Federal Species Matrix

Updated 11/7/11

Sources of Impacts	Within Project		American Burying Beetle	Black-footed Ferret	Blowout Penstemon	Colorado Butterfly Plant	Eskimo Curlew	Gray Wolf	Interior Least Tern	Pallid Sturgeon	Piping Plover	Salt Creek Tiger Beetle	Salt Creek Tiger Beetle (Critical Habitat)
	Yes	No											
Asphalt Patching			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Bank Stabilization			MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	MA	MA	MA	MA	MA
Barge Staging			NE	NE	NE	NE	NE	NE	NLAA CC[3]	NLAA CC[1]	NLAA CC[3]	NE	NE
Bridge Deck Repair			NE	NE	NLAA CC[2 or 1]	NLAA CC[2 or 1]	MA	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1]
Bridge Deck Replacement			NLAA CC[3]	NE	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2, 3]	NLAA CC[4]	NLAA CC[1, 2, 3]	MA	MA
Bridge Painting			NLAA CC[3]	NE	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1]
Bridge Rail Repair/Replacement			NLAA CC[3]	NE	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1]
Bridge Substructure New, Replacement, or Repair - Ephemeral			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Bridge Substructure New, Replacement, or Repair - Intermittent			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Bridge Substructure New, Replacement, or Repair - Perennial			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Bridge Superstructure New, Replacement, or Repair - Ephemeral			NLAA CC[3]	MA	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	MA	MA
Bridge Superstructure New, Replacement, or Repair - Intermittent			NLAA CC[3]	MA	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	MA	MA
Bridge Superstructure New, Replacement, or Repair - Perennial			NLAA CC[3]	MA	NLAA CC[2 or 1]	NLAA CC[2 or 1]	NE	NE	NLAA CC[1, 2]	NLAA CC[4]	NLAA CC[1, 2]	MA	MA
Channel Grade Stabilization Structures			MA	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Channelization, Ephemeral			MA	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Channelization, Intermittent			MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Channelization, Perennial			MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Clearing and Grubbing			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[7]	NLAA CC[1, 2]	MA	MA
Cofferdams			NE	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1, 2]	MA	MA
Concrete Pavement Repair			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	NE	NE
Crack Sealing and Joint Sealing			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	NE	NE
Culvert New, Replacement, Extension, Repair - Ephemeral			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Culvert New, Replacement, Extension, Repair - Intermittent			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Culvert New, Replacement, Extension, Repair - Perennial			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Curb & Flume			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NE	NE	NE	MA	MA
Curb & Gutter			NE	NE	NE	NE	NE	NE	NE	NE	NE	MA	MA
Detention Basin			MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	MA	NLAA CC[2]	MA	MA	MA
De-watering			NE	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[5]	NLAA CC[1, 2]	MA	MA
Drilled Shafts			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NLAA CC[3,5]	NLAA CC[1, 2]	MA	MA
Earth Shoulder Construction			MA	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NE	NE	NE	MA	MA
Erosion Control - Barriers			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Erosion Checks			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Inlet/Outlet Protection			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Mulching			NLAA CC[1, 2]	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2, 4]	NE	NLAA CC[1, 2, 4]	MA	MA
Erosion Control - Post-Construction Erosion Control			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Rolled Erosion Control			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Slope Interuption			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Traps and Basins			NLAA CC[1, 2]	NE	NE	NE	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Erosion Control - Vegetation			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2, 4]	NE	NLAA CC[1, 2, 4]	MA	MA
Fencing			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Grading Above the Hinge Point			NLAA CC[1, 2]	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	NE	NE	NE	MA	MA
