

**Areas of Regulatory Concern**

In calling on agencies to cut obsolete regulations, the President directs each agency to consider the following issues in its review of the regulations:

- Is this regulation obsolete?
- Could its intended goal be achieved in more efficient, less intrusive ways?
- Are there better private sector alternatives, such as market mechanisms, that can better achieve the public good envisioned by the regulation?
- Could private business, setting its own standards and being subject to public accountability, do the job as well?
- Could the States or local governments do the job, making Federal regulation unnecessary?

RSPA suggests that persons commenting on the pipeline safety program consider these issues.

The President's call for regulatory reform provides opportunities for eliminating or improving pipeline safety regulations. RSPA is undertaking a page-by-page review of the Pipeline Safety Regulations and is identifying certain sections of the regulations that are candidates for elimination, revision, clarification or relaxation.

**Improvements to Customer Service**

RSPA is soliciting comments on the kind and quality of services its customers want and their level of satisfaction with the services currently provided by the pipeline safety program. RSPA will use the comments to establish service standards and measure results against them; provide customers with choices in both the sources of service and the means of delivery; make information, services, and complaint systems easily accessible; and provide the means to address customer complaints. RSPA's current customer services include providing guidance in understanding and complying with the Pipeline Safety Regulations and processing exemptions, approvals, registrations, grant applications, and enforcement actions. Other customer services include conduct of pipeline safety seminars, and the development and dissemination of training and informational materials.

Issued in Washington, DC on March 31, 1995.

**Cesar De Leon,**

*Acting Associate Administrator for Pipeline Safety.*

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**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17****RIN 1018-AD 22****Endangered and Threatened Wildlife and Plants; Proposed Determination of Critical Habitat for Woundfin, Virgin River Chub, and Virgin Spinedace and Notice of Public Hearing**

**AGENCY:** U.S. Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule and notice of public hearing.

**SUMMARY:** The Fish and Wildlife Service (Service) proposes to designate critical habitat for the Virgin River chub (*Gila seminuda* = *G. robusta seminuda*), the Virgin spinedace (*Lepidomeda mollispinis* *mollispinis*), and the woundfin (*Plagopterus argentissimus*). The Virgin River chub and woundfin are listed as endangered; the Virgin spinedace has been proposed for listing as threatened (May 18, 1994), but the listing has not been finalized as yet. There is considerable overlap in critical habitat proposed for the three species, the proposed designation includes 330.8 km (206.8 mi) of the Virgin River and its tributaries in portions of Utah, Arizona, and Nevada. The Service proposes 151.7 km (94.8 mi) of critical habitat for the woundfin (approximately 13.5 percent of its historical range); 151.7 km (94.8 mi) for the Virgin River chub (70.8 percent of its historical range, excluding the chub occupying the Muddy River); and 201.9 km (126.2 mi) for the Virgin spinedace (87.3 percent of its historical range). The majority of the land to be designated as critical habitat is under Federal or private ownership.

All three fish species are endemic to the Virgin River Basin of southwestern Utah, northwestern Arizona, and southeastern Nevada. The proposed critical habitat designation includes portions of the mainstem Virgin River and its tributaries, including the 100-year floodplain. This proposed critical habitat would result in additional review requirements under section 7 of the Act with regard to Federal agency actions. Section 4 of the Act requires the Service to consider economic costs and benefits prior to making a final decision on the size and scope of critical habitat.

**DATES:** Comments will be accepted until June 5, 1995.

A public hearing will be held from 5 p.m. to 9 p.m., with registration beginning at 4:30 p.m., on Monday, May 8, 1995. Requests for additional public

hearings must be received by May 22, 1995.

**ADDRESSES:** Requests for additional public hearings or comments and materials concerning this proposal should be sent to the Field Supervisor, U.S. Fish and Wildlife Service, Salt Lake City Field Office, 145 East 1300 South, Suite 404, Salt Lake City, Utah 84115. The public hearing will be in the Garden Room at the St. George Hilton Inn, 1450 South Hilton Drive, St. George, Utah. Comments and materials received will be available for public inspection, by appointment, during normal business hours at the above address. Copies of comments and materials received also will be available for public inspection at the Washington County Public Library in St. George, Utah.

**FOR FURTHER INFORMATION CONTACT:** Mr. Robert D. Williams, Assistant Field Supervisor, Salt Lake City Field Office, at the above address, (801) 524-5001.

**SUPPLEMENTARY INFORMATION:****Background**

The woundfin (*Plagopterus argentissimus*) and Virgin River chub (*Gila seminuda* = *G. robusta seminuda*) are presently listed as endangered pursuant to the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The Virgin spinedace (*Lepidomeda mollispinis* *mollispinis*) was proposed for listing on May 18, 1994, as threatened under the Act. In the subsequent text, all three species of fish are referred to as "listed fishes" even though the Virgin spinedace has only been proposed for listing at this time. These three fishes are all endemic to the Virgin River Basin. The Virgin River flows generally along the Hurricane Fault, which forms the boundary between the Colorado Plateau and the Great Basin. These two geologic provinces are quite dissimilar. The Colorado Plateau is characterized by horizontal-lying strata eroded into canyons, plateaus, and mesas. Long, isolated mountain ranges separated by broad alluvial valleys typify the Great Basin province. The Virgin River originates in south-central Utah, running in a southwest direction from Utah to northwestern Arizona, and southeastern Nevada for approximately 320 kilometers (km) (200 miles (mi)) before emptying into Lake Mead. Prior to the completion of Boulder (Hoover) Dam in 1935, the Muddy River in southeastern Nevada joined the Virgin River before the latter emptied into the Colorado River. These two rivers now flow separately into the Overton Arm of Lake Mead.

These Virgin River fishes have declined in numbers due to the cumulative effects of environmental impacts which include dewatering from numerous diversion projects; proliferation of nonnative fishes; and alterations to natural flow, temperature, and sediment regimes.

#### Woundfin

Based on early records, the original range of the woundfin extended from near the junction of the Salt and Verde Rivers at Tempe, Arizona, to the mouth of the Gila River at Yuma, Arizona (Gilbert and Scofield 1898, Minckley 1973). Woundfin were also found in the mainstem Colorado River from Yuma (Jordan and Evermann 1896, Meek 1904, Follett 1961) upstream to the Virgin River in Nevada, Arizona, and Utah and into La Verkin Creek, a tributary of the Virgin River in Utah (Gilbert and Scofield 1898, Snyder 1915, Miller and Hubbs 1960, Cross 1975). However, there is reason to believe that the woundfin occurred further upstream in the Verde, Salt, and Gila Rivers in Arizona.

Except for the mainstem of the Virgin River, woundfin were extirpated from most of their historical range. Woundfin presently range from Pah Tempe Springs (also called La Verkin Springs) on the mainstem of the Virgin River and the lower portion of La Verkin Creek in Utah, downstream to Lake Mead. A single specimen was taken from the middle Muddy (Moapa) River, Clark County, Nevada, in the late 1960's and since that time no additional specimens have been collected (Deacon and Bradley 1972).

Adult and juvenile woundfin inhabit runs and quiet waters adjacent to riffles with sand and sand/gravel substrates. Adults are generally found in habitats with water depths between 0.15 and 0.43 meters (m) (0.5 and 1.4 feet (ft)) with velocities between 0.24 and 0.49 meters per second (m/s) (0.8 and 1.6 feet per second ft/s). Juveniles select areas with slower and deeper water, while fry are found in backwaters and stream margins which are often associated with growths of filamentous algae. Spawning takes place during the period of declining spring flows.

#### Virgin River Chub

The Virgin River chub was described as a full species (*Gila seminuda*) in 1875 (Cope and Yarrow 1875) and it was thought to be restricted to the Virgin River between Hurricane, Utah, and its confluence with the Colorado River. However, Ellis (1914) considered this chub to be an intermediate between the roundtail chub (*G. robusta*) and bonytail

chub (*G. elegans*), and reduced it to a subspecies (*G. robusta seminuda*) of the roundtail chub.

Until recently, the Fish and Wildlife Service (Service) and other authorities (Holden and Stalnaker 1970, Minckley 1973, Smith et al. 1977) have treated the chub in the Muddy River as a separate, unnamed subspecies of roundtail chub (Moapa roundtail chub = *G. robusta* ssp.). Since 1982, the Service has considered this chub to be a Category 2 candidate species (47 FR 58455, 54 FR 556, 56 FR 58804).

In a recent taxonomic study of the genus *Gila*, DeMarais et al. (1992) asserted that full species status (*G. seminuda*) was warranted for the Virgin River chub. The Muddy River form is included in *G. seminuda*, although it is a separate population. *Gila seminuda* most likely arose through hybridization involving *G. robusta* and *G. elegans*. These taxonomic revisions were recently accepted by the Service, American Fisheries Society, and the American Society of Ichthyologists and Herpetologists Fish Names Committee (Mr. Joseph S. Nelson, American Fish Society, *in litt.* 1993). This proposal to designate critical habitat does not include the Muddy River form of the Virgin River chub. However, the Service will review the status of the Muddy River population of the Virgin River chub.

