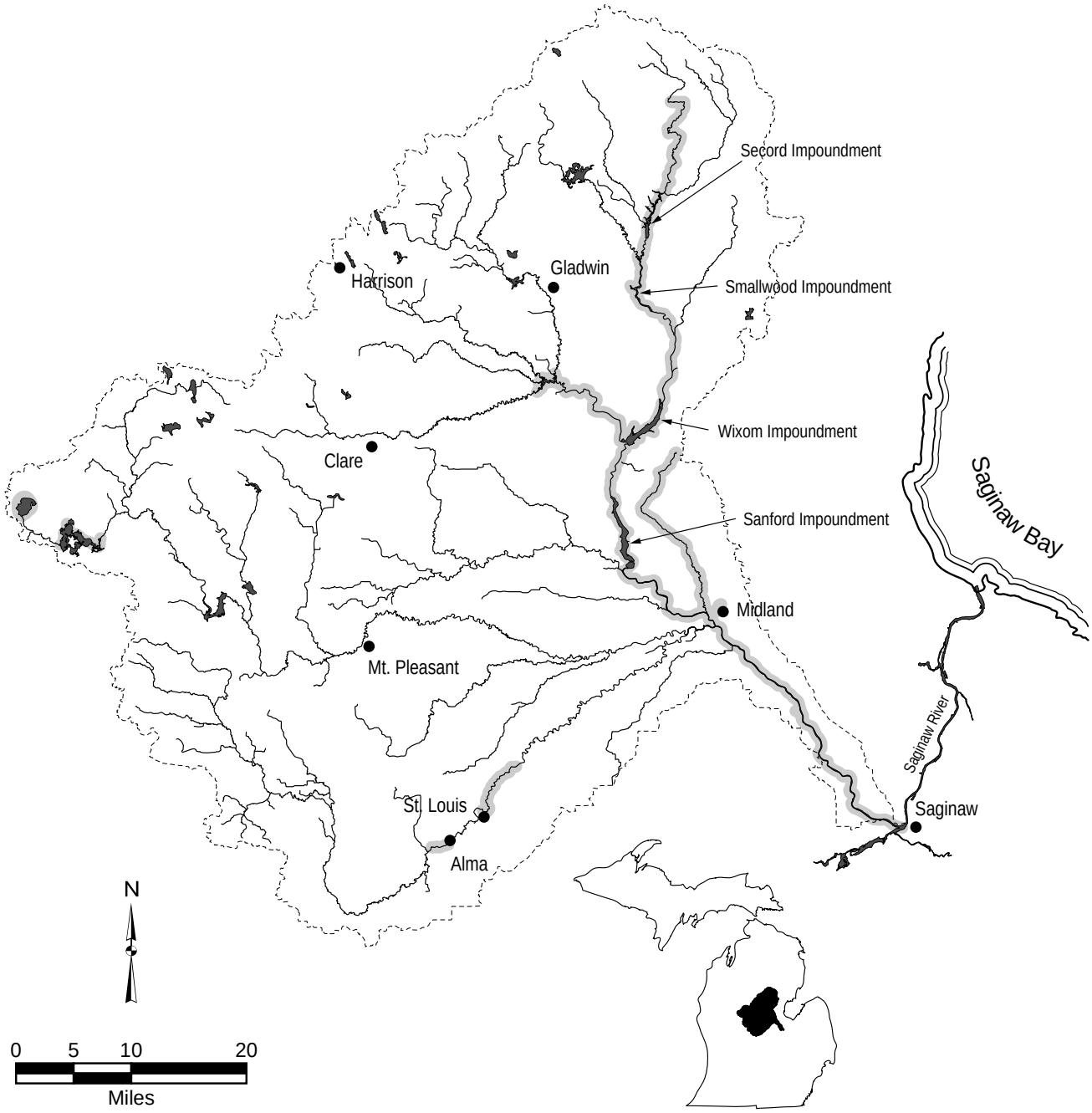
Golden shiner *Notemigonus crysoleucas*

Habitat**:**

feeding - lakes and impoundments and quiet pools of low gradient streams
- clear shallow water
- heavy vegetation