Grading Below the Hinge Point			MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	MA	NLAA CC[7] or MA	MA	MA	MA

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Sources of Impacts	Within Project		American Burying Beetle	Black-footed Ferret	Blowout Penstemon	Colorado Butterfly Plant	Eskimo Curlew	Gray Wolf	Interior Least Tern	Pallid Sturgeon	Piping Plover	Salt Creek Tiger Beetle	Salt Creek Tiger Beetle (Critical Habitat)
	Yes	No											
Guardrail Repair with Soil Disturbance			NLAA CC[1, 2]	NE	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Guardrail Repair without Soil Disturbance			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	NE	NE
Habitat Fragmentation, Modification of Connectivity			MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
Landscaping			NLAA CC[1, 2]	MA	NLAA CC [1]	NLAA CC [1]	MA	NE	NLAA CC[1, 2, 4]	NE	NLAA CC[1, 2, 4]	MA	MA
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/ soil disturbance			NLAA CC [1,2,4]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/out soil disturbance			NLAA CC [4]	MA	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Microsurfacing			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Milling and/or In-place Recycling			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Nighttime work with Lights			NLAA CC[4]	MA	NE	NE	MA	NE	NLAA CC[5]	NE	NLAA CC[5]	MA	MA
Noise Walls (Not in water/wetlands)			NLAA CC[1, 2]	MA	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Overpass			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Pavement Marking			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Pavement Removal			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	NE	NE
Paving			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Piers			NLAA CC[1, 2]	MA	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[1,7]	NLAA CC[1, 2]	MA	MA
Pile Driving - Impact			NLAA CC[1, 2]	MA	NLAA CC [1 or 2]	NLAA CC [1 or 2]	MA	NE	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1, 2]	MA	MA
Pile Driving - Vibratory			NLAA CC[1, 2]	MA	NLAA CC [1 or 2]	NLAA CC [1 or 2]	MA	NE	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1, 2]	MA	MA
Pile/Pier Encasement			NLAA CC[1, 2]	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[1,5]	NLAA CC[1, 2]	MA	MA
Pipe Jacking & Casing			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NLAA CC[1]	NLAA CC[1, 2]	MA	MA
Pre-watering			NLAA CC[1, 2]	NE	NE	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Removal of Structures and Obstructions			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[6, 7]	NLAA CC[1, 2]	MA	MA
Replacing a Bridge with a Culvert			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Resurfacing-Fog/Slurry Seal, Armor Coat/Chip Seal			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Retaining Walls (NOT IN Water/Wetlands)			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Rock or Gravel Surfacing			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Shoo-fly			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC[6]	NLAA CC[1, 2]	MA	MA
Sidewalks and Bikeways			NE	NE	NE	NE	NE	NE	NE	NE	NE	MA	MA
Signs with Soil Disturbance			NLAA CC[1, 2]	NE	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Signs without Soil Disturbance			NE	NE	NE	NE	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	NE	NE
Stream Channel Impact, Ephemeral			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	NE	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Stream Channel Impact, Intermittent			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Stream Channel Impact, Perennial			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	MA	NLAA CC[1, 2]	MA	MA
Survey and Staking			NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	NE	NE	NE	MA	MA
Temporary Crossing, Causeway, Work Platform			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NLAA CC [1,5,6]	NLAA CC[1, 2]	MA	MA
Trenched Widening			NLAA CC[1, 2]	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	NE	NE	NE	MA	MA
Underground Utility Conduit Installation			NLAA CC[1, 2]	MA	NLAA CC[1]	NLAA CC[1]	MA	NE	NLAA CC[1, 2]	NE	NLAA CC[1, 2]	MA	MA
Wetland Mitigation			MA	MA	NLAA CC[1]	MA	MA	NE	MA	MA	MA	MA	MA

Federal Species Matrix

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Sources of Impacts	Within Project		Scaleshell Mussel	Topeka Shiner	Topeka Shiner (Critical Habitat)	Ute Ladies'-tresses	Western Prairie-fringed Orchid	Whooping Crane	Whooping Crane (Critical Habitat)