The Virgin River chub was first collected in the 1870's from the Virgin River near Washington, Utah. Historically, it was collected from the mainstem Virgin River from Pah Tempe Springs, Utah, downstream to the confluence with the Colorado River in Nevada (Cope and Yarrow 1875, Cross 1975). Presently, the Virgin River chub occurs within the mainstem Virgin River from Pah Tempe Springs downstream to at least the Mesquite Diversion.

Adult and juvenile Virgin River chub select deep runs or pools with slow to moderate velocities containing boulders or other instream cover over a sand substrate. Generally, larger fish occupy deeper habitats; however, there is no apparent correlation with velocity. Chub are generally found in velocities ranging up to 0.76 m/s (2.5 ft/s).

#### Virgin Spinedace

The historical distribution of the Virgin spinedace is not well known. Holden (1977) speculated that the species occurred in most of the clear water tributaries and in several mainstem reaches of the Virgin River in southwestern Utah, northwestern Arizona, and southeastern Nevada. Museum records and species survey

information support this historic distribution (Rinne 1971, Cross 1975, Valdez et al. 1991, Addley and Hardy 1993).

Over the last 50 years, there has been a decline in the range of the species with about a 37–40 percent (83 km, 52 mi) habitat loss due to human impacts (Valdez et al. 1991, Addley and Hardy 1993). Stream reaches that once contained spinedace (but are now dewatered) include portions of the East Fork of Beaver Dam Wash, the Santa Clara River downstream Gunlock Reservoir, Mogatsu Creek, Ash Creek near Toquerville, Leeds Creek, and the mainstem Virgin River between Quail Creek Diversion and Pah Tempe Springs. Current distribution of the spinedace includes portions of the mainstem Virgin River and 11 of its tributaries and subtributaries including the East Fork Virgin River, Shunes Creek, North Fork Virgin River, North Creek, La Verkin Creek, Ash Creek, Santa Clara River, Beaver Dam Wash, Coal Pits Wash, Moody Wash, and Mogatsu Creek.

Virgin spinedace are found in runs or pools in clear streams. The presence of cover either in the form of vegetation, boulders, debris, or undercut banks is also characteristic. Substrates in occupied habitats include rubble/cobble, gravel, sand, and silt. Spinedace are found in streams at depths of 0.1 to 0.9 m (0.3 to 2.9 ft) and with current velocities between 0.1 and 1.0 m/s (0.3 to 3.2 ft/s).

#### Importance of the Virgin River Floodplain

Components of the river system include the mainstem channel in which water is maintained most or all of the year and the upland habitats which are inundated during spring flows. These seasonally flooded habitats contribute to the biological productivity of the river system by providing nutrients (allochthonous energy) and terrestrial food sources to aquatic organisms (Hesse and Sheets 1993). Additionally, Hynes (1970) reported that streams with higher percentages of vegetation contained higher densities of aquatic invertebrates. The Virgin River contains little aquatic vegetation and produces a minimum of autochthonous (indigenous) organic matter. Thus, the fauna of the Virgin River is dependent on allochthonous energy inputs from the floodplain that provide much of the food base.

Studies of the major floodplain rivers of the world have documented the value of flooded bottomlands and uplands for fish production (Welcomme 1979). Due to their mobility, many species of fishes

are able to take advantage of food sources from flooded lands. Indeed, many fishes have developed migratory strategies that allow them to utilize inundated areas as spawning, nursery, and foraging areas (Lowe-McConnel 1975, Welcomme 1979). In this context, a rich food source of terrestrial origin may enhance fish growth, fecundity, and/or survival. Use of these inundated floodplains increases the energy available for spawning and is necessary for reproductive success in some species (Finger and Stewart 1987). In many cyprinid fishes, including these Virgin River natives, spawning is associated with seasonal rains and flooding of rivers. Flood-related changes in the river environment not only induce spawning for many species, but these changes comprise the ultimate factors limiting the survival of eggs, larvae, or young fish (Hontela and Stacey 1990).

Loss of floodplain habitats in the Missouri River Basin has reduced fish biomass production as much as 98 percent (Karr and Schlosser 1978). Inundation of floodplain habitats during spring flows also provides areas with warmer water temperatures, low velocity resting habitat, and cover from predation. Recent studies in the Colorado River system show that the life histories and welfare of native riverine fishes are linked to the maintenance of a natural or historic flow regimen (i.e., hydrological pattern of high spring and low autumn-winter flows that vary in magnitude and duration depending on annual precipitation patterns and runoff from snowmelt) (Tyus and Karp 1989, 1990). Minckley and Meffe (1987) suggest that loss of flooding will result in extirpation of many of the native fish species in the Colorado River system.

#### Previous Federal Actions

The woundfin was listed as endangered on October 13, 1970 (35 FR 16047), and critical habitat was proposed on November 2, 1997 (42 FR 57329). However, on March 6, 1979, the proposal for critical habitat was withdrawn (44 FR 12382) due to the 1978 amendments to the Act, which required proposals to be withdrawn if not finalized within 2 years. A Woundfin Recovery Plan was originally approved in July 1979 and subsequently revised on March 1, 1984. On July 24, 1985, the Service proposed the reintroduction of the woundfin into the Gila River drainage in Arizona and determined this population to be "nonessential experimental" in accordance with section 10(j) of the Act (50 FR 30188).

On August 23, 1978, the Service proposed the listing as endangered and

the designation of critical habitat for the Virgin River chub (43 FR 37668). This proposal was also withdrawn (45 FR 64853; September 30, 1980), due to the 1978 amendments to the Act. The Virgin River chub was later listed as endangered on August 24, 1989 (54 FR 35305). Critical habitat was proposed on June 24, 1988 (51 FR 22849); however, the final determination was postponed. When the Virgin River chub was listed, the Muddy River form was omitted due to the uncertainty of its taxonomy. The Virgin River Fishes Recovery Plan, which is under final preparation, includes the woundfin and Virgin River chub (but not the Muddy River form).

The Virgin spinedace was proposed for listing as a threatened species on May 18, 1994 (59 FR 25875). A proposal to designate critical habitat for the spinedace was delayed because the Service felt that the three fish species would receive greater protection if critical habitat was designated simultaneously.

On March 18, 1994, the U.S. District Court, Colorado (Court) ordered the Service to designate critical habitat for the Virgin River chub, woundfin, and Virgin spinedace (if listed before December 31, 1994). The Court ordered that critical habitat be proposed no later than April 1, 1995, and be finalized by December 1, 1995.

Although the listing of the Virgin spinedace has not been finalized, the designation of critical habitat is being proposed for it, in order to allow for public comment on all three species. The final rule for critical habitat designation will also reflect the listed status of the Virgin spinedace as of that date.

#### Definition of Critical Habitat

Critical habitat is defined in section 3 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. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

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, the Secretary of the Interior (Secretary) designate critical habitat at the time the species is determined to be endangered or threatened. Critical habitat is now proposed for the woundfin, Virgin River chub, and Virgin spinedace.

#### Role of Critical Habitat in Species Conservation

The designation of critical habitat is one of several measures available to assist in the conservation and recovery of a species. Critical habitat helps focus conservation activities by identifying areas that contain essential habitat features (primary constituent elements) regardless of whether or not the areas are currently occupied by the listed species. Such designations alert Federal agencies, States, the public, and other organizations to the areas' importance to the conservation and recovery of the species. Critical habitat also identifies areas that may require special management or protection considerations. Areas designated as critical habitat receive protection under section 7 of the Act. This is in regards to actions carried out, funded, or authorized by a Federal agency that are likely to adversely modify or destroy critical habitat. Section 7 requires that Federal agencies consult with the Service on actions that may destroy or adversely modify critical habitat.

Designation of critical habitat only affects Federal actions that occur in the areas and does not automatically prohibit certain actions or create a management plan for a listed species. Such designation does not have a direct effect on habitat not specified as critical habitat. Critical habitat designation may increase protection of designated areas and assists in the recovery of species. Areas outside of critical habitat, containing one or more of the primary constituent elements, serve to maintain ecosystem integrity, thereby indirectly contributing to recovery.

#### Relationship of Critical Habitat to Recovery Plan

Recovery plans, developed in accordance with section 4(f) of the Act, address the steps needed to recover a species throughout its range and provide guidance, that may include population goals and identification of areas in need of protection or special management. In developing a recovery plan, the relationships between critical habitat and other current planning efforts should be evaluated. Recovery plans should recommend actions for managing designated critical habitat on Federal lands, as well as critical habitat under other landownership.

### Primary Constituent Elements

In determining areas for designation as critical habitat, the Service considers those physical and biological features that are essential for the conservation of the species. Such physical and biological features (in 50 CFR 424.12) include, but are not limited to, the following items:

- (1) Space for individual and population growth, and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally
- (5) Habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of a species.

In addition, the Act stipulates that areas containing these elements may require special management considerations or protection.

In determining critical habitat for the Virgin River fishes, the Service focused on the primary physical and biological elements essential to the conservation of each species. The Service is required to list these elements together with a description of the designated critical habitat.

