Document Purpose:

This document may be used for multiple purposes. It has been developed to primarily serve as a planning tool to help initiate and encourage conversations between the USFWS and the Action Agencies (USCG and EPA) on how oil spill response activities may impact listed species within Region 5. The document may also serve as an internal planning document for working together on oil spill response planning. Ounce fully developed by the regions, the document may be used during all stages of a spill as a reference and guide for the decision making process.

The potential impacts shown on this matrix represent cumulative information across all regions, seasons, and spill types. During coordination/consultation on an actual spill response, USFWS may determine that the impact level (color) is different than shown in the matrix. See below for the matrix color-coding key.

Layout:

- 1) Information Tab: This tab provides details on purpose and layout of the document.
- 2) F-1 Tab provides a Species Response Matrix Summary by Habitat within Action Area of Region 5. This table is useful in providing an overview of expectations of what species groups are most likely encountered in the defined environments where a spill may occur.
- 3) F-2 through F-8 Tabs are the ESA Species versus Response Actions. Tabs 1 through 10 include the different types of environments where spill response activities can occur. Within each of these tabs, the user will find the various types of spill response activities that may occur in that environment. Column A includes USFWS listed species (common names). Regions may also choose to include proposed species and candidate species (as a method to save time in the future; however, please note that the USFWS cannot make a determination on candidate species as part of a biological opinion.

Row 1, displays the environment that the activity is occurring in (i.e., shoreline, coastal nearshore, etc.) The response options beginning in Column M include all the tools available to the USCG, EPA and oil spill responders to clean up oil and effectively conduct a response. The empty white boxes colored boxes (beginning in Row 10 and Colum M) are to be filled in following Regional-level workgroup discussion regarding the level of impact we might expect each particular response option to have on each particular species. There are 3 "impact colors" represented on the spreadsheet. See the color explanations below.

No effect due to no overlap between species and action or no impacts on species from action. This applied to individuals whose habitat did not overlap with the action area habitats defined in Section 3.1 and 3.2 and was not identified for the response action. Example: Freshwater mussels do not occur nor are individuals found along shorelines (per the definition in Section 3.1); therefore, all response actions and interrelated actions occurring on Shoreline Habitat would not affect mussels due to no overlap. May affect, not likely to adversely affect due to insignificant or discountable effects May affect, not likely to adversely affect due to implementation of BMPs to minimize impact; For example, birds whose habitat for feeding, nesting, or otherwise includes Shoreline Habitat, may be affected by the response action occurring in Shoreline Habitats, but impacts are reduced by utilizing BMP's (color coded as orange on Species Action Matrix). May affect, likely to adversely affect - discuss possible BMPs with Services ! Special considerations needed, high level of concern. This consideration and concern is due to the variability of the action and habitat and/or species response.

The Species Action Matrix provided in Appendix F2 through F8 presents the outcome for which the effects analysis was derived. For each species within each habitat type, the exposure, individual response to the action, and risk of injury or death to the individual were considered. Habitat pursuant to the known information on the species range was weighed heavily in the Species Action Matrix and the categorization used for effects determination. Exposure was considered as the individuals' behavior and/or distribution within the Action Area and their likelihood of exposure and response to the action. Risk to the individual accounted for their rehabilitation potential post exposure to an action. Responses of species to actions within the defined habitat types were assigned to categories based on the following:

				Od	ccurre	nce in	Action A	ırea	<u>Ha</u>	bit		Environm	nent within Action A	rea of Respons	e Action		
Common Name	Scientific name	Status	IL	IN	MI	MN C	DH WI	Critical Habitat	Terrestrial	Aquatic	1) Shoreline (beach/land)	2) Ports, Canals, Industrial Areas	3) Rivers and Streams	4) Bays and Estuaries	5) Ponds and Lakes	6) Wetlands	7) Upland Areas
Plants																	
American Hart's-tongue Fern	Asplenium scolopendrium var. americanum	Т			Χ				Х								Χ
Decurrent False Aster	Boltonia decurrens	Т	Χ						X				X			Χ	Χ
Dwarf Lake Iris	Iris lacustris	Т			Χ		Х		X		Χ					Х	X
Eastern Prairie Fringed Orchid	Platanthera leucophaea	Т	Χ	Χ	Χ		х х		X				X			Х	X
Fassett's Locoweed	Oxytropis campestris var. chartacea	Т					Х		X		Χ				X		X
Houghton's Goldenrod	Solidago houghtonii	Т			Χ				X		Χ		X		X	Х	
Lakeside Daisy	Hymenoxys herbacea	Т	Χ		Χ		X		X								X
Leafy Prairie-clover	Dalea foliosa	E	Χ						X								X
Leedy's Roseroot	Rhodiola integrifolia ssp. leedyi	Т				Χ			X								X
Mead's Milkweed	Asclepias meadii	Т	Χ	Χ			Х		X								X
Michigan Monkey Flower	Mimulus michiganensis	Е			Χ				X				X			Х	
Minnesota Dwarf Trout Lily	Erythronium propullans	Е				Χ			Х				X				X
Northern Wild Monkshood	Aconitun noveboracense	Т					х х		Х				X				Х
Pitcher's thistle	Cirsium pitcheri	Т	Х	Χ	Χ		Х		Х		X						X
Prairie Bush-clover	Lespedeza leptostachya	Т	Х			Χ	Х		X								X
Short's Bladderpod	Physaria globosa	E		Χ				D	X				X				X
Short's Goldenrod	Solidago shortii	F		X				_	X								X
Small whorled pogonia	Isotria medeoloides	_ T	Х	•	Х	,	Χ		X								X
Tennessee Pondweed	Potamogeton tennesseensis	UR	, ,		, ,		X		, ,	Χ			X			Х	7.
Virginia Sneezeweed	Helenium virginicum	Т					X		Χ							X	
Virginia Spiraea	Spirea virginiana	т					X		X				X			•	
Western Prairie Fringed Orchid	Platanthera praeclara	T				Χ			X								X
Snails																	
Iowa Pleistocene Snail	Discus macclintocki	E	Χ						X								X
Clams (Freshwater Mussels)																	
Clubshell	Pleurobema clava	Е	Χ	Χ	Χ	2	X			Χ		X	X	X	X		
Fanshell	Cyprogenia stegaria	E	Χ	Χ		2	X			Χ		X	X		X		
Fat Pocketbook	Potamilus capax	E	Χ	Χ						Χ		X	X		X		
Higgins' Eye Pearlymussel	Lampsilis higginsii	Е	Χ			Χ	Χ			Χ		X	X		X		
Longsolid	Fusconaia subrotunda	Р	Χ	Χ		,	X	PCH		Χ		X	X		X		
Northern Riffleshell	Epioblasma torulosa rangiana	Е	Χ	Χ	Χ		X			Χ		X	X	X	X		
Orangefoot Pimpleback	Plethobasus cooperianus	Е	Χ							Χ		X	X		X		
Pink Mucket	Lampsilis abrupta	Е	Χ	Χ			X			Χ		X	X		X		
Purple Cat's Paw Pearlymussel	Epioblasma obliquata obliquata	E				,	X			X			Χ		X		
Pyramid (Pink) Pigtoe	Pleurobema rubrum	UR					X			Χ		X	X		X		
Rabbitsfoot	Quadrula cylindrica cylindrica	Т	Χ	Χ		,	X	D		Χ		X	X		X		
Rayed Bean	Villosa fabalis	Е		Χ	Χ		X	PCH		Χ		X	X	X	X		
Rough Pigtoe	Pleurobema plenum	Е		Χ						Χ		X	X		X		
Round Hickorynut	Obovaria subrotunda	Р	Χ		Χ		X	PCH		Χ		X	X	X	X		
Salamander mussel	Simpsonaias ambigua	UR		X			х х			Χ		X	X	X	X		
Scaleshell	Leptodea leptodon	E	Χ							Х		X	X		X		

Appendix F-1. Species Response Matrix Summary by Environment within Action Area of Region 5

				0	ccurr	ence	in Ac	tion A	rea	<u></u>	labit			Environm	ent within Action A	Area of Respons	e Action		
Common Name	Scientific name	Status	IL	IN	MI	MN	ОН	WI	Critical Habitat	Terrestria	I Ac	uatic	1) Shoreline (beach/land)	Ports, Canals, Industrial Areas	3) Rivers and Streams	4) Bays and Estuaries	5) Ponds and Lakes	6) Wetlands	7) Upland Areas
Sheepnose	Plethobasus cyphyus	E	Х	Х		Х		Х	PCH			X	, ,	Х	Х	-	Х		
Snuffbox	Epioblasma triquetra	Е	Χ	Χ	Χ		Χ	Χ	PCH			X		X	X	X	X		
Spectaclecase	Cumberlandia monodonta	E	Χ			Х		Χ	PCH			X		X	X		X		
White Catspaw	Epioblasma obliquata perobliqua	Е		Χ			Χ					Χ			X		X		
Winged Mapleleaf	Quadrula fragosa	Е				Χ		Χ				X		X	X		X		
Crustaceans																			
Illinois Cave amphipod	Gammarus acherondytes	E	Χ									Χ			X				X
Insects																			
American Burying Beetle	Nicrophorus americanus	Т			Χ		Χ			X								Χ	X
Bog Buckmoth	Hemileuca sp.	UR						X		Χ								Χ	
Dakota Skipper	Hesperia dacotae	Т				Χ			D	Χ									X
Frosted Elfin Butterfly	Callophrys irus	UR	Χ	Χ	Χ		Χ	Χ		Χ									X
Hine's Emerald Dragonfly	Somatochlora hineana	E	Χ		Χ			Χ	D	Χ							X	Χ	
Hungerford's Crawling Water Beetle	Brychius hungerfordi	E			Χ							Χ			X				
Karner Blue Butterfly	Lycaeides melissa samuelis	E	Χ	Χ	Χ	Χ	Χ	Χ		Χ									X
Linda's Roadside Skipper	Amblyscirtes linda	UR	Χ							Χ					X			Χ	X
Mitchell's Satyr Butterfly	Neonympha mitchellii mitchellii	Е		Χ	Χ		Χ			Х								Χ	
Monarch Butterfly	Danaus plexippus plexippus	С	Χ	Χ	Χ	Χ	Χ	Χ		Χ					X			Χ	X
Poweshiek Skipperling	Oarisma poweshiek	Е			Χ	Χ		Χ	D	Х								Χ	Х
Rattlesnake-master Borer Moth	Papaipema eryngii	UR	Χ							Х									X
Regal Fritillary	Speyeria idalia	UR	Х	Х	Χ	Х	Х	Χ		Х					X			Χ	X
Rusty Patched Bumble Bee	Bombus affinis	Е	Χ	X		Χ		Χ		X					X			X	X
Fish																			
Lake Sturgeon	Acipenser fulvescens	UR	Χ	Χ	Χ	Χ	Χ	Χ				Χ		X	X	X	X		
Pallid Sturgeon	Scaphirhynchus albus	E	Χ									X		X	X				
Popeye Shiner	Notropis ariommus	UR					Χ					X			X				
Scioto Madtom	Noturus trautmani	Е					Χ					X			X				
Sicklefin Chub	Macrhybopsis meeki	UR	Χ									X		X	X				
Sturgeon Chub	Macrhybopsis gelida	UR	Χ									X		X	X				
Topeka Shiner	Notropis topeka	Е				Χ			D			X			X		X		
Herptiles																			
Alligator Snapping Turtle	Macroclemys temmincki	UR	X	Χ								Χ	X	X	X		X		
Blanding's Turtle	Emydoidea blandingii	UR	Χ	Χ	X	Χ	Χ	X		*X		Χ	X		X	X	X	X	Х
Copperbelly Watersnake, N. DPS	Nerodia erythrogaster neglecta	T		Χ	X		Χ			X		Χ					X	Χ	Х
Eastern Massasauga	Sistrurus catenatus	Т	X	Χ	X		Х	X		Х		Χ					X	Χ	Χ
Illinois Chorus Frog	Pseudacris illinoensis	UR	Χ							Х		Χ			X		X	Χ	Χ
Spotted Turtle	Clemmys guttata	UR		Χ	X		Х			X*		X			X	X	X	X	X
Streamside Salamander	Ambystoma barbouri	UR		Х			Х			X		X			X			X	X
Wood Turtle	Glyptemys insculpta	UR			Х	Χ		Х		X		X			X			X	X