	Yes	No							
Asphalt Patching			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Bank Stabilization			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA
Barge Staging			NLAA CC[1,3]	NE	NE	NE	NE	MA	MA
Bridge Deck Repair			NLAA CC[4]	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	NLAA CC [2]
Bridge Deck Replacement			NLAA CC[4]	MA	MA	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	NLAA CC [2]
Bridge Painting			NLAA CC[4]	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	NLAA CC [2]
Bridge Rail Repair/Replacement			NLAA CC[4]	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	NLAA CC [2]
Bridge Substructure New, Replacement, or Repair - Ephemeral			NLAA CC[2,4]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Bridge Substructure New, Replacement, or Repair - Intermittent			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Bridge Substructure New, Replacement, or Repair - Perennial			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA
Bridge Superstructure New, Replacement, or Repair - Ephemeral			NLAA CC[2,4]	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	MA
Bridge Superstructure New, Replacement, or Repair - Intermittent			NLAA CC[2,4]	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	MA
Bridge Superstructure New, Replacement, or Repair - Perennial			MA	NLAA CC[2]	NLAA CC[2]	NLAA CC [3] or [1]	NLAA CC [2] or [1]	NLAA CC [1 or 2]	MA
Channel Grade Stabilization Structures			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Channelization, Ephemeral			NLAA CC[2]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Channelization, Intermittent			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Channelization, Perennial			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Clearing and Grubbing			NE	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Cofferdams			NLAA CC[1, 3, 5]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Concrete Pavement Repair			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NLAA CC [1]
Crack Sealing and Joint Sealing			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Culvert New, Replacement, Extension, Repair - Ephemeral			NLAA CC[2]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Culvert New, Replacement, Extension, Repair - Intermittent			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Culvert New, Replacement, Extension, Repair - Perennial			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Curb & Flume			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Curb & Gutter			NE	NE	NE	NE	NE	NE	NE
Detention Basin			NLAA CC[2]	NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	MA	MA
De-watering			NLAA CC[1, 5]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Drilled Shafts			NLAA CC[1, 5]	MA	MA	NE	NE	NLAA CC [1 or 2]	MA
Earth Shoulder Construction			NE	NE	NE	NLAA CC [2]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Erosion Control - Barriers			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Erosion Checks			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Inlet/Outlet Protection			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Mulching			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [(1 or 2) plus 3]	NLAA CC [3]
Erosion Control - Post-Construction Erosion Control			NE	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Erosion Control - Rolled Erosion Control			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Slope Interuption			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Traps and Basins			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Erosion Control - Vegetation			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [(1 or 2) plus 3]	NLAA CC [1 plus 3]
Fencing			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NLAA CC [1 plus 3]
Grading Above the Hinge Point			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Grading Below the Hinge Point			NLAA CC[1]	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA

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Sources of Impacts	Within Project		Scaleshell Mussel	Topeka Shiner	Topeka Shiner (Critical Habitat)	Ute Ladies'-tresses	Western Prairie-fringed Orchid	Whooping Crane	Whooping Crane (Critical Habitat)
	Yes	No							