The primary constituent elements determined necessary for the survival and recovery of these Virgin River fishes include, but are not limited to:

Water—A quantity of water of sufficient quality (i.e., temperature, dissolved oxygen, contaminants, nutrients, turbidity, etc.) that is delivered to a specific location in accordance with a hydrologic regime

that is identified for the particular life stage for each species.

**Physical Habitat**—Areas of the Virgin River Basin that are inhabited or potentially habitable by fish for use in spawning, nursing, feeding, and rearing, or corridors between such areas. In addition to river channels, these areas also include side channels, secondary channels, backwaters, springs, and other areas which provide spawning, nursery, feeding, or rearing habitats, or access to these habitats.

**Biological Environment**—Food supply, predation, and competition are important elements of the biological environment and are considered components of this constituent element. Food supply is a function of nutrient supply, productivity, and availability to each life stage of the species. Predation and competition, although considered normal components of this environment, may be out of balance due to nonnative fish species in many areas.

Habitat requirements for the listed fishes vary. In designating an area as critical habitat for more than one of the species, the Service assessed the area for all applicable constituent elements. Specific information on primary constituent elements for each of these fish species is given in the following section.

### Proposed Critical Habitat Designation

**Woundfin**—The proposed designation of critical habitat for the woundfin is the mainstem Virgin River, extending from the confluence of Ash-La Verkin Creeks to above Lake Mead. The Virgin River was divided into five distinct reaches (due to its current functions hydrologically) and these reaches total 151.7 km (94.8 mi) as measures along

the center line of each reach (Table 1). This represents approximately 13.5 percent of the woundfin's historical habitat. Due to the lack of historical data on the distribution of the woundfin in Arizona, this number is only an estimate. These proposed reaches flow through both public and private lands (Table 2).

**Virgin River Chub**—The proposed designation of critical habitat for the Virgin River chub is the mainstem Virgin River, extending from the confluence of Ash-La Verkin Creeks to above Lake Mead. Due to the hydrological current functions of the Virgin River, it was divided into five distinct reaches (Table 1) and these reaches total 151.7 km (94.8 mi). This represents approximately 70.8 percent of the historical habitat within the Virgin River Basin, excluding the range historically occupied by the Muddy River chub population. These reaches flow through both public and private land (Table 2).

**Virgin Spinedace**—The Service proposes 16 reaches within the Virgin River Basin as critical habitat for the Virgin spinedace (Table 1) and these reaches total 201.9 km (126.2 mi). This represents approximately 87.7 percent of the historical habitat for this species (230.2 km or 143.9 mi) (Valdez et al. 1991). Critical habitat is being proposed for the mainstem Virgin River, the East and North Forks of the Virgin River, Beaver Dam Wash, Shunes Creek, Moody Wash, Mogatsu Creek, the Santa Clara River, Ash Creek, La Verkin Creek, and North Creek. These reaches flow through both public and private lands (Table 2).

TABLE 1.—PROPOSED CRITICAL HABITAT IN KILOMETERS (MILES) FOR VIRGIN RIVER LISTED FISHES

State	Woundfin	Virgin River Chub	Virgin Spinedace	State Totals <sup>a</sup>
Arizona .....	50.6 (31.6)	50.6 (31.6)	1.3 (0.8)	51.9 (32.4)
Nevada .....	41.5 (25.9)	41.5 (25.9)	.....	41.5 (25.9)
Utah .....	59.6 (37.3)	59.6 (37.3)	200.6 (125.4)	237.4 (148.4)
Total .....	151.7 (94.8)	151.7 (94.8)	201.9 (126.2)	330.8 (206.8)

<sup>a</sup> State totals do not equal the cumulative totals of the three species due to considerable overlap of proposed critical habitat among species.

TABLE 2.—SHORELINE OWNERSHIP IN KILOMETERS (MILES) OF PROPOSED CRITICAL HABITAT FOR VIRGIN RIVER LISTED FISHES<sup>a</sup>

Ownership	Woundfin	Virgin River Chub	Virgin Spinedace
Federal <sup>b</sup> .....	85.2 (53.3)	85.2 (53.3)	76.8 (48.0)
State .....	7.5 (4.8)	7.5 (4.8)	2.8 (1.8)
Tribal .....	.....	.....	9.7 (6.1)
Private .....	59.0 (36.8)	59.0 (36.8)	112.6 (70.4)

TABLE 2.—SHORELINE OWNERSHIP IN KILOMETERS (MILES) OF PROPOSED CRITICAL HABITAT FOR VIRGIN RIVER LISTED FISHES <sup>a</sup>—Continued

Ownership	Woundfin	Virgin River Chub	Virgin Spinedace
Total .....	151.7 (94.8)	151.7 (94.8)	201.9 (126.2)

<sup>a</sup> Landownership was typically the same on both riverbanks. However, in several reaches (1.5 km or less) the river formed a boundary between Federal and private lands. Based upon the location of the channel, these reaches were identified as either Federal or private, not both. Therefore, distances may be doubled to represent ownership along both riverbanks.

<sup>b</sup> Federal lands include those managed by the Bureau of Land Management, Forest Service, and National Park Service.

### **Virgin River Floodplain**

The riparian zone within the 100-year floodplain of the Virgin River reaches is being proposed as critical habitat, but only those portions of the 100-year floodplain that contain constituent elements are being designated for critical habitat. Developed lands not considered critical habitat within the 100-year floodplain boundary include, but are not limited to, existing paved roads, bridges, parking lots, dikes, levees, railroad tracks, railroad trestles, water diversion canals outside of natural stream channels, active gravel pits, cultivated agricultural land, and residential, commercial, and industrial developments. These developed areas do not contain primary constituent elements and will not contribute to the species' recovery.

### **Effects of Critical Habitat Designation**

Section 7(a)(2) of the Act requires that activities Federal agencies authorize, fund, or carry out do not destroy or adversely modify designated critical habitat. This is in addition to the requirement of section 7(a)(2) that Federal agencies insure that their actions do not jeopardize the continued existence of a listed species. A Federal agency must consult with the Service if a proposed action of theirs affects a listed species or its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified in 50 CFR part 402.

Once critical habitat is designated, section 7(a)(4) of the Act and implementing regulations (50 CFR 402.10) require that Federal agencies confer with the Service on any action which will destroy or adversely modify the designated areas. Conference reports provide advisory conservation recommendations to assist a Federal agency in identifying and resolving conflicts that may be caused by the proposed action.

If a Federal agency requests consultation under section 7 of the Act, and the Service concurs, a formal conference report may then be issued. Formal conference reports on proposed critical habitat contain an opinion prepared in accordance with formal

consultation procedures as if the critical habitat were already designated. Such a formal conference report is adopted as the biological opinion pursuant to 50 CFR 402.10(d) when the critical habitat is designated, provided no significant information or changes in the action occur that would alter the content of the opinion.

Designation of critical habitat focuses on the primary constituent elements within the defined reaches and their contribution to the species recovery, and includes consideration of the species' biological needs and factors that will contribute to its recovery (i.e., distribution, numbers, reproduction, and viability). In evaluating Federal actions, the Service will consider the action's impact on factors used to determine critical habitat of the Virgin River listed fishes. These factors include the primary constituent elements of water, physical habitat, and biological environment. The ability of an area to provide these constituent elements into the future and the reaches' capability to contribute to the recovery of the species will also be considered. The potential level of allowable impacts or habitat reduction in critical habitat reaches will be determined on a case-by-case basis during section 7 consultation.

For species with multiple critical habitat reaches, each reach has local and rangewide roles in contributing to the conservation of the species. The loss of a single reach may not jeopardize the continued existence of the species, but it could significantly reduce the critical habitat's contribution to recovery of a species. In some cases, the destruction of a reach proposed as critical habitat could result in the loss of an entire population, thereby precluding any recovery and reducing the likelihood of survival of the species. The proposed critical habitat reaches in the Virgin River Fishes Recovery Plan include areas important for recovery of these fishes.

### **Examples of Proposed Actions**

Section 4(b)(8) requires for any proposed or final regulation; designation of critical habitat, a brief description and evaluation of those

activities that may adversely modify or destroy such habitat or those activities that may be affected by such designation. Destruction or adverse modification of critical habitat is defined as a direct or indirect alteration that appreciably diminishes the value of critical habitat for the survival and recovery of a listed species. Some activities disturb or remove the primary constituent elements within designated critical habitat for the Virgin River fishes. These activities include actions that reduce the volume and timing of water flows, destroy or eliminate access to spawning and nursery habitat, prevent recruitment, impact food sources, contaminate the river, or increase predation and competition by nonnative fishes. In contrast, other activities such as recreation (i.e., boating, hiking, hunting, etc.), some types of farming and ranching, may not adversely modify critical habitat.

