

Mick Lawler

Auctioneer - Broker

LAWLER REAL ESTATE AND AUCTION COMPANY

Munfordville, Kentucky 42765

October 26, 2022

Kentucky State Board on Electric Generation and Transmission Siting
P.O. Box 615
211 Sower Blvd.
Frankfort, KY 40602-0615

Case #2022-00115

Dear Commissioners:

I write to you to express my concerns related to the placement of the Thoroughbred Solar Project by Leeward Renewable Energy at a site consisting of approximately 500 acres in Hart County. This tract of property is located between Interstate 65 and Highway 31W on the west and east, respectively; just south of the city of Munfordville, and being only a half mile from the banks of Green River.

The proposed site is a karst region with many existing sink holes. It is not uncommon for sink holes to appear in this area after heavy rains or even forming as the result of farm equipment or livestock on a weak section of land.

Additionally, the proposed site is located in the Green River water shed area. The section of Green River that flows through Hart and Edmonson Counties is home to the Rayed Bean freshwater mussel (*Villosa fabalis*) which is recognized by the United States Department of Fish and Wildlife as an endangered species. Great lengths have been taken over the last 15 to 20 years to protect these endangered mussels and the river they call home. These efforts include the creation of Green River CREP which imposed limitations on the use of lands located within the Green River water shed, as well as collaboration between the National Park Service and the Kentucky Department of Fish and Wildlife to stock a portion of Green River located within Mammoth Cave National Park with these endangered mussels.

This section of Green River is so unique that The Nature Conservancy has gone to great lengths to acquire properties along its banks and Western Kentucky University has procured approximately 1,600 acres, more or less, on the river in an effort to protect this highly diverse natural resource.

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PUBLIC SERVICE
COMMISSION

The installation of solar panels over such a large site that plays a significant role in the diverse ecosystem of Green River and the Rayed Bean mussels would likely redirect the drainage of water and further jeopardize the longevity of an already federally recognized endangered species. Moreover, the use of any herbicides, leaking of hydraulic fluids, fuels, and other waste at the proposed site will end up in our river.

I am currently, and have been for over 46 years, a real estate broker - auctioneer and farmer of several hundred acres in this area. I am familiar with the delicate nature of karst lands and how quickly they can give way. Over the course of my career, I have witnessed new sink holes form and existing ones enlarge. I have also been witness to the positive changes our river has undergone through the protection of lands within the watershed area.

I am not the only concerned citizen and, if warranted, a petition can be signed and produced to you asserting protest of the location by several individuals.

As you give consideration to the site application for the Thoroughbred Solar Project, I implore you to seek recommendation of an engineer who specializes in hydrology as well as seek clearance from the United States Department of Fish and Wildlife, The Nature Conservancy, the National Park Service, Mammoth Cave National Park, Kentucky Energy and Environment Cabinet, and Kentucky Department of Fish and Wildlife.

Sincerely,



Mick Lawler

cc: United States Department of Fish and Wildlife
National Park Service
Mammoth Cave National Park
The Nature Conservancy
Western Kentucky University
Kentucky Energy and Environment Cabinet
Kentucky Department of Fish and Wildlife
Hart Fiscal Court

Endangered mussels released in Green River

KL kentuckyliving.com/news/endangered-mussels-released-in-green-river

September 14, 2020



Kentucky Living

- September 14, 2020
- 2 min read
- News

Partnership with National Park Service enhances mussel population

FRANKFORT, Ky. (September 14, 2020) – In conjunction with the National Park Service, the Kentucky Department of Fish and Wildlife Resources earlier this month stocked about 1,200 individual mussels into the Green River within Mammoth Cave National Park in southcentral Kentucky, in order to restore a federally-listed endangered species historically found in waters of the commonwealth.

The rayed bean, a species of freshwater mussel, has not been found in Kentucky waters in more than four decades. The mussels for this restoration effort were moved from the Allegheny River in Pennsylvania because of a tar spill.

In return, the Center for Mollusk Conservation in Frankfort will be sharing a different species of mussel with Pennsylvania for additional research next spring. Kentucky Fish and Wildlife founded the center in 2002, and it is one of the world's foremost facilities for restoring and recovering rare and imperiled freshwater mussels.

Another 1,200 individuals of the same mussel species were placed in the Green River upstream of the national park.