Appendix F-1. Species Response Matrix Summary by Environment within Action Area of Region 5

				Od	curr	ence i	n Act	tion Aı	rea	Ha	bit		Environm	ent within Action A	rea of Respons	e Action		
Common Name	Scientific name	Status	IL	IN	MI	MN	ОН	WI	Critical Habitat	Terrestrial	Aquatic	1) Shoreline (beach/land)	2) Ports, Canals, Industrial Areas	3) Rivers and Streams	4) Bays and Estuaries	5) Ponds and Lakes	6) Wetlands	7) Upland Areas
Mammals																		
Canada Lynx	Lynx canadensis	Т			Χ	Χ		Χ	D	X								X
Gray Bat	Myotis grisescens	E	Χ	Χ						X				X		X		X
Gray Wolf	Canis lupus	DR			Χ	Χ		Χ		X								X
Indiana Bat	Myotis sodalis	E	Χ	Χ	Χ		Χ		D	X							Χ	X
Little Brown Bat	Myotis lucifugus	UR	Χ	Χ	Χ	Χ	Χ	Χ		X								X
Northern Bog Lemming	Synaptomys borealis	UR				Χ				X							Χ	
Northern Long-eared Bat	Myotis septentrionalis	Т	Χ	Χ	Χ	Χ	Χ	Χ		X							Χ	X
Plains Spotted Skunk	Spilogale putorius interrupta	UR				Χ				X								X
Prairie Gray Fox	Urocyon cinereoargenteus ocythous	UR				Χ		Χ		X								X
Tricolored Bat	Perimyotis subflavus	UR	Χ	Χ	Χ	Χ	Χ	Χ		Χ				Χ		X		X
Birds																		
Eastern Black Rail	Laterallus jamaicensis ssp. jamaicensis	Т	Χ	Χ	Χ	Χ	Χ	Χ		X							Χ	
Golden-winged Warbler	Vermivora chrysoptera	UR	Χ	Χ	Χ	Χ	Χ	Χ		Х							Χ	X
Piping Plover, Great Lakes Population	Charadrius melodus	Е	Χ	Χ	Χ	Χ	Χ	Χ	D	Х		X		X	X	X		
Rufa Red Knot	Calidiris canutus rufa	Т	Χ	Χ	Χ	Χ	Χ	Χ	PCH	X		X		X	X	X		
Whooping Crane, Non-essential	Grus americana	E	Χ	Χ	Χ	Χ	Χ	Χ										
Experimental Pop.										X							Χ	Х

¹ Status designations: E = endangered, T = threatened, UR = under review, P = proposed for listing, DR = delisted due to recovery, D = designated critical habitat, PCH = proposed critial habitat under review (USFWS, 2021; USFWS, 2022)

² Primary habitat occupied by the species. Species denoted with an asterisk are those that can occupy both terrestrial and aquatic habitats.

																				Sh	orelin	e (bea	ch/lar	nd)														
							Deflec	4:	الم	_										Ch.		٦ ٥:١		dlife											١٨/	-t- NA-		
	0	ccurre	nce in	Action	Area		Dellec ntainme				ecovei ctivitie			Rem	ioval/c	leanu	p Acti	vities		Subi A	merge ctivitie	a Oli es		ection vities		Lo	cating	, Tracki	ing, a	nd Suj	oport A	Activiti	es		vvas	Ste ivia Activ	anagem /ities*	ent
																			p									·	<u> </u>									
Common Name Plants	IL	IN	MI	MN O	H W	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand cleaning (surface, <1 inch)	chel avat	emoval /Cleaning or debris, or vegeta	Detection of non-floating or submerged oil	Recovery of non-floating or submerged oil	Containment of non-floating or submerged oil	Deterrence and Hazing	Capture and care of contaminated species or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	of New Access F	/use of Stagin	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	personnel by	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
American Hart's-tongue Fern			Χ																																			
Decurrent False Aster	Х		,,																																			
Dwarf Lake Iris			Χ		Х																										1		1					
Eastern Prairie Fringed Orchid	Χ	Χ	Χ	>	< X																										•		•					
Fassett's Locoweed					Х																										1		1					
Houghton's Goldenrod			Χ																												į		į					
Lakeside Daisy	Χ		Χ	>	(•		•					
Leafy Prairie-clover	Χ																																					
Leedy's Roseroot				X																																		
Mead's Milkweed	Χ	X			Х																																	
Michigan Monkey Flower			Χ																																			
Minnesota Dwarf Trout Lily				X																																		
Northern Wild Monkshood				>	< X																																	
Pitcher's thistle	Χ	X	Χ		Х																										!		!					
Prairie Bush-clover	Χ			X	Х																										-		-					
Short's Bladderpod		Χ																																				
Short's Goldenrod		Χ																																				
Small whorled pogonia	Χ		Χ	>	<																																	
Tennessee Pondweed				>	(
Virginia Sneezeweed				>	<																																	
Virginia Spiraea				>	(
Western Prairie Fringed Orchid				X																																		
Snails																													•								-	
Iowa Pleistocene Snail	Χ																																					
Clams (Freshwater Mussels)							-	•	•									•						•				<u> </u>										
Clubshell	Χ	Χ	Χ	>	<																																	
Fanshell	Χ	Χ		>	<																																	
Fat Pocketbook	Χ	Χ																																				
Higgins' Eye Pearlymussel	Χ			Χ	X																																	
Longsolid	Χ	Χ		>	<																																	
Northern Riffleshell	Χ	Χ	Χ	>	<																																	
Orangefoot Pimpleback	Χ																																					
Pink Mucket	Х	Χ		>	<																																	

																							Sh	oreli	ne (be	each/	land)																
																											Vildlife																
	0	courre	nca i	in Act	ion Ar	-02			tion ar nt Act			Recov Activi				Pam	oval/	clean	un Ac	tivitio	c			merge Activiti	ed Oil		otectic ctivitie			Loc	ratina	Tracl	dina a	nd Su	nnart	Λctivi	ties		1	Waste	e Man Activit		ent
		Journe	1100 1	III ACI	IOH AI	Ca	COIIL	annic		IVILICS		ACTIVI	ucs			TCH	Ovair	olcario	ир Ло	,tivitic		,		CHVILI	103		Stivitio	.5		LOC	atirig	i, maci	urig, a	na ou	pport	ACUVI	lics				TOUVIL		
							Booming	es or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	acuuming	Sorbents		Flooding	Flushing	m Cleaning	andblasting		eaning (surface, <1 inch) lechanical (non-chemical) sand	xcavati	nent, debris, or vegetation	Detection of non-floating or submerged oil	Recovery of non-floating or submerged oil	Containment of non-floating or	submerged on Deterrence and Hazing	d ca	or recovery of c	of Aircraft	of Vessels	of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	tion/use of Stagin	ral attenuation - allow habitat to ver naturally while monitoring	nent of buoys	Locating, Sampling and monitoring:	water (micrude personnel by		Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Common Name	IL	IN	MI	MN	ОН	WI	3001	Dike	Constrement) N	Kir	/acı	Sorb		00 -	-Ius	Steam	Sano	Mec.	ileal Vec	ileai	edii	Dete subn	Reco	lo d	Jete	Sapi	bec	Use	Use	Use	Jse	Crea	Creat land)	Natural	Jepl	Loca	-, II,		Nas	Lem	l uo	Эес
Purple Cat's Paw Pearlymussel					X				T	Τ		T	T 0,		<u> </u>		- 07	T	T	<u> </u>		- 0	<u> </u>	T 0.	<u>, </u>	<u>,, </u>		0)											Τ.			<u>- </u>	
Pyramid (Pink) Pigtoe					Χ																																		+	\neg	-	\neg	
Rabbitsfoot	Х	Х			Χ										$^{+}$													+													\neg	$\overline{}$	
Rayed Bean		Х	Х		Χ										\dashv											+		+													-	$\overline{}$	
Rough Pigtoe		Х													\neg											+		+													\neg	\neg	
Round Hickorynut	Х		Х		Χ								+		\neg										1	+		\top													\neg		
Salamander mussel	Х	Х	Х	Х		Х							+		\neg											+		\top													\neg	\neg	
Scaleshell	Х																																				+		\top	$\neg \vdash$	-	\rightarrow	
Sheepnose	Х	Х		Х	Χ	Х									\dashv											+		\top											+	\neg	\neg	\neg	
Snuffbox	Х	Χ	Х		Χ	Х				1					\neg																								+	\neg	\neg	\neg	
Spectaclecase	Х			Х		Χ																																		\neg	-	\neg	
White Catspaw		Χ			Χ																																			-	-	\neg	
Winged Mapleleaf				Χ		Χ																														1				$\neg \vdash$	-	$\overline{}$	
Crustaceans																																											
Illinois Cave amphipod	Х																																										
Insects																				!						_																	
American Burying Beetle			Χ		Х																																						
Bog Buckmoth						Χ									一																												
Dakota Skipper				Χ																																							
Frosted Elfin Butterfly	Χ	Χ	Χ		Χ	Χ																																					
Hine's Emerald Dragonfly	Χ		Χ			Χ																																					
Hungerford's Crawling Water Beetle			Χ																																								
Karner Blue Butterfly	Χ	Χ	Χ	Χ	Χ	Χ									T																												
Linda's Roadside Skipper	Χ																																										
Mitchell's Satyr Butterfly		Χ	Χ		Χ																																						
Monarch Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																					
Poweshiek Skipperling			Χ	Χ		Χ																																					
Rattlesnake-master Borer Moth	Χ																																										
Regal Fritillary	Χ	Χ	Χ	Χ	Χ	Χ																																					
Rusty Patched Bumble Bee	Χ	X		Χ	Χ	Χ																																					
Fish												•		•																													
Lake Sturgeon	Χ	Χ	Χ	Χ	Χ	Χ																																					
Pallid Sturgeon	Χ																																										
Popeye Shiner					Χ																																						

