

# Interim Core Map Documentation for the White Catspaw (pearlymussel) (*Epioblasma perobliqua*) Entity ID 324

## Version 1

**Review Completed:** April 2026

**Core Map Developer:** Center for Biological Diversity<sup>1</sup>

## Review Notes

The developers created this core map using the U.S. Environmental Protection Agency's (EPA) process available at: <https://www.epa.gov/endangered-species/process-epa-uses-develop-core-maps-pesticide-use-limitation-areas>. EPA reviewed the draft interim map and documentation and evaluated if: (1) the map and documentation are consistent with the agency's process; (2) areas included or excluded from the interim core map are consistent with the biology, habitat, and/or recovery needs of the species; (3) data sources are documented and appropriate; and (4) the GIS data and mapping process are consistent with the stated intention of the developer. EPA agrees that this map is a reasonable depiction of core areas for this species based on the available data and was consistent with the agency's mapping process. This documentation was not prepared by EPA, and EPA may have edited this documentation for clarity or other purposes. Some views in this documentation may not necessarily be the views of EPA or its staff.

The core map developed for this species is considered interim and can be used to develop pesticide use limitation areas (PULAs). This core map incorporates information developed by the U.S. Fish and Wildlife Service (FWS) and made available to the public; however, the core map has not been formally reviewed by FWS. This interim core map may be revised in the future to incorporate expert feedback from FWS.

This core map does not replace or revise any range or designated critical habitat developed by FWS.

## Species Summary

The white catspaw (pearlymussel) (*Epioblasma perobliqua*; Entity ID 324) is an endangered mussel. There is no designated critical habitat for this species. Preferred habitats include small to medium-sized streams, with areas of coarse gravel and sand substrate within fast flowing riffles and runs. The white catspaw is currently known to exist in only a 3-mile portion of Fish Creek in Williams County in northwest Ohio. Loss of habitat, reduction or elimination of host fish, or other unknown factors may be limiting the population. Additional information is provided in **Appendix 1**.

## Description of Core Map

The core map for the white catspaw is based on species range, which includes a 3-mile segment of Fish Creek in northwest Ohio. The species range is highly refined and only includes the known/presumed occupied creek. There is no designated critical habitat. **Figure 1** depicts the interim core map for the

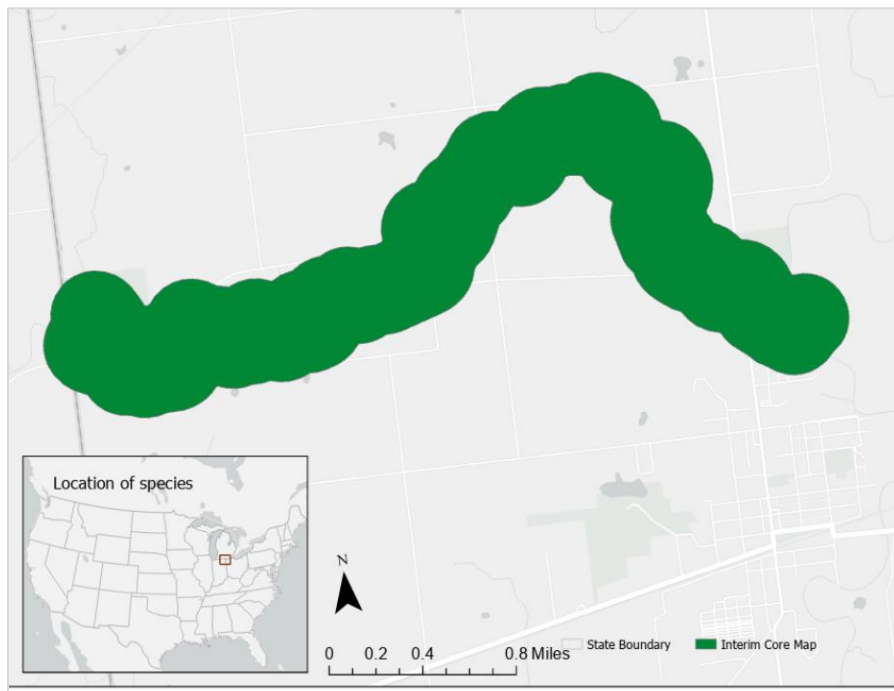
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<sup>1</sup> CBD sent EPA the core map for this species before EPA released its mapping process document and example documentation. EPA supplemented the documentation and supporting analysis for consistency with EPA's most recent documentation examples made available after CBD developed this core map.

white catspaw. The core map represents approximately 1,174 acres along the 3-mile segment of Fish Creek in northwest Ohio.

