USACE Natural Resource Management

Reptiles & Amphibians

Ozark Hellbender

REASONS FOR LISTING STATUS: Populations of the Ozark Hellbender have declined due to an array of reasons. Habitat has been lost as a result of impoundments, ore and gravel mining, sedimentation, and runoff which has degraded habitat past the point of usability. Chytrid fungus has been found in some Missouri populations and has proven fatal in many amphibian species. In addition to habitat loss and degradation, the rocks used by hellbenders for cover and nesting are often disturbed by human recreational activities.

In 2004 the U.S. Fish and Wildlife Service was petitioned to list this subspecies as Endangered under the Endangered Species Act. In 2011, the USFWS finalized the hellbender's listing as Endangered. (USFWS)

MANAGEMENT AND PROTECTION: Since its listing, observations of Ozark hellbender larvae in the wild and captivity have greatly increased understanding of larval movement and ecology. Genetic analysis has also been conducted, which has indicated that there are at least 3 genetic lineages of this subspecies.

Captive breeding has been conducted since 2011. According the 2020 5-Year Review published by USFWS, over 7,000 larvae and juveniles have been released due to breeding and head-starting programs. Population monitoring and surveying for new populations are key components of the hellbender's recover strategy. (USFWS)

HABITAT NEEDS: The Ozark hellbender is an entirely aquatic amphibian. (USFWS)

- Occupied waters for the subspecies include cool, clear streams and rivers with many large rocks.
- Because the species breathes through its skin, it is critical that water quality is maintained. Streams must be fast flowing in order to ensure adequate oxygen levels.
- Larvae and small hellbenders utilize large rocks and small stones in gravel beds for shelter and adults spend most of their life under large, flat rocks. Larvae appear to use the same habitat as adults. (USFWS)

FAST FACTS

Description: This subspecies has dark dorsal blotching and noticeably pronounced chin mottling. This hellbender has a smaller overall body size than the other subspecies. Additionally, the gill-like openings are considerably reduced compared to the other subspecies. Adults can grow up to 2 feet long. The body is flattened to allow for movement in fast, flowing streams. (USFWS)

Photos: U.S. Fish and Wildlife Service & Missouri Department of Conservation

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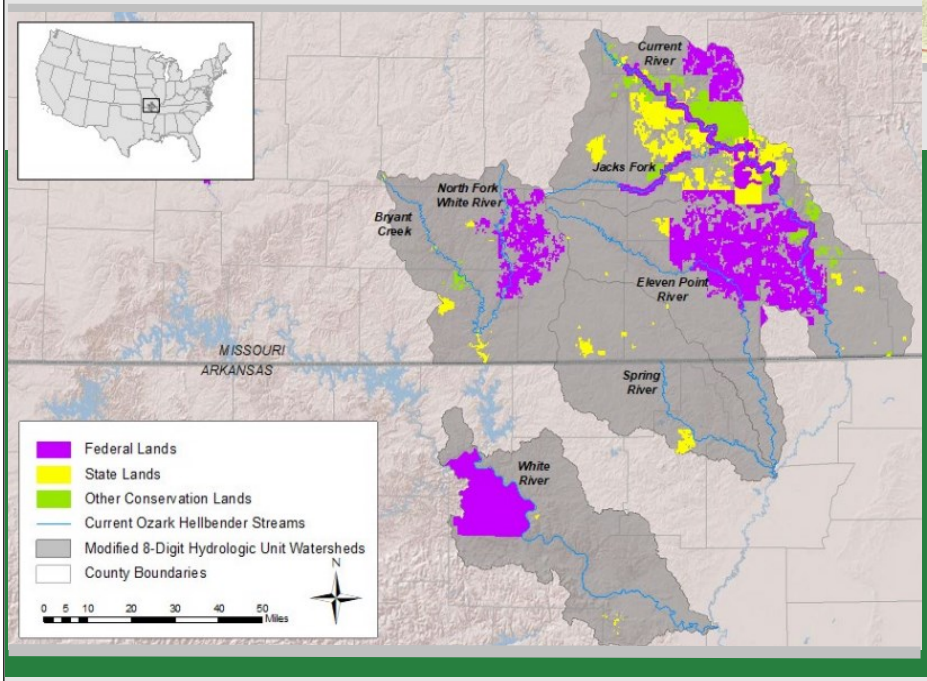
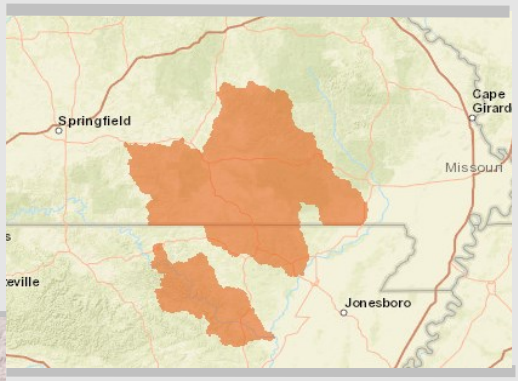
USACE ROLE: This subspecies has a restricted range in southern Missouri and northeastern Arkansas. Due to its restricted nature, only a handful of USACE's projects intersect the range of the Ozark hellbender. According to the 2019 NRM Assessment, Little Rock District's Norfork Lake is noted to have rare occurrences of the Ozark hellbender.