																					;	Shore	eline (beacl	n/land))														
	0	Sourro	nco i	n Acti	ion Ar	22			ion an nt Acti			ecove			Por	noval/	′cleanu	ın Act	tivitios		Sı	ubmeı Acti\	rged C	Dil F	Wildlif Protecti Activiti	ion		Lo	aatina	, Tracki	ng or	ad Qur	aport /	∧ ctivit	ios		Wa		anagen	nent
		curre	iice ii	II ACI	IOH AI	z a	COITE	allille		villes	F	Cuviu			IVEI	ilovai/	Cleanu	ір Асі	uviues		_	ACII	/IIIES		CUVIU	C S		LU	Jauriy	, IIack	riy, ai	iu Sup	JPOIL F	ACTIVIT	6 3			ACIIV	VILLES	
Common Name	IL	IN	MI	MN	ОН	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand	(surface, <1 mon)	Manual removal /Cleaning of oil, oiled	Sediment, debits, or vegetation Detection of non-floating or	submerged oil Recovery of non-floating or	submerged oil Containment of non-floating or	g oil	Deterrence and Hazing Capture and care of contaminated	cove	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	of New Access F	ion/use of Staging Ar	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	ess of personnel by	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Scioto Madtom					Х																																			
Sicklefin Chub	Χ																																							
Sturgeon Chub	Χ																																							
Topeka Shiner				Χ																																				
Herptiles																									-															
Alligator Snapping Turtle	Χ	Χ																																	!					
Blanding's Turtle	Χ	Χ	Χ	Χ	Χ	Χ																											!		!					
Copperbelly Watersnake, N. DPS		Χ	Χ		Χ																																			
Eastern Massasauga	Χ	Χ	Χ		Χ	Χ																																		
Illinois Chorus Frog	Χ																																							
Spotted Turtle	Χ	Χ	Χ		Χ																																			
Streamside Salamander		Χ			Χ																																			
Wood Turtle			Χ	Х	Χ	Х																																		
Mammals																			_															<u> </u>						
Canada Lynx			Χ	Х		Х																																		
Gray Bat	Χ	Х	, ,	, ,		, ,															+	+				-+					\rightarrow				\vdash			\vdash	1	
Gray Wolf	^	,,	Χ	Х		Х									+		+	+		+	+	+	_	-		\dashv		\rightarrow		_	\rightarrow				\vdash	\vdash	\vdash	\vdash	+-	
Indiana Bat	Υ	Х	Х	^	Х	^									<u> </u>									_											+	\vdash	\vdash	_	+-	+
Little Brown Bat				Y	X	Y									 		1					+		_											-	\vdash	\vdash	\vdash	+-	\vdash
Northern Bog Lemming	^	^	^	Х	^	^									-		1				_	_													-	\vdash	\vdash	\vdash	+-	\vdash
Northern Long-eared Bat	V	~	~		Χ	V									<u> </u>		1					_		_											-	\vdash	\vdash	\vdash	+-	+
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Plains Spotted Skunk				X		V							-		-		+	+		-	+	+	_	+		-+					\rightarrow				₩	₩	\vdash	\vdash	+-	
Prairie Gray Fox	V	V	V	X	V	X							-		-		+			-	_	_	_	_											₩	₩	₩	₩	+-	
Tricolored Bat	Х	Χ	Х	Х	Х	Χ																																		
Birds	.,	.,																_			_																			
Eastern Black Rail					X								_								_					_					_				4		_		4—	
Golden-winged Warbler					X																																			
Piping Plover, Great Lakes					Х																												!		<u>!</u>					
Rufa Red Knot					Χ																												!		!					
Whooping Crane, Non-essential Experimental Pop. * Decenting is addressed in the NRT's					X																																			

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE

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	0	ccurre	ence i	n Acti	on Area	a (Defle ontainn	ection a			Recove Activiti			Re	moval	/cleanı	up Act	ivities		S		rged C vities		Protection Activities			Lo	catin	g, Trac	king, a	and Su	ıpport A	Activitie	es		Wa	aste Ma Acti	anage ivities*	ment
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							ør E	arriers, dams, pits,	cking						aning	Ę.	(non-chemical) sand	e, < l -cher	Cavation (21 men) /Cleaning of oil, oi	bris nor	d oil of non-floating or	submerged oil Containment of non-floating or	oil	and Hazing care or contaminated	covery	aft	els	sles	Use of machinery/supporting equipment	e of New Access Points	of Staging Areas (on	attenuation - allow habitat t naturally while monitoring	of buoys	Sampling and monitoring: water (includes SCAT)	Access of personnel by foot traffic	ling	Storage (on water)	Storage	ation
							ing or Bel	ruction	renches Culvert block	Skimming	acuuming	Sorbents	Flooding	Flushing	steam Clear	andblasting	chanical (eaning (surractions)	eaning and lanual remo	ediment, de Jetection of	ubmerged c	submerged o Containment	submerged o	eterrence al	casses	Jse of Aircraft	Jse of Vessels	Jse of Vehicles	e of mach uipment	Creation/Use	Creation/use and)	ਰ ਡ	eployment of	ocating, Sa Air, Iand, wa	sess of pe	Vaste Handling	Temporary S	Temporary S	(errans) Decontamination
Common Name	IL	IN	MI	MN	OH \	ΝI	Boom Dikes	Con	tre.	Ski	Vac	Sor	Flo	Flu	Ste	Sar	Me	Me	Ma	sec Def	sub Rec	sub	sub	Def	Spe	nse	ns	ns	Use equ	S	Creat land)	Nat	Del	Pi,	Acc	Wa	Ter	Ter	Dec
Plants						_																																	
American Hart's-tongue Fern			Х																																				
Decurrent False Aster	Х																																						
Dwarf Lake Iris			Χ			× L																																	
Eastern Prairie Fringed Orchid	Х	Χ	Χ			× L																																	
Fassett's Locoweed						x L																																	
Houghton's Goldenrod			Χ																																				
Lakeside Daisy	X		Χ		X																																		
Leafy Prairie-clover	Χ																																						
Leedy's Roseroot				Χ																																			
Mead's Milkweed	Х	Χ				хΓ																																	
Michigan Monkey Flower			Χ																																				
Minnesota Dwarf Trout Lily				Χ																																			
Northern Wild Monkshood					Χ	хΓ																																	
Pitcher's thistle	X	Χ	Χ			хΓ																																	
Prairie Bush-clover	X			Χ		хΓ																																	
Short's Bladderpod		Χ																																					
Short's Goldenrod		Χ																																					
Small whorled pogonia	Χ		X		X																																		
Tennessee Pondweed					X																																		
Virginia Sneezeweed					X																																		
Virginia Spiraea					X																																		
Western Prairie Fringed Orchid				Χ																																			
Snails																																	•						
Iowa Pleistocene Snail	Χ																																						
Clams (Freshwater Mussels)												•																					•						
Clubshell	Χ	Χ	Χ		Χ																											!		!					
Fanshell	Χ	Χ			Χ																											!		!					
Fat Pocketbook	Χ	Χ																														!		!					
Higgins' Eye Pearlymussel	Χ			Χ		x 🔽																										!		!					
Longsolid	Χ	Χ			Χ																											!		!					
Northern Riffleshell	Χ	Χ	Χ		Χ																				T							!		!					
Orangefoot Pimpleback	Χ																															!		!					
Pink Mucket	Х	Χ			X																											!		!					

