Hornyhead chub (*Nocomis biguttatus*)

**Habitat:**

- **feeding**
  - adults: near riffles
  - young: near vegetation
  - clear water, does not tolerate turbidity
  - gravel substrate
  - low gradient streams that are tributaries to large streams

- **spawning**
  - large stones and pebbles present
  - often below a riffle in shallow water
  - gravel substrate
River chub (*Nocomis micropogon*)

**Habitat:**
- feeding - moderate to large streams
- moderate to high gradient
- gravel, boulder, or bedrock substrate
- little to no aquatic vegetation
- cannot tolerate turbidity or siltation
Golden shiner (*Notemigonus crysoleucas*)

**Habitat:**
- **Feeding:** lakes and impoundments and quiet pools of low gradient streams
  - clear shallow water
  - heavy vegetation
- **Spawning:** vegetation
Pugnose shiner (*Notropis anogenus*)

**Habitat:**
- feeding - very clear water of lakes, impoundments, and low-gradient streams
- aquatic vegetation
- clean sand, marl, or organic debris substrate
- extremely intolerant of turbidity
Emerald shiner (*Notropis atherinoides*)

**Habitat:**

- feeding - open-large stream channels and lake
- low to moderate gradient
- range of turbidities and bottom types
- midwater or surface preferred, substrate of little importance
- avoids rooted vegetation

- spawning - sand or firm mud substrate or gravel shoals
Bigmouth shiner (*Notropis dorsalis*)

**Habitat:**
- feeding - small clear streams
- good flows
- sand or gravel substrate
- open water, free from vegetation
Blackchin shiner (*Notropis heterodon*)

**Habitat:**
- feeding - lakes, impoundments, and quiet pools in streams and rivers
- clear water
- clean sand, gravel, or organic debris substrate
- dense beds of submerged aquatic vegetation
- cannot tolerate turbidity, silt, or loss of aquatic vegetation
Blacknose shiner (*Notropis heterolepis*)

**Habitat:**

- **feeding** - clear lakes, impoundments, and pools of small, clear, low-gradient streams
- aquatic vegetation
- clean sand, gravel, marl, muck, peat, or organic debris substrate
- cannot tolerate much turbidity, much siltation, or loss of aquatic vegetation

- **spawning** - sandy substrate
**Spottail shiner** (*Notropis hudsonius*)

**Habitat:**
- **Feeding:** large rivers, lakes, and impoundments
  - firm sand and gravel substrate
  - low current
  - sparse to moderate vegetation
  - avoids turbidity
- **Spawning:** over sandy shoals or gravelly riffles
  - near the mouths of small streams
Rosyface shiner (*Notropis rubellus*)

**Habitat:**
- feeding - moderate sized streams
- moderate to high gradient
- gravel or sand substrate; intolerant of silt substrate
- clear water; intolerant of turbidity

- spawning - on nests of horneyhead chub, chesnut lamprey, and redhorses
- sandy-gravel, gravel or bedrock substrate
- shallow high gradient water