

US EPA ARCHIVE DOCUMENT

Memorandum: Draft

From: Steve Johnson, Geologist
TSCA Permits

To: Record

Date: 1/7/09

Re: Endangered Species Act, required regulatory consultation, review of TSCA application, Clinton LF #3

Pursuant to Section 7(a)(2) of the Endangered Species Act, consultation is required with either U.S. Fish and Wildlife Service or the National Oceanic Atmospheric Administration Fisheries Service prior to any activity that EPA authorizes that is likely to "jeopardize" any federally listed species or critical habitat. The approval to dispose of PCBs at Clinton Landfill #3 is an activity that is not likely to do so. Further consultation with federal regulatory agencies is not required. A comprehensive environmental assessment for biology was never done and appears too late. Chances of their being any harm seems low given that review of the site for listings in the state database showed only one possible issue.

Placement of Toxic substances in the proposed landfill is near the habitat of a Illinois state-listed species, the "Spike Mussel" ... *Elliptic Dilatata*. The species is designated by the State of Illinois as being one of State Special Concern (SSC). That category is the lowest and least jeopardized of the three state categories, SSC, Threatened and Endangered. It is a relatively widespread species throughout the mid-continent but its population has been reduced considerably and is listed by several other states. It is not presently a federally listed species according to U.S. Fish & Wildlife Service and does not seem to be a candidate species as of this date.

The issue of regulatory concern is whether disposal of PCBs at the proposed site might result in runoff of PCBs during storm events that could result in exposure of the mollusks. The Illinois Department of Natural Resources reviewed the situation at the request of the applicant, Clinton Landfill Inc. In accordance with Illinois Administrative Code a Consultation Agency Action Report was prepared that identified the location of the landfill, the habitat of the mollusk. On Feb. 17, 2005 the Illinois State Department of Natural Resources issued the Consultation Agency Action Report. The report stated that "adverse impacts are unlikely". A letter was prepared by Illinois Division of Nat. Resources Review and Coordination that states that, "the leachate collection, disposal and sedimentation basin systems appeared to be of a design such that the proposed landfill [would] not adversely impact water quality within the protected resource area". Consultation was then terminated and the results communicated in a letter to PDC Technical Services Inc. on Jan. 3, 2002 with a caveat that only the Natural Heritage Database was consulted. No field survey was conducted and the department was expressly clear that the review was not the same as a comprehensive environmental

impact assessment and that the State may raise concerns regarding other natural resources.

The informal consultation resulted in a conclusion that action would not affect the listed species and was conducted prior to construction of the proposed TSCA PCB disposal cell. The conclusion appears to be based on the state review agency noting PDC's designs and how they plan on separating two water streams at the landfill, contact water and non-contact water. The conclusion is based on containment and is not based on health risk or any exposure concentration modelling. Leachate and Rainfall contact water is isolated from the environment. There is no planned discharge of contact water at all. PDC will dispose of contact water either by recycling or through a water treatment plant. Non-contact water will be discharged under the Clean Water Act from perimeter sedimentation/settlement basins that are designed to capture and contain fugitive airborne waste dust might accumulate around the cell.

After noting the status and requirements for consultation under ESA, as amended Dec. 16, 2008 (but not yet in effect until Jan. 15, 2009). I find no information calling for a formal consultation with federal Fish and Wildlife or other federal agencies, however there is a requirement to not "jeopardize" the continued existence of a listed species. There could be listed species on the site that just have not been discovered. However, such is not to be known, it seems. No biological survey was included in the TSCA application. Unless such a survey can be found it is impossible to rule out the possibility of undiscovered members of a listed species in the area. I believe the likelihood is low, however. The state database was consulted and I believe it is reasonable to accept the proposed Landfill site as having passed all necessary requirements under the ESA. There are no federally listed species and the landfill is not critical habitat. The nearby Salt Creek is apparently considered a protected resource area by the State of Illinois, but the State believes the landfill will have no adverse impact to surface water quality.

It is my conclusion that surface water control at the site is protective so EPA's authorization of PDC's disposal of PCBs at Cell #3 is not likely to adversely affect a federally listed species.