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	0)ccurr	ence	in Ac	ction A	rea		Deflect ainmei				Recove Activitie			Rei	moval/	/cleanu	ın Act	ivities		S		erged ivities		Protect Activiti			1.0	ncating	r Tracl	kina a	ind Su	nnort /	Activitie	29		Wa	ste Ma	anagen vities*	nent
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Common Name	II	IN	MI	MN	N OH	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	/acuuming	Sorbents	looding	Flushing	Steam Cleaning	sandblasting	Aechanical (non-chemical) sand	cal (non-che	Anual removal /Cleaning of oil, oiled	, o	submerged oil Recovery of non-floating or	d oil	Containment of non-floating or submerged oil	nce and Haz	pecies or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	loyment of buoys	ocating, Sampling and monitoring: kir, land, water (includes SCAT)	access of personnel by foot traffic	Vaste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Purple Cat's Paw Pearlymussel					X						<u> </u>				T						<u>,, </u>	<u>" </u>		0 0,	<u> </u>	" 														
Pyramid (Pink) Pigtoe					Х																												!		!					
Rabbitsfoot	Χ	Х			Х																												!		i					
Rayed Bean		Х	Х		Х																+	+	\neg										!		i					
Rough Pigtoe		Х																								_							!		i					
Round Hickorynut	Х	Х	Х		Х																	_											i		i					
Salamander mussel	Х	Х	Х	Х		Х															+	+	\neg			$\overline{}$							i		1					
Scaleshell	Х																									_							!		i					
Sheepnose	Х	Х		Х	Х	Х														_	_	_				_							i		i					
Snuffbox	Х	Х	Х		Х	Χ															+	+											i		i					
Spectaclecase	Χ			Х		Х																\top											i		i					
White Catspaw		Х			Х																												·							
Winged Mapleleaf				Х		Х																											1		,					
Crustaceans																																	•		<u> </u>					
Illinois Cave amphipod	Х																																							
Insects																																								
American Burying Beetle			Χ		Х																																			
Bog Buckmoth						Χ																																		
Dakota Skipper				Х																																				
Frosted Elfin Butterfly	Χ	Х	Χ		Χ	Х																																		
Hine's Emerald Dragonfly	Χ		Χ			Χ																																		
Hungerford's Crawling Water Beetle			Χ																																					
Karner Blue Butterfly	Χ	Χ	Χ	Х	Χ	Χ																																		
Linda's Roadside Skipper	Χ																																							
Mitchell's Satyr Butterfly		Х	Χ		Χ																																			
Monarch Butterfly				Х	Χ	Χ																																		
Poweshiek Skipperling			Χ	Х		Х																																		
Rattlesnake-master Borer Moth	Х																																							
Regal Fritillary	Χ	Х	Χ	Х	Х	Χ																																		
Rusty Patched Bumble Bee		Χ			Χ																																			
Fish														-					-																					
Lake Sturgeon	Χ	Х	Χ	Χ	Χ	Χ																											!		!					
Pallid Sturgeon	Х																																!		!					
Popeye Shiner					Χ																																			

Ports, Canals, Industrial Areas (Structures and water) Wildlife Waste Management Submerged Oil Protection Deflection and Recovery Removal/cleanup Activities Activities Activities containment Activities Activities Locating, Tracking, and Support Activities Activities* Occurrence in Action Area of New Access Points Creation/use of Staging Areas (on ccess of personnel by foot traffic Containment of non-floating or emporary Storage (on water) ry of non-floating or ged oil Sampling and m water (includes \$ etection of non-floating ubmerged oil eployment of buoys Temporary Storage (on land) of Vehicles Naste Handling of Vessels of Aircraft ocating, Sir, land, v ö of Common Name IL IN MI MN OH WI Scioto Madtom Sicklefin Chub Χ ! Χ Sturgeon Chub 1 Χ Topeka Shiner Herptiles Alligator Snapping Turtle Χ Χ Χ Blanding's Turtle Χ Χ Χ Copperbelly Watersnake, N. DPS Χ Χ Χ Χ Χ Χ Χ Χ Eastern Massasauga Illinois Chorus Frog Χ Χ Spotted Turtle Χ Χ Χ Streamside Salamander Χ Χ Wood Turtle Χ Χ Mammals Canada Lynx Χ Χ **Gray Bat** X X Gray Wolf Χ Χ Χ Indiana Bat Χ Χ Χ Little Brown Bat Χ Χ Χ Χ Χ Northern Bog Lemming Χ Northern Long-eared Bat $X \quad X \quad X$ Χ Χ Plains Spotted Skunk Χ Prairie Gray Fox Χ X X Tricolored Bat Χ Birds Eastern Black Rail Χ Χ Χ Golden-winged Warbler Χ Χ Piping Plover, Great Lakes Χ Χ Χ Χ Rufa Red Knot Χ х х Χ Χ Whooping Crane, Non-essential X X X X XExperimental Pop.

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE

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	Od	ccurre	nce i	n Actic	on Area	a	contair			es		ecover ctivitie			Rer	noval/	cleanu	ıp Act	tivities			nemar Activ	rged O vities		Protecti Activitie			Lo	catino	j, Tracl	king, a	and Su	upport	Activi	ies		vva	ste ivia Activ		ent
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Common Name	IL	IN	MI	MN	OH \	ΝI	ũ		trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand	n-cher	val /Cleaning o	Sediment, debris, or vegetation Detection of non-floating or	submerged oil Recovery of non-floating or	submerged oil Containment of non-floating or	submerged oil	Deterrence and Hazing Capture and care of contaminated	OVE	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	personnel by	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Plants American Hart's-tongue Fern			Х																																					
Decurrent False Aster	Х		^																														!							
Dwarf Lake Iris			Х			x F																																		
Eastern Prairie Fringed Orchid	Χ	Χ				x																																		
Fassett's Locoweed						x F																																		
Houghton's Goldenrod			Х			-																																		
Lakeside Daisy	Χ		X		Χ	-																																		
Leafy Prairie-clover	Χ					_ F		\dashv										+		+		+		\dashv		+	\dashv								+					
Leedy's Roseroot				Х		F		\dashv														+				\dashv	\dashv							1	+					
Mead's Milkweed	Χ	Χ				x h		$^{+}$																											1					
Michigan Monkey Flower			Χ																														!		!					
Minnesota Dwarf Trout Lily				Χ				\neg																									!		!					
Northern Wild Monkshood					Χ	x T		\dashv										\top		\top													!		!					
Pitcher's thistle	Χ	Χ	Χ			x [
Prairie Bush-clover	X			Χ		x																																		
Short's Bladderpod		Χ																															!		!					
Short's Goldenrod		Χ																																						
Small whorled pogonia	Χ		Χ		Χ																																			
Tennessee Pondweed					Χ																																			
Virginia Sneezeweed					Χ																																			
Virginia Spiraea					Χ																																			
Western Prairie Fringed Orchid				Χ																																				
Snails																																								
Iowa Pleistocene Snail	Х																																							
Clams (Freshwater Mussels)																																								
Clubshell		Χ	Χ		Χ																												!		!					
Fanshell	Χ	Χ			Χ																												!		!					
Fat Pocketbook	Χ	Χ																															!		!					
Higgins' Eye Pearlymussel	Χ			Χ		X																											!		!					
Longsolid	Χ	X			Χ																												!		!					
Northern Riffleshell	Χ	X	X		Χ																												!		!					
Orangefoot Pimpleback	Χ																																!		!					
Pink Mucket	Х	X			X																												!		!					

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Common Name	IL	IN	MI	MN	ı OH	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand	(surface, < 1 cal (non-che	emoval /Cleaning of	Sediment, debris, or Vegetation Detection of non-floating or	submerged oil Recovery of non-floating or	oil of non-float	submerged oil	ce and Hazin	Capture and care of contaminated species or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	5	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, Iand, water (includes SCAT)	personnel by	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Purple Cat's Paw Pearlymussel					Х																												!		!					
Pyramid (Pink) Pigtoe					Χ																												!		!					
Rabbitsfoot	Χ	Χ			Χ																												!		!					
Rayed Bean		Χ	Χ		Χ																												!		!					
Rough Pigtoe		Χ																															!		!					
Round Hickorynut	Χ	Χ	Χ		Χ																												!		!					
Salamander mussel	Χ	Χ	Χ	Χ	Χ	Χ																											!		!					
Scaleshell	Χ																																!		!					
Sheepnose	Χ	Χ		Χ	Χ	Χ																											!		!					
Snuffbox	Χ	Χ	Χ		Χ	Χ																											!		!					
Spectaclecase	Χ			Χ		Χ																											!		!					
White Catspaw		Χ			Χ																												!		!					
Winged Mapleleaf				Χ		Χ																											!		!					
Crustaceans										-								•																						
Illinois Cave amphipod	Χ																																!		!					
Insects																				_		_									•									
American Burying Beetle			Χ		Χ																																			
Bog Buckmoth						Χ																																		
Dakota Skipper				Χ																																				
Frosted Elfin Butterfly	Χ	Χ	Χ		Χ	Χ																																		
Hine's Emerald Dragonfly	Χ		Χ			Χ																																		
Hungerford's Crawling Water Beetle			Χ																														!		!					
Karner Blue Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																		
Linda's Roadside Skipper	Χ																																!		!					
Mitchell's Satyr Butterfly		Χ	Χ		Χ																																			
Monarch Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																											!		!					
Poweshiek Skipperling			Χ	Χ		Χ																																		
Rattlesnake-master Borer Moth	Χ																																							
Regal Fritillary			Χ		Χ																												!		!					
Rusty Patched Bumble Bee	Χ	Χ		Χ	Χ	Χ																											!		!					
Fish																																								
Lake Sturgeon	Χ	Χ	Χ	Χ	Χ	Χ																											!		!					
Pallid Sturgeon	Χ																																!		!					
Popeye Shiner					Χ																												!		!					

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Common Name	IL	IN	MI	MN	ОН	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand		emoval /Cleaning	ין סר		∪ −	submerged oil Deferrence and Hazing	d care of contami	species of recovery of contaminated Use of Aircraft		Use of Vehicles	chinery/supporting	Creation/Use of New Access Points Creation/Use of Stacing Areas (on	uation - allo	over naturally while monitoring	ent of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Scioto Madtom					Х					Ĭ	U,		Ů,			Ľ	Ţ				<u> </u>		<u>" </u>									!							
Sicklefin Chub Sturgeon Chub	X X							-							+	-	+					+		+		+	_					!		!				\longrightarrow	
Topeka Shiner	^			Х																						+						!		!				$\overline{}$	
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Alligator Snapping Turtle	Х	Х																!	T !													!		!					
Blanding's Turtle		Х	Х	Х	Х	Х											+	<u> </u>	+ ;		+	+	+							-		· ·		!					
Copperbelly Watersnake, N. DPS	•	X	X	, ,	X	, ,		!						!				!	+ ;																				
Eastern Massasauga	Х	X			X	Х		!						!				!	+ :																				
Illinois Chorus Frog	Χ							!						!				!	+ !																				
Spotted Turtle	Χ	Х	Χ		Χ													!	 			+	+									!		!					
Streamside Salamander		Χ			Χ																											!		. !					
Wood Turtle			Χ	Х	Χ	Х																										!		!					
Mammals																													<u> </u>										
Canada Lynx			Χ	Χ		Χ																																	
Gray Bat	Χ	Χ																														!		1					
Gray Wolf			Χ	Χ		Χ																																	
Indiana Bat	Χ	Χ	Χ		Χ																																		
Little Brown Bat	Χ	Χ	Χ	Χ	Χ	Χ																																	
Northern Bog Lemming				Χ																																			
Northern Long-eared Bat	Χ	Χ	Χ	Χ	Χ	Χ																																	
Plains Spotted Skunk				Χ																																			
Prairie Gray Fox				Χ		Χ																																	
Tricolored Bat	Χ	Χ	Χ	Χ	Χ	Χ																										!		!					
Birds																																							
Eastern Black Rail					Χ																																		
Golden-winged Warbler		Χ			Χ																																		
Piping Plover, Great Lakes					Χ																											!		!					
Rufa Red Knot					Χ																											!		!					
Whooping Crane, Non-essential	Х	Х	Х	X	Х	Χ											 																						

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE.