"The re-introduction of the federally endangered rayed bean into Mammoth Cave National Park is an important step in re-establishing this species in its historic Kentucky range," Mammoth Cave Science and Resource Management Chief Tim Pinion said.

"The National Park Service is proud to partner with Kentucky Department of Fish and Wildlife Resources in conservation of freshwater mussels in the Green River, including many rare and endangered species."

The restoration of the rayed bean in the Green River is part of a larger, multi-species effort that Kentucky Fish and Wildlife started in 2004. The initial project aimed to restore rare and endangered mussels in the Licking River in northeastern Kentucky.

Each of the rare mussels placed into a waterway is tagged so the department can monitor them over time.

"Restoring historic biodiversity is part of the mission of Kentucky Fish and Wildlife," said Monte McGregor, director of the Center for Mollusk Conservation.

"One of our primary purposes as an agency is to help native Kentucky wildlife species to thrive. Through our restoration and monitoring activities, we've seen populations of many rare mussels become re-established and increase, nearly doubling in some cases."

Freshwater mussels purify water naturally, providing a vital ecological service. Mussels filter water as they feed, removing sediments and chemical pollutants from the water, thus improving living conditions for people as well as other wildlife species.

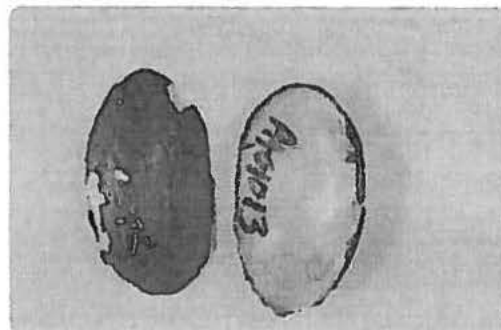
Related Articles



[ECOS](#) /

Rayed Bean (*Villosa fabalis*)

[Range Information](#) | [Candidate Info](#) | [Federal Register](#)
[Recovery](#) | [Critical Habitat](#) | [SSA](#) | [Conservation Plans](#)
[Petitions](#) | [Biological Opinions](#) | [Life History](#)



Taxonomy: [View taxonomy in ITIS](#)

Listing Status: Endangered

Where Listed: **WHEREVER FOUND**

General Information

The rayed bean is a small mussel, usually less than 1.5 inches (in) (3.8 centimeters (cm)) in length (Cummings and Mayer 1992, p. 142; Parmalee and Bogan 1998, p. 244; West et al. 2000, p. 248). The shell outline is elongate or ovate in males and elliptical in females, and moderately inflated in both sexes, but more so in females (Parmalee and Bogan 1998, p. 244). The valves are thick and solid. The anterior end is rounded in females and bluntly pointed in males (Cummings and Mayer 1992, p. 142). Females are generally smaller than males (Parmalee and Bogan 1998, p. 244). Dorsally, the shell margin is straight, while the ventral margin is straight to slightly curved (Cummings and Mayer 1992, p. 142). The beaks are slightly elevated above the hingeline (West et al. 2000, p. 248), with sculpture consisting of double loops with some nodules (Parmalee and Bogan 1998, p. 244). No posterior ridge is evident. Surface texture is smooth and sub-shiny, and green, yellowish-green, or brown in color, with numerous, wavy, dark-green rays of various widths (sometimes obscure in older, blackened specimens) (Cummings and Mayer 1992, p. 142; West et al. 2000, p. 248). Internally, the left valve has two pseudocardinal teeth (tooth-like structures along the hingeline of the internal portion of the shell) that are triangular, relatively heavy, and large, and two short, heavy lateral teeth (Cummings and Mayer 1992, p. 142). The right valve has a low, triangular pseudocardinal tooth, with possibly smaller secondary teeth anteriorly and posteriorly, and a short, heavy, and somewhat elevated lateral tooth (Parmalee and Bogan 1998, p. 244). The color of the nacre (mother-of-pearl) is silvery white or bluish and iridescent posteriorly. Key characters useful for

distinguishing the rayed bean from other mussels are its small size, thick valves, unusually heavy teeth for a small mussel, and color pattern (Cummings and Mayer 1992, p. 142).

The species historical range included Illinois, Indiana, Kentucky, Michigan, New York, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia. See below for information about where the species is known or believed to occur.