Guardrail Repair with Soil Disturbance			NE	NE	NE	NLAA CC[2]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Guardrail Repair without Soil Disturbance			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Habitat Fragmentation, Modification of Connectivity			MA	MA	MA	MA	MA	MA	MA
Landscaping			NE	NE	NE	NLAA CC [1]	NLAA CC [1]	NLAA CC [(1 or 2) plus 3]	NLAA CC [1 plus 3]
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/ soil disturbance			NE	NE	NE	NLAA CC[2]	NLAA CC [1]	NLAA CC [1 or 2]	MA
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/out soil disturbance			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	MA
Microsurfacing			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Milling and/or In-place Recycling			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Nighttime work with Lights			NE	NE	NE	NE	NE	MA	MA
Noise Walls (Not in water/wetlands)			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Overpass			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Pavement Marking			NE	NE	NE	NE	NE	NE	NE
Pavement Removal			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Paving			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Piers			NLAA CC[1,2,3,5]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Pile Driving - Impact			NLAA CC[1,3]	MA	MA	NLAA CC [1 or 3]	NLAA CC [1 or 2]	NLAA CC [1 or 2]	MA
Pile Driving - Vibratory			NLAA CC[1,3]	MA	MA	NLAA CC [1 or 3]	NLAA CC [1 or 2]	NLAA CC [1 or 2]	MA
Pile/Pier Encasement			NLAA CC[1,2,3,5]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Pipe Jacking & Casing			NE	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Pre-watering			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NLAA CC [1]
Removal of Structures and Obstructions			NLAA CC[1,2,3]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NLAA CC [1 plus 3]
Replacing a Bridge with a Culvert			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Resurfacing-Fog/Slurry Seal, Armor Coat/Chip Seal			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Retaining Walls (NOT IN Water/Wetlands)			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Rock or Gravel Surfacing			NE	NE	NE	NE	NE	NE	NE
Shoo-fly			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NLAA CC [1 plus 3]
Sidewalks and Bikeways			NE	NE	NE	NE	NE	NLAA CC [1 or 2]	NE
Signs with Soil Disturbance			NE	NE	NE	NLAA CC[3]	NLAA CC [2]	NLAA CC [1 or 2]	NE
Signs without Soil Disturbance			NE	NE	NE	NE	NE	NLAA CC [1]	NE
Stream Channel Impact, Ephemeral			NLAA CC[2]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Stream Channel Impact, Intermittent			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Stream Channel Impact, Perennial			MA	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Survey and Staking			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NE
Temporary Crossing, Causeway, Work Platform			NLAA CC[1, 2, 3, 5]	MA	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	MA
Trenched Widening			NE	NE	NE	NE	NLAA CC[1]	NLAA CC [1 or 2]	NE
Underground Utility Conduit Installation			NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC [1 or 2]	NLAA CC [1 plus 3]
Wetland Mitigation			NLAA CC[1]	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA

State Species Matrix

Updated 11/7/2011

Sources of Impacts	Within Project		American Ginseng	Blacknose Shiner	Finescale Dace	Lake Sturgeon	Massasauga	Mountain Plover	Northern Redbelly Dace	River Otter	Saltwort	Small White Lady's Slipper	Southern Flying Squirrel	Sturgeon Chub	Swift Fox
	Yes	No													
Asphalt Patching			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Bank Stabilization			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Barge Staging			NE	NE	NE	NLAA CC[1]	NE	NE	NE	NLAA CC [1]	NE	NE	NE	NLAA CC[1]	NE
Bridge Deck Repair			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NE	NLAA CC[4]	NLAA CC [1]
Bridge Deck Replacement			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NLAA CC [1]	NLAA CC[4]	NLAA CC [1]
Bridge Painting			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NE	NLAA CC[4]	NLAA CC [1]
Bridge Rail Repair/Replacement			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NE	NLAA CC[4]	NLAA CC [1]
Bridge Substructure New, Replacement, or Repair - Ephemeral			NLAA CC[1]	NLAA CC[3]	NLAA CC[3]	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC[3]	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	NLAA CC [1]
Bridge Substructure New, Replacement, or Repair - Intermittent			NLAA CC[1]	NLAA CC[3]	NLAA CC[3]	MA	NLAA CC[1]	NLAA CC[1]	NLAA CC[3]	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	MA	NLAA CC [1]