																				Е	Bays a	nd Es	tuaries	S														
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	0			۸ - ti	۸		Deflec				Recove			Dan		-1	A				merge		Prote				4:	Tuest		~ 4 C··		A _4::4			Was		anagem	ent
		ccurre	nce in	Action	Area	COI	ntainme		ivilles	F	Activitie	25		Ren	iovai/o	cleanu	p Acu	villes		А	ctivitie	es	Activ	nues		LC	caung	, Track	ang, a	na Su	pport	ACIIVII	es			Activi	illes"	
Common Name	IL	IN	MI	MN OI	H WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand cleaning (surface, <1 inch)	cal (non-che and excavat	Manual removal /Cleaning of oil, oiled sediment, debris, or vegetation	Detection of non-floating or submerged oil	Recovery of non-floating or submerged oil	Containment of non-floating or submerged oil	- 4az	Capture and care of contaminated species or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	ō	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	nent of b	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
American Hart's-tongue Fern			X																																			
Decurrent False Aster	Х		,,				+									\vdash																		\vdash			\square	
Dwarf Lake Iris	^		Х		Х		+									\vdash																	\vdash	\vdash			\vdash	
Eastern Prairie Fringed Orchid	Х	Х	X	Х												\vdash																		\vdash				
Fassett's Locoweed	^	,,	,,	,	X											\vdash																		-				
Houghton's Goldenrod			Х		, ,											\vdash																		-				
Lakeside Daisy	Χ		X	Х																														\vdash				
Leafy Prairie-clover	X				-											\vdash																		-	$\overline{}$		\vdash	
Leedy's Roseroot				Χ			+																															
Mead's Milkweed	Χ	Х			Х		+																															
Michigan Monkey Flower			Χ				+	+																								+					\Box	
Minnesota Dwarf Trout Lily				Χ																																		
Northern Wild Monkshood				Х	X X																																	
Pitcher's thistle	Χ	Χ	Χ		Х																																	
Prairie Bush-clover	Χ			Χ	Х		+																									 			\Box			
Short's Bladderpod		Х					+																												\Box			
Short's Goldenrod		Χ					+																												\Box			
Small whorled pogonia	Χ		Χ	Х	,		+																															
Tennessee Pondweed				Х																																		
Virginia Sneezeweed				Х																																		
Virginia Spiraea				Х																																		
Western Prairie Fringed Orchid				Χ																																		
Snails							_																															
Iowa Pleistocene Snail	X																																					
Clams (Freshwater Mussels)							-		-																													
Clubshell	X	Χ	Χ	X																											!		!					
Fanshell		Χ		Х																																		
Fat Pocketbook	Χ	Χ																																				
Higgins' Eye Pearlymussel	Χ			Χ	Х																																	
Longsolid	Х	Χ		Х																																		
Northern Riffleshell	Χ	Χ	Χ	Х																											!		!					
Orangefoot Pimpleback	Χ																																					
Pink Mucket	Χ	Χ		Х																																		

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Common Name	IL	IN	MI	MN	ОН	WI	Booming	s or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand	al (non-cher	emoval /Cleaning of	fnon	yed oil	Recovery of non-libating of submerged oil	Containment of non-floating or submerged oil	Deterrence and Hazing	Capture and care of contaminated species or recovery of contaminated	 Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	nent of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Purple Cat's Paw Pearlymussel					Х																																		
Pyramid (Pink) Pigtoe					Χ																																		
Rabbitsfoot	X	Χ			Χ																																		
Rayed Bean		Χ	X		Χ																											!		!					
Rough Pigtoe		Χ																																					
Round Hickorynut	Χ	Χ	Χ		Χ																											!		!					
Salamander mussel	Χ	Χ	Χ	Χ	Χ	Χ																										!		!					
Scaleshell	Χ																																						
Sheepnose	Χ	Χ		Χ	Χ	Χ																																	
Snuffbox	Χ	Χ	Χ		Χ	Χ																										!		!					
Spectaclecase	Χ			Χ		Χ																																	
White Catspaw		Χ			Χ																																		
Winged Mapleleaf				Χ		Χ																																	
Crustaceans																																							
Illinois Cave amphipod	Χ																																						
Insects																																							
American Burying Beetle			Χ		Χ																																		
Bog Buckmoth						Χ																																	
Dakota Skipper				Χ																																		-	
Frosted Elfin Butterfly	Χ	Χ	Χ		Χ	Χ																																	
Hine's Emerald Dragonfly	Χ		Χ			Χ																																-	
Hungerford's Crawling Water Beetle			Χ																																				
Karner Blue Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																	
Linda's Roadside Skipper	Χ																																						
Mitchell's Satyr Butterfly		Χ	Χ		Χ																																		
Monarch Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																	
Poweshiek Skipperling			Χ	Χ		Χ																																	
Rattlesnake-master Borer Moth	Χ																																						
Regal Fritillary	Χ	Χ	Χ	Χ	Χ	Χ																																	
Rusty Patched Bumble Bee	Χ	Χ		Χ	Χ	Χ																																	
Fish						'																																	
Lake Sturgeon	Χ	Χ	Χ	Χ	Χ	Х																T										!		!					
Pallid Sturgeon	Χ																																						
Popeye Shiner					Х																																		

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	00	CULTE	nce ir	a Acti	on Are	22			ion an nt Acti			ecove ctivitie			Po	moval	l/clean	un A	ctivitie	c			merge Activiti			tection ivities			ocatin	ıg, Trac	kina -	and Su	ınnar	Activi	tioc		Wa		anager vities*	nent
		curre	iice ii	I ACII	OH AIR	5a	COITE			VIIIES	-	CHVILLE	7 5	_	Ne	IIIOvai	/CI C all	up A	Cuvine		_		CHVILI	5 5	ACI				OCalli	ig, mac	Kiriy, e	and Su	ippori	ACTIVI	1162	_		ACII	villes	
Common Name Scioto Madtom	IL	IN	MI	MN	OH X	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	as		cleaning (surface, <1 inch) Mechanical (non-chemical) sand	y and ex	ediment, debris, or vegetation	Detection of non-floating or submerged oil	Recovery of non-floating or submerged oil	ed ed	Deterrence and Hazing	Capture and care of contaminated species or recovery of contaminated	ircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to	eployment of buoys	Locating, Sampling and monitoring: Air. land, water (includes SCAT)	of personnel by	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Sicklefin Chub	Χ																			+																				
Sturgeon Chub	Χ																																							
Topeka Shiner				Χ																																				
Herptiles						'											-	_	_							-			-											
Alligator Snapping Turtle	Χ	Χ																																						
Blanding's Turtle	Χ	Χ	Χ	Χ	Χ	Х																											!		!					
Copperbelly Watersnake, N. DPS		Χ	Χ		Χ																																			
Eastern Massasauga	Χ	Χ	Χ		Χ	Х																																		
Illinois Chorus Frog	Χ																																							
Spotted Turtle	Χ	Χ	Χ		Χ																												!		!					
Streamside Salamander		Χ			Χ																																			
Wood Turtle			Χ	Χ	Χ	Х																																		
Mammals						'							!				-	-											•											
Canada Lynx			Χ	Χ		Х																																		
Gray Bat	Χ	Χ																																						
Gray Wolf			Χ	Χ		Х																																		
Indiana Bat	Χ	Χ	Χ		Χ																																			
Little Brown Bat	Χ	Χ	Χ	Χ	Χ	Х																																		
Northern Bog Lemming				Χ																				1					1											
Northern Long-eared Bat	Χ	Χ	Χ	Χ	X	Х																																		
Plains Spotted Skunk				Χ																																				
Prairie Gray Fox				Χ		Х																																		
Tricolored Bat	Χ	Χ	Х		Х	х																																		
Birds						ı												_																						
Eastern Black Rail	Χ	Х	Χ	Χ	Χ	Χ																																		
Golden-winged Warbler					Χ											1					\neg			1					+											
Piping Plover, Great Lakes					X																\dashv												,		,					
Rufa Red Knot					X															+													<u> </u>		1					
Whooping Crane, Non-essential Experimental Pop.					X	- 1																											•		•					

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE.