U.S. Fish & Wildlife Service



[Freshwater Mussels of the Upper Mississippi River System](#)



Threatened and Endangered Mussels



**Winged
mapleleaf**



**Higgins'
eye
pearlymussel**



**Fat
pocketbook**



Scaleshell



Sheepnose



Spectaclecase

In North America, it is estimated that 43% of the 300 species of freshwater mussels are in danger of extinction. Further, the current extinction rate (percent loss per decade) for freshwater mussels is 1.2% and is estimated to be 6.4% in the future. These rates fall within the range of estimates for tropical rainforest communities (1-8% loss per decade). Historically, the Midwest boasted the most diverse collection of mussels in the world. But today, the States of Minnesota, Wisconsin, Iowa, Missouri, Illinois, Indiana, and Ohio list more than half of their 78 known mussel species as endangered, threatened, or requiring special concern.

No other group of animals in North America is in such grave danger of extinction!

Four mussel species that reside in the Upper Mississippi River basin receive [Federal protection](#) under the Endangered Species Act of 1973. They are listed as endangered species and include the [winged mapleleaf](#), [Higgins' eye](#), [fat pocketbook](#) and [scaleshell](#). The [sheepnose](#) and [spectaclecase](#) are candidate species. [Numerous other species](#) are listed by the States of Minnesota, Wisconsin, Iowa, Illinois, and Missouri.

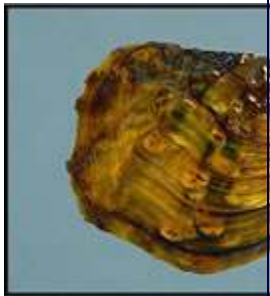



Winged mapleleaf	Higgins' eye pearlymussel	Scaleshell	Fat pocketbook
			
Click for larger scale	Click for larger scale	Click for larger scale	Click for larger scale

Table 1. Native mussel species (Order Unionoida) in the Upper Mississippi River System. Unless otherwise noted, species have been found alive in the Mississippi or Illinois Rivers since 1995 (Havlik pers. comm, Yager pers. comm.). Sources: Havlik and Sauer (2000); U.S. Fish and Wildlife Service (2003)

FE = Federally Endangered FT = Federally Threatened FCS = Federal Candidate Species SE = state endangered ST = state threatened SSC = state special concern X = extirpated TR = not presently in the Mississippi River, but alive in major tributaries of UMRS ^ Wisconsin and Iowa treat these two as separate species #Possibly extirpated from UMRS 1 Year of publication for state and Federal listings		Year of Last Observation	Federal 2003 ¹	Illinois 1999 ¹	Iowa 1995 ¹	Minnesota 1996 ¹	Missouri 1999 ¹	Wisconsin 1997 ¹
Common Name	Species							
Subfamily Cumberlandinae								
Spectaclecase	<i>Cumberlandia monodonta</i> (Say, 1829)		FCS	SE	SE	ST	SSC	SE
Subfamily Amblesminae								
Threeridge	<i>Amblesma plicata</i> (Say, 1817)							
Purple warty back	<i>Cyclonaias tuberculata</i> (Rafinesque, 1820)	1991		ST	ST	ST		SE
Elephantear	<i>Elliptio crassidens</i> (Lamarck, 1819)	1997		ST		SE	SE	SE
Spike	<i>Elliptio dilatata</i> (Rafinesque, 1820)			ST		SSC		
Ebony shell	<i>Fusconaia ebena</i> (I. Lea, 1831)			ST		SE	SE	SE
Wabash pigtoe	<i>Fusconaia flava</i> (Rafinesque, 1820)							
Washboard	<i>Megaloniaias nervosa</i> (Rafinesque, 1820)					ST		SSC
Sheepnose	<i>Plethobasus cyphus</i> (Rafinesque, 1820)		FCS	SE	SE	SE	SE	SE
Round pigtoe	<i>Pleurobema sintoxia</i> (Rafinesque, 1820)				SE	ST		SSC
Winged mapleleaf (TR)	<i>Quadrula fragosa</i> (Conrad, 1835)	1921	FE			SE	SE	SE
Monkeyface	<i>Quadrula metanevra</i> (Rafinesque, 1820)					ST		ST
Wartyback	<i>Quadrula nodulata</i> (Rafinesque, 1820)					SE	SSC	ST
Pimpleback	<i>Quadrula p. pustulosa</i> (I. Lea, 1831)							

Mapleleaf	<i>Quadrula quadrula</i> (Rafinesque, 1820)							
Pistolgrip	<i>Tritogonia verrucosa</i> (Rafinesque, 1820)				SE	ST		ST
Pondhorn (TR)	<i>Uniomerus tetralasmus</i> (Say, 1831)	1919						