The white catspaw preferred habitats include small to medium-sized streams, with areas of coarse gravel and sand substrate within fast flowing riffles and runs. Landcover categories within the core map area are included in **Table 1**. Landcover is predominantly cultivated crops and woody wetlands which are generally consistent with the habitat of this species.

The core map developed for the white catspaw is considered interim. This core map will be used to develop pesticide use limitation areas (PULAs) that include the white catspaw. This core map incorporates information developed by FWS and made available to the public; however, the core map has not been formally reviewed by FWS. This interim core map may be revised in the future to incorporate expert feedback from FWS. This interim core map has a “none” best professional classification because it consists of the species’ range without additions or subtractions. There is confidence in the core map because the species’ range is highly refined, represents areas important for this species’ conservation. This core map does not replace or revise any range or designated critical habitat developed by FWS for this species.



**Figure 1. Interim core map for the white catspaw. The total acreage of the interim core map is approximately 1174 acres.**

**Table 1. Percentage of Interim Core Map Represented by NLCD<sup>2</sup> Land Covers and Associated Example Pesticide Use Sites/Types.**

Example pesticide use sites/types	NLCD Class/Value	% Area
Forestry	Deciduous Forest (41)	15
Forestry	Evergreen Forest (42)	0
Forestry	Mixed Forest (43)	0
Agriculture	Pasture/Hay (81)	20
Agriculture	Cultivated Crops (82)	36
Mosquito adulticide, residential	Open space, developed (21)	5
Mosquito adulticide, residential	Developed, Low intensity (22)	2
Mosquito adulticide, residential	Developed, Medium intensity (23)	1
Mosquito adulticide, residential	Developed, High intensity (24)	0
Invasive species control	Woody Wetlands (90)	21
Invasive species control	Emergent Herbaceous Wetlands (95)	0
Invasive species control	Open water (11)	0
Invasive species control	Grassland/herbaceous (71)	0
Invasive species control	Scrub/shrub (52)	0
Invasive species control	Barren land (rock/sand/clay; 31)	0
<b>Total Acres</b>	<b>Interim Core Map Acres</b>	<b>~ 1,174</b>

## Evaluation of Known Location Information

There are four datasets with known location information for this species:

- Descriptions of locations provided by FWS
- Occurrence locations included in iNaturalist
- Occurrence locations included in the Global Biodiversity Information Facility (GBIF)
- Occurrence locations included in NatureServe

The developer evaluated these four sets of data to inform or support the core map. FWS provided the most refined descriptions of the occurrence information and confirmed that known locations of extant populations are located within the range. iNaturalist had one research grade observation. A GBIF search returned no occurrence data. NatureServe included 2 documented areas, all of which were consistent with the location of the species range identified by FWS given the data resolution. **Appendix 1** includes more information on the available known location information.

<sup>2</sup> Dewitz, J., 2023, National Land Cover Database (NLCD) 2021 Products: U.S. Geological Survey data release, <https://doi.org/10.5066/P9JZ7AO3>

## Approach Used to Create Core Map

The developer compiled available information for the white catspaw from FWS. The information compiled for the white catspaw is included in **Appendix 1**. Influential information that impacted the development of the core map included:

- The species range is refined, following the creek where the species is known to occur.
- Occurrence data are generally consistent with the species range location.

The developer used the compiled information to identify the core map type, and compared known location data to the range and found that these known locations are consistent with the species range given the resolution of the data. Based on the refined range, the developer selected the range to use as the species core map.

## Discussion of Approaches and Data that were Considered but not Included in Core Map

Alternative approaches and data not already described in this documentation were not explored for the development of this interim core map.