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	Oc	ccurre	nce in	n Actio	on Are	а	contair	flection ment		es		ecover ctivitie:			Ren	noval/	cleanu	aA qu	tivities		3		nergeo ctivitie			ection vities	Lo	cating	, Tracki	ng, a	nd Sup	port A	Activitie	es			ste iviai Activi	nagem	ent
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Common Name Plants	IL	IN	MI	MN	ОН	WI	ũ	IS	trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	non-cher	surface, al (non-c	al /Cleaning o	sediment, debris, or vegetation Detection of non-floating or	ged oil	Recovery of non-floating or submerged oil	Containment of non-floating or submerged oil	Deterrence and Hazing	Capture and care of contaminated species or recovery of contaminated	 Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	ging Areas (on	Natural attenuation - allow habitat to recover naturally while monitoring	int of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
American Hart's-tongue Fern			Χ			Г																																	
Decurrent False Aster	Χ					ŀ																																	
Dwarf Lake Iris			Χ			x						-					 		+	+	+	_							_								-		
Eastern Prairie Fringed Orchid	Х	Χ			Х	x											 		+	+	+	\dashv															\rightarrow		
Fassett's Locoweed						х																										!		!					
Houghton's Goldenrod			Х			ŀ	-	-	-	_		$\overline{}$						+	+	+									$\overline{}$!		!					
Lakeside Daisy	Χ		Χ		Χ	ŀ												+			+																		
Leafy Prairie-clover	Χ					ŀ														+	+	\dashv																	
Leedy's Roseroot				Х		ŀ																_																	
Mead's Milkweed	Χ	Х				x h																\dashv																	
Michigan Monkey Flower			Χ			ŀ																_																	
Minnesota Dwarf Trout Lily				Х		ŀ														+		_																-	
Northern Wild Monkshood					Χ	x															+	_																	
Pitcher's thistle	Х	Χ	Χ			x						-					 		+	+	+	_																	
Prairie Bush-clover	Χ			Х		x														+	+	_																	
Short's Bladderpod		Χ				ŀ													+	+	+	\dashv																	
Short's Goldenrod		Χ				ŀ																																	
Small whorled pogonia	Х		Χ		Χ	ŀ																																	
Tennessee Pondweed					Χ	ŀ																																	
Virginia Sneezeweed					Χ	ı																																	
Virginia Spiraea					Χ	ı																																	
Western Prairie Fringed Orchid				Χ		Ī																																	
Snails						-		•			•		•																	•		•	•		•				
Iowa Pleistocene Snail	X					Γ																																	
Clams (Freshwater Mussels)						-											•		-							•			-					•					
Clubshell	X	Χ	Χ		Χ	Γ																										!		!					
Fanshell	Χ	Χ			Χ	ľ																										!		!					
Fat Pocketbook	X	Χ																														!		!					
Higgins' Eye Pearlymussel	Χ			Χ		Х																										!		!					
Longsolid	Χ	Χ			Χ	ļ																										!		!					
Northern Riffleshell	Χ	Χ	Χ		Χ	ļ																										!		!					
Orangefoot Pimpleback	Χ																															!		!					
Pink Mucket	Х	Χ			Х																											!		!					

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	0	ccurre	ence i	in Ac	tion Ar	ea			tion ar nt Acti			ecove ctivitie			Rer	noval/	cleanu	p Acti	ivities		bmero Activi	ged Oil		otection ctivities		L	ocatino	ı. Trac	king, aı	nd Sup	port A	ctivitie	es		Was	ste Ma Activ	anagen vities*	ient
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Common Name	IL	IN	MI	MN	ОН	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand cleaning (surface, <1 inch)	al (non-che	emoval /Cleaning of vegeta	Recovery of non-floating or	submerged oil Containment of non-floating or submerged oil	Deferrence and Hazing	d cal	,	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	9	ion/use of Staging Areas (on	Natural attenuation - allow habitat to recover naturally while monitoring	ent of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Purple Cat's Paw Pearlymussel					X												_				_	_									!		!					
Pyramid (Pink) Pigtoe					X																										!		!					
Rabbitsfoot	X				Χ																										!		!					
Rayed Bean		X	Х		Χ																										!		!					
Rough Pigtoe		X																													!		!					
Round Hickorynut	X		X		Х																										!		!					
Salamander mussel	Χ	X	X	X	Χ	X																									!		!					
Scaleshell	X																														!		!					
Sheepnose	Χ	Χ		X		X																									!		!					
Snuffbox		Χ	Χ		X	X																									!		!					
Spectaclecase	Χ			Χ		Χ																									!		!					
White Catspaw		Χ			X																										!		!					
Winged Mapleleaf				Χ		Χ																									!		!					
Crustaceans																																						
Illinois Cave amphipod	Χ																																					
Insects																																						
American Burying Beetle			Χ		Χ																																	
Bog Buckmoth						Χ																																
Dakota Skipper				Χ																																		
Frosted Elfin Butterfly	Χ	Χ	Χ		Χ																																	
Hine's Emerald Dragonfly	Χ		Χ			Χ																									!		!					
Hungerford's Crawling Water Beetle			Χ																																			
Karner Blue Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																
Linda's Roadside Skipper	Χ																																					
Mitchell's Satyr Butterfly		Χ			Χ																																	
Monarch Butterfly	Χ	Χ			Χ	Χ																																
Poweshiek Skipperling			Χ	Χ		Χ																																
Rattlesnake-master Borer Moth	Χ																																					
Regal Fritillary			Χ		Χ																																	
Rusty Patched Bumble Bee	Χ	Χ		Χ	Χ	Χ																																
Fish																																						
Lake Sturgeon		Χ	Χ	Χ	Χ	Χ																									!		!					
Pallid Sturgeon	Χ																																					
Popeye Shiner					Χ																																	

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							De	flection	n and		R	ecove	rv								Sub	merge	ed Oil		ldlife ection											Wa	ste Ma	anagem	ent
	00	ccurre	nce ir	n Acti	on Are	ea	contai					ctivitie			Rer	noval/d	cleanu	p Acti	vities			Activiti			ivities		Lo	ocating	j, Tracki	ing, ar	nd Sup	port A	Activiti	es				vities*	
								Dikes or Berms Construction barriars, dame, nits, and	directo, dario, pres, direc	ocking	Skimming	acuuming		- Bu		eaning		cal (non-chemical) sand (surface, <1 inch)	cal (non-chemical) sand and excavation (>1 inch)	al removal /Cleaning of oil, oiled ent, debris, or vegetation		f non-floating or oil	nent of non-floating or ed oil	d Hazing	and care of contaminated or recovery of contaminated	raft	of Vessels	of Vehicles	machinery/supporting lent	New Access Points	Areas (on	attenuation - allow habitat to raturally while monitoring	Deployment of buoys	Sampling and monitoring: water (includes SCAT)	s of personnel by foot traffic	Vaste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
							Booming	kes	nch	Culvert bl	gim	acuu	Sorbents	Flooding	lushing	Steam Cl	andb	echanic eaning	echa	anua dim	stec	Recovery submerge	onta bme	eterr	apture pecies o	io ge	Jse o	Jse o	se of juipm	eati	Creati land)	Natural recove	old	ocating, Vir, land, v	cess	aste	ğ III	mpe n lar	Scor
Common Name	IL	IN	MI	MN	OH	WI	<u> </u>	<u> </u>	<u> </u>	ರ	<u>ਲ</u> ੋ	> >	တိ	Ĕ	Ē	<u> </u>	_ ss	<u> </u>	<u> </u>	Se ⊠	Det	Rec	<u> </u>	۵	<u>ုပ္က ဇွ</u>	_ <u>ຶ</u>	<u> </u>	_ <u>ຶ</u> _	Use	<u>ပ်</u>	<u>ਨੂੰ ਛ</u>	<u>z</u> ĕ	۵	Air,	<u>\</u>	Š	_ <u>e_</u>	<u> 후 호</u>	<u>ظ</u>
Scioto Madtom					X																																	+	
Sicklefin Chub	X																																				<u> </u>	+	
Sturgeon Chub	Х			.,																																			
Topeka Shiner				Χ		L																										!		!					
Herptiles																												<u> </u>											
Alligator Snapping Turtle	X																	!	!				_			_						!		!				lacksquare	
Blanding's Turtle	Χ		X	X	X	Х												!	<u> </u>													!		!					
Copperbelly Watersnake, N. DPS	.,	X	X		X													!	!				_																
Eastern Massasauga		Χ	Х		Χ	X												!	<u>!</u>																				
Illinois Chorus Frog	X		.,		.,													!	<u> </u>			_	-	_								<u>!</u>		!				\longrightarrow	
Spotted Turtle	X		Χ		X													!	!													!		!				lacksquare	
Streamside Salamander		Χ			X																																igwdow	+	
Wood Turtle			Х	Х	Χ	X																														<u> </u>			
Mammals									_								<u> </u>						_													<u> </u>		$\downarrow \downarrow \downarrow$	
Canada Lynx			X	Х		X																																	
Gray Bat	Χ	Х																														!		!					
Gray Wolf			Χ	Χ		X																																	
Indiana Bat		X			Χ	ļ																																	
Little Brown Bat	Х	Х	Х		Χ	X																																	
Northern Bog Lemming				Х		ļ																																	
Northern Long-eared Bat	Х	Х	Х		Χ	X																																	
Plains Spotted Skunk				Х																																			
Prairie Gray Fox				Χ		Χ																																	
Tricolored Bat	Χ	Χ	Χ	Χ	Χ	Х																										!		!					
Birds																																					<u></u>		
Eastern Black Rail					Χ																																		
Golden-winged Warbler					Χ																																		
Piping Plover, Great Lakes					Χ																											!		!					
Rufa Red Knot					Χ																											!		!					
Whooping Crane, Non-essential	Χ	Х	Χ		X	Х																																	