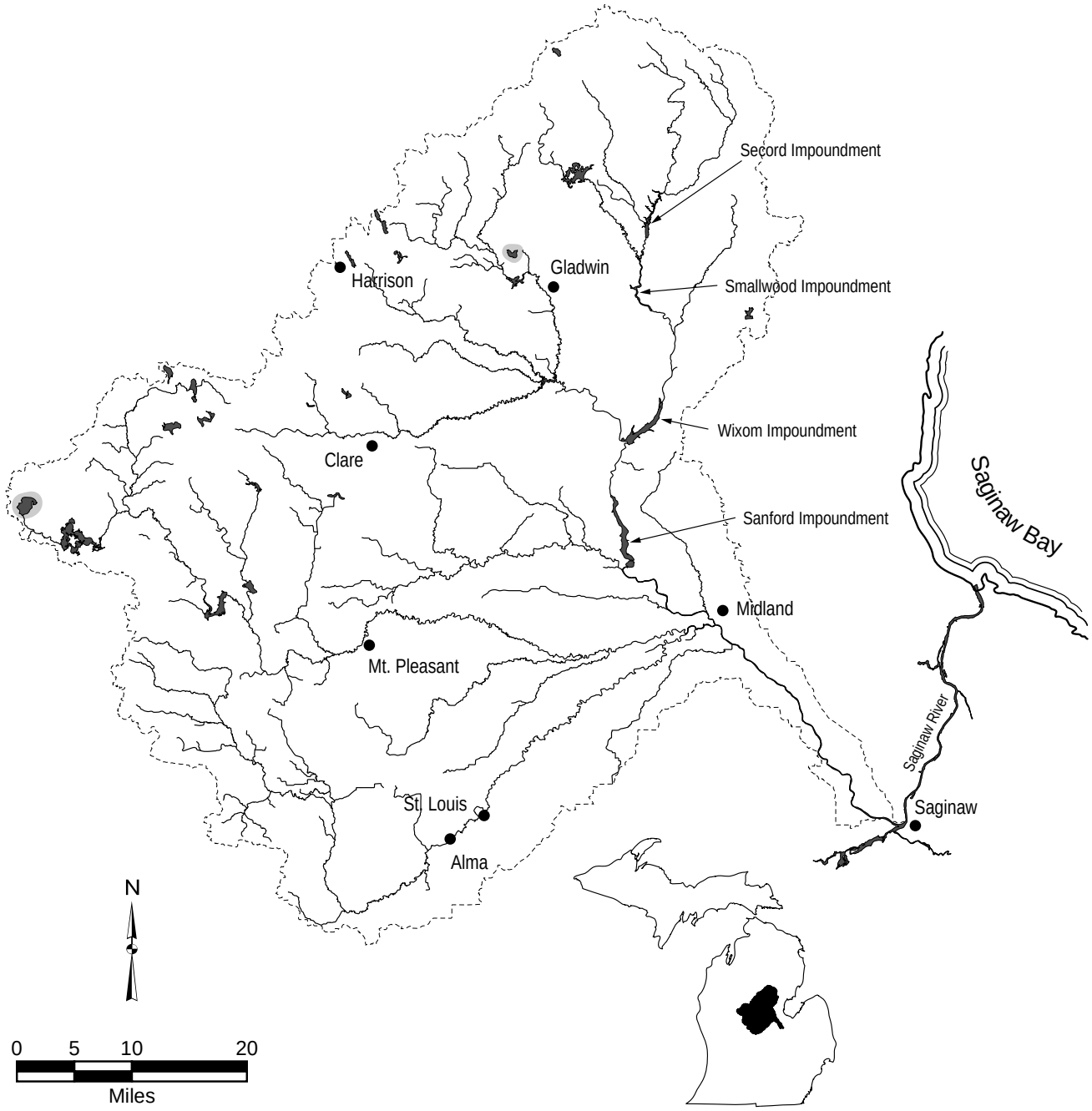
spawning - vegetation



Pugnose shiner *Notropis anogenus* – **special concern**

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

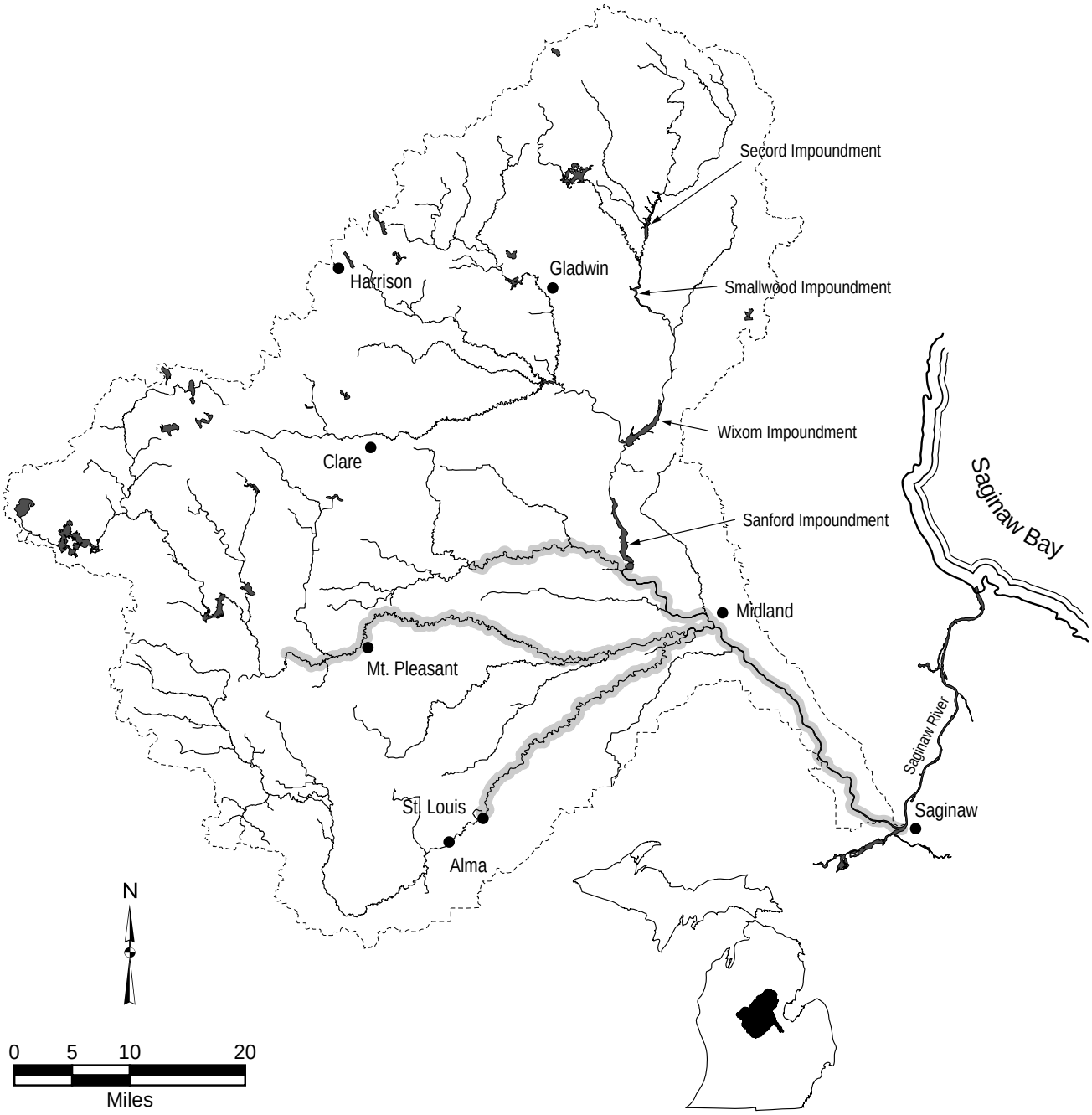


Emerald shiner *Notropis atherinoides*

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

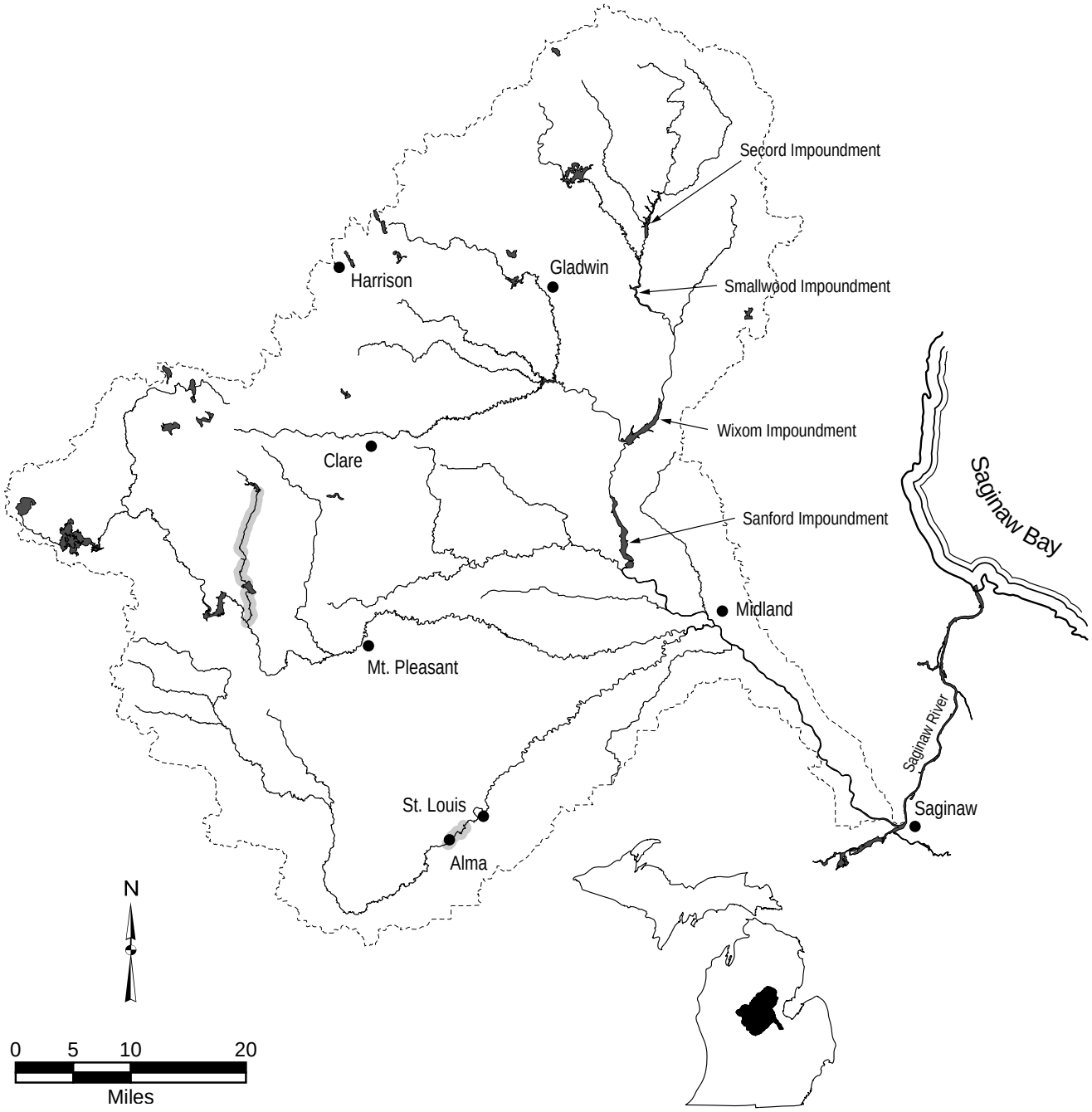
spawning - sand or firm mud substrate or gravel shoals



