td>4.</td>
</tr>
</tbody>
</table>
Special Management Considerations and Protection

Section 3(5) of the Act defines critical habitat, in part, as areas within the geographical area occupied by the species “on which are found those physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations and protection.” Additional special management is not required if adequate management or protection is already in place. Adequate special management considerations or protection is provided by a legally operable plan or 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. We use the following three criteria to determine if a plan provides adequate special management or protection: (1) A current plan or agreement must be complete and provide sufficient conservation benefit to the species; (2) the plan must provide assurances that the conservation management strategies will be implemented; and (3) the plan must provide assurances that the conservation management strategies will be effective, i.e., provide for periodic monitoring and revisions as necessary. If all of these criteria are met, then the lands covered under the plan would no longer meet the definition of critical habitat.

Two proposed critical habitat sites are currently being managed by The Nature Conservancy (TNC). The Nature Conservancy currently has no formal management plans for these areas, but intends to have draft plans developed. If these plans are finalized prior to our final determination, we will consider whether they provide special management and we may exclude these areas if we determine that no additional special management is required.

Effect of Critical Habitat Designation

The designation of critical habitat directly affects Federal agencies. The Act requires Federal agencies to ensure that actions they fund, authorize, or carry out do not destroy or adversely modify critical habitat to the extent that the action appreciably diminishes the value of the critical habitat for the survival and recovery of the species. Individuals, organizations, States, local and Tribal governments, and other non-Federal entities are only affected by the designation of critical habitat if their actions occur on Federal lands, require a Federal permit, license, or other authorization, or involve Federal funding.

Section 7(a) of the Act requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its proposed or designated critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR part 402. Section 7(a)(4) of the Act and regulations at 50 CFR 402.10 require Federal agencies to confer with us on any action that is likely to jeopardize the continued existence of a proposed species or to result in destruction or adverse modification of proposed critical habitat.

If a species is subsequently listed or critical habitat is designated, then section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of such a species or destroy or adversely modify its critical habitat. To that end, if a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with us. Regulations at 50 CFR 402.16 also require Federal agencies to reintiate consultation in instances where we have already reviewed an action for its effects on a listed species if critical habitat is subsequently designated.

Section 4(b)(8) of the Act requires us to include in any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (whether public or private) which, in the opinion of the Secretary, if undertaken may adversely modify such habitat, or may be affected by such designation. Activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements (defined above) to an extent that the value of critical habitat for both the survival and recovery of the springsnails and amphipod is appreciably reduced.

To properly portray the effects of critical habitat designation, we must first compare the section 7 requirements for actions that may affect critical habitat with the requirements for actions that may affect a listed species (see the next section. “Available Conservation Measures,” for a discussion of specific actions that may affect listed species or critical habitat). It is important to note that proposed critical habitat may also be adversely modified by physical activities occurring within the larger supporting aquifer systems. This would particularly include adverse impacts to the Roswell Basin aquifer for Bitter Lake NWR and Rustler aquifer (Boghi 1997) for Diamond Y Springs Complex. Section 7 prohibits actions funded, authorized, or carried out by Federal agencies from jeopardizing the continued existence of a listed species or destroying or adversely modifying the listed species’ critical habitat. Actions likely to “jeopardize the continued existence” of a species are those that would appreciably reduce the likelihood of the species’ survival and recovery. Actions likely to “destroy or adversely modify” critical habitat are those that would appreciably reduce the value of critical habitat for the survival and recovery of the listed species.

Common to both definitions is an appreciable detrimental effect on both survival and recovery of a listed species, in the case of critical habitat by reducing the value of the habitat so designated. Given the similarity of these definitions, actions likely to destroy or adversely modify critical habitat for these springsnails and the amphipod would almost always result in jeopardy to the species concerned, particularly when the area of the proposed action is occupied by these species. In those cases, critical habitat provides little additional protection to a species, and the existence of a critical habitat designation does not materially affect the outcome of consultation.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and authorizes recovery plans for all listed species. The protection required of Federal agencies and the prohibitions against certain activities involving listed animals are discussed in part in the “Effect of Critical Habitat Designation” section below.