Bridge Substructure New, Replacement, or Repair - Perennial			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	MA	NLAA CC [1]
Bridge Superstructure New, Replacement, or Repair - Ephemeral			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NLAA CC [1]	NLAA CC[4]	NLAA CC [1]
Bridge Superstructure New, Replacement, or Repair - Intermittent			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NLAA CC [1]	NLAA CC[4]	NLAA CC [1]
Bridge Superstructure New, Replacement, or Repair - Perennial			NLAA CC [3 or 1]	NLAA CC[2]	NLAA CC[2]	NLAA CC[4]	NLAA CC [4 or 1]	NLAA CC[1]	NLAA CC[2]	NLAA CC [3 or 2]	NLAA CC[1]	NLAA CC [2] or [1]	NLAA CC [1]	NLAA CC[4]	NLAA CC [1]
Channel Grade Stabilization Structures			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Channelization, Ephemeral			NLAA CC[1]	MA	MA	NE	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Channelization, Intermittent			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Channelization, Perennial			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Clearing and Grubbing			NLAA CC[1]	NLAA CC[5] or MA	NLAA CC[5] or MA	NLAA CC [7]	NLAA CC[1]	NLAA CC[1]	NLAA CC[5] or MA	NLAA CC [1]	MA	NLAA CC[1]	MA	NLAA CC [7]	NLAA CC [1]
Cofferdams			NLAA CC[1]	NLAA CC[3]	NLAA CC[3]	NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	NLAA CC[3]	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC[1]	NLAA CC [1]
Concrete Pavement Repair			NE	NE	NE	NE	NE	NLAA CC[1]	NE	NE	NE	NE	NLAA CC [1]	NE	NLAA CC [1]
Crack Sealing and Joint Sealing			NE	NE	NE	NE	NE	NLAA CC[1]	NE	NE	NE	NE	NE	NE	NLAA CC [1]
Culvert New, Replacement, Extension, Repair - Ephemeral			NLAA CC[1]	MA	MA	NE	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	NLAA CC [1]
Culvert New, Replacement, Extension, Repair - Intermittent			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	MA	NLAA CC [1]
Culvert New, Replacement, Extension, Repair - Perennial			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	MA	NLAA CC [1]
Curb & Flume			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Curb & Gutter			NE	NE	NE	NE	NE	NE	NE	NE	MA	NE	NE	NE	NE
Detention Basin			NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	NLAA CC[2]	NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC[2]	NLAA CC [1]
De-watering			NE	MA	MA	NLAA CC[5]	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC[5]	NLAA CC [1]
Drilled Shafts			NLAA CC[1]	MA	MA	NLAA CC [3,5]	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NE	NLAA CC [1]	NLAA CC [3,5]	NLAA CC [1]
Earth Shoulder Construction			NLAA CC [2]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	NLAA CC [1]
Erosion Control - Barriers			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Erosion Checks			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Inlet/Outlet Protection			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Mulching			NE	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	MA	NLAA CC[1]	NE	NE	NE
Erosion Control - Post-Construction Erosion Control			NLAA CC[1]	NE	NE	NE	NLAA CC [1,2,3]	NLAA CC[1]	NE	NE	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Erosion Control - Rolled Erosion Control			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Slope Interuption			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Traps and Basins			NE	NE	NE	NE	NLAA CC [2,3]	NLAA CC[1]	NE	NE	MA	NE	NE	NE	NE
Erosion Control - Vegetation			NE	NLAA CC[4]	NLAA CC[4]	NE	NLAA CC [1,2,3]	NLAA CC[1]	NLAA CC[4]	NE	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Fencing			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	MA
Grading Above the Hinge Point			NLAA CC[2]	NE	NE	NE	NLAA CC[1]	NLAA CC[3]	NE	NE	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Grading Below the Hinge Point			NLAA CC[1]	NLAA CC[5] or MA	NLAA CC[5] or MA	NLAA CC[7] or MA	NLAA CC[1]	MA	NLAA CC[5] or MA	NLAA CC [1]	MA	NLAA CC[1]	MA	NLAA CC[7] or MA	MA

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Sources of Impacts	Within Project		American Ginseng	Blacknose Shiner	Finescale Dace	Lake Sturgeon	Massasauga	Mountain Plover	Northern Redbelly Dace	River Otter	Saltwort	Small White Lady's Slipper	Southern Flying Squirrel	Sturgeon Chub	Swift Fox
	Yes	No													
