**Northern longear sunfish** (*Lepomis peltastes*)

**Habitat:**

- **feeding** - clear moderate-sized shallow streams with moderate vegetation
  - rocky substrates
  - little to no current

- **spawning** - nests in gravel, sand, or hard rock substrate
Smallmouth bass (*Micropterus dolomieu*)

**Habitat:**

- **feeding** - clear, cool, deep lakes and rivers
  - streams where 40% consists of riffles over clean gravel, boulder, or bedrock substrate
  - in pools with a current and >4 feet of depth
  - gradients between 4 and 25 feet per mile

- **spawning** - nest in sandy, gravel, or rocky substrate
  - gradients 7 to 25 feet per mile
  - streams 20 to 100 feet wide

- **winter refuge** - larger deeper waters
  - with gradients between 3 to 7 feet per mile
**Largemouth bass (Micropterus salmoides)**

**Habitat:**
- **feeding** - non-flowing clear waters - lakes, impoundments, and pools of streams
- abundant aquatic vegetation
- soft muck, organic debris, gravel, sand, and hard non-flocculent clay substrates

- **spawning** - nest in gravelly sand to marl and soft mud substrates
- emergent vegetation
- quiet shallow bays; no current
**White crappie** (*Pomoxis annularis*)

**Habitat:**

- **feeding** - lakes and impoundments >5 acres
- sluggish pools of moderate to large low-gradient rivers
- no substrate preference
- can tolerate severe turbidity and rapid siltation

- **spawning** - various substrates usually beside rooted aquatic vegetation
- sometimes under banks
Black crappie (*Pomoxis nigromaculatus*)

**Habitat:**

- **Feeding:**
  - Larger clear non-silty low-gradient rivers; also in lakes and impoundments
  - Clean hard sand or muck substrate
  - Associated with submerged aquatic vegetation
  - Does not tolerate silt or turbidity well

- **Spawning:**
  - Nests in gravel, sand, or mud substrate
  - Some vegetation must be present
  - Sometimes nests under banks
**Rainbow darter** (*Etheostoma caeruleum*)

**Habitat:**
- **feeding** - gravelly high gradient riffles
- **clear, moderate to large streams**
- **in shallows** (average 1 foot)

**spawning** - gravel or rubble riffles
Iowa darter (Etheostoma exile)

**Habitat:**
- Feeding: clear, slow-moving streams and lakes; sandy to muddy substrates; intolerant of turbid water; lives in rooted aquatic vegetation
- Spawning: in pond-like extensions of streams on organic matter or roots in shallows

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Lake Michigan

Locations:
- Allegan Dam
- Allegan
- Saugatuck
- Hamilton
- Wayland
- Portage
- Battle Creek
- Marshall
- Montague
- Nortondale
- Allegan Dam
- Douglas
- Lake Michigan
Least darter (*Etheostoma microperca*)

**Habitat:**
- **feeding** - moderate to warm temperature
- clear quiet low-gradient vegetated streams (wetlands, floodplains)
- soft substrate
- **spawning** - spawning occurs on stems of plants
- male guards a territory in a vegetated area
Johnny darter (*Etheostoma nigrum*)

**Habitat:**
- **Feeding:** sand and silt substrate
- little to moderate current
- shallow areas of streams, rivers, lakes, and impoundments
- tolerant of many organic and inorganic pollutants and turbidity

- **Spawning:** underneath rocks
- in stream pools or protected shallows of lakes
Yellow perch (*Perca flavescens*)

**Habitat:**

- **feeding** - clear lakes and impoundments; also Lake Michigan
  - low gradient rivers
  - abundance of rooted aquatics
  - muck, organic debris, sand, or gravel substrate
  - does not tolerate turbidity and siltation

- **spawning** - shallows of lakes, tributaries of streams
  - occurs over rooted vegetation, submerged brush, fallen trees
  - may occur over sand or gravel
Northern logperch (*Percina caprodes semifasciata*)

**Habitat:**
- feeding - gravel riffles, deeper slower sections of rivers
- medium size streams; also lakes, impoundments, and Lake Michigan
- sand, gravel, or rock substrate
- avoids turbidity and silt

spawning - riffles or sandy in-shore shallows
Blackside darter (*Percina maculata*)

**Habitat:**
- feeding - small to medium streams
- low to medium gradient
- gravel and sand substrate
- tolerate some turbidity

- spawning - gravel and sand substrate
Walleye (*Sander vitreus*)

**Habitat:**
- feeding: larger, deeper streams and in large, shallow, turbid lakes and impoundments; also Lake Michigan
- gravel, bedrock, and firm substrates preferred
- does not tolerate a lot of turbidity or low oxygen
- spawning: rocky substrates in high gradient water in rivers
- boulder to coarse gravel shoals in lakes
- winter refuge: avoids strong currents
**Freshwater drum** (*Aplodinotus grunniens*)

**Habitat:**
- **feeding** - deeper pools of rivers and Lake Michigan
  - in shallows
  - prefers clear waters and clean substrates
  - can adapt to high turbidity levels
- **spawning** - pelagically, in open water, over sand or mud substrate
  - occurs in bays or lower portions of marshes
Round goby (*Neogobius melanostomus*) - non-native species

**Habitat:**
- **feeding**: rock, cobble, riprap, and vegetate areas of rivers and lakes
  - young found over sand substrate
- **spawning**: rocky substrate with large interstitial spaces
- **winter refuge**: rocky substrate with large interstitial spaces
  - deep water