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

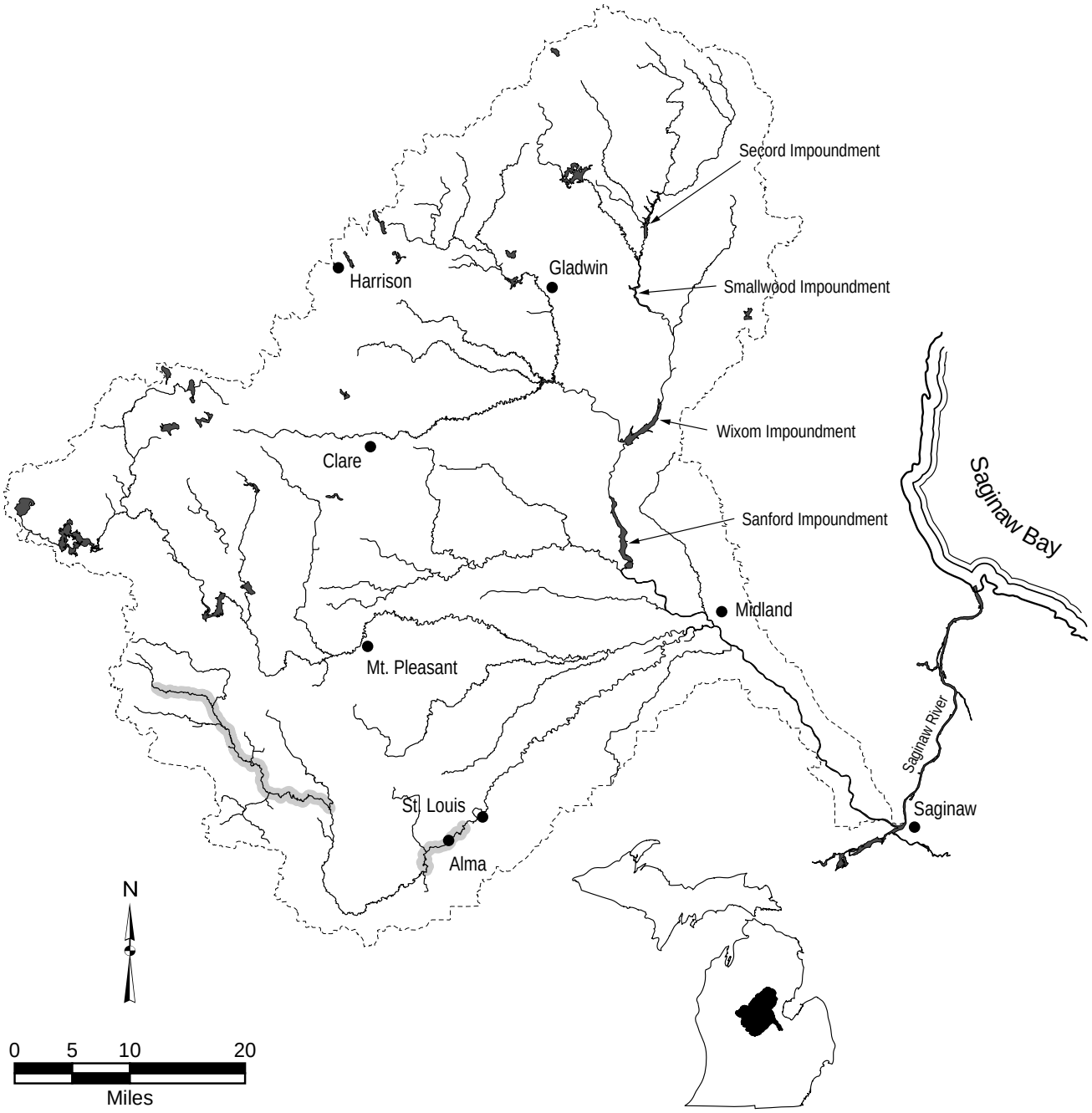


Blacknose shiner *Notropis heterolepis*

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

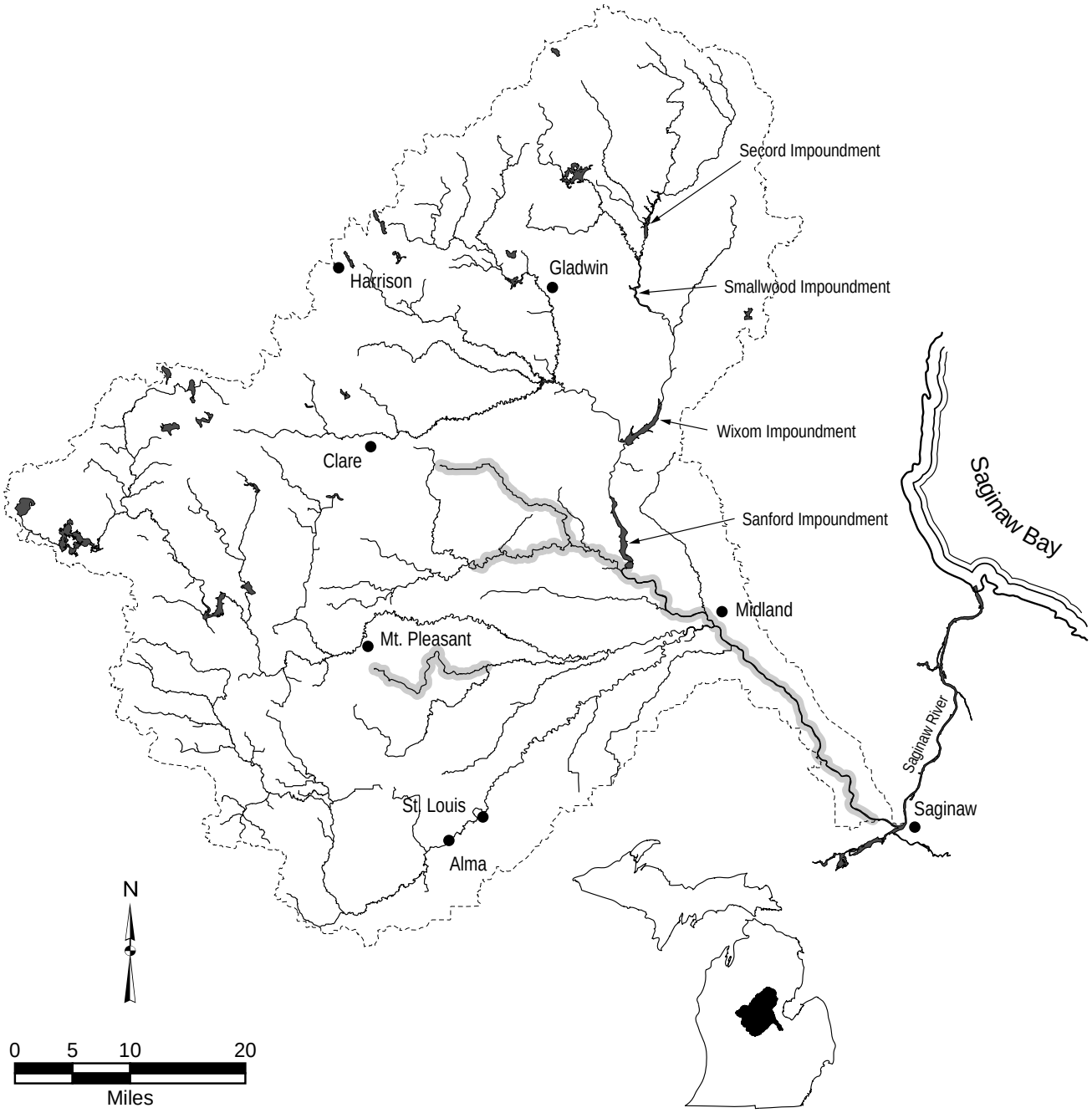


Spottail shiner *Notropis hudsonius*

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

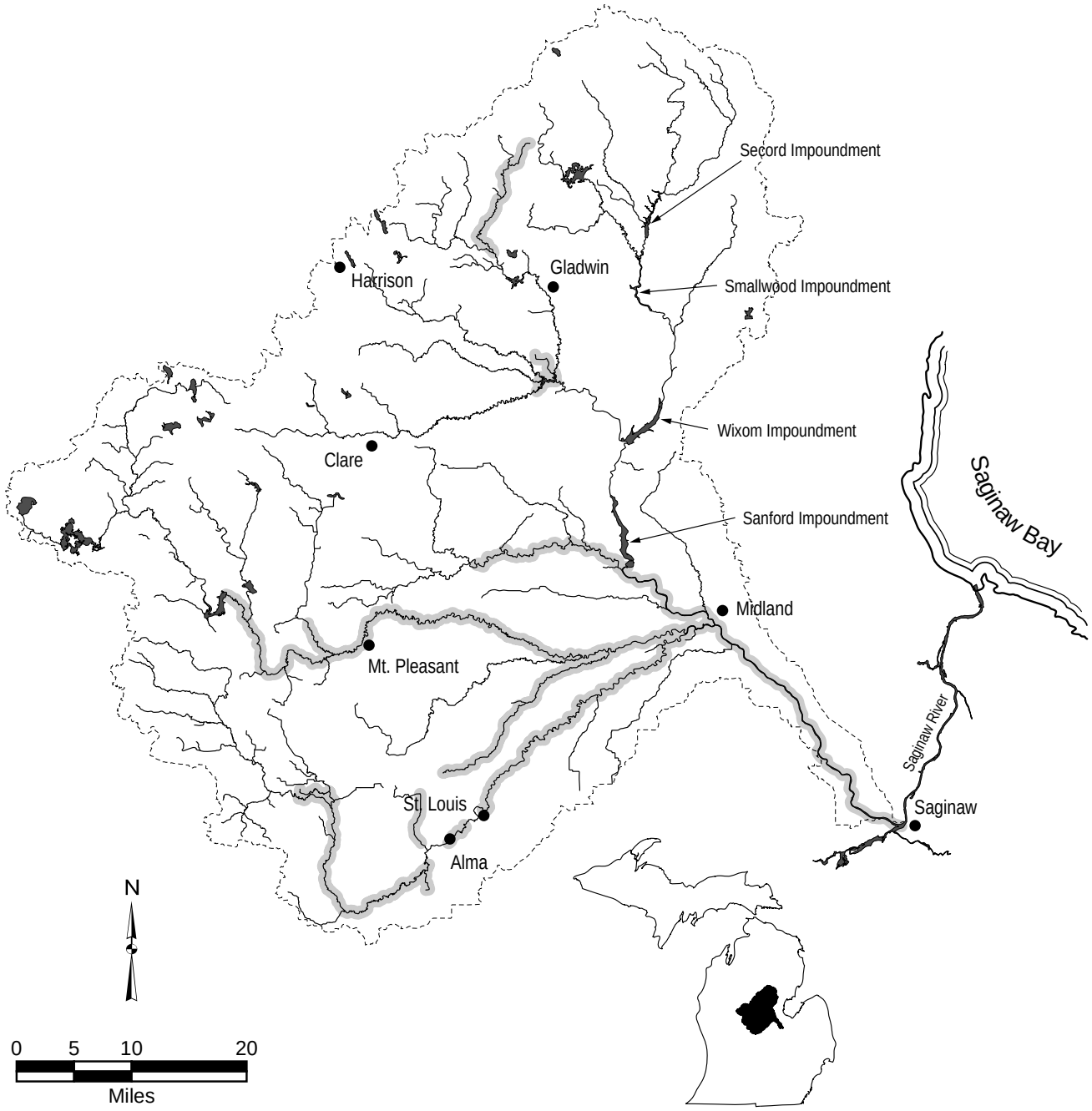


Rosyface shiner *Notropis rubellus*