Federally supported actions that could affect the springsnails, amphipod, or their habitats include any activity that would significantly alter the source-water capture zones, subterranean flows, or water level of the supporting aquifers; any activity that would significantly alter the water chemistry (e.g., temperature) in the wetland habitats and systems where these species occur;
and any activity that would introduce, spread, or augment non-native aquatic predators or competitors. This may generally involve groundwater pumping, water diversion, drainage alteration projects, wetland filling, road construction, construction of public and private facilities, chemical applications, oil and gas permitting activities, technical assistance programs, and wastewater or point-source discharge permits. Specific examples include, but are not limited to, EPA authorization of discharges under the National Pollutant Discharge Elimination System and registration of pesticides; Federal Highway Administration approval or funding of road or highway infrastructure and maintenance; BLM issuance of oil and gas leases or permits; U.S. Army Corps of Engineers authorization of discharges of dredged or fill material into waters of the United States under section 404 of the Clean Water Act; USDA-Natural Resources Conservation Service technical assistance and other programs; USDA-Rural Utilities Service infrastructure or development; Federal Energy Regulatory Commission permitting activities; and the Department of Housing and Urban Development’s Small Cities Community Development Block Grant and home loan programs.

The Act and implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, or collect, or to attempt any of these), import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the U.S. Fish and Wildlife Service.

Permits may be issued to carry out otherwise prohibited activities involving endangered wildlife species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, or for incidental take in the course of otherwise lawful activities.

It is our policy, published in the Federal Register on July 1, 1994 (59 FR 34272), to use to the maximum extent practicable those activities that would or would not constitute a violation of section 9 of the Act. The intent of this policy is to increase public awareness as to the effects of this proposed listing on future and ongoing activities within the species’ range. We believe, based on the best available information, that the following actions will not result in a violation of section 9:

1. Possession, delivery, or movement, including interstate transport that does not involve commercial activity, of specimens of these species that were legally acquired prior to the publication in the Federal Register of the final regulation adding these species to the list of endangered species;
2. Oil and gas exploration and drilling in areas where surface or groundwater is not connected to habitats occupied by the Roswell springsnail, Koster’s trypnia, Pecos assiminea, and Noel’s amphipod; (see \section{Economic Analysis})
3. Groundwater pumping or use of a supporting aquifer that would not result in a significant lowering of aquifer levels or reduced spring water discharges; and
4. Domestic sewer hook-ups to city wastewater treatment systems within the groundwater recharge zones of the supporting aquifers.

Potential activities involving these species that we believe will likely be considered a violation of section 9 include, but are not limited to, the following:

1. Collection of specimens of these species for private possession or deposition in an institutional collection without the appropriate Federal permits;
2. The use of chemical insecticides or herbicides in violation of the label directions which results in killing or injuring these species;
3. The unauthorized release of biological control agents (e.g., insects) that attack any life stage of these species;
4. Subsurface drilling or similar activities that contaminate or cause significant degradation of surface drainage water or aquifer water quality that supports the habitat occupied by these species;
5. Groundwater pumping to the extent that a significant reduction in the quantity or quality of water in areas occupied by these species occurs;
6. Septic tank placement where the groundwater is connected to sinkhole or other aquatic habitats occupied by these species;
7. Activities occurring within the surface drainage zones that produce contaminated run-off (e.g., dumping waste products such as chemicals or oils on upland sites) during significant rain events; and
8. Habitat modification such as removal of marsh emergent or perennial vegetation, construction, clearing, grading, digging, filling, blasting, and alteration of the natural drainages within or adjacent to the occupied wetland feature that results in killing or injuring these species by significantly impairing essential life-sustaining requirements such as breeding, feeding, and shelter.

If you have questions regarding whether specific activities will likely violate section 9, contact the New Mexico Ecological Services Field Office (see \section{Economic Analysis}). For Pecos assiminea in Texas, contact the Austin Ecological Services Field Office, 10711 Burnet Road, Suite 200, Hartland Bank Building, Austin, TX 78758, (512)/490-0057. Requests for copies of the regulations on listed wildlife and inquiries about prohibitions and permits may be addressed to the U.S. Fish and Wildlife Service, Division of Endangered Species, P.O. Box 1306, Albuquerque, NM 87103 (telephone 505/248-6920; facsimile 505/248-6788).