Current Listing Status Summary

Show 10 ▾ entries

Status	Date Listed	Lead Region
Endangered	02 15 2012	Midwest Region (Region 2) ▾

Showing 1 to 1 of 1 entries

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» Range Information

Current Range

📍 📄 🔍 *Last Updated: 07-12-2022 - Wherever found*

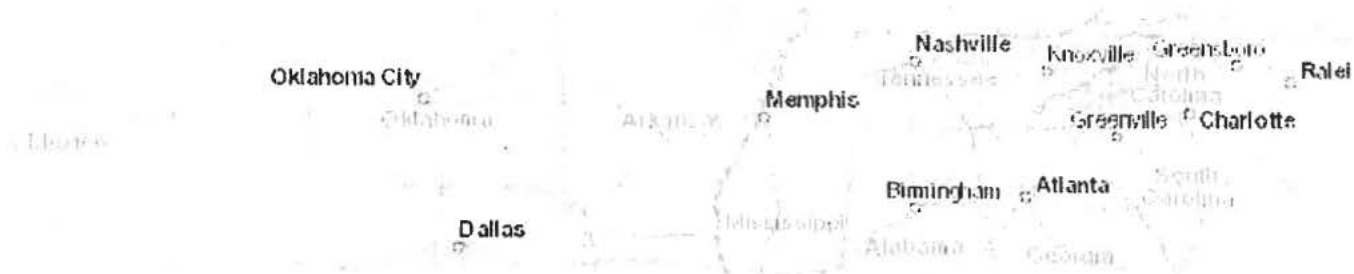
Zoom in! Some species' locations may be small and hard to see from a wide perspective. To narrow-in on locations, check the state and county lists (below) and then use the zoom tool.

Want the FWS's current range for all species? Click [here](#) to download a zip file containing all individual shapefiles and metadata for all species.

* For consultation needs do not use only this current range map, please use [IPaC](#).

Current range maps are only shown within the jurisdictional boundaries of the United States of America. The species may also occur outside this region.





- **Wherever found**

Listing status: Endangered

- **States/US Territories** in which this population is known to or is believed to occur: Indiana, Kentucky, Michigan, New York, Ohio, Pennsylvania, Tennessee, West Virginia
- **US Counties** in which this population is known to or is believed to occur: [View All](#)
- **USFWS Refuges** in which this population is known to occur: Erie National Wildlife Refuge
- **Countries** in which this population is known to occur: Canada, United States

» **Candidate Information**

No Candidate information available for this species.

No Candidate Assessments available for this species.

Candidate Notice of Review Documents

Show 10 ▾ entries

Date	Citation Page	Title
11/09/2009	74 FR 57804 57878	<u>Review of Native Species That Are Candidates for Listing; Annual Description of Progress on Listing Actions; Proposed</u>
12/10/2008	73 FR 75176 75244	<u>Review of Native Species That Are Candidates for Listing; Annual Description of Progress on Listing Actions; Proposed</u>
12/06/2007	72 FR 69034 69106	<u>Review of Native Species That Are Candidates for Listing; Annual Description of Progress on Listing Actions; Proposed</u>
09/12/2006	71 FR 53756 53835	<u>Review of Native Species That Are Candidates or Proposed for Listing; Annual Description of Progress on Listing Actions; Proposed</u>
05/11/2005	70 FR 24870 24934	<u>Endangered and Threatened Wildlife and Plants; Review of Native Species That Are Candidates or Proposed for Listing as Endangered or Threatened; Annual Description of Progress on Listing Actions; Proposed</u>

- 05/04/2004 69 FR 24876 24904 [Review of Species That Are Candidates or Proposed of Findings on Resubmitted Petitions; Annual Descr](#)
- 11/15/1994 59 FR 58982 59028 [ETWP; Animal Candidate Review for Listing as Enda](#)
- 11/31/1994 59 FR 59004 59026 [ETWP; Animal Candidate Review for Listing as Enda](#)

Showing 1 to 10 of 10 entries

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No Uplisting Documents currently available for this species.