Table 1 (continued)

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Common Name	Species							
Subfamily Anodontinae								
Elktoe	<i>Alasmodonta marginata</i> (Say, 1818)					T	SSC	SSC
Slippershell mussel (TR)	<i>Alasmodonta viridis</i> (Rafinesque, 1820)	1883		ST	SE			ST
Flatfloater	<i>Anodonta suborbiculata</i> (Say, 1831)						SSC	SSC
Cylindrical papershell (TR)	<i>Anodontoides ferussacianus</i> (Lea, 1834)	1883		ST			SSC	
Rock pocketbook	<i>Arcidens confragosus</i> (Say, 1829)					SE	SSC	ST
White heelsplitter	<i>Lasmigona c. complanata</i> (Barnes, 1823)							
Creek heelsplitter	<i>Lasmigona compressa</i> (L. Lea, 1829)	1979			ST	SSC		
Flutedshell	<i>Lasmigona costata</i> (Rafinesque, 1820)					SSC		
Giant floater	<i>Pyganodon (=Anodonta) grandis</i> (Say, 1829)	1982		SE		ST	SSC	ST
Salamander mussel	<i>Simpsonaias ambigua</i> (Say, 1825)							
Creepers	<i>Strophitus undulatus</i> (Say, 1817)				ST			
Paper pondshell	<i>Utterbackia (=Anodonta) imbecillis</i> (Say, 1829)							

Table 1 (continued)

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Common Name	Species							
Subfamily Lampsilinae								
Mucket	<i>Actinonaias ligamentina</i> (Lamarck, 1819)					ST		
Butterfly	<i>Ellipsaria lineolata</i> (Rafinesque, 1820)			ST	ST	ST		SE
Snuffbox (TR)	<i>Epioblasma triquetra</i> (Rafinesque, 1820)	1920		SE		ST	SSC	SE
Plain pocketbook	<i>Lampsilis cardium</i> (Rafinesque, 1820)							
Higgins' eye	<i>Lampsilis higinisii</i> (I. Lea, 1857)		FE	SE	SE	SE	SE	SE
Fatmucket	<i>Lampsilis siliquoidea</i> (Barnes, 1823)							
^Yellow sandshell	<i>Lampsilis teres anodontoides</i> (Lea, 1831)				SE	SE		SE
^Slough sandshell	<i>Lampsilis teres teres</i> (Rafinesque, 1820)				SE			SE
Fragile papershell	<i>Leptodea fragilis</i> (Rafinesque, 1820)							
#Scaleshell (TR)	<i>Leptodea leptodon</i> (Rafinesque, 1820)	1921	FE				SSC	X
Black sandshell	<i>Ligumia recta</i> (Lamarck, 1819)			ST		SSC	SSC	
Pondmussel	<i>Ligumia subrostrata</i> (Say, 1831)	1968						
Threehorn wartyback	<i>Obliquaria reflexa</i> (Rafinesque, 1820)							
Hickory nut	<i>Obovaria olivaria</i> (Rafinesque, 1820)					SSC	SSC	
Pink heelsplitter	<i>Potamilus alatus</i> (Say, 1817)							
#Fat pocketbook	<i>Potamilus capax</i> (Green, 1832)	1986	FE	SE			SE	X
Pink papershell	<i>Potamilus ohioensis</i> (Rafinesque, 1820)							
Bleufer	<i>Potamilus purpuratus</i> (Lamarck, 1819)	1975						
Lilliput	<i>Toxolasma parvus</i> (Barnes, 1823)							
Fawnsfoot	<i>Truncilla donaciformis</i> (I. Lea, 1828)							
Deertoe	<i>Truncilla truncata</i> (Rafinesque, 1820)							
Ellipse (TR)	<i>Venustaconcha ellipsiformis</i> (Conrad, 1836)				ST	ST		ST

[Species Identification and Location](#) • [Threatened and Endangered Mussels](#) • [Life History](#) • [Ecology](#) • [Mussel Harvest on the River](#) • [Current Threats](#) • [Mussel Conservation Activities](#) • [Ongoing Studies and Projects](#) • [Multimedia](#) • [Teacher Resources](#) • [Frequently Asked Questions](#) • [Glossary](#) • [References](#) • [Links to Other Mussel Sites](#)

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Last updated on October 31, 2006

<http://www.fws.gov/midwest/mussel/threatened.html>