\section{Economic Analysis}

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 consider the economic and other relevant impacts of designating a particular area as critical habitat. We based this proposal on the best available scientific information. We will use the economic analysis, and take into consideration all comments and information submitted during the comment period, to make a final critical habitat designation. We may exclude areas from critical habitat upon a determination that the benefits of exclusion outweigh the benefits of specifying an area as critical habitat. We cannot exclude areas from critical habitat when the exclusion will result in extinction of the species. We will conduct a robust economic analysis on the effects of the proposed critical habitat designation prior to a final determination that will comply with the ruling by the Tenth Circuit Court of Appeals in \textit{New Mexico Cattle Growers Association, et.al. v. U.S. Fish and Wildlife Service}. When the draft economic analysis is completed, we will announce its availability with a notice in the Federal Register, and we will reopen the comment period at that time to accept comments on the economic analysis or further comment on the proposed rule.
Secretarial Order 3206: American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act

The purpose of Secretarial Order 3206 (Secretarial Order) is to, ‘clarify’ the responsibilities of the component agencies, bureaus, and offices of the Department of the Interior and the Department of Commerce, when actions taken under authority of the Act and associated implementing regulations affect, or may affect, Indian lands, tribal trust resources, or the exercise of American Indian tribal rights.” If there is potential that a tribal activity could cause either direct or incidental take of a species proposed for listing under the Act, then meaningful government-to-government consultation will occur to try to harmonize the Federal trust responsibility to tribes and tribal sovereignty with our statutory responsibilities under the Act. The Secretarial Order also requires us to consult with tribes if the designation of an area as critical habitat might impact tribal trust resources, tribally owned fee lands, or the exercise of tribal rights. However, no known tribal activities could cause either direct or incidental take of the four species in this proposed rule, and no tribal lands or tribal trust resources are anticipated to be affected by the proposed designation of critical habitat.

Public Comments Solicited

The Service expects any final rule resulting from this proposal to be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any threat (or lack thereof) to these species;
(2) Additional information concerning the range, distribution, and population size of these species, including the locations of any additional populations of these species;
(3) Current or planned activities in the subject area and their possible impacts on these species;
(4) Reasons why any habitat should or should not be determined to be critical habitat for these species pursuant to section 4 of the Act; and
(5) Any foreseeable economic or other impacts resulting from the proposed designation of critical habitat.

Our practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents may request that we withhold their home address from the rulemaking record, which we will honor to the extent allowable by law. In some circumstances, we would withhold from the rulemaking record a respondent’s identity, as allowable by law. If you wish us to withhold your name or address, you must state this prominently at the beginning of your comment. However, we will not consider anonymous comments. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. Comments and materials received will be available for public inspection, by appointment, during normal business hours (see ADDRESSES section).

In accordance with interagency policy published on July 1, 1994 (59 FR 34270), upon publication of this proposed rule in the Federal Register, we will solicit expert reviews by at least three specialists regarding pertinent scientific or commercial data and our conclusions relating to the taxonomic, biological, and ecological information for the three snails and the amphipod. The purpose of such a review is to ensure that decisions are based on scientifically sound data, assumptions, and analyses, including the input of appropriate experts. We will send these peer reviewers copies of this proposed rule immediately following publication in the Federal Register. We will invite these peer reviewers to comment, during the public comment period, on the information presented in this proposed rule to list and designate critical habitat for the three springsnails and amphipod.

In making a final decision on this proposed rule, we will take into consideration the comments and any additional information we receive. The final rule may differ as a result of this process.

Public Hearings

The Endangered Species Act provides for one or more public hearings on this proposal, if requested. Requests must be received within 45 days of the date of publication of the proposal in the Federal Register. Such requests must be made in writing and addressed to New Mexico Ecological Services Field Office (see DATES and ADDRESSES sections).

Clarity of the Rule

Executive Order 12866 requires each agency to write regulations that are easy to understand. We invite your comments on how to make this rule easier to understand including answers to questions such as the following: (1) Are the requirements in the rule clearly stated? (2) Does the rule contain technical language or jargon that interferes with its clarity? (3) Does the format of the rule (grouping and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? (4) Would the rule be easier to understand if it were divided into more (but shorter) sections? (5) Is the description of the rule in the “Supplementary Information” section of the preamble helpful in understanding the proposed rule? What else could we do to make the rule easier to understand?