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

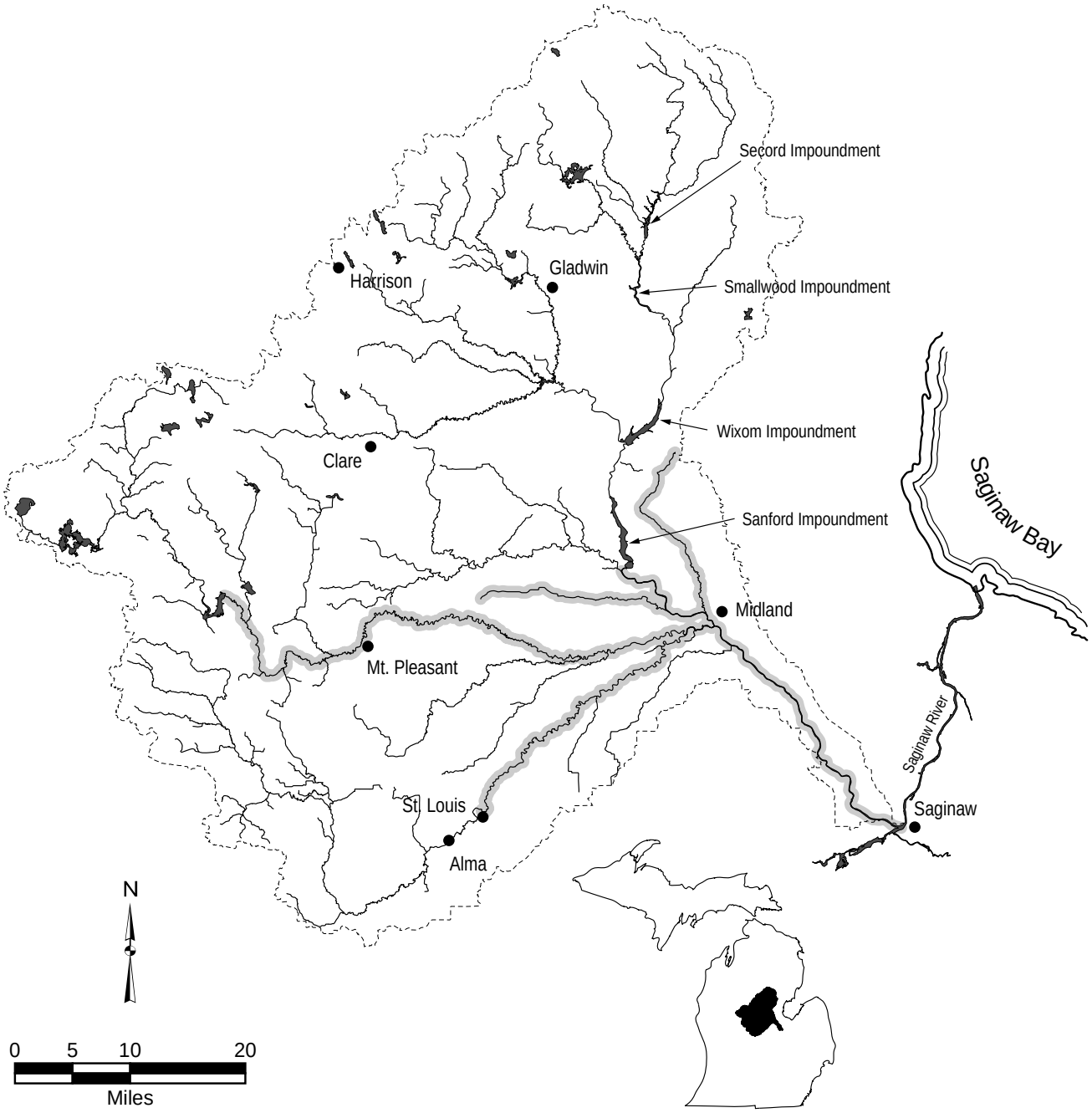


Sand shiner *Notropis stramineus*

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

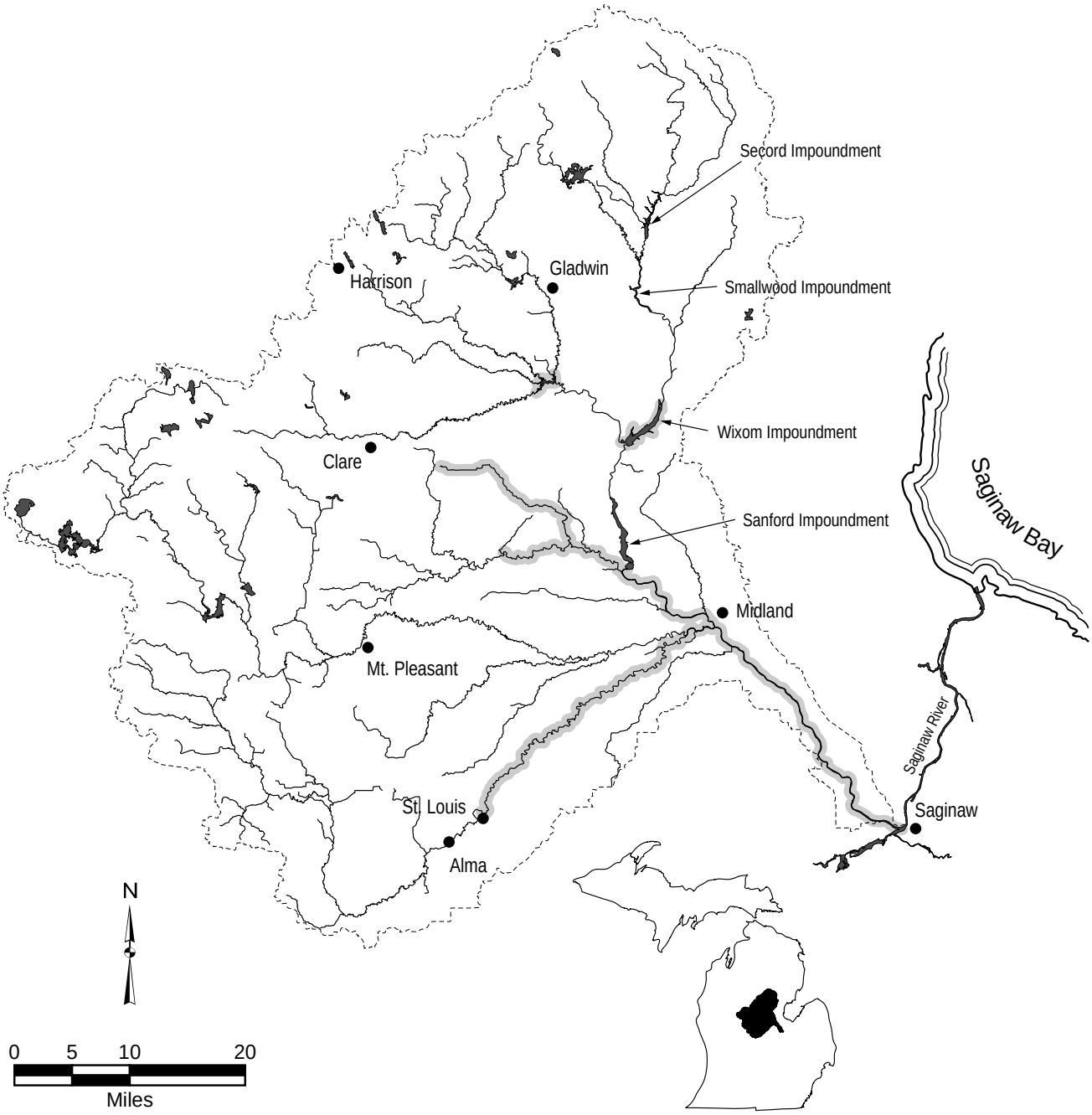


Mimic shiner *Notropis volucellus*

Habitat**:**

feeding - pools and backwater of streams, moderately weedy lakes and impoundments
- quiet or still water
- clear shallow water