Areas designated as critical habitat for the Virgin River listed fishes support a number of proposed and existing commercial and noncommercial activities. Some activities that will affect critical habitat include construction and operation of hydroelectric facilities, irrigation, flood control, bank stabilization, oil and gas drilling, mining, grazing, stocking or introduction of nonnative fishes, municipal water supplies, and resort facilities. Federal activities include the Sandstone Reservoir, Pah Tempe Pipeline, Halfway Wash Project, Lake Powell Pipeline, water wheeling, water leasing, Washington Fields Pumpback, and dewatering of springs for municipal and industrial purposes. Commercial activities that will not destroy or adversely modify critical habitat include river float trips and guided sport fishing. Noncommercial activities such as boating, fishing, and various activities associated with nature appreciation are largely associated with private recreation and most likely will not affect critical habitat. Section 7 of the Act only applies to Federal actions (i.e., projects, permits, loans, etc.) and each Federal action must be evaluated on a case-by-case basis.

## Consideration of Economic and Other Factors

Section 4(b)(2) of the Act considers economic and other relevant impacts in determining whether to exclude any proposed areas from the final designation of critical habitat. The Service may exclude areas from critical habitat designation when the costs or impacts outweigh the benefits, provided that exclusion will not result in extinction of a species. An economic analysis was conducted on the costs of the proposed critical habitat designation (Brookshire et al. 1995). The study area for the economic analysis encompassed portions of the Virgin River Basin in Utah, Arizona, and Nevada.

The biological requirements for the recovery of these listed fishes and regional economic activities were assessed and form the basis of the economic analysis. The biological requirements include adjustments in water diversions in the Virgin River Basin and/or mitigation of nonflow-related activities within the 100-year floodplain. The effects of recovery efforts on future water depletions in the basin also were taken into consideration. The impacts of these possible changes on current and prospective economic activities were estimated using input-output models for each county and region in the Virgin River Basin. Direct and indirect impacts on employment, wages, and State and Federal revenues derived from business and personal income taxes were also factored into the exclusion process. The results of these models are found in the economic analysis document prepared for determining critical habitat for these particular fish species (Brookshire et al. 1995). This complete economic analysis is part of the administrative record which is available to the public upon request.

## Economic Analysis Methodology

The economic analysis provides insights into the reallocation of resources from the perspectives of both economic efficiency and distribution or equity. The efficiency criterion determines whether designating areas as critical habitat produces any net gains to society. The equity criterion looks at the resulting distribution of gains and losses. The study region for which the economic analysis was conducted includes Washington and Iron Counties in Utah, Clark County in Nevada, and the portion of Mohave County in Arizona located north of the Colorado River. The time frame chosen for the study encompasses a 45-year period

(1995 through 2040) projected to recover the listed fishes.

Washington County, Utah, and Clark County, Nevada are two counties that will be directly affected by any actions taken by the Service on behalf of the listed fishes. Presently, these counties are among the fastest growing areas in the United States. From 1980 to 1990, Washington County's population grew by 52 percent, while Clark County's grew by 62.5 percent. The Virgin River also flows through a portion of Mohave County in Arizona. This area has a very small population and a modest economic base. Iron County, Utah, (lies north of Washington County) is a rapidly growing area that is economically closely linked to Washington County. Although the Virgin River does not flow through Iron County, any economic impacts on Washington County would be felt in Iron County as well.

The linkage between the biological requirements for the survival and recovery of the listed fishes and economic activities in the region formed the basis for the economic analysis. As an index of these biological requirements, adjustments made in the operations of the Quail Creek Reservoir and agricultural diversions on the Virgin River were included. The effects of recovery efforts on projected future water development and delivery projects were taken into consideration. The direct effects on the agencies responsible for water development and delivery also were taken into consideration. The direct and indirect impacts of these possible changes on current and prospective economic activities were then estimated for each county and regional economy.

One cannot predict the outcome of future section 7 consultations involving listed fishes in the region. Economic impacts associated with the critical habitat designation depends on the time required for the recovery of the listed fishes. County and regional economic impacts are of interest when considering the effects of critical habitat designations. County economic impacts are the direct and indirect impacts of the critical habitat designations on specific geographic areas. County economic impacts were analyzed using input-output (I-O) models that organize the basic accounting relationships that describe the production section of the economy (Brookshire et al. 1995). The I-O model is based on the assumption that all sectors of the economy are related, and the production of a good or service can be described by a recipe whose ingredients are the outputs from other sectors of the economy. The

primary inputs are labor, capital, and other raw resources. Through its multiplier analysis, the I-O model is capable of generating estimates of the changes in output for economic sectors, changes in employment, and changes in income due to the critical habitat designation. The models report total impacts resulting from interactions among the different sectors of the economy.

Regional economic efficiency impacts refer to the overall net impacts on the regional economy after accounting for the effects of intercounty transfers. The goal of a regional efficiency analysis is to determine whether an action would have an overall positive or negative impact on the regional economy.

A separate I-O model was developed for each county and focused on the direct and indirect impacts generated by the critical habitat designation (Brookshire et al. 1995). In most cases, impacts on a given county generated impacts on neighboring counties. Thus, it was necessary to investigate potential offsetting impacts. As a result, an I-O model was constructed that investigated the impacts for an entire region (all four counties).

Economic activity for the models was estimated using Impact Analysis for Planning (IMPLAN) 1990 data sets that were updated and projected through the year 2040, using data from the Bureau of Economic Analysis of the U.S. Department of Commerce. The IMPLAN data set contains 528 economic sectors that were aggregated to 16 sectors (Brookshire et al. 1995).

The I-O models used in this study are essentially demand-side models. The conventional way to introduce impacts into such models is through a vector of changes in final demands. That is, the impacts reduce the regional demand for the output of the sector that experiences a direct impact. However, this method is not logical for determining effects on the agricultural sector because these effects are generated by converting agricultural sectors to municipal and industrial (M&I) uses. This conversion effectively reduces the quantity of output in the agricultural sectors by restricting the supply of a key input. For this reason, a mixed modeling approach was used, in which the agricultural impacts are represented as a supply-side shock used to generate an exogenous level of output in the agricultural sectors. The direct impacts in the remaining sectors are modeled as more typical changes in final demand.

The study utilized three scenarios to explore the impacts of preserving the listed fishes upon the water needs of the projected human population. Projected

economic activity to the year 2040 in the Virgin River Basin, if no flows and habitat are protected to preserve the listed fishes, is compared to projected economic activity if flows and habitat are preserved for the fish. The baseline scenario represents a "without fish" projection of economic growth that is then compared to two "with fish" projections. All of the scenarios used the same population projection.

The baseline "without fish" scenario (WOFBA) is based upon the water development plans of water districts in the Virgin River Basin: the Washington County Water Conservation District (WCWCD) and the Las Vegas Valley Water District. The "without fish" scenario determines how much water will be needed for municipal and industrial development in order to satisfy the population projections. This scenario accepts the Boyle (1994) water need projections under a limited conservation assumption. Thus, the water needs of the expanding population base are determined by a gallons-per-day-per-capita value, which assumes a level of conservation above the existing consumption observed in the region.

The "with fish" structural scenario (WFST) asks the same questions as in the baseline scenario. The fundamental differences are—(1) Given the water needs associated with preserving the listed fishes, the structural water development projects must be brought on line at an earlier time, and (2) winter flows below Quail Creek Diversion remain at 2.4 cubic meters per second (86 cubic feet per second) rather than 1.4 cubic meters per second (50 cubic feet per second) as in the "without fish" scenario. Generally, the volume of water available from each new project is not directly affected by the actions taken on behalf of the listed fishes. However, the maintenance of the 86 cfs instream flow for the listed fishes results in less available water for municipal use. Therefore, water projects are required to come on line sooner to meet the projected demand. In addition, the agricultural retirement program must begin earlier. In this scenario, the per-capita consumption of water is the same as in the baseline.

The "with fish" conservation scenario (WFCO) addresses the water needs of the growing population and the listed fishes through a combination of conservation and agricultural retirements. Conservation requires that per-capita consumption should fall. This is achieved through water-saving technologies incorporated into new homes and industrial facilities.

All of the scenarios utilize the reallocation of agricultural water to urban and industrial uses and/or to habitat preservation for the listed fishes. Whether habitat is preserved for fish, water must be reallocated as the human population continues to grow. The impacts of critical habitat designation affect the timing of the reallocation of resources, and not the quantity of water that must be reallocated. The "with fish" agricultural scenario produces three sets of direct impacts which are outlined below.

(1) Agriculture—The conversion of use will occur earlier than under the baseline scenario, with the result that agricultural output is projected to decline under the "with fish" scenario. The method of incorporating this impact into the I-O models is to introduce a reduction in the allocation of water to the affected agricultural sectors. This translates directly into a specified reduction in the dollar value of the output of the agriculture sector. This mechanism was used to generate the decline in agricultural output in the baseline (WOFBA) projection. Water was pulled from agriculture to meet the needs of the growing M&I sectors. The growth in the nonagricultural sectors of the economy, reported in the WOFBA projection, is predicated on the conversion of water to M&I uses.

(2) Water Delivery Projects—to meet the baseline growth projection for Washington County, several water delivery projects are under consideration. Supplying instream water for the fishes will require these projects to be built earlier than in the "without fish" baseline. This may result in an increased cost of water delivery. This cost increase is driven by increased user cost of the funds devoted to the projects. The increased cost of each accelerated project is incorporated as an increase in the weighted average cost per acre-foot of water delivered to the users. Thus, a new delivery project could increase in the user's total "water bill." A cost increase for a basic input is incorporated into the I-O models as an equiproportionate reduction in the level of expenditure in each sector of the economy.