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE

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	Oc	ccurre	nce ir	n Actio	n Area	C	containm				ecover ctivities			Ren	noval/	cleanu	p Acti	vities			merge Activitie		Activ			L	ocating	g, Track	king, a	nd Sup	port A	Activitie	es		vvas	Activi		31 IL
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							Booming Dikes or Berms	Construction barriers, dams, pits, and	Culvert blocking	Skimming	/acuuming	Sorbents	Flooding	Flushing	Steam Cleaning	ndblasting	chanical (non-chemical) sand	cal (non-che and excavat	emoval /Cleaning of oil, oil. debris, or vegetation	tion of non erged oil	Recovery of non-floating or submerged oil	Containment of non-floating or submerged oil	and Haz	prure and care or contaminated ecies or recovery of contaminated	Use of Aircraft	se of Vessels	Jse of Vehicles	Use of machinery/supporting equipment	reation/Use of New Access Points	Creation/use of Staging Areas (on and)	Vatural attenuation - allow habitat to ecover naturally while monitoring	Deployment of buoys	ocating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Vaste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Common Name	IL	IN	MI	MN	OH W	/1	Boo	Con	(In)	Skir	Vac	Sorl	Floc	Flus	Stea	San	Med	Med	Mar sed	Detec subm	Rec sub	Con sub	Det	Spe	Use	Use	Use	Use equi	Cre	Creat land)	Natu reco	Dep	Loc Air,	Acc	Was	Ten	Ten (on	Dec
Plants																																						
American Hart's-tongue Fern			Χ																																			
Decurrent False Aster	X																														!							
Dwarf Lake Iris			Χ		>	⟨ 🔽																									:-		!					
Eastern Prairie Fringed Orchid	X	Χ	Χ		X >	〈 <mark> ̄</mark>	!																															
Fassett's Locoweed					>	<																																
Houghton's Goldenrod			Χ																												!		!					
Lakeside Daisy	X		Χ		Χ																																	
Leafy Prairie-clover	X																																					
Leedy's Roseroot				Χ																																		
Mead's Milkweed	X	Χ			>	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$																																
Michigan Monkey Flower			Χ																												!		!					
Minnesota Dwarf Trout Lily				Χ																																		
Northern Wild Monkshood					X >	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$																																
Pitcher's thistle	X	X	Χ		>	$\langle \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$																																
Prairie Bush-clover	X			Χ	>	$\langle \; $																																
Short's Bladderpod		Χ																																				
Short's Goldenrod		Χ																																				
Small whorled pogonia	X		Χ		X																																	
Tennessee Pondweed					Χ																																	
Virginia Sneezeweed					Χ																										!		!					
Virginia Spiraea					Χ																																	
Western Prairie Fringed Orchid				Χ																																		
Snails							·		•											•																		
Iowa Pleistocene Snail	X																																					
Clams (Freshwater Mussels)							•																					•										
Clubshell	X	Χ	Χ		Χ																																	
Fanshell	Χ	Χ			Χ																																	
Fat Pocketbook	Χ	Χ																																				
Higgins' Eye Pearlymussel	Χ			Χ	>	< [
Longsolid	Χ	Χ			Χ																																	
Northern Riffleshell	Χ	Χ	Χ		Χ																																	
Orangefoot Pimpleback	Χ																																					
Pink Mucket	Χ	Χ			Χ																																	

																						,	Wetland	ds															
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							Booming	(es or Berms	struction barriers, dams, pits, ches	lvert blocking	Skimming	/acuuming	Sorbents	Flooding	Flushing	Steam Cleaning	ndblasting	echanical (non-chemical) sand	cal (non-chemical) s	ianing and excavation (>1 incn) anual removal /Cleaning of oil, oiled	diment, debris, or vegetation tection of non-floating or		Containment of non-floating or submerged oil	Hazin	pure and care or contaminated ecies or recovery of contaminated	Use of Aircraft	se of Vessels	e of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	cating, Sampling and monitoring: , land, water (includes SCAT)	cess of personnel by foot traffic	Waste Handling	Femporary Storage (on water)	Temporary Storage (on land)	Decontamination
Common Name	IL	IN	MI	MN	I OH	WI	B	一	Con	Culv	κ̈́		တိ	Ĕ	<u> </u>	<u> </u>	Sa	¥ 5	S S S	<u>5 ≥</u>	S S	<u> </u>	<u>, ೮ ೫</u>	۵	<u>နှင့်</u>	<u> </u>	<u> </u>	Use	Use	ပ်	<u>ਬ</u> ਨੂ	Ž Š	ے	를 은	Ac	Š	e	<u> </u>	
Purple Cat's Paw Pearlymussel					Х																																		
Pyramid (Pink) Pigtoe					Χ																																		
Rabbitsfoot	Х	Χ			Χ																															'			
Rayed Bean		Χ	Χ		Χ																																		
Rough Pigtoe		X																																		<u> </u>			
Round Hickorynut	Χ	X	Χ		Χ																																		
Salamander mussel	Х	Χ	Χ	Х	Χ	Χ																																	
Scaleshell	Χ																																						
Sheepnose	Χ	Χ		X	Χ	X																																	
Snuffbox	Χ	Х	Χ		X	X																																	
Spectaclecase	Χ			Χ		Χ																																	
White Catspaw		Χ			Χ																																		
Winged Mapleleaf				Χ		Χ																																	
Crustaceans																																							
Illinois Cave amphipod	Χ																																						
Insects								-	-										-		-	-					-					-							
American Burying Beetle			Χ		Χ																											!		!					
Bog Buckmoth						Χ																										!							
Dakota Skipper				Χ																																			
Frosted Elfin Butterfly		Χ	Χ		Χ	Χ																																	
Hine's Emerald Dragonfly	Χ		Χ			Χ																										!		!					
Hungerford's Crawling Water Beetle			Χ																																				
Karner Blue Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																																	
Linda's Roadside Skipper	Χ																															!		!					
Mitchell's Satyr Butterfly		Χ			Χ																											!		!					
Monarch Butterfly	Χ	Χ	Χ	Χ	Χ	Χ																										!		!					
Poweshiek Skipperling			Χ	Χ		Χ																										!		!					
Rattlesnake-master Borer Moth	Χ																																						
Regal Fritillary	Χ	Χ	Χ	Χ	Χ	Χ																										!		!					
Rusty Patched Bumble Bee	X	Χ		Χ	Χ	Χ																										!		!					
Fish																																							
Lake Sturgeon	Χ	Χ	Χ	Χ	Χ	Χ																																	
Pallid Sturgeon	Χ																																						
Popeye Shiner					Χ																																		

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	Oc	curre	ence i	n Acti	ion Aı	rea		Deflectainme				Recove Activitie			Rer	noval/d	cleanu	n Acti	vities			bmerç Activi	ged Oil	Pro	Vildlife otection ctivities			ocatin	n Trac	ckina :	and Su	nnort A	Activitie	2 6		Was	ste Ma Activ	nagem	ient
		Journe	1100 1	117100	101171	Cu	001	tanini		IVILICO	,	TOUVILLE			1101	io vai, c	Jicaria	p / toti	VILICO			7 (0111)	11103	710	ouvides.			Locatii	g, mac	Jiting, t	una oa	pport	CHVILIC	,5			7 (0117	11100	
Common Name	IL	IN	MI	MN		WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand cleaning (surface <1 inch)	cal (non-chemicand excavation	emoval /Cleaning	of non-flo	overy o	submerged oil Containment of non-floating or	Submerged on Deterrence and Hazing	oture and car	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Scioto Madtom Sicklefin Chub	V				Х																					_													
Sturgeon Chub	X X								-	-	 								+		+	+		_		+	+				-					\longrightarrow			
Topeka Shiner	^			Х							<u> </u>															+													
				^																																			
Herptiles Alligator Snapping Turtle	Х	Х									1						1									1													
Blanding's Turtle	X	X	Х	Х	Х	Х															_											,		\vdash					
Copperbelly Watersnake, N. DPS	^	X	X	^	X	^													+	-	+											!		├ ⊹'					
Eastern Massasauga	Х	X				Х		+	+										+	-	+	+	_	_							_	•		<u> </u>					
		^	^		^	^		-	_										_		+	+		_								!		<u> </u>					
Illinois Chorus Frog	X	V	V		V														_	-	+											!		<u> </u>					
Spotted Turtle	Χ	X	Χ		X																											!		!!					
Streamside Salamander		Χ			X																																		
Wood Turtle			Х	Χ	Χ	X																										!		!					
Mammals								,	,																			,											
Canada Lynx			Х	Χ		X																												'					
Gray Bat	Χ	Χ																																					
Gray Wolf			Χ	Χ		X																																	
Indiana Bat		Χ	Χ		Χ																											!		!					
Little Brown Bat	Х	Χ	Χ		X	Χ																																	
Northern Bog Lemming				Χ																												!		!					
Northern Long-eared Bat	X	Χ	Χ	Χ	Χ	Χ																										!		!					
Plains Spotted Skunk				Χ																																			
Prairie Gray Fox				Χ		Χ																																	
Tricolored Bat	Χ	Χ	Χ	Χ	Χ	Χ																																	
Birds								•	•	•	•	•		•	•				•		•	•	•	•		•	•	•	•	•	•		•						
Eastern Black Rail	X	Χ	Χ	Χ	Χ	Χ																										!		!					
Golden-winged Warbler	X	Χ	Χ	Χ	Χ	Χ																										!		!					
Piping Plover, Great Lakes	Χ		X																																				
Rufa Red Knot	Χ	X			Х																																		
Whooping Crane, Non-essential Experimental Pop.		X	Х	X	X	X						ida in D																				!		!					

^{*} Decanting is addressed in the NRT's guidance and in the RAM; however, it is not a response utilized within R5 nor accounted for in this BE.

																					ι	Upland	s															
							Defle	stion o	nd		Recovei	7.7								Subi	merge	od Oil	Wildl Protec												Was	eto Ma	ınagem	ont
	O	ccurre	nce ir	Actio	n Area	C	ontainme				Activitie			Ren	noval/d	leanu	p Activ	rities			ctivitie		Activit			Lo	cating	g, Track	ing, a	nd Sup	port A	ctivitie	s		vvas	Activ		CIII
								ers, dams, pits, and									themical) sand <1 inch)	themical) sand vation (>1 inch)	/Cleaning of oil, oiled s, or vegetation	of non-floating or ed oil	oating or	non-floating or	Hazing re or contaminated	y of contaminated				supporting	New Access Points	Staging Areas (on	ion - allow habitat to while monitoring)ys	g and monitoring: cludes SCAT)	iel by foot traffic		Storage (on water)	Φ	
Common Name	IL	IN	MI	MN	OH W	Rooming	Dikes or Berms	Construction barri	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-c cleaning (surface,	Mechanical (non-c cleaning and exca	val	Detection of non-f submerged oil	Recovery of non-floating submerged oil	Containment of no submerged oil	ce and and cal	CO	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/ equipment	ō	ion/use of a	Natural attenuation recover naturally when	Deployment of buoys	Locating, Sampling and r Air, land, water (includes	Access of personnel by foot traffic	Waste Handling	Temporary Storag	Temporary Storage (on land)	Decontamination
Plants			V																																			
American Hart's-tongue Fern Decurrent False Aster	Х		X																												!		!					
Dwarf Lake Iris	V	V	X		X				_																						!		!					
Eastern Prairie Fringed Orchid Fassett's Locoweed	^	Χ	Χ		X X																										!		,					
Houghton's Goldenrod			Χ		^																																	
Lakeside Daisy	X		Χ		X																										!		!					
Leafy Prairie-clover	X																														!		!					
Leedy's Roseroot				Χ																											!		!					
Mead's Milkweed	X	Χ			X																										!		!					
Michigan Monkey Flower			Χ																																			
Minnesota Dwarf Trout Lily				Χ																											!		!					
Northern Wild Monkshood					X X																										!		!					
Pitcher's thistle	X	Χ	Χ		X																										!		!					
Prairie Bush-clover	X			Χ	X																										!		!					
Short's Bladderpod		Χ																													!		!					
Short's Goldenrod		Χ																													!		!					
Small whorled pogonia	X		Χ		Χ																										!		!					
Tennessee Pondweed					X																																	
Virginia Sneezeweed					X																																	
Virginia Spiraea					X																																	
Western Prairie Fringed Orchid				Χ																											!		!					
Snails																																						
Iowa Pleistocene Snail	Х																														!		!					
Clams (Freshwater Mussels)																																						
Clubshell	X	Χ	Χ		Χ																																	
Fanshell	X	Χ			X																																	
Fat Pocketbook	Χ	Χ																																				
Higgins' Eye Pearlymussel	X			Χ	X																																	
Longsolid	X	Χ			X																																	
Northern Riffleshell	X	Χ	Χ		Χ																																	