» Federal Register Documents

Federal Register Documents

Show 10 ▾ entries

Date	Citation Page	Title
04/17/2017	82 FR 18156 18158	<u>Initiation of 5-Year Status Reviews of Eight Endangered A for Information</u>
02/14/2012	77 FR 8632 8665	<u>Determination of Endangered Status for the Rayed Bean Throughout Their Ranges: Final rule.</u>
09/27/2011	76 FR 59836 59862	<u>Partial 90-Day Finding on a Petition To List 404 Species in States as Endangered or Threatened With Critical Habitat</u>
11/02/2010	75 FR 67552 67583	<u>Listing the Rayed Bean and Snuffbox as Endangered; Pro</u>
11/09/2009	74 FR 57804 57878	<u>Review of Native Species That Are Candidates for Listing. Threatened; Annual Notice of Findings on Resubmitted P of Progress on Listing Actions</u>
12/10/2008	73 FR 75176 75244	<u>Review of Native Species That Are Candidates for Listing. Threatened; Annual Notice of Findings on Resubmitted P of Progress on Listing Actions; Proposed Rule</u>
12/06/2007	72 FR 69034	<u>Review of Native Species That Are Candidates for Listing.</u>

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» Species Status Assessments (SSAs)

Species Status Assessments (SSAs)

No Species Status Assessments (SSA's) are currently available for this species.

Special Rule Publications

No Special Rule Publications currently available for this species.

» Recovery

- [Species with Recovery Documents Data Explorer](#)
- Recovery Priority Number: 5

No Current Recovery Plans available for this species.

Other Recovery Documents

Note: This report includes actual Five Year Review completions and notices as well as records that act as Five Year Review completions and notices.

Show 10 ▾ entries

Date	Citation	Page	Title
04/17/2017	82 FR 18156	18158	Initiation of 5-Year Status Reviews of Eight Endange Species and Request for Information

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Five Year Reviews

Note: This report includes actual Five Year Review completions as well as records that act as Five Year Review completions.

Show 10 ▾ entries

Date	Title
10/24/2018	Daved Bean(Villosa fabalis) 5 Year Review

Showing 1 to 1 of 1 entries

No Delisting Documents currently available for this species.

» Critical Habitat

No Critical Habitat Documents currently available for this species.

» Conservation Plans

No Conservation Plans currently available for this species.

» Petitions

Show 10  entries

Petition Title	Date Received by the FWS	Where the species is believed to or known to occur	Petitioner Name	Requested Action	Pe Fi
404 Southeast aquatic species; list w/CH	04/20/2010	AL, AR, CO, CT, DC, DE, FL, GA, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, NE, NH, NJ, NY, OH, OK, PA, RI, SC, TN, TX, VA, VT, WI, WV, Canada, Mexico, United States	<ul style="list-style-type: none">• Dogwood Alliance• Tennessee Forests Council• Gulf Restoration Network• Center for Biological Diversity• West Virginia Highlands Conservancy• Clinch Coalition• Alabama Rivers	<ul style="list-style-type: none">• APA: Designate Critical Habitat• Listing: Threatened or Endangered	

Showing 1 to 1 of 1 entries

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» **Biological Opinions**

Show 10 ▾ entries

BO date	Lead Office	Title	Activity Code	Project Type	Li
10/29/2021	New York Ecological Services Field Office	PIN 5813.24 General Bridge Repair Rt 305 over Oswayo Creek BIN 1045430	05E1NY00-2020-F-2264	TRANSPORTATION	
10/16/2020	Branch of National Consultations	Reinitiation formal consultation: OSMRE's regulatory program - SMCRA Title V	09E31000-2020-F-0001	Mining - Subsurface Exploration - Coal, Mining - Subsurface Extraction - Coal, Mining - Subsurface Leasing - Coal, Mining - Subsurface Reclamation - Coal, Mining - Surface Exploration - Coal, Mining - Surface	

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To see all Issued Biological Opinions please [visit the report](#)» **Life History**

No Life History information has been entered into this system for this species.

» Other Resources

NatureServe Explorer Species Reports-- NatureServe Explorer is a source for authoritative conservation information on more than 50,000 plants, animals and ecological communities of the U.S and Canada. NatureServe Explorer provides in-depth information on rare and endangered species, but includes common plants and animals too. NatureServe Explorer is a product of NatureServe in collaboration with the Natural Heritage Network.

ITIS Reports-- ITIS (the Integrated Taxonomic Information System) is a source for authoritative taxonomic information on plants, animals, fungi, and microbes of North America and the world.

FWS Digital Media Library -- The U.S. Fish and Wildlife Service's National Digital Library is a searchable collection of selected images, historical artifacts, audio clips, publications, and video." +