(3) Electric Power—WCWCD runs two small hydroelectric power facilities and sells the power to the local grid. As a result of diversions that put water into the Virgin River to meet fish needs, power production may decline. For electricity users in the area, there is no impact as a result of this change because the amount of power produced is small and seasonal and the decline will be made up through load shifting. For the WCWCD, however, the change in the

operation of the river would result in loss of revenue that must be made up through higher revenues from the sale of water. In this model, the impact is treated as a cost increase across all sectors in proportion to their level of economic activity. The motivation for the argument is identical to that presented in the previous section.

To these three direct impacts, the "with fish" conservation scenario adds another class of direct impacts.

(1) Conservation Expenditures—Expenditures for low-water-using appliances, landscaping changes, and other water-saving equipment (i.e., timed sprinklers) in new structures only. These expenditures are modeled as being offset by reductions elsewhere in the construction sector. For example, costs due to the installation of low-water-using appliances are offset through lower expenses elsewhere in the construction budget. To ensure that the analysis errs on the side of overstating the impacts, all conservation-related expenditures are assumed to be made outside the region, and all offsetting reductions in expenditures are assumed to be incurred by local suppliers. Thus, conservation-related expenditures are introduced into the I-O models as a negative impact for the region.

It should be emphasized that the water delivery projects mentioned in these scenarios are necessary in any case to support the water needs of the region's growing population. Actions taken to preserve and restore the listed fish species in the Virgin River will affect only the timing of these projects. They are not the primary reason for why these projects must be built. The same is true for the agricultural conversions that are required to satisfy the region's growing municipal and industrial water needs. Using some Virgin River water to meet the listed fishes' requirements may affect the timing of agricultural retirements. However, it is not the root cause for the retirements nor will it involve condemnation of any agricultural lands. Agricultural conversions will continue to be voluntary market transactions.

Actions taken on behalf of the listed fishes result in two types of direct impacts to the affected economies. The instream flows for the fishes require that the conversion of agricultural water to M&I uses take place earlier than without the fish consideration. It is important to note that actions taken on behalf of the fishes affect only the timing of this conversion.

Setting aside instream flows for the listed fishes requires the timing of some planned water delivery projects to be

altered. Actions taken on behalf of the fishes affect only the timing of water delivery projects that are required to support the growing human population.

### Results of the Economic Analysis

The Virgin River Basin has an economy that is service-oriented, thus reflecting the popularity of the region as a retirement and recreation area. Employment, earnings, and tax revenues are reported for each of the sectors analyzed in the I-O models, as well as

for the regional economy. The three scenarios investigated in this study are based on the assumption of sustained regional population growth rates during the 45-year study period, even though a decline is expected as desirable building sites become scarce. The growing population's water needs will be met by constructing a series of dams to increase the region's water supply for municipal and industrial uses. This will also improve water quality in the Virgin River. In addition, retirement of

agricultural land is expected when water and agricultural land are used for other purposes.

The Act requires that the economic effects of designating critical habitat be computed separately from the total economic effects of listing and critical habitat designation. Table 3 summarizes the effects of critical habitat designation under the WFST and WFCO impact scenarios. These effects are reported for the entire Virgin River region, including Washington County and Clark Counties.

TABLE 3.—COUNTY AND REGIONAL-LEVEL PRESENT VALUE AND ANNUALIZED INCREMENTAL CRITICAL HABITAT IMPACTS (1990 \$ MILLIONS) (3 PERCENT DISCOUNT RATE)

	Output	Employment	Earnings	Tax revenues
WFST vs WOFBA:				
Washington:				
Present Value .....	−47,496 .....		−13,617 .....	−6,182
Percent Deviation from WOFBA .....	−0.0016 .....	−0.0019 .....	−0.0016 .....	−0.0016
Annualized Values .....	−1.947 .....	−26 .....	−0.558 .....	−0.253
Clark:				
Present Value .....	−10.63 .....		−0.827 .....	−0.632
Percent Deviation from WOFBA .....	−0.00001 .....	−0.0001 .....	0 .....	0
Annualized Values .....	−0.428 .....	−1 .....	−0.034 .....	−0.026
Region:				
Present Value .....	−59,818 .....		−14,961 .....	−6,283
Percent Deviation from WOFBA .....	−0.0001 .....	−0.0001 .....	0 .....	−0.00001
Annualized Values .....	−2.453 .....	−30 .....	−0.613 .....	−0.258
WFCO vs. WOFBA:				
Washington:				
Present Value .....	−13,742 .....		−2,065 .....	−0.133
Percent Deviation from WOFBA .....	−0.00046 .....	−0.00011 .....	−0.00024 .....	−0.00003
Annualized Values .....	−0.563 .....	4 .....	−0.085 .....	−0.005
Region:				
Present Value .....	−20,938 .....		−1.12 .....	−1.476
Percent Deviation from WOFBA .....	0 .....	0 .....	0 .....	0
Annualized values .....	−0.858 .....	4 .....	−0.046 .....	−0.061

Under the WFST scenario, the present value of output changes in the Washington County economy due to critical habitat designation is −\$1.95 million annually. This constitutes 0.0016 percent of the present value of the baseline stream of output (WOFBA). Employment and earnings effects are presented in the report and are similar to that of the output effects.

For Clark County, the output effects of the critical habitat designation are −\$0.43 million annually. The baseline economy of Clark County is much larger than that of Washington County. Consequently, the effects of the designation of critical habitat on the economy are smaller. The cumulative output effects represent only 0.00001 percent of the baseline level of economic activity. Both the earnings and tax revenue effects are too small to be reliably reported as deviations from the baseline level of economic activity.

For the region as a whole, the output effect of designating critical habitat is −\$2.45 million annually (0.0001

percent). The other aggregate effects are of similar relative magnitudes.

Water use conservation can significantly mitigate the effects of designating critical habitat for these listed fishes. This is also true for the critical habitat effects alone. Under the WFCO scenario, the present value of the output changes in Washington County is −\$13.7 million, 0.00046 percent of the baseline level of activity. For the region as a whole, the output effects of designating critical habitat are −\$20.9 million, an amount too small to calculate as a percentage of the baseline. There are no conservation scenario impacts for Clark County for reasons discussed later.

### National Efficiency Effects

To obtain true measures of national efficiency impacts, exact welfare changes must be computed. These are calculated as changes in aggregate household utility. In general, I-O models are not capable of producing such values because they lack a fully modeled household sector. However,

reasonable approximations may be obtained through aggregate factor payments. These omit surplus measures (producer and consumer) and hence underestimate the aggregate changes in national efficiency. They do, however, provide a reasonable approximation under certain assumptions.

In many applications of I-O analysis for use as inputs to a cost-benefit analysis, aggregate factor payments (value added) are used to represent the national efficiency effect of a policy change or action. This measure is correct only for cases in which the value-added change can be attributed solely to the policy change or action undertaken. In the case of the listed fishes, this assumption is reasonable because all changes in resource allocation can be attributed to actions taken on behalf of the fishes by virtue of the methodology followed in this study.

Including secondary effects in computing national efficiency impacts is valid because these effects are technological in nature rather than pure

transfers. That is, the linkages in the economy between productive sectors arise from the basic production functions in the economy. Thus, a direct impact occurring in one sector of the economy will generate ripple effects throughout the economy. Such effects are solely attributable to the initial direct impact.

The I-O model permits computation of this factor income, and it may be used to measure the national efficiency effects of various changes in the economy, such as those introduced by actions taken on behalf of the listed fishes. Aggregate factor payments are computed for the baseline (WOFBA) scenario and for the "with fish" scenarios (WFST and WFCO).

The factor payments capture the value added from the production side of the local economy. Because some of the output change is captured through leakages to the rest of the world (principally the United States), the total factor payments changes will be smaller than the total output changes.

Based on these results, it is not surprising that the effects of the factor payments are small for the county-level and regional analysis. Under the WFST scenario, the efficiency losses to the nation are a \$32.2 million reduction in value added. The annualized value of this reduction is - \$1.32 million. With water conservation measures, the cumulative change (over the 45-year period) in value added is - \$10.68 million (- \$0.438 million as an annualized value). Water conservation mitigates most of the impacts associated with the critical habitat designation.

For Washington County, the present value of the cumulative changes (over the 45-year period) in value added is - \$24.62 million for the WFST scenario. With the inclusion of water conservation measures, this value falls to - \$8.153 million (annualized value - \$0.764 million).

For Clark County, the present value of the cumulative changes (over the 45-year period) is - \$4.649 million (annualized value is - \$0.191 million).

### Conclusions of the Economic Analysis

The three described impact scenarios were analyzed and it is useful to distinguish them in summarizing the economic effects of actions taken on behalf of the listed fishes. The baseline scenario (WOFBA) represents the way in which the county-level and regional economies would grow over the 45-year study period if no actions were taken to protect the listed species. The entire region is projected to experience population growth at rates well above the national average. Projected

population growth and economic development will lead to shifts in resource use. Consequently, agricultural water will be converted to M&I uses resulting in a decline in agricultural output. At the same time, several required water delivery projects are planned to provide water to sustain the projected growth levels.