Send a copy of any comments that concern how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C Street NW., Washington, DC 20240. You may also e-mail the comments to this address: Exsec@ios.doi.gov.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order 12866, the proposed designation of critical habitat in this document is a significant rule and has been reviewed by the Office of Management and Budget (OMB). Under section 4(b)(1)(A) of the Act, the Secretary is to make listing proposals solely on the basis of the best scientific and commercial data available, after conducting a review of the status of the species and taking into account any efforts being made to protect the species. Therefore, our analyses under E.O. 12866 and the Regulatory Flexibility Act pertain only to the proposed critical habitat portion of this rule, and not to the proposed listing. Under section 4(b)(2) of the Act, the Secretary is to designate critical habitat based on the best scientific data available and after taking into consideration the economic impact and any other relevant impact of specifying any particular area as critical habitat.

(a) While we will prepare an economic analysis to assist us in considering whether areas should be excluded pursuant to section 4 of the Act, we believe that the proposed critical habitat designation will not have an annual economic effect of $100 million or more or adversely affect an economic sector, productivity, jobs, the environment, or other units of government. Under the Act, a critical habitat may not be destroyed or adversely modified by a Federal agency...
action; the Act does not impose any restrictions related to critical habitat on non-Federal persons unless they are conducting activities funded or otherwise sponsored or permitted by a Federal agency.

(b) This proposed designation of critical habitat, if finalized, will not create inconsistencies with other agencies’ actions. As discussed above, Federal agencies are required to ensure that their actions do not jeopardize the continued existence of listed species. The prohibition against adverse modification of critical habitat is not expected to impose any substantial additional restrictions to those that will exist from a proposed or final listing of these four invertebrate species. Because of the potential for impacts on other Federal agencies’ activities, we will continue to review this proposed action for any inconsistencies with other Federal agencies’ actions.

(c) We believe that this proposed designation of critical habitat, if finalized, will not materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients, except those involving Federal agencies which would be required to ensure that their activities do not destroy or adversely modify designated critical habitat. As discussed above, we do not anticipate that the adverse modification prohibition (from critical habitat designation) will have any significant economic effects, but will wait until completion of the economic analysis to fully evaluate expected effects.

(d) OMB has determined that the proposed designation of critical habitat for these species may raise novel legal or policy issues and, as a result, this rule has undergone OMB review.

Regulatory Flexibility Act

Under the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement 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 amended the Regulatory Flexibility Act (RFA) to require Federal agencies to provide a statement of the factual basis for certifying that the rule 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 proposed rule, we are certifying that the proposed designation of critical habitat will not have a significant effect on a substantial number of small entities. The following discussion explains our rationale.

The Small Business Administration (http://www.sba.gov/size) defines small entities to include small organizations, such as independent non-profit organizations, and small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents, as well as small businesses. 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, agricultural businesses with annual sales 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 a rule designating critical habitat 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. 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. Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies; private or State activities are not affected by the designation unless they have a Federal nexus. If the listing of these species is finalized, Federal agencies will be required to consult with us under section 7 of the Act on activities that they fund, permit, or implement that may affect Roswell springsnail, Koster’s tryonia, Noel’s amphipod or Pecos assiminea. If this proposed critical habitat designation is finalized, Federal agencies must also consult with us if their activities may affect designated critical habitat. However, we do not believe this will result in any significant additional regulatory burden on Federal agencies or their applicants because consultation would already be required due to the presence of these species that are proposed for listing, and the duty to avoid adverse modification of critical habitat would not trigger additional regulatory impacts beyond the duty to avoid jeopardizing the species.

Because these species have not been listed, there is no history of consultations. Therefore, for the purposes of this review and certification under the Regulatory Flexibility Act, we are assuming that any future consultations in the area proposed as critical habitat will be due to the listing and critical habitat designation. The areas where critical habitat designations are being proposed are largely being managed for the benefit of wildlife. Projected land uses for the majority of the proposed critical habitat consists of habitat improvement projects (i.e., exotic weed control and prescribed burning), wildlife management, and recreational use (i.e., hunting, bird watching, and hiking).

On non-federal lands, activities that lack Federal involvement would not be affected by the critical habitat designation. Activities of an economic nature that are most likely to occur on non-federal lands in the area encompassed by this proposed designation are recreation-related activities (i.e., hiking, trail construction, hunting, bird watching, and fishing). Oil and gas development and agricultural uses are also potential activities which could occur on private lands proposed as critical habitat in this designation. However, we do not expect the economic development of these lands through oil and gas or agricultural uses to be likely because these lands are currently owned by The Nature Conservancy and are managed as nature preserves to benefit wildlife and plant species. Land use outside of the proposed critical habitat designation that surrounds the Diamond Y Springs Complex is predominantly ranching and irrigated farming. We also do not expect the economic development of these
lands through agricultural uses to be likely because existing water rights are already established in this area and the use of chemical insecticides or herbicides carried out in accordance with the label directions would not result in a significant economic effect.