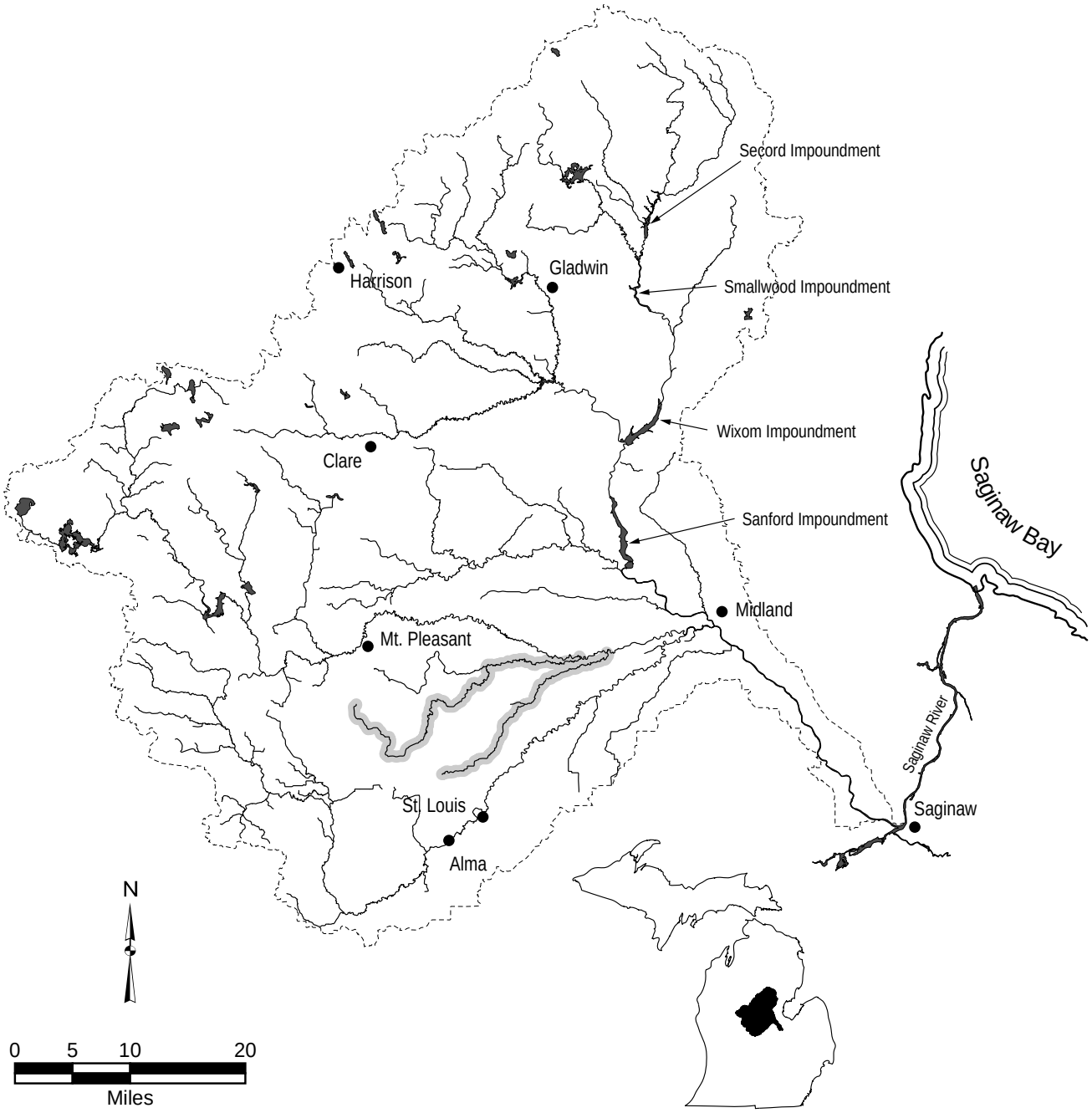
spawning - aquatic vegetation necessary



Suckermouth minnow *Phenacobius mirabilis*

Habitat:

feeding - riffles
- warm water
- low to moderate gradient, enough to keep gravel riffles free of silt
- turbid water rich in organic material
- absence of aquatic vegetation

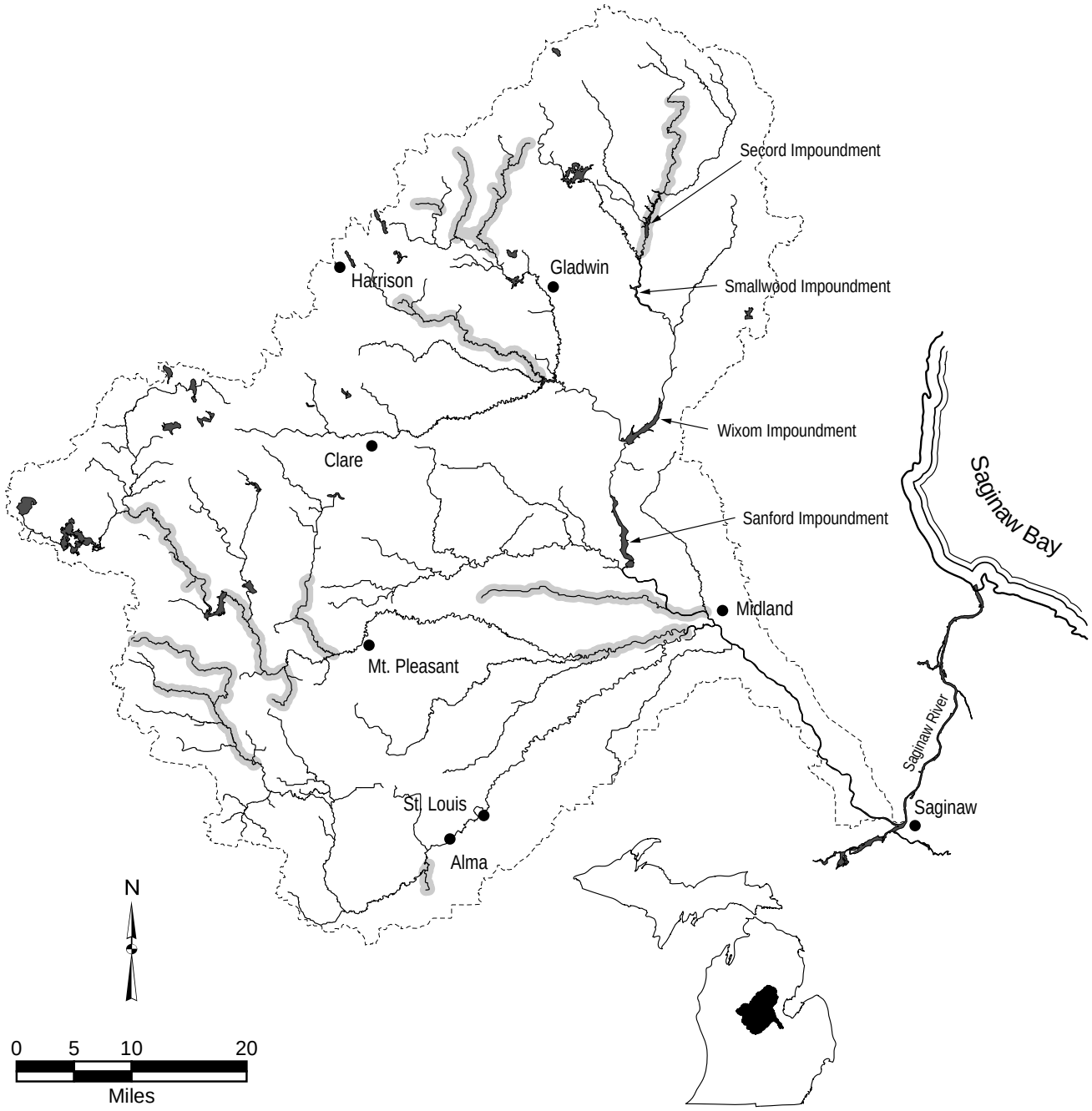


Northern redbelly dace *Phoxinus eos*

Habitat**:**

feeding - slow current
- in boggy lakes and streams
- detritus or silt substrate
- clear to slightly turbid water

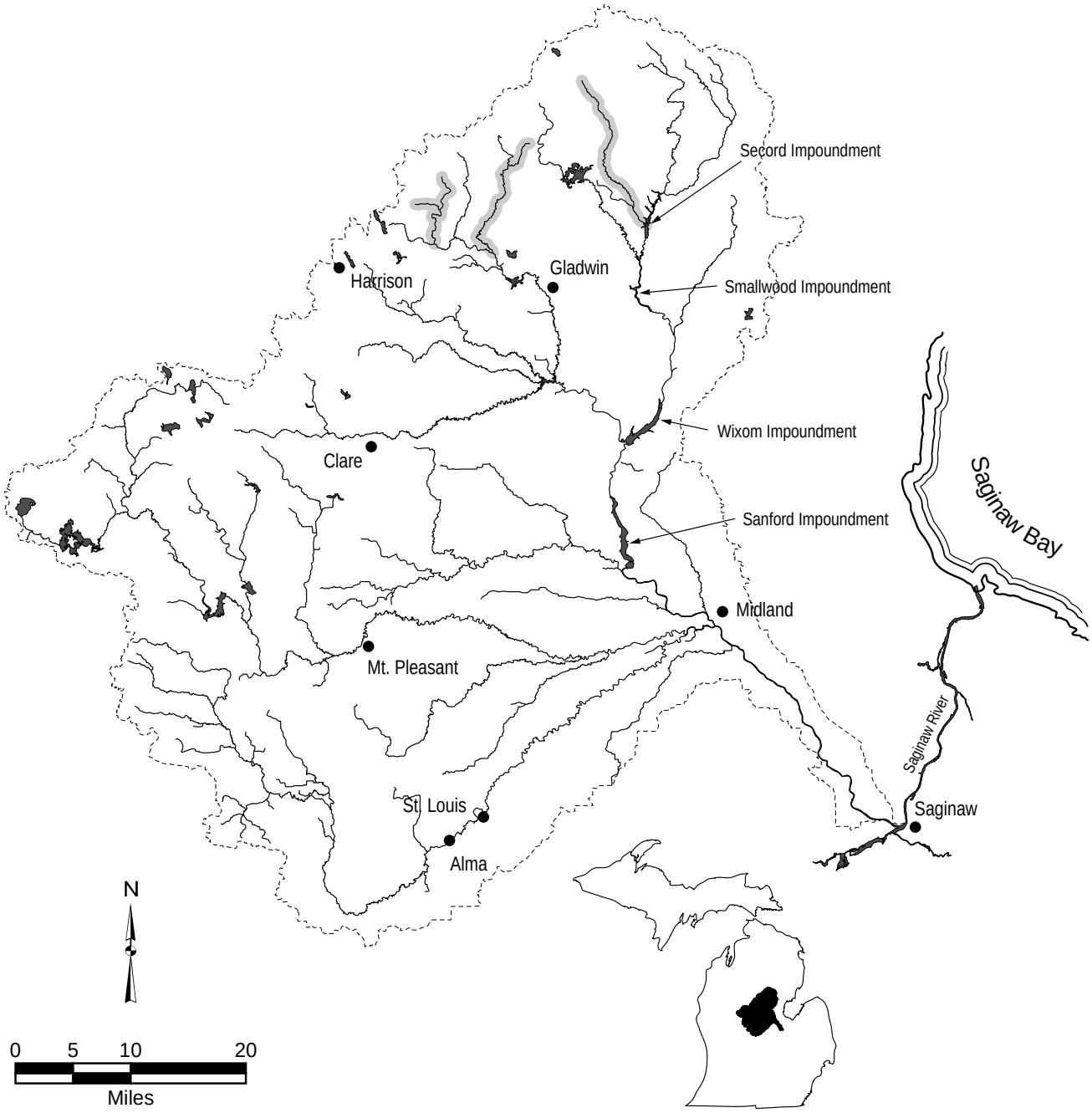
spawning - filamentous algae needed for egg deposition