The WFST scenario takes the baseline regional projection and introduces measures designed to protect and recover the listed fishes. These measures result in more rapid conversion of agricultural water and the acceleration of some water delivery projects. Thus, agricultural production declines more quickly under the WFST scenario. Water costs also rise as a result of the earlier development of these projects, and the effect is a reduced level of final demand in all sectors.

In summary, all of the economic effects of the WFST scenario indicate that preserving and recovering the listed fishes will have a relatively small impact on the overall economy. Some sectors will experience greater declines than others, but the overall decline in economic activity is projected to be small.

Since water usage rates in Washington County are high compared to other southwestern cities, a conservation scenario (WFCO) was analyzed. In this scenario, consumption levels were reduced through the use of water-conserving appliances, fixtures, and landscaping, applied to new construction only. Conservation is not without some cost. These costs were introduced into the models in the form of crowding-out other expenditures. Thus, construction costs were projected to increase. Offsetting this cost increase are the savings that will result from delaying the planned construction of new water delivery facilities. A further offset is provided because agricultural water is converted to M&I uses at a slower pace.

The overall effect of conservation is an almost complete mitigation of the economic effects associated with actions undertaken on behalf of the listed fishes. In fact, by the latter part of the study period, there are negative effects only in the agriculture and construction sectors. However, latter effects are likely overstated in the analysis due to the extreme nature of the complete crowding-out assumption.

The Service has prepared detailed documents further explaining the biology of each fish species (Maddux et al. 1995) and the economic analysis process used to determine critical habitat (Brookshire et al. 1995). These documents are available to supplement

this notice and for public review. Copies may be obtained by contacting the field office (see **ADDRESSES** section).

### Available Conservation Measures

The purpose of the Act, as stated in section 2(b), is to provide a means to conserve the ecosystems upon which endangered and threatened species depend and to provide a program for the conservation of listed species. Section 2(c)(1) of the Act declares that " \* \* \* all Federal departments and agencies shall seek to conserve endangered and threatened species and shall utilize their authorities in furtherance of the purposes of this Act."

The Act mandates the conservation of listed species through various mechanisms, such as section 7 (requiring Federal agencies to further the purposes of the Act by carrying out conservation programs and insuring that Federal actions will not likely jeopardize the continued existence of the listed species or result in the destruction or adverse modification of critical habitat), section 9 (prohibition of taking of listed species), section 10 (research permits and habitat conservation plans), section 6 (cooperative State and Federal grants), land acquisition, and research. The section 7 requirement that Federal agencies consult with the Service if their actions may impact critical habitat enables the Service to assess Federal activities that may impair survival and recovery potential, thus ensuring that such actions are considered in relation to the goals and recommendations of the recovery plan.

### Public Comments Solicited

The Service finds that any final action resulting from this proposal be accurate and effective as possible. Therefore, the Service requests comments or suggestions from the public, other concerned government agencies, Indian Nations, the scientific community, commercial interests, or any other interested party concerning this proposed rule. Comments are particularly sought concerning:

(1) The location and reasons why any Federal or non-Federal lands (either proposed critical habitat or additional areas) should or should not be determined to be critical habitat as provided by section 4 of the Act;

(2) Current and planned activities in the vicinity of proposed critical habitat areas and their possible impacts on proposed critical habitat;

(3) Other physical and biological features that are essential to the conservation of the species and in need of special management or protection;

(4) Specific information on the scale, location, and distribution of primary constituent elements on all ownership and land designations;

(5) Information concerning health of the ecosystems on which the woundfin, Virgin River chub, and Virgin spinedace depend;

(6) Information on the economic benefits and costs that would result from this proposed designation of critical habitat;

(7) Data and information relevant to determining whether the benefits of excluding a particular area from critical habitat outweigh the benefits of specifying the area as critical habitat;

(8) The methods and thresholds the Service might use in determining whether the costs of designating an area outweigh the benefits of designation;

(9) Methods of analysis useful in evaluating economic and other relevant impacts;

(10) Information regarding the suitability or unsuitability of critical habitat boundaries of the 100-year floodplain (as defined on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs));

(11) Information about areas of land or water located within the outer boundaries of the proposed critical habitat, but that do not provide primary constituent elements and thus can be excluded. Of particular interest are means to describe these areas of land within specific limits using reference points and lines as found on standard topographical maps.

The final decision on this proposal will take into consideration the comments and any additional information received by the Service, and such communications may lead to a final regulation that differs from this proposal.

## Public Hearings

The Act provides for at least one public hearing on this proposal, if requested within 45 days from date of publication of this proposal in the **Federal Register**. Requests for a hearing must be made in writing and addressed to the Field Supervisor, Salt Lake City Field Office (see **ADDRESSEES** section). The Service has arranged for a public hearing to be held on May 8, 1995, from 5 p.m. to 9 p.m., with registration beginning at 4:30 p.m., at the St. George Hilton Inn, 1450 South Hilton Drive, St. George, Utah.

## National Environmental Policy Act

The Service has determined that an Environmental Assessment, as defined

under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

## Required Determinations

This proposed rule was reviewed under Executive Order 12866. The rule will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Based on the information discussed in this rule concerning public projects and private activities within the proposed critical habitat, significant economic impacts will not result from this action. Also, no direct costs, enforcement costs, information collection, or recordkeeping requirements are imposed on small entities by this action, and the rule contains no recordkeeping requirements as defined under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*). This rule does not require a federalism assessment under Executive Order 12612 because it would not have any significant federalism effects as described in the order.

## References Cited

A complete list of all references cited is available upon request from the Field Supervisor, Salt Lake City Field Office (see **ADDRESSEES** section).

## Authors

The primary authors of this proposal are Henry R. Maddux and Janet A. Mizzi of the Service's Salt Lake City Field Office; Selena J. Werdon of the Service's Nevada State Office; and Lesley A. Fitzpatrick of the Service's Arizona State Office.

## List of Subjects in 50 CFR Part 17

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

## Proposed Regulation Promulgation

Accordingly, the Service hereby proposes 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:

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

## § 17.11 [Amended]

2. It is proposed to amend § 17.11(h) by revising the “critical habitat” entry for “Chub, Virgin River” and “Woundfin” under Fishes, to read “17.95(e)”.

3. It is proposed to amend § 17.95(e) by adding critical habitat of the Virgin River chub (*Gila robusta seminuda*=*G. seminuda*) and woundfin (*Plagopterus argentissimus*) in the same alphabetical order as these species occur in 17.11(h).

## § 17.95 Critical habitat-fish and wildlife.

\* \* \* \* \*

(e) \* \* \*

### Virgin River Chub (*Gila seminuda*)

Legal descriptions for St. George (Utah-Arizona) and Littlefield (Arizona) were obtained from the 1987 Bureau of Land Management (BLM) maps (Surface Management Status 30×60 Minute Quadrangle). Legal descriptions for Overton (Nevada-Arizona) were obtained from the 1989 BLM maps (Surface Management Status 30×60 Minute Quadrangle). Critical habitat areas proposed for the Virgin River chub in each State are as follows:

Utah, Washington County. The Virgin River from its confluence with Ash-La Verkin Creeks in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian) to Washington Fields Diversion in T.42S., R.14W., Sec. 21 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the Washington Fields Diversion in T.42S., R.14W., Sec. 21 (Salt Lake Base and Meridian) to the Johnson Diversion in T.42S., R.15W., Sec. 27 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the Johnson Diversion in T.42S., R.15W., Sec. 27 (Salt Lake Base and Meridian) to the Arizona-Utah border in T.43S., R.17W., Sec. 36 (Salt Lake Base and Meridian).

