

APPENDIX 2A. List of Plant Communities Mapped in the Lower St. Louis River

This appendix lists the plant communities identified in the St. Louis River project area by Reschke and Epstein and the relationships between these plant communities and the conservation targets, the WDNR plant community types, and the MDNR plant community types.

Plant Community Type	Plant Community Map Code	St. Louis River Habitat Plan Conservation Target (Plant Communities Only)	Corresponding Plant Community Type in WDNR Classification	Corresponding Plant Community Type in MDNR Classification**	Corresponding Plant Community Type in Old MDNR Classification
OPEN WETLANDS					
Lake mudflats (= "Estuarine mudflats")	M	Great Lakes coastal wetland complex	lake mud flats	Mud Riverbank	River Beach
Clay seeps	A	Clay seeps	clay seeps	Clay Riverbank	River Beach
Northern Great Lakes shore submergent marsh	D	Great Lakes coastal wetland complex	submerged aquatic northern Great Lakes subtype	Northern Great Lakes Submergent Marsh	Lake Bed
Northern Great Lakes shore emergent marsh	Ca	Great Lakes coastal wetland complex	deep marsh northern great lakes subtype	Northern Great Lakes Emergent Marsh	Mixed Emergent Marsh (Forest)
Northern sedge wet meadow	E	Wet meadows	sedge meadow northern subtype	Sedge Meadow	Wet Meadow
Northern water lily aquatic wetland	B	Inland marshes	submerged aquatic northern water lily subtype	LAURENTIAN MARSH (BASIN) (class)	Lake Bed
Bulrush-cattail-burreed shallow marsh	Cb	Inland marshes	shallow marsh	LAURENTIAN MARSH (BASIN) (class)	Mixed Emergent Marsh (Forest)
Bluejoint wet meadow	AA	Wet meadows	bluejoint meadow	Bluejoint Meadow	Wet Meadow
Lake sedge wet meadow	Aab	Wet meadows	sedge meadow lake sedge subtype	Sedge Meadow	Wet Meadow
Tussock sedge wet meadow	Aac	Wet meadows	sedge meadow tussock sedge subtype	Sedge Meadow	Wet Meadow
Northern sedge poor fen	JJ	Fens	poor fen sedge subtype	NORTHERN POOR FEN (class)	Poor Fen, Sedge Subtype
Dredge material wet meadow	MM	Not a target	none	none	none
Interdunal wetland	F	Interdunal wetland	interdunal wetland	none	none
WOODED WETLANDS					
Speckled alder swamp	Ha	Shrub swamps	alder thicket	Northern Alder Swamp	Alder Swamp
~Dogwood - willow swamp	Hb	Shrub swamps	shrub carr	Estuary Sandbar Willow - Alder Shrubland	Alder Swamp

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Perched willow swamp	Hd	Shrub swamps	perched willow swamp	NORTHERN WET MEADOW (class)	Willow Swamp
Speckled alder swamp or other unknown shrubland	H	Shrub swamps	alder thicket or none	Northern Alder Swamp or none	Alder Swamp or none
Black ash - mixed hardwood swamp	G	Hardwood swamps	northern hardwood swamp black ash subtype	Rich Black Ash Swamp Forest	Black Ash Swamp
Black ash - mixed hardwood swamp	G	Hardwood swamps	northern hardwood swamp black ash subtype	Wet-mesic Black Ash / Sugar Maple Forest	Black Ash Swamp
Black ash - mixed hardwood swamp	G	Hardwood swamps	northern hardwood swamp black ash subtype	NORTHERN WHITE CEDAR WET FOREST (class)	Black Ash Swamp
"Black ash - conifer swamp" = White cedar - black ash forest	NN	Hardwood swamps	northern hardwood swamp black ash subtype	Very Wet Black Ash - Mixed Conifer Swamp	Black Ash Swamp
Aspen - balsam poplar lowland forest	FF	Hardwood swamps	lowland aspen forest	Wet-mesic Quaking Aspen / Black Ash Forest	Mixed Hardwood Swamp
White cedar - (mixed conifer) / alder swamp	PP	Conifer swamps	white cedar swamp cedar-mixed conifer subtype	Northern White-cedar Swamp	White Cedar Swamp
Black ash - willow - basswood floodplain forest	QQ	Hardwood swamps	floodplain forest subtype unknown	Black Ash - Willow - Basswood Floodplain Forest	Floodplain Forest
OPEN UPLANDS					
Great Lakes beach	I	Beaches	beach Great Lakes subtype	Lake Superior Sand Beach	Lake Beach (Lake Superior) Sand Subtype
Riverine igneous - metamorphic cobble - gravel shore	Ia	Not treated as a plant community (embedded within estuarine aquatic habitat types)	Great Lakes cobble beach non-alkaline subtype	Cobble Riverbank	River Beach
Dredge material beach	W	Not a target	none	none	none
Great Lakes beachgrass dune	K	Beachgrass dunes	lake dune beachgrass subtype	Lake Superior Beachgrass Dune	Lake Beach (Lake Superior) Sand Subtype