Guardrail Repair with Soil Disturbance			NLAA CC[2]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [2]	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Guardrail Repair without Soil Disturbance			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Habitat Fragmentation, Modification of Connectivity			MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA	MA
Landscaping			NLAA CC[1]	NLAA CC[4]	NLAA CC[4]	NE	NLAA CC[1]	NLAA CC[1]	NLAA CC[4]	NLAA CC [1]	MA	NLAA CC [1]	NLAA CC [2]	NE	NLAA CC [1]
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/ soil disturbance			NLAA CC[2]	NE	NE	NE	NLAA CC[1]	NLAA CC[1,2]	NE	NLAA CC [2]	MA	NLAA CC [1]	NLAA CC [1,3]	NE	NLAA CC [1]
Lighting, Traffic and Pedestrian Signals, Dynamic Message Signs w/out soil disturbance			NE	NE	NE	NE	NE	NLAA CC[1,2]	NE	NE	NE	NE	NLAA CC [1,3]	NE	NLAA CC [1]
Microsurfacing			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Milling and/or In-place Recycling			NE	NE	NE	NE	NE	NLAA CC[3]	NE	NE	NE	NE	NE	NE	NLAA CC [2]
Nighttime work with Lights			NE	NE	NE	NE	NE	NLAA CC[2]	NE	NE	NE	NE	NLAA CC [3]	NE	NLAA CC [1]
Noise Walls (Not in water/wetlands)			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	MA
Overpass			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	MA	NE	NLAA CC [1]
Pavement Marking			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Pavement Removal			NE	NE	NE	NE	NE	NLAA CC[1]	NE	NE	NE	NE	NLAA CC [1]	NE	NLAA CC [1]
Paving			NE	NE	NE	NE	NE	NLAA CC[1]	NE	NE	NE	NE	NLAA CC [1]	NE	NLAA CC [1]
Piers			NLAA CC[1]	NLAA CC[5] or MA	NLAA CC[5] or MA	NLAA CC [1,7]	NLAA CC[1]	NLAA CC[1]	NLAA CC[5] or MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NLAA CC [1,7]	NLAA CC [1]
Pile Driving - Impact			NLAA CC [1 or 3]	MA	MA	NLAA CC[1]	NLAA CC [4 or 1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC [1 or 2]	NLAA CC [1]	NLAA CC[1]	NLAA CC [1]
Pile Driving - Vibratory			NLAA CC [1 or 3]	MA	MA	NLAA CC[1]	NLAA CC [4 or 1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC [1 or 2]	NLAA CC [1]	NLAA CC[1]	NLAA CC [1]
Pile/Pier Encasement			NLAA CC[1]	NLAA CC[3]	NLAA CC[3]	NLAA CC[1,5]	NLAA CC[1]	NLAA CC[1]	NLAA CC[3]	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC[1,5]	NLAA CC [1]
Pipe Jacking & Casing			NLAA CC[1]	NLAA CC[3]	NLAA CC[3]	NLAA CC[1]	NLAA CC[1]	NLAA CC[1]	NLAA CC[3]	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NLAA CC[1]	NLAA CC [1]
Pre-watering			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Removal of Structures and Obstructions			NLAA CC[1]	NLAA CC[5] or MA	NLAA CC[5] or MA	NLAA CC[6,7]	NLAA CC[1]	NLAA CC[1]	NLAA CC[5] or MA	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC [6,7]	NLAA CC [1]
Replacing a Bridge with a Culvert			NLAA CC[1]	MA	MA	NE	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NLAA CC [1]	NE	NLAA CC [1]
Resurfacing-Fog/Slurry Seal, Armor Coat/Chip Seal			NE	NE	NE	NE	NE	NLAA CC[3]	NE	NE	NE	NE	NE	NE	NLAA CC [2]
Retaining Walls (NOT IN Water/Wetlands)			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Rock or Gravel Surfacing			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NLAA CC [2]
Shoo-fly			NLAA CC[1]	MA	MA	NLAA CC[6]	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC[6]	NLAA CC [1]
Sidewalks and Bikeways			NE	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	MA	NE	NLAA CC [1]	NE	NLAA CC [2]
Signs with Soil Disturbance			NLAA CC[2]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [2]	MA	NLAA CC [1]	NE	NE	NLAA CC [2]
Signs without Soil Disturbance			NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Stream Channel Impact, Ephemeral			NLAA CC[1]	MA	MA	NE	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Stream Channel Impact, Intermittent			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Stream Channel Impact, Perennial			NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	MA	MA	NLAA CC[1]	NE	MA	NLAA CC [1]
Survey and Staking			NLAA CC[1]	NE	NE	NE	NLAA CC [4 or 1]	NLAA CC[4]	NE	NE	MA	NLAA CC[1]	NE	NE	NLAA CC [2]
Temporary Crossing, Causeway, Work Platform			NLAA CC[1]	MA	MA	NLAA CC [1,5,6]	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	NLAA CC [1,5,6]	NLAA CC [1]
Trenched Widening			NLAA CC[2]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NE	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Underground Utility Conduit Installation			NLAA CC[1]	NE	NE	NE	NLAA CC[1]	NLAA CC[1]	NE	NLAA CC [1]	MA	NLAA CC[1]	NE	NE	NLAA CC [1]
Wetland Mitigation			NE	MA	MA	MA	NLAA CC[1]	NLAA CC[1]	MA	NLAA CC [1]	MA	NLAA CC[1]	NE	MA	NLAA CC [1]