This proposed designation of critical habitat would not affect a substantial number of small entities currently involved in oil production. Prohibitions on oil and gas development or exploration are not anticipated.

Conservation measures or stipulations to future permits and leases may be necessary to prevent contamination of water resources; however, these measures and stipulations should not result in significant economic hardship to a substantial number of small entities. We are not aware of a significant number of future activities that would require Federal permitting or authorization; therefore, we conclude that the proposed rule would not affect a substantial number of small entities involved in oil production.

We also considered the likelihood that this proposed designation of critical habitat would result in significant economic impacts to small entities. In general, two different mechanisms in section 7 consultations could lead to additional regulatory requirements for small entities who are usually applicants for Federal permits. First, if we conclude, in a biological opinion, that a proposed action is likely to jeopardize the continued existence of a species or adversely modify its critical habitat, we can offer “reasonable and prudent alternatives.” Reasonable and prudent alternatives are alternative actions that can be implemented in a manner consistent with the scope of the Federal agency’s legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid jeopardizing the continued existence of listed species or resulting in adverse modification of critical habitat.

A Federal agency and an applicant may elect to implement a reasonable and prudent alternative associated with a biological opinion that has found jeopardy or adverse modification of critical habitat. An agency or applicant could alternatively choose to seek an exemption from the requirements of the Act or proceed without implementing the reasonable and prudent alternative. However, unless an exemption were obtained, the Federal agency or applicant would be at risk of violating section 7(a)(2) of the Act if it chose to proceed without implementing the reasonable and prudent alternative. Secondly, if we find that a proposed action is not likely to jeopardize the continued existence of a listed species, we may identify reasonable and prudent measures designed to minimize the amount or extent of take and require the Federal agency or applicant to implement such measures through non-discretionary terms and conditions. We may also identify discretionary conservation recommendations designed to minimize or avoid the adverse effects of a proposed action on listed species or critical habitat, help implement recovery plans, or to develop information that could contribute to the recovery of the species.

Based on our experience with section 7 consultations for all listed species, virtually all projects—including those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. As we have no consultation history for these springsnails and amphipod, we can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats they face. The kinds of actions that may be included in future reasonable and prudent alternatives include monitoring of water contamination and measures to prevent contamination, such as stipulations on permits that will for natural gas or oil, control of exotic weeds in spring areas, and suspended or restricted use of pesticides or herbicides in areas occupied by and necessary to the survival and recovery of these species. Because recommended reasonable and prudent alternative measures must be economically feasible, these measures are not likely to result in a significant economic impact to a substantial number of small entities.

As required under section 4(b)(2) of the Act, we will conduct an analysis of the potential economic impacts of this proposed critical habitat designation, and will make that analysis available for public review and comment before finalizing this designation. However, court deadlines require us to publish this proposed rule before the economic analysis can be completed.

In summary, we have considered whether this proposed designation of critical habitat would result in a significant economic effect on a substantial number of small entities. It would not affect a substantial number of small entities. Many of the parcels within this designation are located in areas where likely future land uses would not be affected by designation of critical habitat. As discussed earlier, the private parcels within the proposed designation are currently being managed for the benefit of wildlife and, therefore, are not likely to require any Federal authorization. In the remaining areas, Federal involvement—and thus section 7 consultations, the only trigger for economic impact due to the proposed designation of critical habitat—would be limited to a subset of the area proposed. The most likely future section 7 consultations resulting from this rule would be for habitat improvement projects (i.e., invasive species control or prescribed burning), oil and gas development or exploration permitting, and activities which may result in the depletion of underground water sources or contamination of the underground aquifer. The proposed designation of critical habitat would result in project modifications only when proposed Federal activities, or non-Federal activities with a Federal nexus, would destroy or adversely modify critical habitat. While this may occur, it is not expected frequently enough to affect a substantial number of small entities. Even when it does occur, we do not expect it to result in a significant economic impact, as the measures included in reasonable and prudent alternatives must be economically feasible and consistent with the proposed action. Therefore, we are certifying that the proposed designation of critical habitat for the Roswell springsnail, Koster’s snail, and Joel’s amphipod will not have a significant economic impact on a substantial number of small entities, and an initial regulatory flexibility analysis is not required.