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Great Lakes juniper dune shrubland	L	Dune shrublands	lake dune juniper shrub subtype	Lake Superior Dune Shrubland	Lake Beach (Lake Superior) Sand Subtype
Northern (Laurentian) igneous - metamorphic dry cliff	O	Cliffs and rock outcrops	open cliff basalt/diabase subtype	Laurentian Xeric Igneous Cliff	Dry Cliff (Northeast)
Red clay eroding bluffs	P	Eroding clay bluffs	none	Clay Riverbank	~River Beach
Developed	Z	Not a target	none	none	none
Disturbed sandy meadow (may or may not be dredge material)	BB	Not a target	none	none	none
WOODED UPLANDS					
Wet-mesic disturbed shrubland (more upland than wetland)	Hc	Not a target	none	none	none
Dredge material shrubland	X	Not a target	none	none	none
~Mixed Pine - (Oak) Igneous - Metamorphic Rock Outcrop	N	Northern conifer-hardwood forest	bedrock glade boreal mixed pine-(oak) subtype	Dry-mesic Red Oak / Juneberry / Blueberry Woodland	Northern Hardwood Forest (Northern)
~Mixed Pine - (Oak) Igneous - Metamorphic Rock Outcrop	N	Northern conifer-hardwood forest	bedrock glade boreal mixed pine-(oak) subtype	Dry-mesic Red Oak / Juneberry / Blueberry Woodland	Oak Woodland-Brushland (Big Woods)
Great Lakes dune pine forest	J	Dune pine forests	none	Poor Dry-mesic Great Lakes Pine Forest	White Pine Forest (Central)
Great Lakes dune pine forest	J	Dune pine forests	none	Poor Dry-mesic Great Lakes Pine Forest	Red Pine Forest
White pine - aspen - birch - mountain maple forest (combination of Qa and Qb)	Q	White pine-red pine forests	combination of northern dry-mesic forest white pine-aspen subtype and northern dry-mesic forest white pine / mountain maple subtype	Combination of Mesic White Spruce - (Pine) / Paper Birch Forest and Mesic White Pine - Red Pine Forest	White Pine Forest (Northeast)
White pine - aspen - birch forest	Qa	White pine-red pine forests	northern dry-mesic forest white pine-aspen subtype	Mesic White Spruce - (Pine) / Paper Birch Forest	White Pine Forest (Northeast)

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White pine / mountain maple mesic forest	Qb	White pine-red pine forests	northern dry-mesic forest white pine / mountain maple subtype	Mesic White Pine - Red Pine Forest	White Pine Forest (Northeast)
White pine - red pine dry-mesic forest (on clay)	R	White pine-red pine forests		Rich Dry-mesic Red Pine - White Pine Forest	White Pine Forest (Northeast)
White cedar - boreal conifer mesic forest	OO	Boreal spruce-fir forests	mesic cedar forest cedar-spruce-fir subtype	Mesic Upland White-Cedar Forest	Upland White Cedar Forest (Lake Superior) Mesic subtype
Spruce - fir - mountain maple forest	S	Boreal spruce-fir forests	boreal forest spruce-fir subtype	Mesic Aspen - Birch - Fir Forest	Spruce-Fir Forest, White Spruce-Balsam Fir subtype
Spruce - fir - aspen forest	T	Boreal spruce-fir forests	boreal forest spruce-fir-hardwoods subtype	Mesic White Spruce - (Pine) / Paper Birch Forest	Spruce-Fir Forest
Aspen - birch - red maple forest	U	Either boreal spruce-fir forests or white pine-red pine forests	northern mesic forest aspen-birch-red maple subtype	Wet-mesic Aspen - Birch - Red Maple Forest	Aspen-Birch Forest
Apem - birch / boreal conifer forest	U	Boreal spruce-fir forests	boreal forest aspen-birch-spruce-fir subtype	Moist Aspen - Birch - Fir Forest	Aspen - Birch Forest, Spruce-Fir subtype
Maple - yellow birch - northern hardwoods forest	V	Northern conifer-hardwood forest	northern mesic forest sugar maple-yellow birch subtype	Northern Rich Maple-Basswood Forest	Maple-Basswood Forest (Northern)
Maple - yellow birch - northern hardwoods forest	V	Northern conifer-hardwood forest	northern mesic forest sugar maple-yellow birch subtype	Northern Rich Maple-Basswood Forest	Northern Hardwood Forest (Northern)
White cedar - black ash forest (= "Black ash - conifer swamp")	NN	Hardwood swamps	northern hardwood swamp black ash subtype	Very Wet Black Ash - Mixed Conifer Swamp	Black Ash Swamp