Finescale dace *Phoxinus neogaeus*

Habitat:

feeding - cool bog lakes and streams
- neutral to slightly acidic waters
- various substrates

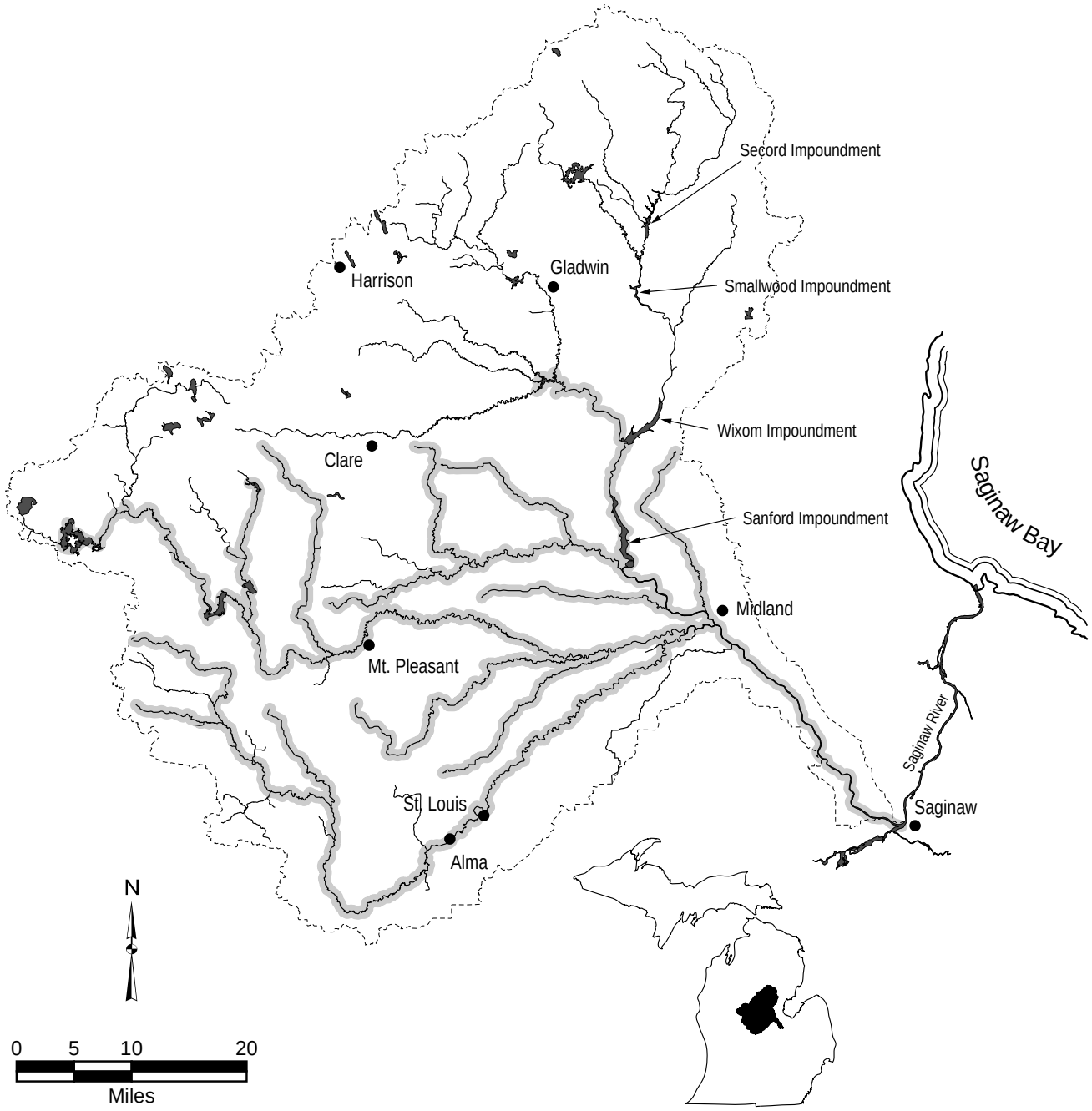


Bluntnose minnow *Pimephales notatus*

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

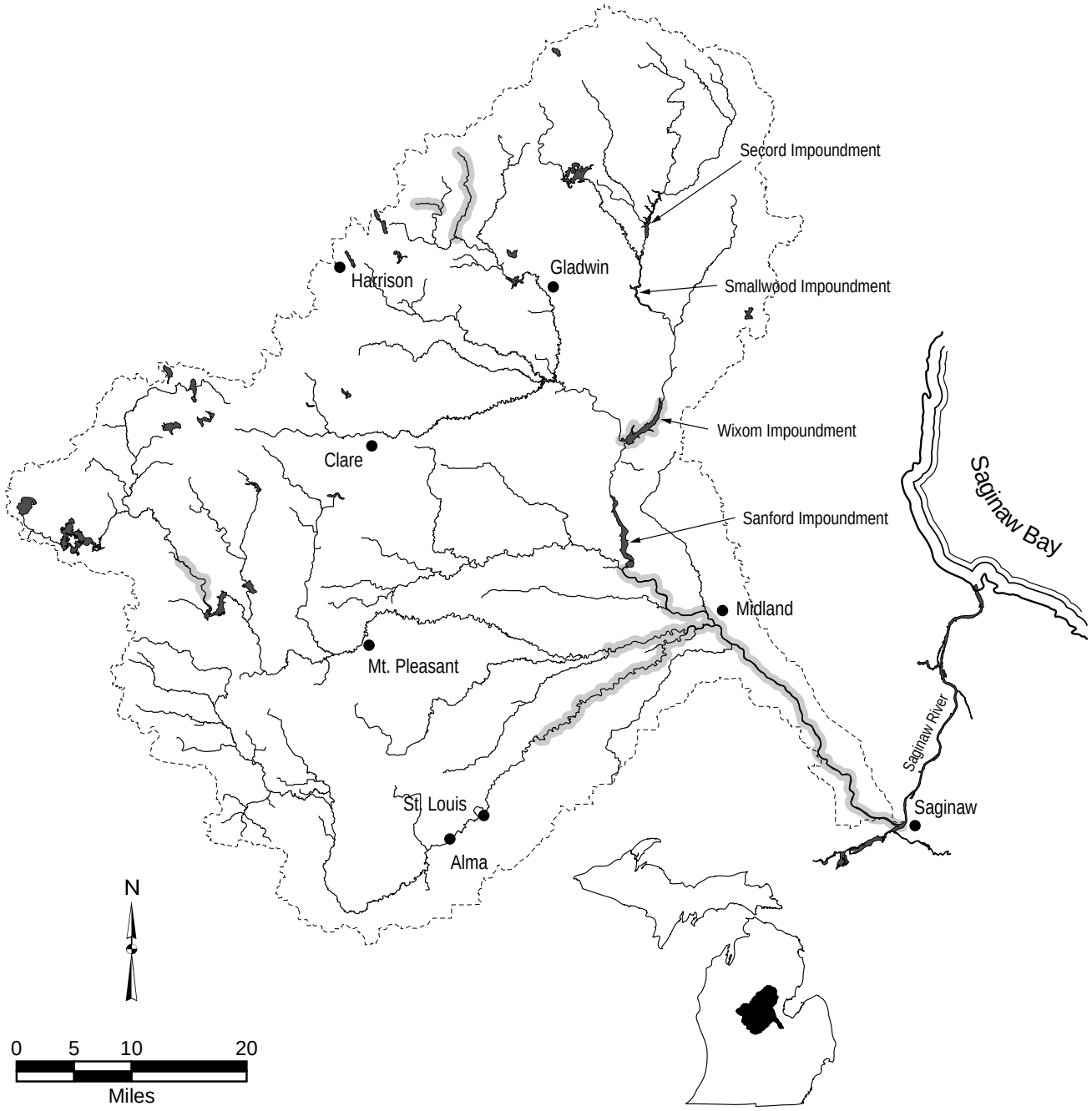


Fathead minnow *Pimephales promelas*

Habitat**:**

feeding - pools of small streams, lakes, and impoundments
- tolerant of turbidity, high temperatures, and low oxygen