Map, below: USFWS map of federal, state, and conservation land ownership within presumed Ozark hellbender streams.

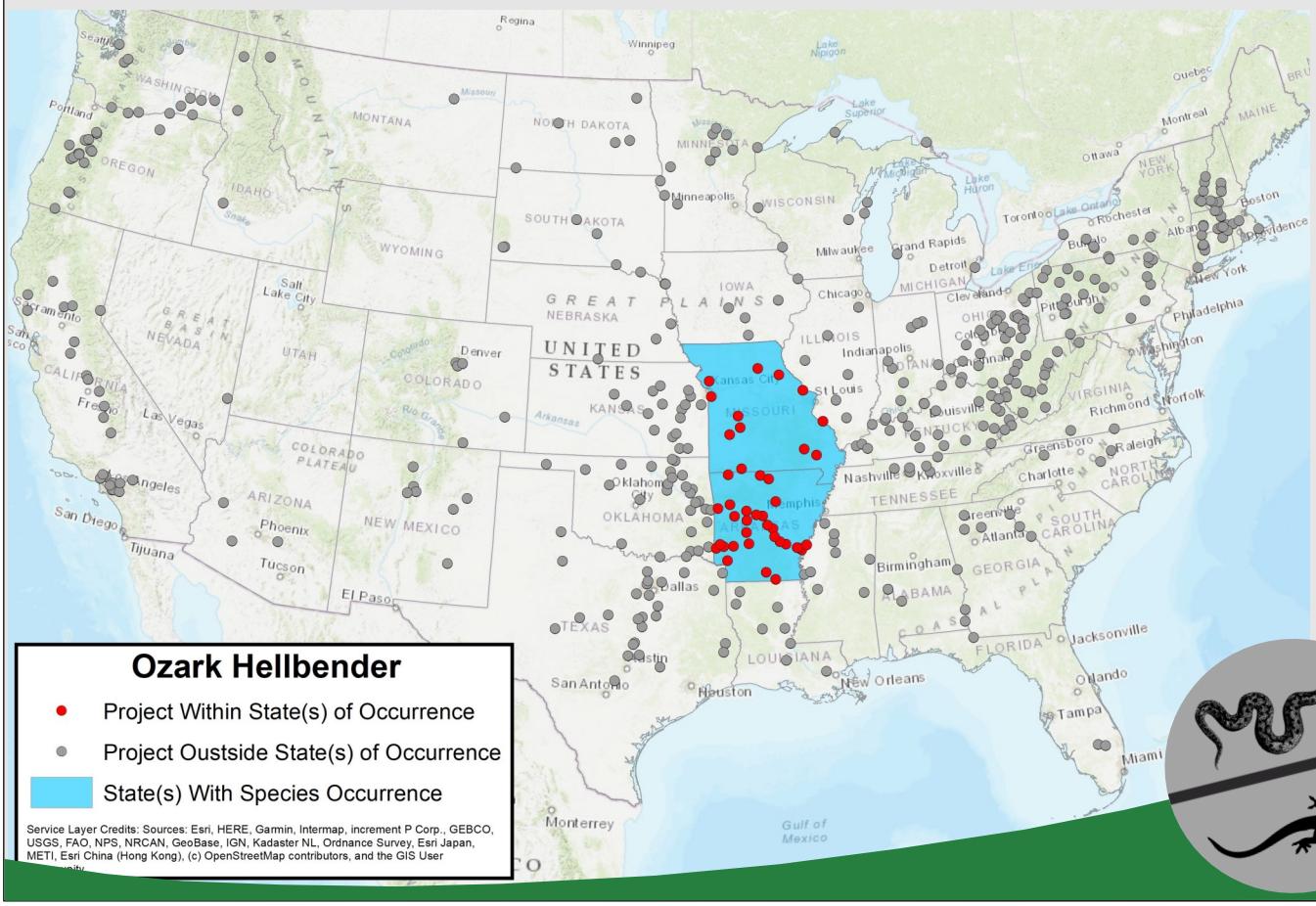




Map, a: Ozark Hellbender's range as depicted in USFWS's Environmental Conservation Online System

WHAT IS USACE NRM DOING:

According to the Engineer Research and Development Center's Threatened and Endangered Species Cost Estimates database, nearly $18,000 has been expended on the Ozark hellbender since 2012. Of that sum, over $5,000 has been spent by the Environmental Stewardship business line. These funds were predominantly used to fund inventory, survey, and/or monitoring efforts. USACE works to ensure no project negatively impacts the hellbender.



Source: Map provided by Ashleigh Boss, ORISE Fellowship, Institute for Water Resources

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