## Appendix 1. Information Compiled for the Species

### 1. Recent FWS Documents

- FWS, “Recovery Plan for the White Catspaw Pearly Mussel,” 1990, [https://ecos.fws.gov/docs/recovery\\_plan/900125.pdf](https://ecos.fws.gov/docs/recovery_plan/900125.pdf)
- FWS, 5-YEAR REVIEW White Catspaw Pearly Mussel, 2009 [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/1523.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/1523.pdf)
- FWS, “5-YEAR REVIEW White Catspaw Pearly Mussel (*Epioblasma obliquata perobliqua*),” 2021, [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/3232.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/3232.pdf)

### 2. Background information on Species

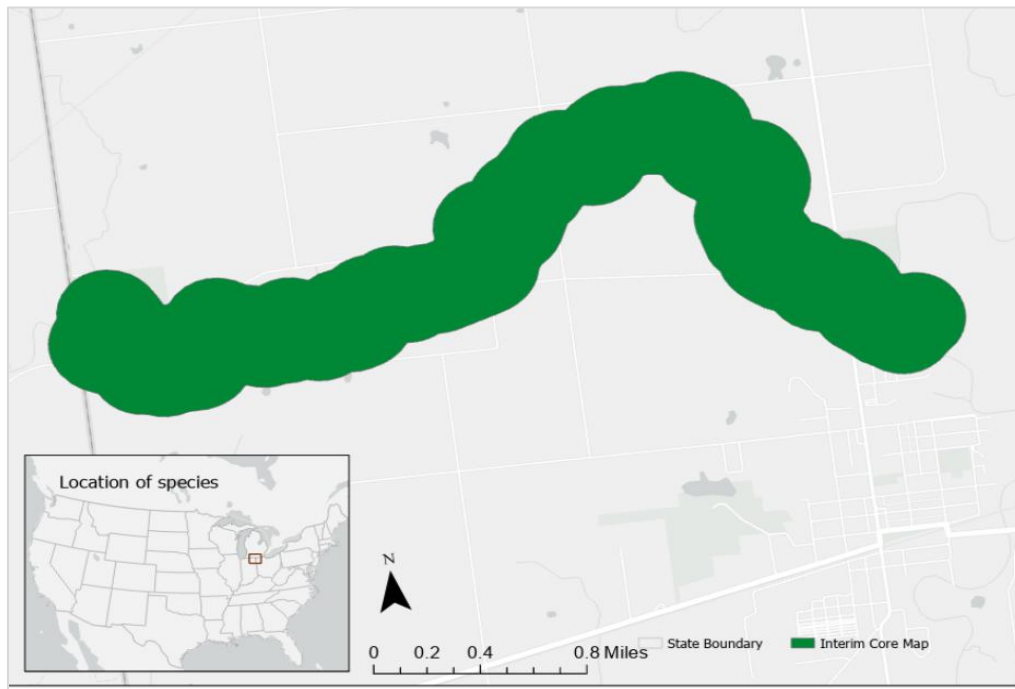
- **Status:** Federally listed as endangered in 1976
- **Taxonomy:** Kingdom: Animalia Phylum: Mollusca, Class: Bivalvia, Order: Unionida, Family: Unionidae, Genus: Epioblasma, Species: Epioblasma perobliqua
- **Resiliency** - Low  
See Known Locations section of this document for population counts.
- **Redundancy** - Low
- **Representation** - Low  
*“This mussel is believed to exist only in a three mile portion of Fish Creek in Ohio. Since 1970 only three living specimens and three recently deceased individuals have been collected. The low population level makes the mussel extremely vulnerable to extinction due to deteriorating water quality from contaminants, as well as habitat destruction due to increased siltation, stream channelization, and gravel dredging operations.”* (FWS Recovery Plan 1990, 44).
- **Habitat Description**  
*“Small to medium-sized streams, with areas of coarse gravel and sand substrate within fast flowing riffles and runs, are believed to be the preferred habitats”* (FWS Recovery Plan 1990, 4).
- **Relevant Life History Information:**  
“Loss of habitat, reduction or elimination of host fish, or other unknown factors may be limiting the population of this little-studied mussel”. FWS Recovery Plan 1990). Host fish is not currently known, but is likely a darter or sculpin.
- **Overall Threat Statement**  
*“Channelization for flood control and other forms of substrate disturbance (e.g. gravel dredging operations, channel maintenance dredging, instream construction, and the removal of logs and other obstructions to flow) have contributed substantially to the decline of unionid mollusks.”* (FWS Recovery Plan 1990, pg. 17)
- **Relevant Pesticide Use Sites**  
“Agricultural and urban uses within the occupied watershed.” Pesticides are mentioned in the 1990 Recovery Plan as an environmental stressor that should be monitored. Also, general pollutants are recognized as a threat in the Recovery Plan.
- **Delisting Criteria**  
“Delisting to threatened status can occur when:
  - 1) the population in Fish Creek is shown to be sufficiently large and diverse to adapt to natural habitat changes,
  - 2) three similar additional populations are discovered or established, and

3) the mussel, its habitat, and its host(s) are protected from any foreseeable threats which would impede survival”, FWS Recovery Plan 1990, pg. 4).