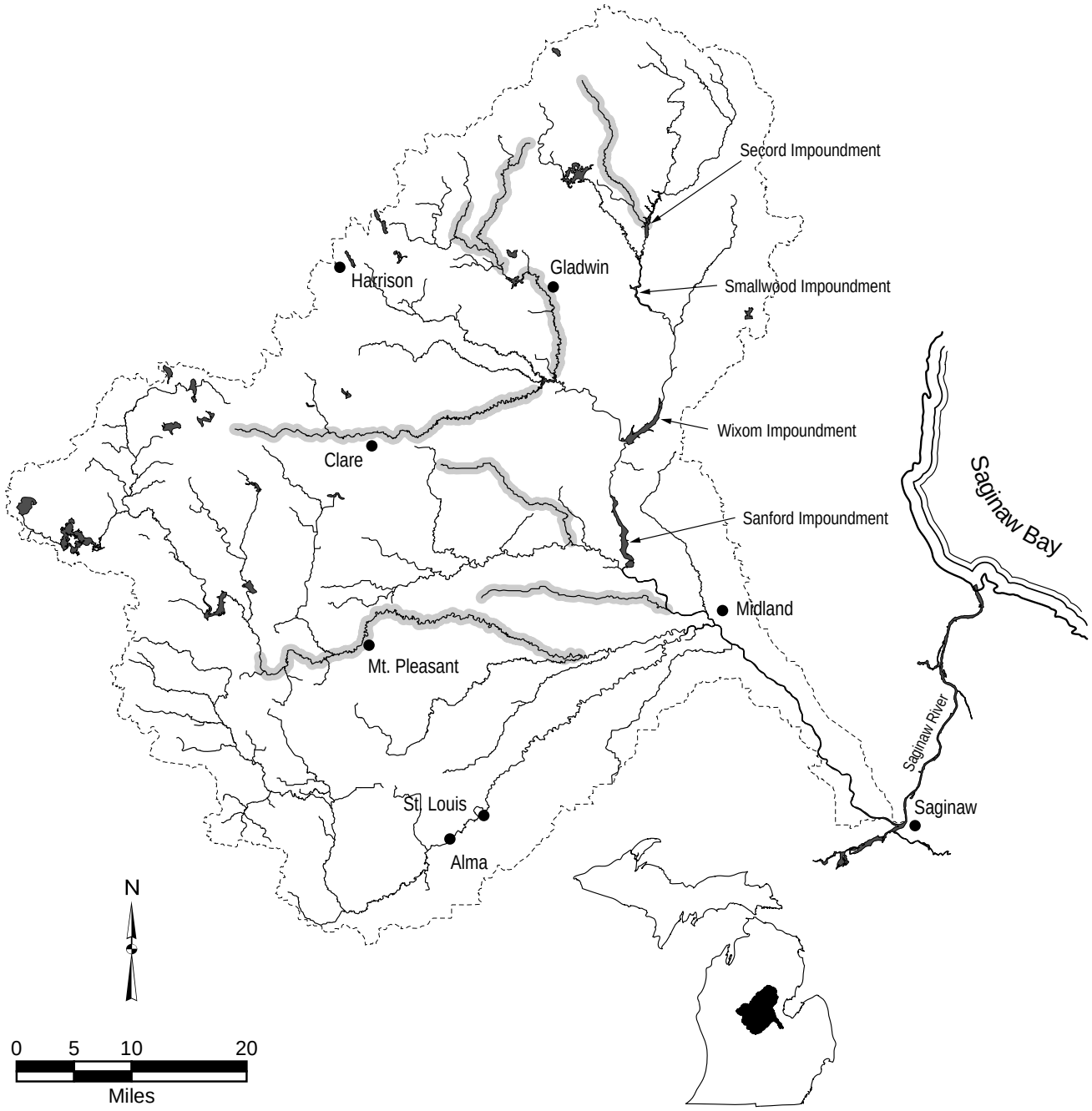
spawning - on underside of objects in water 2 to 3 feet deep
- prefer sand, marl, or gravel substrate



Longnose dace *Rhinichthys cataractae*

Habitat**:**

feeding - lakes and streams
- high gradient
- gravel or boulder substrate



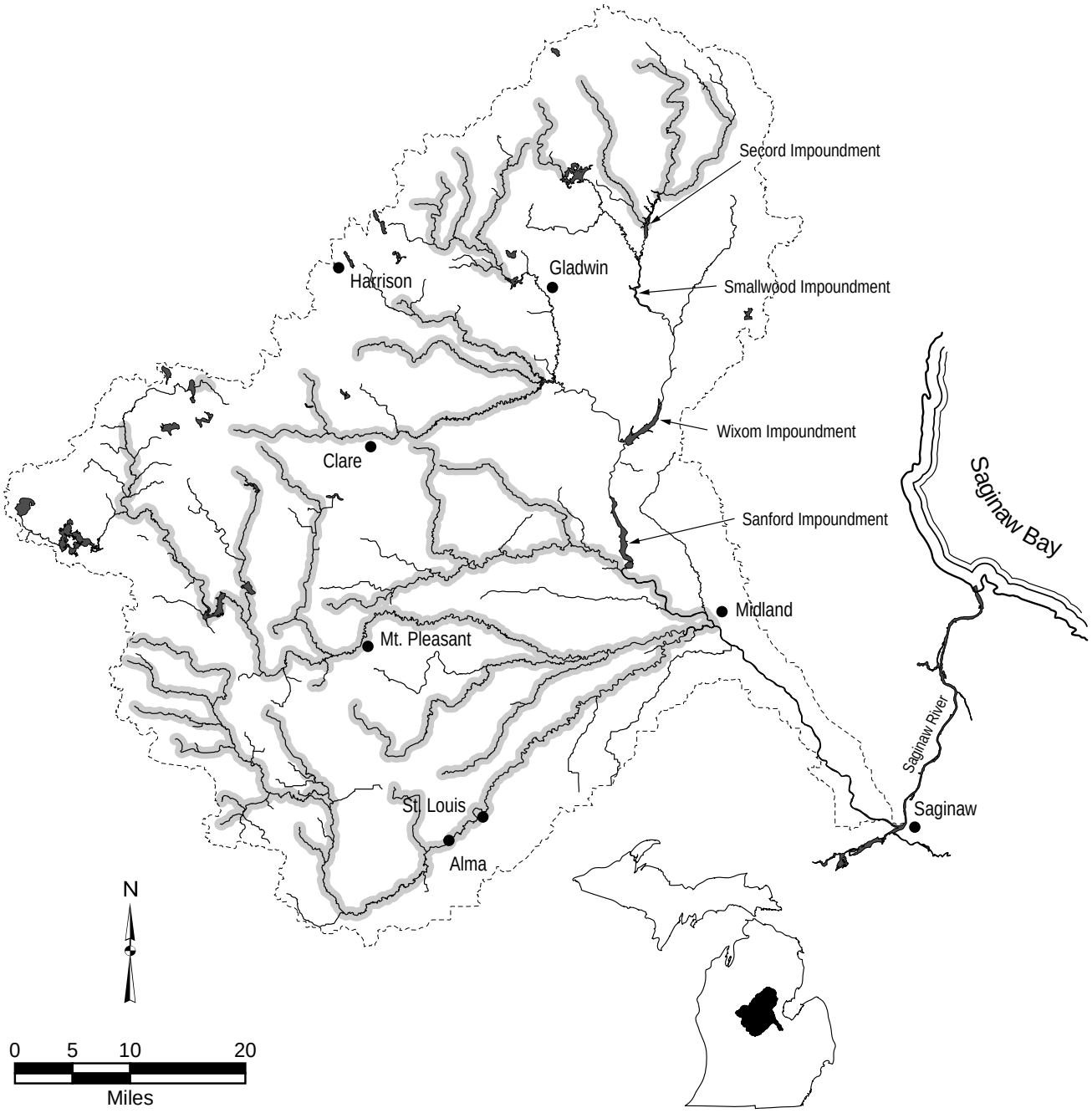
Western blacknose dace *Rhinichthys obtusus*

