## **Species Conclusions Table**

Project Manager: Chris Powell	Project Name: Maury Restoration II
Date: 27-June-2016	Project Number: NAO-2016-00134/VMRC#16-V0757

Project Description: To reduce bank erosion and eliminate sediment loading downstream within the Maury and James Rivers by restoring approximately 400 linear feet of the Maury River through the excavation of a 0.77-acre mid-channel bar (approximately 3,400 cubic yards of accumulated river deposition); discharging the excavated material and imported fill material (approximately 4,000 cubic yards total) along 450 feet of the left river bank to create a vegetated bankfull, floodplain bench; installing two rock vanes; sloping the riverbank and establishing a riparian buffer.

Species Under the Jurisdiction of FWS:

Species/Resource		ESA Section 7 / Eagle		
Name	Conclusion	Act Determination	Species Info / Habitat Description	Notes / Determination
			"Indiana bats hibernate during winter in caves or, occasionally, in abandoned mines. For hibernation, they require cool, humid caves with stable temperatures, under 50° F but above freezing. After hibernation, Indiana bats migrate to their summer habitat in wooded areas where they	
			usually roost under loose tree bark on dead or dying trees. During summer, males roost alone or in small groups" "Groups of female Indiana bats	
			form maternity colonies to bear their offspring in crevices of trees or under loose tree bark. Dead trees are preferred roost sites, and trees standing	
			in sunny openings are attractive because the air spaces and crevices under the bark are warm.	
			Typical roosts are beneath the bark and in crevices of dead trees and beneath loose bark of living trees. Roost trees are likely to be exposed to	
			direct sunlight throughout the day, and are as likely to be in upland habitats as in floodplain forests. Indiana bats are also known to roost in	
			human-made structures such as bridges, sheds, houses and abandoned churches." "Indiana bats also forage in or along the edges of forested	
			areas." "Loss and degradation of summer habitat and	
			roost sites due to water impoundment, stream channeling, forest clearing, housing development, and clear cutting for agricultural or other uses may	
Indiana bat (Myotis sodalis)	No suitable habitat present	No effect	be important factors in continuing Indiana bat population decline."	No effect as this project does not affect any caves and no tree removal will be within the permit area.

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Northern long-eared bat (Myotis septentrionalis)	No suitable habitat	No effect	"Northern long-eared bats spend winter hibernating in caves and mines, called hibernacula. They typically use large caves or mines with large passages and entrances; constant temperatures; and high humidity with no air currents. Specific areas where they hibernate have very high humidity, so much so that droplets of water are often seen on their fur. Within hibernacula, surveyors find them in small crevices or cracks, often with only the nose and ears visible. During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. Males and non-reproductive females may also roost in cooler places, like caves and mines. This bat seems opportunistic in selecting roosts, using tree species based on suitability to retain bark or provide cavities or crevices. It has also been found, rarely, roosting in structures like barns and sheds."	No effect as this project does not affect any caves and no tree removal will be within the permit area.	
James Spinymussel (Pleurobema collina)	Species (listed/proposed) present	May affect	"This freshwater mussel is found in the upper James and Dan River basins. The species has declined rapidly during the past two decades and now exists only in small, headwater tributaries of the upper James River basin in Virginia and West Virginia. In 2000, it was discovered in the Dan River basin in North Carolina and Virginia." "Suitable habitat for this species includes free- flowing streams with a variety of flow regimes. The James spinymussel is found in a variety of substrates that are free from silt."	Not likely to adversly affect as the Time of Year Restriction will be applied to permit conditions. No in stream work will occur 15 May - 31 July.	
Eagles (Haliaeetus leucocephalus)					
Eagle Nests	Unlikely to disturb nesting bald eagles	No Eagle Act permit required			

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	Does not intersect with bald eagle concentration area	No Eagle Act permit required					
Critical Habitat							
N/A							
Other (species not listed above)							
Species Under the Ju	risdiction of NOA	A/NMFS					
Essential Fish Habitat							
Anadromous Fish Use Area							
Subaquatic Vegetation							
HAPC Sandbar Shark							
Atlantic Sturgeon							

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