- **Recovery Actions:** (FWS Recovery Plan 1990, pg. 4).
  1. Work with agencies and landowners to identify projects and land use practices deleterious to the mussel and implement less damaging alternatives. Land acquisition and management agreements are likely.
  2. Monitor the Fish Creek population and its habitat
  3. Survey other streams locate additional populations
  4. Determine preferred habitat characteristics and the fish host for the glochidia
  5. Establish new populations, if none are discovered
  6. Develop an educational program to alert the public value of endangered mussels

### 3. Description of Species Range

“The White Catspaw is currently known to exist in only a 3-mile portion of Fish Creek in Williams County in northwest Ohio.” (Five Year Review 2021, pg. 2).



**Figure A1-1. depicts the FWS range map of the white catspaw. This range was last updated 1/5/2024 and has an area of approximately 1,174 acres.**

### 4. Critical Habitat

There is no designated critical habitat for this species.

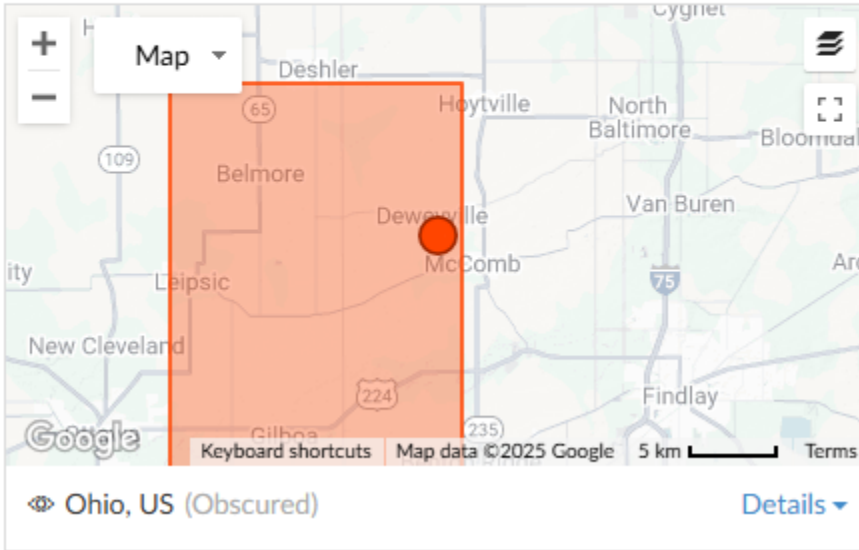
### 5. Known Locations

- Occurrences Described in FWS Documents  
“The White Catspaw is currently known to exist in only a 3-mile portion of Fish Creek in Williams County in northwest Ohio.” (Five Year Review 2021, pg. 2).
- Occurrences Described in [iNaturalist](#): searched 02-27-2025.

- iNaturalist includes **1** research grade observation. Map is identified as obscured but identified location is not consistent (*i.e.*, much farther east) than the range;
- <https://www.inaturalist.org/observations/237670350>
- **Figure A1-2** depicts the location of this observation.

Observed:  
👁️ August 2024

Submitted:  
👁️ August 2024



**Figure A1-2. Occurrence available in iNaturalist.**

- No occurrences described in GBIF: searched 02-27-2025.  
<https://www.gbif.org/species/search?q=white%20cat%27s%20paw>
- Occurrences Described in NatureServe: searched 02-27-2025.  
[https://explorer.natureserve.org/Taxon/ELEMENT\\_GLOBAL.2.108924/Epioblasma\\_perobliqua](https://explorer.natureserve.org/Taxon/ELEMENT_GLOBAL.2.108924/Epioblasma_perobliqua)  
NatureServe has a few documented locations consistent with the range (northwest Ohio boarding northeast Indiana).