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



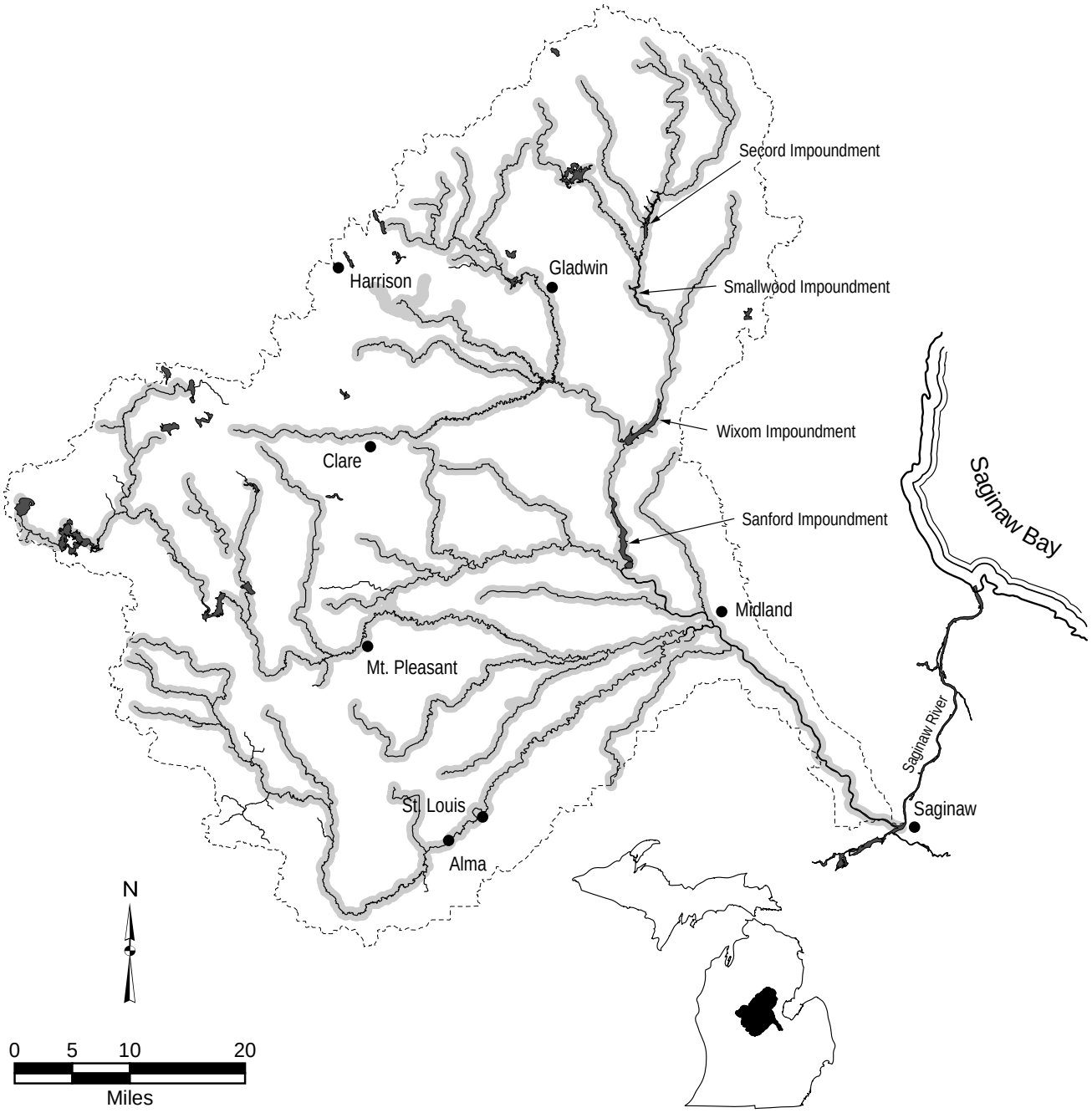
Creek chub *Semotilus atromaculatus*

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

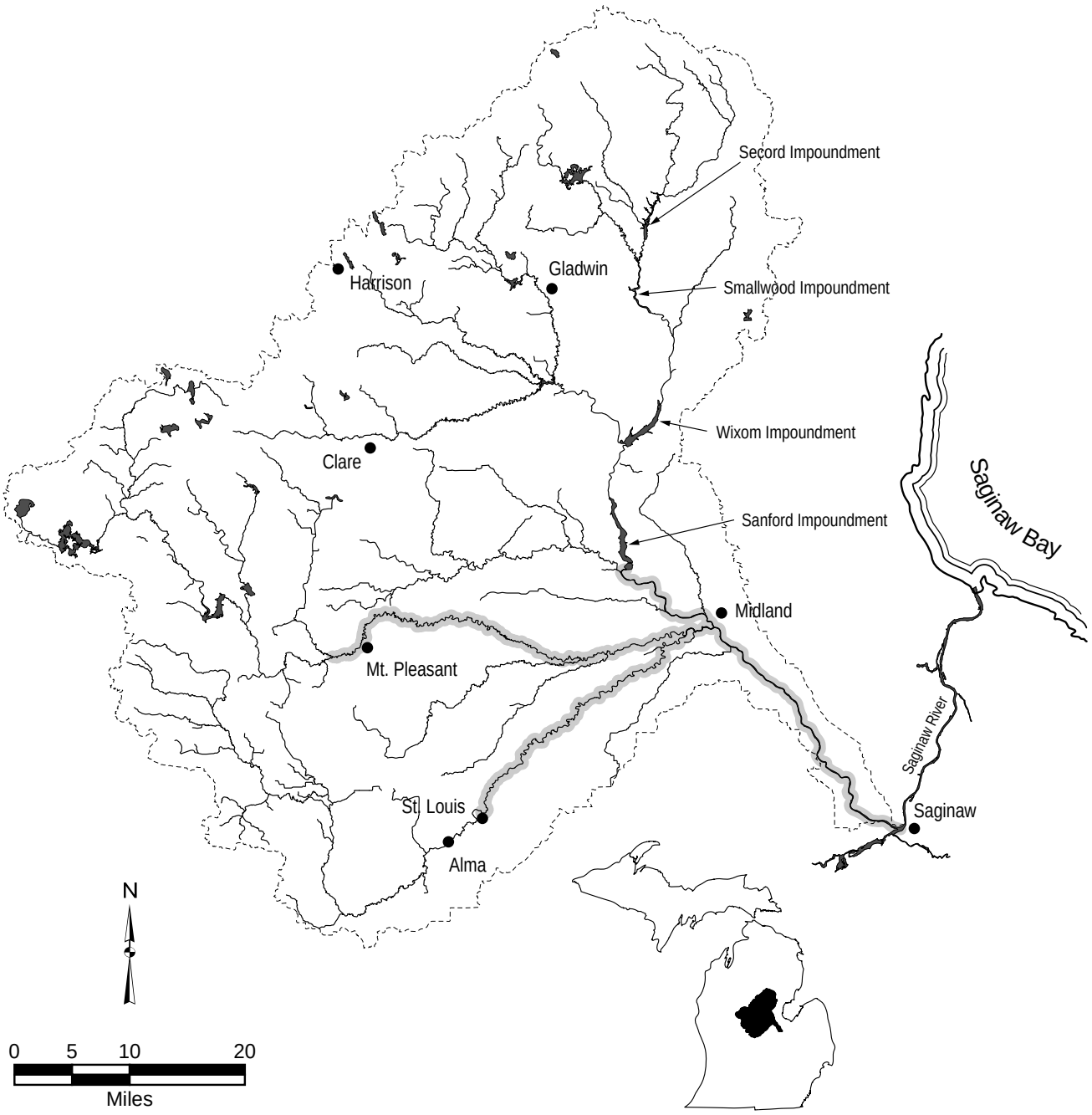


Quillback *Carpiodes cyprinus*

Habitat**:**

feeding - clear to turbid water
- Lake Huron
- sand, sandy gravel, sandy silt, or clay-silt substrate
- medium- to low-gradient rivers and streams; also lakes and sloughs

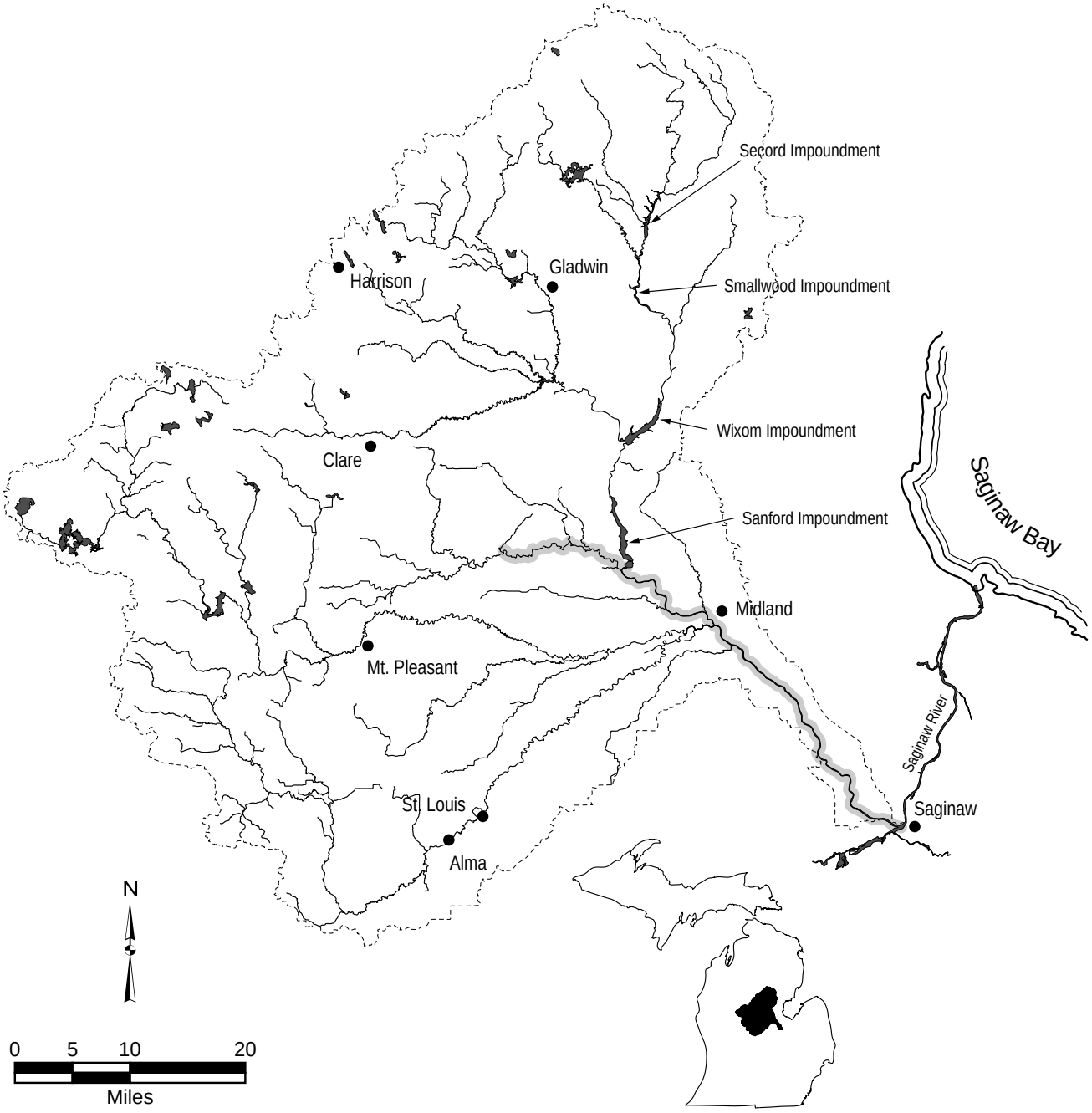
spawning - streams or overflow areas of bends of rivers or bays of lakes
- scatter eggs over sand or mud substrate



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