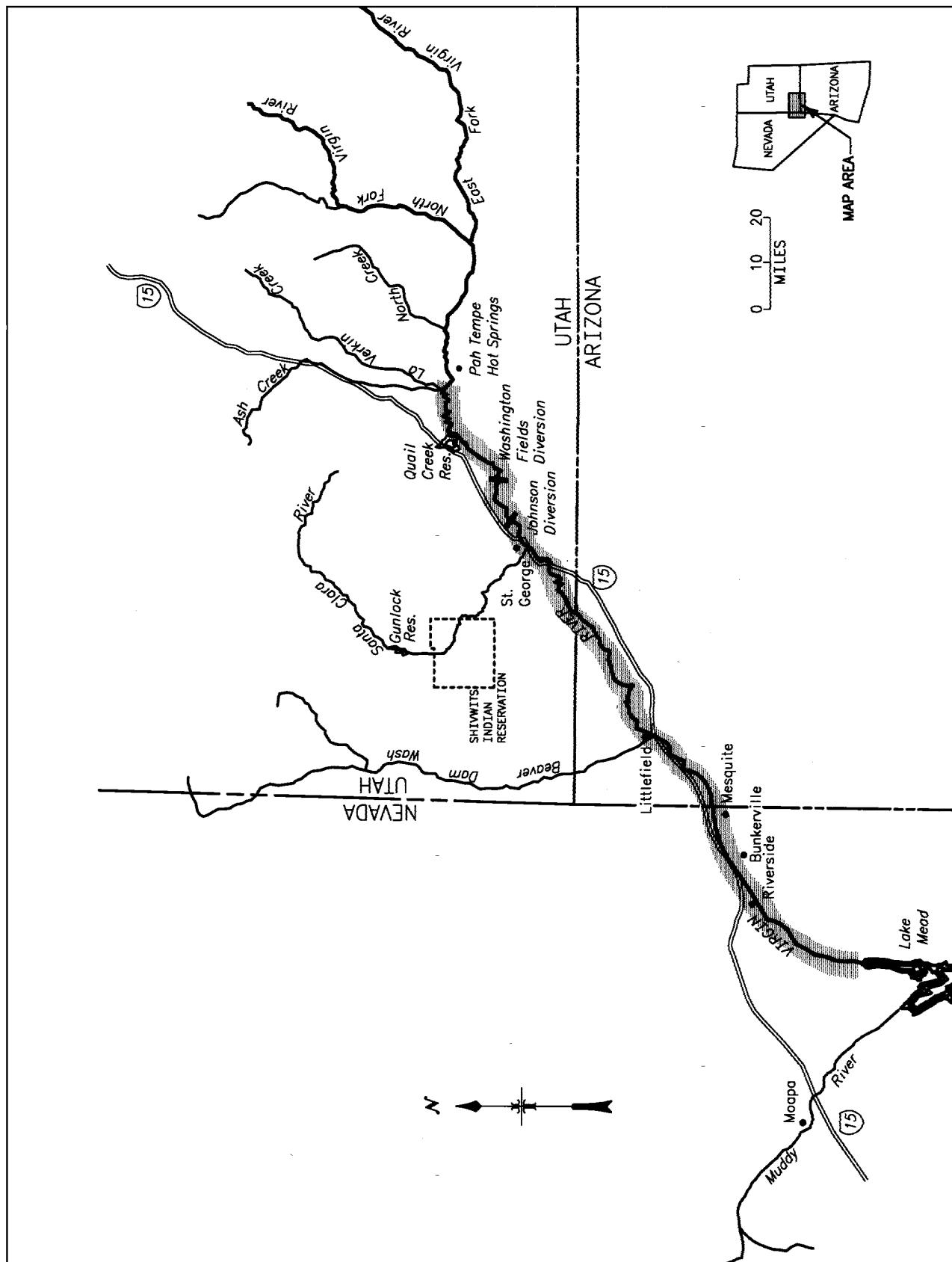
Arizona, Mohave County. The Virgin River from the Arizona-Utah border in T.42N., R.13W., Sec. 33 (Salt Lake Base and Meridian) to the Arizona-Nevada border in T.39N., R.16W., Sec. 2 (Salt Lake Base and Meridian).

Nevada, Clark County. The Virgin River from the Arizona-Nevada border in T.13S., R.71E., Sec. 15 (Salt Lake Base and Meridian) to the highwater level of Lake Mead in T.16S., R.68E., Sec. 1 (Salt Lake Base and Meridian).

Known constituent elements include water, physical habitat, and biological environment as required for each particular life stage for each species.

**Note:** Map follows.

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**Woundfin (*Plagopterus argentissimus*)**

Legal descriptions for St. George (Utah-Arizona) and Littlefield (Arizona) were obtained from the 1987 BLM maps (Surface Management Status 30×60 Minute Quadrangles). Legal descriptions for Overton (Nevada-Arizona) were obtained from the 1989 BLM maps (Surface Management Status 30×60 Minute Quadrangles). Critical habitat areas proposed for the woundfin in each State are as follows:

Utah, Washington County. The Virgin River from its confluence with Ash-La Verkin Creeks in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian) to the

Washington Fields Diversion in T.42S., R.14W., Sec. 21 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the Washington Fields Diversion in T.42S., R.14W., Sec. 21 (Salt Lake Base and Meridian) to the Johnson Diversion in T.42S., R.15W., Sec. 27 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the Johnson Diversion in T.42S., R.15W., Sec. 27 (Salt Lake Base and Meridian) to the Arizona-Utah border in T.43S., R.17W., Sec. 36 (Salt Lake Base and Meridian).

Arizona, Mohave County. The Virgin River from the Arizona-Utah border in

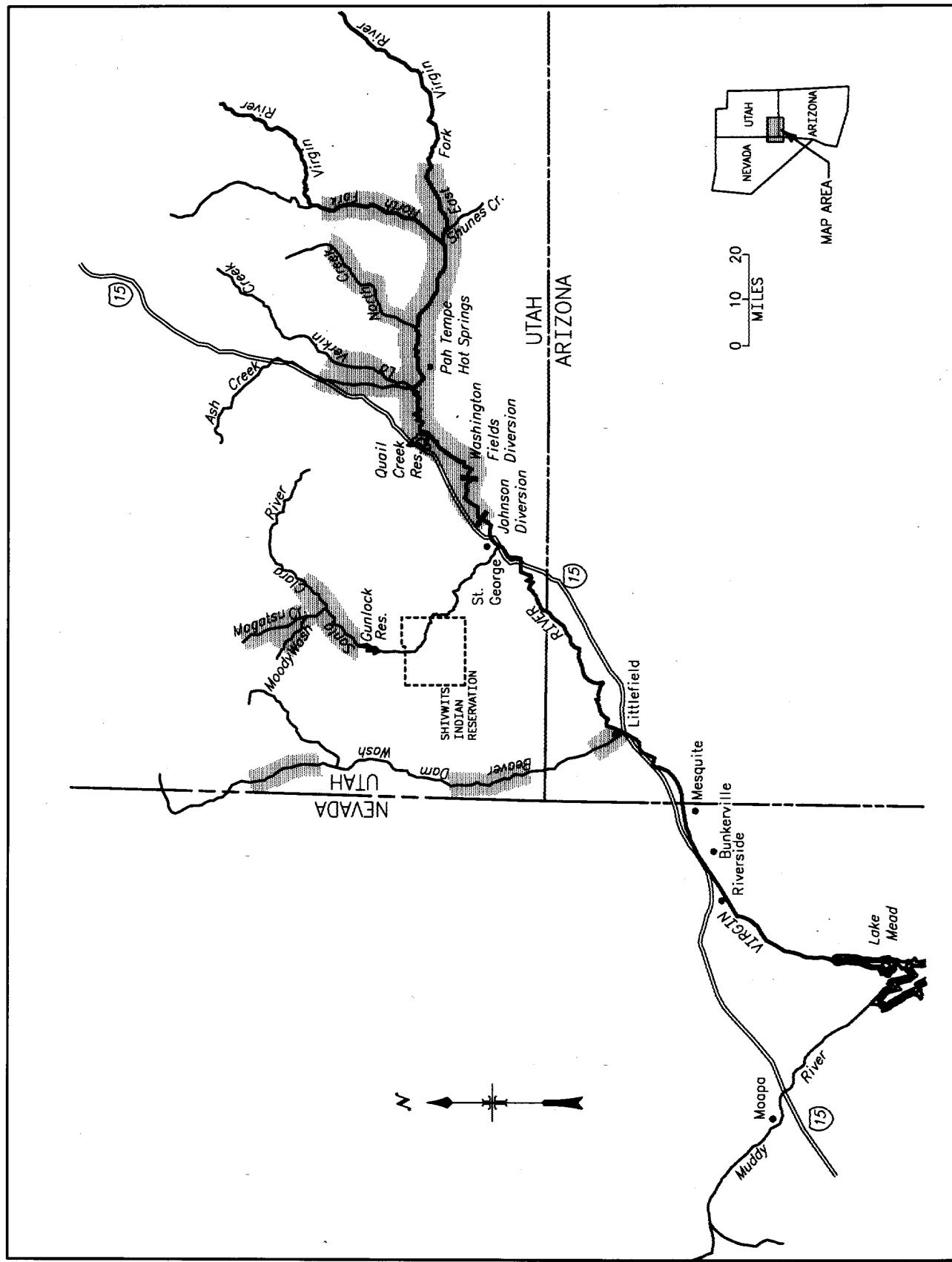
T.42N., R. 13W., Sec. 33 (Salt Lake Base and Meridian) to the Arizona-Nevada border in T.39N., R.16W., Sec. 2 (Salt Lake Base and Meridian).

Nevada, Clark County. The Virgin River from the Arizona-Nevada border in T.13S., R.71E., Sec. 15 (Salt Lake Base and Meridian) to the highwater level of Lake Mead in T.16S., R.68E., Sec. 1 (Salt Lake Base and Meridian).

Known constituent elements include water, physical habitat, and biological environment as required for each particular life stage for each species.

**Note:** Map follows.

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4. The proposed rule published in the **Federal Register** of May 18, 1994, pages 25875–25880, adding the Virgin spinedace to § 17.11(h) is amended by revising the critical habitat entry for "Spinedace, Virgin" to read "17.95(e)".

