Scientific Name: *Lepomis megalotis*
Common Name: Longear sunfish
BISON No.: 010116

Legal Status:

- Arizona, Species of Special Concern
- ESA, Endangered
- ESA, Proposed Endangered
- ESA, Proposed Threatened
- ESA, Threatened
- New Mexico-WCA, Endangered
- New Mexico-WCA, Threatened
- USFS-Region 3, Sensitive
- None

Distribution:

- Endemic to Arizona
- Endemic to Arizona and New Mexico
- Endemic to New Mexico
- Not Restricted to Arizona or New Mexico
- Northern Limit of Range
- Southern Limit of Range
- Western Limit of Range
- Eastern Limit of Range
- Very Local

Major River Drainages:

- Dry Cimmaron River
- Canadian River
- Southern High Plains
- Pecos River
- Estancia Basin
- Tularosa Basin
- Salt Basin
- Rio Grande
- Rio Mimbres
- Zuni River
- Gila River
- Rio Yaqui Basin
- Wilcox Playa
- Rio Magdalena Basin
- Rio Sonoita Basin
- Little Colorado River
- Mainstream Colorado River
- Virgin River Basin
- Hualapai Lake
- Bill Williams Basin

Status/Trends/Threats (narrative):

Federal (USDI): Threatened, State AZ: Wildlife of concern (endangered), State NM: Sensitive (Region 3).
The longear sunfish populations are stable.
The greatest threat to longear sunfish is that they hybridize extensively with other *Lepomis* (Lee et al. 1981).

Distribution (narrative):

The longear sunfish is restricted to fresh waters of east-central North America, west of the Appalachians, occurs from southern Quebec south to Gulf of Mexico in AL and western FL. Extends west through TX and Rio Grande tributaries in northeast Mexico, north through eastern

parts of the states from Oklahoma to southern Ontario, Canada (Lee et al. 1981, Sublette et al. 1990). The longear sunfish is native to the Pecos and Canadian drainages and has been introduced into the Rio Grande and Mimbres basins (Sublette et al. 1990). Populations of longear sunfish exist in the lower Pecos drainage, and in Sumner Reservoir, and other populations are present in the Rio Grande and its principal irrigation canals (Sublette et al. 1990).

Key Distribution/Abundance/Management Areas:

Panel key distribution/abundance/management areas:

Breeding (narrative)**:**

Longear sunfish spawn during the summer when water temperatures reach 21.6-22.8ºC, and cease when water temperatures rise to 28.9ºC (Boyer and Vogele 1971). Eggs are deposited in nests (i.e. shallow, circular depressions) constructed by the male in a variety of habitats but generally are located in brush-free areas with gradually sloping gravel substrates (Sublette et al. 1990). Immediately after spawning, the female leaves from the nest and the male remains to guard the demersal, adhesive eggs and to aerate and embed the eggs in gravel by fanning them with its caudal fin (Sublette et al. 1990). Eggs hatch in about seven days, depending on water temperatures (Sublette et al. 1990).

Habitat (narrative)**:**

The longear sunfish thrives in reservoirs, but typically inhabits small streams and upland parts of rivers, generally absent from downstream lowland sections (Lee et al. 1981). This species prefers clear, shallow, well-vegetated areas of low gradient streams (Sublette et al. 1990).

Breeding Season:

- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

Panel breeding season comments:

Aquatic Habitats:

Large Scale:

- Rivers
- Streams
- Springs
- Spring runs
- Lakes
- Ponds
- Sinkholes
- Cienegas
- Unknown
- Variable

Small Scale:

- Runs
- Riffles
- Pools
- Open Water
- Shorelines

Panel comments on aquatic habitats:

Important Habitat Features (Water characteristics):

Current

- Fast (> 75 cm/sec)
- Intermediate (10-75 cm/sec)
- Slow (< 10 cm/sec)
- None
- Unknown
- Variable

Gradient

- High gradient (>1%)
- Intermediate Gradient (0.25-1%)
- Low Gradient (<0.25%)
- None
- Unknown
- Variable

Water Depth

- Very Deep (> 1 m)
- Deep (0.25-1 m)
- Intermediate (0.1-0.25 m)
- Shallow (< 0.1 m)
- Unknown
- Variable

Panel comments on water characteristics:

Important Habitat Features (Water Chemistry)

Temperature (general)

- Cold Water (4-15°C)
- Cool Water (10-21°C)
- Warm Water (15-27°C)
- Unknown
- Variable

Turbidity

- High
- Intermediate
- Low
- Unknown
- Variable

Conductivity

- Very High (> 2000 µS/cm)
- High (750-2000 µS/cm)
- Intermediate (250-750 µS/cm)
- Low (< 250 µS/cm)
- Unknown
- Variable

Panel comments on water chemistry:

Important Habitat Features (Structural elements):

Substrate

- Bedrock
- Silt/Clay
- Detritus
- Sand
- Gravel
- Cobble
- Boulders
- Unknown
- Variable

Cover

- Rocks, boulders
- Undercut banks
- Woody debris
- Aquatic vegetation
- Rootwads
- Not important
- Overhanging vegetation
- Unknown
- Variable

Panel comments on structural elements:

Diet (narrative)**:**

The longear sunfish is primarily insectivorous, it also takes a variety of other invertebrates, fish eggs, and some filamentous algae, with larger individuals sometimes feeding on small fish (Sublette et al. 1990).

Diet category (list):

- Planktivore
- Herbivore
- Insectivore
- Piscivore (Fish)
- Omnivore
- Detritivore

Grazing Effects (narrative):

No documentation with respect to the effects of cattle grazing on longear sunfish. While cattle grazing is unlikely to affect this species in reservoirs, but since this species prefers clear, shallow, well-vegetated areas of low gradient streams and upland parts of rivers cattle grazing may negatively impact preferred habitat.

Panel limiting habitat component relative to grazing and comments:
Panel assessment: Is this species a priority for selecting a grazing strategy? Throughout the species' distribution in New Mexico and Arizona YES NO UNKNOWN In key management area(s) YES NO UNKNOWN

Principle Mechanisms Through Which Grazing Impacts This Species (list):

May be Revised

- Alteration of bank structures
- Alteration of substrate
- Alteration of water regimes
- Altered stream channel characteristics
- Altered aquatic vegetation composition
- Altered bank vegetation structure
- Change in food availability
- Change in water temperature
- Change in water quality
- Habitat fragmentation
- Increased turbidity
- Other biotic factors
- Parasites or pathogens
- Population genetic structure loss
- Range improvements
- Trampling, scratching
- Unknown

Panel causal mechanisms comments:

Authors

- **Draft:** Magaña, H.A.
- **GP 2001:**
- **GP 2002:**
- **Revision:**

Bibliography:

Boyer, R.L. and Vogele, L.E. 1971. Longear sunfish behavior in two Ozark reservoirs. Spec. Pub. No. 8, Am. Fish. Soc., pp 13-25

Lee, D. S., Gilbert C. R., Hocutt C. H., Jenkins R. E., Callister D. E., and Stauffer J. R. 1981. Atlas of North American Freshwater Fishes: North Carolina, North Carolina State Museum of Natural History, 1981, c1980.

Sublette, J. E. Hatch M. D. and Sublette M., 1990. The fishes of New Mexico. Albuquerque, NM, University of New Mexico Press.