																								Upla	nds																	
	Od	ccurre	ence	in Ac	tion Ar	ea		eflectior inment		ies		ecove ctivitie			Re	moval	l/clean	nup A	ctivitie	es			merg Activit	jed Oi ties	il F	Wildl Proted Activi	tion			Locati	ng, Tra	cking	, and S	Suppo	ort Ac	tivities	5		Wa		lanage ivities*	
							Booming	es or Berms setruction barriers dams nits and	5	Culvert blocking	Skimming	cuuming	Sorbents	Flooding	shing	am Cleaning	asting	non-chemical) sand		y and excavation (>1 inch)	inual removal /Cleaning of oil, oiled diment, debris, or vegetation	ection of non-floating or merged oil	/ of non-floating or	on of non-floating or	oil	ing	or recovery of contaminated	e of Aircraft	of Vessels	of Vehicles	of machinery/supporting	n/Use of New Access Points	e of Staging Areas (on	attenuation - allow habitat to	er naturally while monitoring	loyment of buoys	ating, Sampling and monitoring: land, water (includes SCAT)	ccess of personnel by foot traffic	Naste Handling	Temporary Storage (on water)	ърогагу Storage land)	ontamination
Common Name		IN	MI	MN	ОН	WI	Bo		<u></u> <u>4</u> 8	ਠ	<u>ਲ</u> _		S	Ĕ	<u> </u>	Ste	- S	<u>ĕ</u>		응 :	Se	Det sub	<u> </u>	<u>, 3</u>	ns	<u>دّ دّ</u>	S C	Use	Use	Use	Use	<u> </u>	<u> </u>	$\frac{\bar{z}}{2}$	<u>ē</u>	_ق	Air,	Ac	Š	_e_	Ten	ے کے
Orangefoot Pimpleback	Х	.,			.,			_								_	4		4															4	4				<u> </u>		4	4
Pink Mucket	Χ	Χ			X			_		_						-	4	_	4					_	_	_			<u> </u>		_	_		4	4		\longrightarrow		<u> </u>	_	4	4
Purple Cat's Paw Pearlymussel					X			_		_						1	4	_	4					-	_	_			<u> </u>		_			4	4		\longrightarrow		<u> </u>	_	4	4
Pyramid (Pink) Pigtoe	V				X			_								_	4		4						_									4	4		\rightarrow		<u> </u>	_	4	4
Rabbitsfoot	Χ	X			X			_								_	4		4						_						_			4	4		\rightarrow		<u> </u>	_	4	4
Rayed Bean		X	Х		Х			_								_	4		+						_						_			+	4		\rightarrow		<u> </u>	_	4	4
Rough Pigtoe	V	X						_	_	_						_	4	+	4					_	_	_			-	+				4	4		\longrightarrow		<u> </u>	-	4	4
Round Hickorynut	X	X	X		X			_	_	\rightarrow						_	4	+	4					_	_	_			-	+				4	4		\rightarrow		<u> </u>	-	4	4
Salamander mussel	X	Χ	Χ	Х	Х	_ X		—								_	4	_	4						_				_					4	4					_	4	4
Scaleshell	X	.,			.,			_									4		4															4	4				<u> </u>	4	4	4
Sheepnose	Х	Х		Х	X			_											4															4	4						4	4
Snuffbox	Х	Χ	Χ		X	Х											4		4															4	4				<u> </u>		4	
Spectaclecase	Χ			Χ		X											4		4										1					4	4				<u> </u>		4	
White Catspaw		Χ			Х																																		<u> </u>	4	4	4
Winged Mapleleaf				X		×Ι																												_	Ш				<u> </u>			Ш
Crustaceans Illinois Cave amphipod	X					[
Insects																																										
American Burying Beetle			Χ		Χ	[!		!					
Bog Buckmoth						Х																																				
Dakota Skipper				Χ																															!		!					
Frosted Elfin Butterfly	Χ	Χ	Χ		Χ	Х																													!		!					
Hine's Emerald Dragonfly	Χ		Χ			Х																																				
Hungerford's Crawling Water Beetle			X																																							
Karner Blue Butterfly	Χ	Χ	Χ	Х	Χ	Х																													,		,					
Linda's Roadside Skipper	Χ																																		!		!					
Mitchell's Satyr Butterfly		Χ	Χ		Χ																																					
Monarch Butterfly				Χ	X	Х																													!		!					
Unoccupied Cricital Habitat - Poweshiek Skipperling																																										
Adjacent to occupied wetland - Poweshiek Skipperling			X	Х		Х																													!		!					

						_	Uplands																																	
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	O	Occurrence in Action Area				currence in Action Area					Recovery Activities				Removal/cleanup Activities Submerged Oil Activities Protection Activities Locating, Tracking									king, a	g, and Support Activities					vva	anagen vities*	ent								
Common Name	IL	IN	MI	MN	ОН	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	J –	ace, <1 inch)	and exe	ediment, debris, or vegetation	Detection of non-floating or submerged oil	Recovery of non-floating or submerged oil	Containment of non-floating or submerged oil	ice and Ha:	capture and care or contaminated species or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Rattlesnake-master Borer Moth	Х																																!		!					
Regal Fritillary		X	Χ		Χ																												!		!					
Rusty Patched Bumble Bee	Χ	Χ		Χ	Χ	X																											!		!					
Et-L																																								
Fish	V	V	V	V	V	v [1	1											
Lake Sturgeon	X	Χ	Х	Χ	Х	^ -									-			_	_		_																	\vdash		
Pallid Sturgeon	Χ				.,	_											_							1														_		
Popeye Shiner					X	_																																		
Scioto Madtom					Χ	L																																		
Sicklefin Chub	Χ																																							
Sturgeon Chub	Χ																																							
Topeka Shiner				Χ																																				
Herptiles																																								
Alligator Snapping Turtle	Χ	Х				Г																																		
Blanding's Turtle	X		Х	Х	Х	X																											,							
Copperbelly Watersnake, N. DPS	,,	X	Х	,,	X	^									+		+		+	+																				
Eastern Massasauga	X	X	X		X	X													+	_													1							
Illinois Chorus Frog	X	^	^		^	^													+	_													+ +		<u>:</u> !					
Spotted Turtle		Х	X		Х	-													+	-													;		-;					
Streamside Salamander	^	X	^		X	-													+	+													<u>:</u>		<u>:</u> !					
Wood Turtle		^	X	X	X	x													+	+													+ +		:					
Mammals			^	^	^	^																											'		:					
Canada Lynx			X	Χ		x																											 , 		!					
Gray Bat	Y	Х	^	^		^																											+ +							
Gray Wolf	^	^	Y	Х		x												+	+																!					
Indiana Bat	Y	Χ	X	^	Х	^													+														!							
Little Brown Bat				~	X	y													+	4															!					
	^	^	^	X	^	^																											!		!					
Northern Long cored Ret	~	~	V		~	V F																																		
Northern Long-eared Bat	X	٨	Χ		Х	^												+	4														!		!					
Plains Spotted Skunk				X															4														!!		!					
Prairie Gray Fox				X		X											4	4															!		!					
Tricolored Bat	Х	Х	Х	Х	Χ	X																											!!		!					

Appendix F-8. Species Response Matrix for Responses Occurring in Uplands within Action Area of Region 5

																							Upland	ds															
	0	ccurre	ence i	n Acti	ion Ar	rea			tion ar	nd tivities		Recove Activitie			Rei	moval/	cleanu	ıp Acti	vities			bmerg Activit		Prote	dlife ection vities	Locating, Tracking, and Support Activities				Waste Management Activities*			ent						
Common Name	IL	IN	MI	MN	ОН	WI	Booming	Dikes or Berms	Construction barriers, dams, pits, and trenches	Culvert blocking	Skimming	Vacuuming	Sorbents	Flooding	Flushing	Steam Cleaning	Sandblasting	Mechanical (non-chemical) sand cleaning (surface, <1 inch)	Mechanical (non-chemical) sand cleaning and excavation (>1 inch)	. <u>o</u> :	Detection of non-floating or		inmen erged	Deterrence and Hazing	Species or recovery of contaminated species or recovery of contaminated	Use of Aircraft	Use of Vessels	Use of Vehicles	Use of machinery/supporting equipment	Creation/Use of New Access Points	Creation/use of Staging Areas (on land)	Natural attenuation - allow habitat to recover naturally while monitoring	Deployment of buoys	Locating, Sampling and monitoring: Air, land, water (includes SCAT)	Access of personnel by foot traffic	Waste Handling	Temporary Storage (on water)	Temporary Storage (on land)	Decontamination
Birds Eastern Black Rail	Х	Х	Χ	Х	Х	Х																																	
Golden-winged Warbler	X		X	Х		X																										,		,					
Piping Plover, Great Lakes	X	X	X	X	X																											!		!					
											-																									—			
Rufa Red Knot	X	X	X	Х	X																																		
Whooping Crane, Non-essential	Х	Х	Х	Х	Χ	Χ																																	