Executive Order 13211

On May 18, 2001, the President issued an Executive Order (E.O. 13211) on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. Although this proposed designation of critical habitat is a significant regulatory action under Executive Order 12866, it is not expected to significantly affect energy supplies, distribution, or use. Prohibitions to carry out energy development or exploration are not anticipated as a result of this action either within the proposed designation or within the larger supporting aquifer systems. Based on our experience with section 7 consultations for all listed species, virtually all projects—including
those that, in their initial proposed form, would result in jeopardy or adverse modification determinations in section 7 consultations—can be implemented successfully with, at most, the adoption of reasonable and prudent alternatives. These measures must be economically feasible and within the scope of authority of the Federal agency involved in the consultation. As we have no consultation history for these springsnails and amphipod, we can only describe the general kinds of actions that may be identified in future reasonable and prudent alternatives. These are based on our understanding of the needs of the species and the threats they face. The kinds of actions that may be included in future reasonable and prudent alternatives for energy development include monitoring of water contamination and measures to prevent contamination. Stipulations on permits to drill for natural gas or oil and mineral leases may be necessary, in some circumstances, to protect aquatic habitat from contamination or degradation. However, these measures and stipulations should not result in significant negative impacts to energy supplies, distribution or use. Energy development within the proposed critical habitat designation is very unlikely given current land ownership. Future development and exploration beyond that which currently exists on the Refuge are also unlikely as no additional mineral leases are available that have not already been developed and/or abandoned. 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 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 any of their actions involving Federal funding or authorization must not destroy or adversely modify the critical habitat or take these species under section 9.
(b) This rule will not produce a Federal mandate of $100 million or greater in any year (i.e., 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 the proposed listing and designation of critical habitat for these 4 species. The takings implications assessment concludes that this proposed rule does not pose significant takings implications. A copy of this assessment is available by contacting the New Mexico Ecological Services Field Office (see ADDRESSES section).

Federalism

In accordance with Executive Order 13132, this rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior policy, we requested information from and coordinated development of this proposal with appropriate resource agencies in New Mexico and Texas (i.e., during the prior 90-day finding comment period and on an annual basis with the New Mexico Department of Game and Fish). We will continue to coordinate any future listing decisions or designation of critical habitat for the three springsnails and the amphipod with the appropriate Federal, State, and local agencies. Designation of critical habitat only affects activities conducted, funded, or permitted by Federal agencies; non-Federal activities are not affected by the designation if they lack Federal involvement. In areas occupied by the Roswell springsnail, Koster’s tryonia, Noël’s amphipod, and Pecos assiminea, Federal agencies funding, permitting, or implementing activities will be required, if these species are listed, through consultation with us under section 7 of the Act, to avoid jeopardizing their continued existence. If this critical habitat designation is finalized, Federal agencies also must ensure, also through consultation with us, that their activities do not destroy or adversely modify designated critical habitat.

In unoccupied areas, or areas of uncertain occupancy, designation of critical habitat could trigger additional review of Federal activities under section 7 of the Act, and may result in additional requirements on Federal activities to avoid destroying or adversely modifying critical habitat. Any development that lacked Federal involvement would not be affected by the critical habitat designation. Should a federally funded, permitted, or implemented project be proposed that may affect designated critical habitat, we will work with the Federal action agency and any applicant, through section 7 consultation, to identify ways to implement projects while minimizing or avoiding any adverse effect to the species or critical habitat. In our experience, the vast majority of such projects can be successfully implemented with at most minor changes that avoid significant economic impacts to project proponents.

The designations may have some benefit to these governments in that the areas essential to the conservation of these species are more clearly defined, and the primary constituent elements of the habitat necessary to the survival of these species are specifically identified. While our making this definition and identification does not alter where and what federally sponsored activities may occur, these determinations may assist these local governments in long-range planning (rather than waiting for case-by-case section 7 consultations to occur).

Civil Justice Reform

In accordance with Executive Order 12988, the Office of the Solicitor has determined that this rule would not significantly affect the judicial system and would meet the requirements of sections 3(a) and 3(b)(2) of the Order. We propose to list these four species and designate critical habitat in accordance with the provisions of the 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 springsnails and the amphipod.

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

This rule does not contain any new collections of information that require approval by the Office of Management and Budget (OMB) under 44 U.S.C. 3501 et seq. This rule will not impose new record-keeping or reporting requirements on State or local governments, individuals, businesses, or organizations.

