**Sand shiner** *Notropis stramineus*

**Habitat:**

- **feeding**
  - sand and gravel substrate
  - shallow pools in medium size streams, lakes, and impoundments
  - clear water and low gradient
  - rooted aquatic vegetation preferred
  - tolerant of some inorganic pollutants provided substrate is not covered

- **spawning**
  - clean gravel or sand substrate

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[Map of the area with various locations marked]
Mimic shiner *Notropis volucellus*

Habitat:

- **feeding**: pools and backwater of streams, moderately weedy lakes and impoundments
  - quiet or still water
  - clear shallow water
- **spawning**: aquatic vegetation necessary
Northern redbelly dace *Phoxinus eos*

Habitat:

- feeding - slow current
  - in boggy lakes and streams
  - detritus or silt substrate
  - clear to slightly turbid water
- spawning - filamentous algae needed for egg deposition
Finescale dace *Phoxinus neogaeus*

Habitat:
- feeding - cool bog lakes and streams
- neutral to slightly acidic waters
- various substrates
**Bluntnose minnow** *Pimephales notatus*

**Habitat:**

- **Feeding:**
  - quiet pools and backwaters of medium to large streams, lakes, and impoundments
  - clear warm water
  - some aquatic vegetation
  - firm substrates
  - tolerates all gradients, turbidity, organic and inorganic pollutants

- **Spawning:**
  - eggs deposited on the underside of flat stones or objects
  - nests in sand or gravel substrate
Fathead minnow *Pimephales promelas*

**Habitat:**

- **feeding**  - pools of small streams, lakes, and impoundments
  - tolerant of turbidity, high temperatures, and low oxygen
- **spawning**  - on underside of objects in water 2 to 3 feet deep
  - prefer sand, marl, or gravel substrate
**Longnose dace** *Rhinichthys cataractae*

**Habitat:**
- feeding - lakes and streams
- high gradient
- gravel or boulder substrate
**Western blacknose dace  *Rhinichthys obtusus***

**Habitat:**
- Feeding:
  - moderate to high gradient streams
  - sand and gravel substrate
  - clear cool water in pools with deep holes and undercut banks
  - does not tolerate turbidity and silt well
- Spawning:
  - riffles with gravel substrate and fast current
- Winter refuge:
  - larger waters

[Map of the area showing locations like Ontonagon, Rockland, Victoria Dam, Agate Falls, Bond Falls Dam, Lower Dam, and others, with Lake Superior and Michigan and Wisconsin borders indicated.]
**Creek chub** *Semotilus atromaculatus*

Habitat:

- **feeding** - streams, rivers, or shore waters of lakes and impoundments
  - can tolerate intermittent flows
  - tolerates moderate turbidity
- **spawning** - gravel nests
  - low current
- **winter refuge** - deeper pools and runs
**Longnose sucker** *Catostomus catostomus*

**Habitat:**

- **Feeding:** clear, cold rivers and lakes
- **Spawning:** in streams or lake shallows
  - current
  - gravel substrate
**White sucker** *Catostomus commersonii*

**Habitat:**
- **feeding** - streams, rivers, lakes, and impoundments
- can inhabit highly turbid and polluted waters
- **spawning** - quiet gravelly shallow areas of streams
Silver redhorse *Moxostoma anisurum*

Habitat:

- **feeding** - streams, rivers, lakes, and impoundments
  - low current
  - pollution and turbidity intolerant
- **spawning** - swift current in rivers, do not spawn in tributaries
  - males territorial
  - gravel to rubble substrate
**Shorthead redhorse** *Moxostoma macrolepidotum*

**Habitat:**
- feeding - downstream sections of large rivers, lakes, and impoundments
- rocky substrates
- swift water near riffles
- clear to slightly turbid water
- spawning - gravelly riffles in smaller feeder streams
Black bullhead *Ameiurus melas*

Habitat:

- **feeding**:
  - turbid water
  - silt bottom
  - low gradient small to medium streams, pools, and headwaters of large rivers; also in lakes and impoundments
  - can tolerate very warm water and very low dissolved oxygen

- **spawning**:
  - nest in moderate to heavy vegetation or woody debris and under overhanging banks
Yellow bullhead *Ameiurus natalis*

Habitat:

- **feeding** - clear flowing water
- heavy vegetation
- low gradient streams, lakes, and impoundments
- tolerant of low oxygen

- **spawning** - nest under a stream bank or near stones or stumps
**Brown bullhead** *Ameiurus nebulosus*

**Habitat:**

- **feeding** - larger streams and rivers, lakes and impoundments  
  - clear cool water with little clayey silt  
  - moderate amounts of aquatic vegetation  
  - sand, gravel, or muck substrate  
  - not tolerant of turbid water  
  - tolerant of warm water and low oxygen
- **spawning** - nest in mud or sand substrate among rooted aquatic vegetation  
  - usually near a stump, tree, or rock
- **winter refuge** - in muddy bottoms
Stonecat *Noturus flavus*

Habitat:

- feeding - consistent low to moderate gradient flowing water
- rocky riffles of larger streams and smaller rivers
- not tolerant of silt
- tolerant of low oxygen and pollution

- spawning - eggs deposited beneath stones
- shallow rocky areas of streams or lakes
Margined madtom *Noturus gyrinus*

Habitat:

- **feeding** - clear cool & warm water streams among rocks, boulders, and in gravel
- intolerant of silt
- low to moderate gradient in large creeks to large rivers
- occupies soft and hard bottoms of pools, runs, & riffles
- in daylight associated with substrate cover; at night in open areas

- **spawning** - on flat rocks in gentle to moderate current above and below riffles
Northern pike *Esox lucius*

Habitat:

- feeding - cool to moderately warm streams, rivers, lakes, and impoundments
- vegetation in slow to moderate current
- spawning - submerged vegetation with slow current in shallow water
**Muskellunge** *Esox masquinongy*

**Habitat:**
- Feeding: warm, heavily vegetated lakes, stumpy weedy bays, and slow heavily vegetated medium to large rivers
  - shallow cool water
  - tolerant of low oxygen
- Spawning: clear shallow waters (15-20’’) in heavily vegetated areas