5. The proposed rule published in the **Federal Register** of May 18, 1994, pages 25875–25880, adding the Virgin spinedace to § 17.11(h) is further amended by adding critical habitat of the Virgin spinedace (*Lepidomeda mollispinis mollispinis*) to § 17.95(e) in the same alphabetical order as the species occurs in 17.11(h).

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

\* \* \* \* \*

(e) \* \* \*

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**Virgin Spinedace (*Lepidomeda mollispinis mollispinis*)**

Legal descriptions for St. George (Utah-Arizona) and Littlefield (Arizona) were obtained from the 1987 BLM maps (Surface Management Status 30 × 60 Minute Quadrangles). Legal descriptions for Kanab (Utah-Arizona) were obtained from the 1983 BLM maps (Surface Management Status 30 × 60 Minute Quadrangles). Critical habitat areas proposed for the Virgin spinedace in each State are as follows:

Arizona, Mohave County. Beaver Dam Wash from the confluence with the Virgin River in T.40N., R.15W., Sec. 4 (Salt Lake Base and Meridian) upstream 1.3 km (0.8 mi) in T.40N., R15W., Sec. 5 (Salt Lake Base and Meridian).

Utah, Kane County. The East Fork of the Virgin River from the falls in Parunuweap Canyon in T.42S., R.9W., Sec. 5 (Salt Lake Base and Meridian) to its confluence with the North Fork of the Virgin River in T.42S., R.10W., Sec. 5 (Salt Lake Base and Meridian).

Utah, Kane County. Shunes Creek from the Second Creek confluence in T.42S., R.10W., Sec. 11 (Salt Lake Base

and Meridian) to its confluence with the East Fork of the Virgin River in T.42S., R.10W., Sec. 4 (Salt Lake Base and Meridian).

Utah, Washington County. Beaver Dam Wash from the Narrows in T.39S., R.20W., Sec. 1 (Salt Lake Base and Meridian) to 0.4 km (0.25 mi) upstream of the confluence with East Bunker Peak Wash in T.40S., R.19W., Sec. 5 (Salt Lake Base and Meridian).

Utah, Washington County. Beaver Dam Wash from Horse Canyon in T.41S., R.19W., Sec. 31 (Salt Lake Base and Meridian) downstream through Lytle Ranch downstream to Iverson Ranch in T.42S., R.20W., Sec. 13 (Salt Lake Base and Meridian).

Utah, Washington County. Moody Wash from the lower end of Racer Canyon in T.38S., R.17W. Sec. 33 (Salt Lake Base and Meridian) to just below the Dixie National Forest Boundary in T.39S., R.17W., Sec. 26 (Salt Lake Base and Meridian).

Utah, Washington County. Mogatsu Creek from the falls downstream of Bingham Ranch in T.39S., R.16W., Sec. 30 (Salt Lake Base and Meridian) to its confluence with the Santa Clara River in T.40S., R.17W., Sec. 14 (Salt Lake Base and Meridian).

Utah, Washington County. Santa Clara River from Veyo Hot Springs in T.39S., R.16W., Sec. 32 (Salt Lake Base and Meridian) to the upstream end of Gunlock Reservoir in T.40S., R.17W., Sec. 29 (Salt Lake Base and Meridian).

Utah, Washington County. Santa Clara River from downstream of the dam forming Gunlock Reservoir in T.41S., R.17W., Sec. 5 (Salt Lake Base and Meridian) to its confluence with the Virgin River in T.43S., R.15W., Sec. 6 (Salt Lake Base and Meridian).

Utah, Washington County. Ash Creek from Toquerville Springs in T.40S., R.13W., Sec. 35 (Salt Lake Base and Meridian) to its confluence with the

Virgin River in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian).

Utah, Washington County. La Verkin Creek from Chute Falls in T.40S., R.12W., Sec. 30 (Salt Lake Base and Meridian) to its confluence with the Virgin River in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian).

Utah, Washington County. North Creek from the confluence of the Left and Right Forks in T.40S., R.11W., Sec. 33 (Salt Lake Base and Meridian) to its confluence with the Virgin River in T.41S., R.12W., Sec. 23 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the confluence of Ash-La Verkin Creeks in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian) to the Washington Fields Diversion in T.42S., R.14W., Sec. 21 (Salt Lake Base and Meridian).

Utah, Washington County. The North Fork of the Virgin River from the Narrows in T.40S., R10W., Sec. 34 (Salt Lake Base and Meridian) to its confluence with the East Fork of the Virgin River in T.42S., R.10W., Sec. 5 (Salt Lake Base and Meridian).

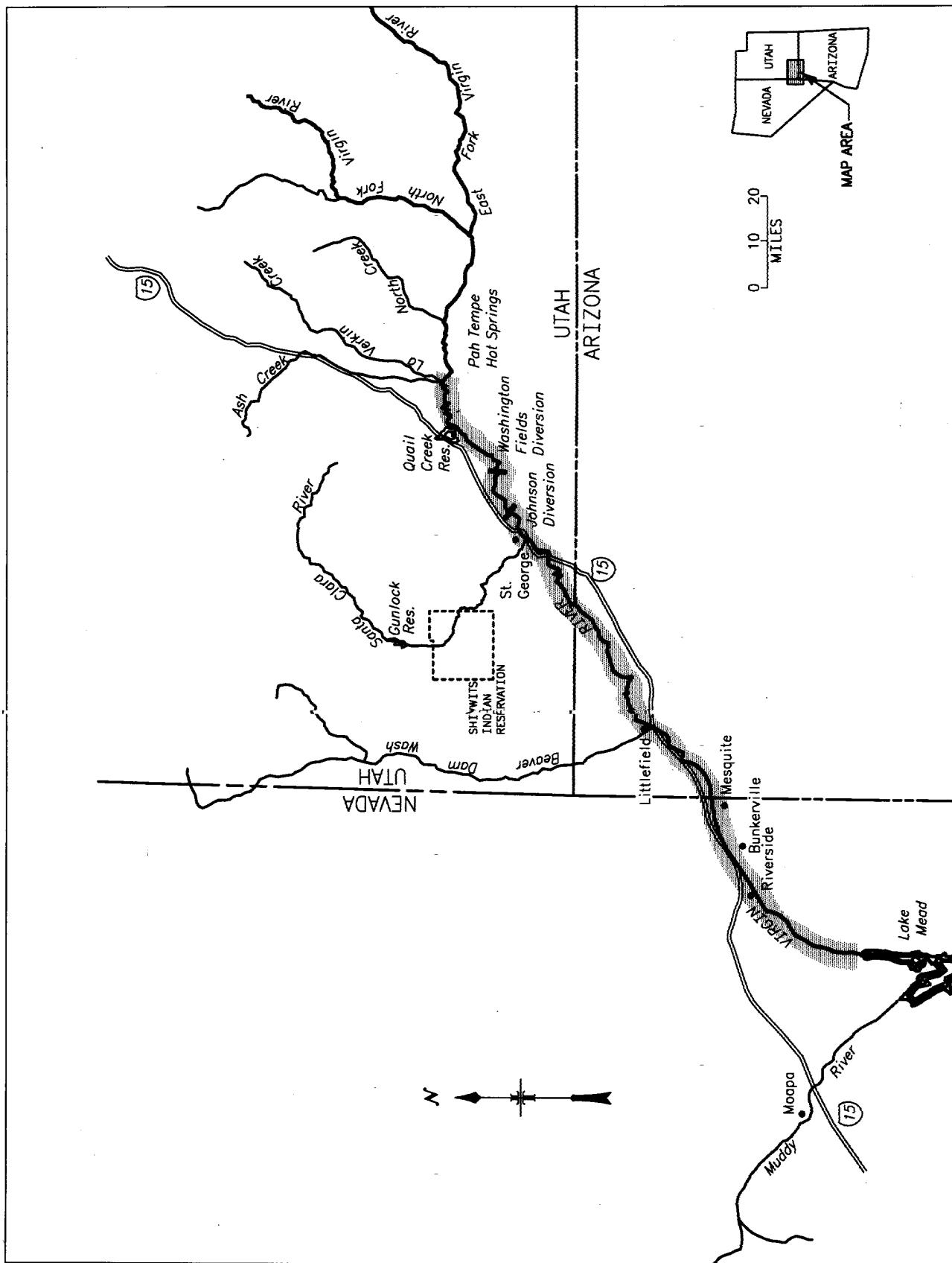
Utah, Washington County. The Virgin River from the confluence of the East and North Forks in T.42S., R.10W., Sec. 5 (Salt Lake Base and Meridian) to the Quail Creek Diversion in T.41S., R.14W., Sec. 36 (Salt Lake Base and Meridian).

Utah, Washington County. The Virgin River from the Quail Creek Diversion in T.41S., R.12W., Sec. 30 (Salt Lake Base and Meridian) to the confluence of Ash-La Verkin Creeks in T.41S., R.13W., Sec. 23 (Salt Lake Base and Meridian).

Known constituent elements include water, physical habitat, and biological environment as required for each particular life stage for each species.

**Note:** Map follows.

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Dated: March 29, 1995.

**George T. Frampton, Jr.,**

*Assistant Secretary for Fish and Wildlife and  
Parks.*

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