National Environmental Policy Act

It is our position that, outside the Tenth Circuit, we do not need to prepare environmental analyses as defined by the NEPA in connection with designating critical habitat under the Endangered Species Act of 1973, as amended. We published a notice outlining our reasons for this determination in the Federal Register on October 25, 1983 (48 FR 49244). This assertion was upheld in the courts of the Ninth Circuit (Douglas County v. Babbitt, 48 F.3d 1495 (9th Cir. Ore., 1995), cert. denied 116 S. Ct. 698 (1996). However, when the range of the species includes States within the Tenth Circuit, such as that of the springsnails,
pursuant to the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F.3d 1429 (10th Cir. 1996), we will undertake a NEPA analysis for critical habitat designation and notify the public of the availability of the draft environmental assessment for this proposal when it is finished.

**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), E.O. 13175, and the Department of the Interior’s requirement at 512 DM 2, we understand that recognized Federal Tribes must be related to on a Government-to-Government basis. We recognize that certain Federal Tribes have confirmed a relationship with the New Mexico Ecological Services Field Office (see ADDRESSES section) (telephone 505/346-2525).

**References Cited**

A complete list of all references cited in this rulemaking is available upon request from the New Mexico Ecological Services Field Office (see ADDRESSES section).

**Author**

The primary authors of this proposed rule are the New Mexico Ecological Services Field Office staff (see ADDRESSES section).

**List of Subjects in 50 CFR Part 17**

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

**Proposed Regulation Promulgation**

Accordingly, we propose to 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:


2. Amend §17.11(h) as follows:

   a. Add Koster’s tryonia snail, Pecos assiminea snail, and Roswell springsnail in alphabetical order under “SNAILS”;

   b. Add Noel’s amphipod under “CRUSTACEANS”, to the List of Endangered and Threatened Wildlife to read as follows:

   **§ 17.11 Endangered and threatened wildlife.**

   * * * * *

   (h) * *

<table>
<thead>
<tr>
<th>Species</th>
<th>Historic range</th>
<th>Vertebrate population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
</tr>
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<tr>
<td>SNAILS</td>
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<tr>
<td>Snail, Koster’s tryonia</td>
<td>Tryonia kosteri</td>
<td>U.S.A. (NM)</td>
<td>NA</td>
<td>E</td>
<td>17.95(f)</td>
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<td>Snail, Pecos assiminea.</td>
<td>Assiminea pecos</td>
<td>U.S.A. (NM, TX), Mexico.</td>
<td>NA</td>
<td>E</td>
<td>17.95(f)</td>
<td>NA</td>
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<td>Springsnail, Roswell ...</td>
<td>Pyrgulopsis (=Fontelicella) roswellensis.</td>
<td>U.S.A. (NM)</td>
<td>NA</td>
<td>E</td>
<td>17.95(f)</td>
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<tr>
<td>Amphipod, Noel’s ...</td>
<td>Gammarus desperatus</td>
<td>U.S.A. (NM)</td>
<td>NA</td>
<td>E</td>
<td>17.95(h)</td>
<td>NA</td>
</tr>
</tbody>
</table>

3. Amend §17.95 as follows:

   a. In paragraph (f), add critical habitat for Koster’s tryonia, Pecos assiminea, and Roswell springsnail; and

   b. In paragraph (h), add critical habitat for Noel’s amphipod, in the same alphabetical order as these species occur in §17.11(h).

**§ 17.95 Critical habitat—fish and wildlife.**

<table>
<thead>
<tr>
<th>Species</th>
<th>Historic range</th>
<th>Vertebrate population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
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<tr>
<td>(f) Clams and snails.</td>
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<td>Koster’s tryonia (Tryonia kosteri)</td>
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<tr>
<td>1. Critical habitat is depicted for Koster’s tryonia in Chaves County, NM, at the Bitter Lake National Wildlife Refuge and Sago Springs, Bitter Creek, the adjacent gypsum sinkholes, portions of impoundments 3, 5, 6, 7, 15, and Hunter Marsh, on the map and as described below. The described proposed designation includes all springs, seeps, sinkholes, and outflows surrounding Bitter Creek, Refuge impoundments, and the Sago Springs complex. Legal description: USGS 7.5 minute quad-Bitter Lake, N.Mex., T10S, R25E, NW1⁄4 NE1⁄4, SE1⁄4 NE1⁄4, E1⁄2 SE1⁄4 Section 9; E1⁄2 NE1⁄4, SW1⁄4 NE1⁄4, W1⁄2 SE1⁄4 Section 16; E1⁄2 NW1⁄4, SW1⁄4 NW1⁄4, NW1⁄4 NE1⁄4, NW1⁄4 NW1⁄4, NW1⁄2 NW1⁄4, NW1⁄2 SW1⁄4 Section 21; N1⁄2 SE1⁄4 Section 20; E1⁄2 NE1⁄4, NE1⁄4 NE1⁄4 Section 29; NW1⁄4 SW1⁄4, T9S, R25E, SE1⁄4 NE1⁄4, SE1⁄4,</td>
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</table>
General locations of proposed critical habitat designations for Roswell springsnail, Koster's tryonia, Pecos assiminea, and Noel's amphipod

Sago Spring and Impoundment Complexes

Legend

- Critical Habitat Areas

Bitterlake National Wildlife Refuge Boundary

- Highway

- Railroad

- River

- Water Body

General Location Area

New Mexico
2. Within these areas, the primary constituent elements include permanent, flowing, unpolluted fresh to moderately saline water; slow to moderate velocities of water over substrates (a surface on which a plant or animal grows or is attached) ranging from deep organic silts to limestone cobble and gypsum substrates; presence of algae, submersent vegetation, and detritus in the substrata; water temperatures in the approximate range of 10–20 degrees Centigrade (50–68 degrees Fahrenheit) with natural diurnal and seasonal variation slightly above and below that range.

Pecos assiminea (Assiminea pecos)

1. A portion of the critical habitat for the Pecos assiminea is located in paragraph (f) of this section within the text for the Koster’s tryonia. These species occur together, and critical habitat and the primary constituent elements are identical for these snails. In addition, critical habitat is depicted for the Pecos assiminea in Pecos County, TX, at the Diamond Y Springs complex. The proposed designation includes the Diamond Y Spring, which is located at UTM 13–698261 E, 3431372 N and approximately 6.8 km (4.2 mi) of its outflow ending at approximately UTM 13–701832 E, 3436112 N, about 0.8 km (0.5 mi) downstream of the State Highway 18 bridge crossing. Also included is approximately 0.8 km (0.5 mi) of Leon Creek upstream of the confluence with Diamond Y Draw. All surrounding riparian vegetation and mesic soil environments within the spring, outflow and portion of Leon Creek are also proposed for designation as these areas are considered habitat for the Pecos assiminea. Critical habitat is also depicted for the Pecos assiminea in Reeves County, TX, at the East Sandia Spring complex. East Sandia Spring is located at UTM 13–698266 E, 3431347 N. The proposed designation includes the springhead itself, surrounding seeps and all submersent vegetation and moist soil habitat found at the margins of these areas. These areas are considered habitat for the Pecos assiminea.
General location of proposed critical habitat designation for Pecos assiminea

Diamond Y Draw Complex

Legend
- Critical Habitat Area
- Road Classification:
  - Limited Access
  - Highways
  - Secondary Roads
  - Railroads
  - Rivers

General Area

[Map showing the location of Diamond Y Draw Complex with surrounding areas]
2. The primary constituent elements of critical habitat for Pecos assiminea are found in paragraph (f) of this section within the text for Koster's tryonia. In addition, Pecos assiminea requires moist soil at stream or for Koster's tryonia. In addition, Pecos
spring run margins with hydrophytic 
vegetation such as salt grass or sedges.
Roswell springsnail (Pyrgulopsis
roswellensis)

The critical habitat map and description 
for the Roswell springsnail is located in 
paragraph (f) of this section within the text 
for the Koster’s tryonia. These species occur 
together and critical habitat and the primary 
constituent elements are identical for these 
nails.

(h) Crustaceans.

Noel’s amphipod (Gammarus desperatus)

The critical habitat map and description, 
including the primary constituent elements, 
for the Noel’s amphipod is located in 
paragraph (f) of this section, within the text 
for the Koster’s tryonia. These species occur 
together, and critical habitat and the primary 
constituent elements are identical for this 
nail and the Noel’s amphipod.


Joseph E. Doddridge,
Acting Assistant Secretary for Fish and 
Wildlife and Parks.

[FR Doc. 02–3140 Filed 2–11–02; 8:45 am]