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APPENDIX 2B. List of Plant Communities Mapped in the Lower St. Louis River

This table shows the relationship between the grouped plant communities used in map legends and the individual plant communities listed in Part A of this appendix.

Map Legend: Grouped Plant Communities and Other Land Cover Classes	Plant Community Map Code*	Associated Plant Community Type(s)
Submergent marsh	B	Northern water lily aquatic wetland
Submergent marsh	D	Northern Great Lakes shore submergent marsh
Mix of Emergent marsh and Submergent marsh	Ca/D	Northern Great Lakes shore emergent marsh / Northern Great Lakes shore submergent marsh
Mix of Emergent marsh and Submergent marsh	D/Ca	Northern Great Lakes shore submergent marsh / Northern Great Lakes shore emergent marsh
Emergent marsh	Ca	Northern Great Lakes shore emergent marsh
Emergent marsh	Ca/Cb	Northern Great Lakes shore emergent marsh / Bulrush-cattail-burreed shallow marsh
Emergent marsh	Ca/E/JJ	Northern Great Lakes shore emergent marsh / Northern sedge wet meadow / Northern sedge poor fen
Emergent marsh	Ca/QQ	Northern Great Lakes shore emergent marsh / Black ash - willow - basswood floodplain forest
Emergent marsh	Cb	Bulrush-cattail-burreed shallow marsh
Emergent marsh	Cb/Ca	Bulrush-cattail-burreed shallow marsh / Northern Great Lakes shore emergent marsh
Emergent marsh	Cb/H	Bulrush-cattail-burreed shallow marsh / Speckled alder swamp or unknown shrubland
Mix of Shrub swamp and Emergent marsh	Ca/H	Northern Great Lakes shore emergent marsh / Speckled alder swamp or unknown shrubland
Mix of Shrub swamp and Emergent marsh	Ca/Hb	Northern Great Lakes shore emergent marsh / Dogwood - willow swamp
Mix of Shrub swamp and Emergent marsh	Hb/Ca	Dogwood - willow swamp / Northern Great Lakes shore emergent marsh
Mix of Shrub swamp and Emergent marsh	Hb/Cb	Dogwood - willow swamp / Bulrush-cattail-burreed shallow marsh
Shrub swamp	H	Speckled alder swamp or unknown shrubland
Shrub swamp	H/U	Speckled alder swamp or unknown shrubland / Aspen - birch - red maple forest
Shrub swamp	Ha	Speckled alder swamp
Shrub swamp	Ha/Hb	Speckled alder swamp / Dogwood - willow swamp
Shrub swamp	Ha/Hb/G	Speckled alder swamp / Dogwood - willow swamp / Black ash - mixed hardwood swamp
Shrub swamp	Hb	Dogwood - willow swamp
Shrub swamp	Hb/U	Dogwood - willow swamp / Aspen - birch - red maple forest
Shrub swamp	Hd	Perched willow swamp

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Map Legend: Grouped Plant Communities and Other Land Cover Classes	Plant Community Map Code*	Associated Plant Community Type(s)
Shrub swamp	Hd/Ha	Perched willow swamp / Speckled alder swamp
Shrub swamp	Hd/Ha/A	Perched willow swamp / Speckled alder swamp / Clay seep
Mix of Shrub swamp and Floodplain forest	Hb/QQ	Dogwood - willow swamp / Black ash - willow - basswood floodplain forest
Mix of Shrub swamp and Floodplain forest	QQ/Hb	Black ash - willow - basswood floodplain forest / Dogwood - willow swamp
Floodplain forest	QQ	Black ash - willow - basswood floodplain forest
Floodplain forest	QQ/Z	Black ash - willow - basswood floodplain forest / Developed
Wet meadow	E	Northern sedge wet meadow
Wet meadow	E/Ca	Northern sedge wet meadow / Northern Great Lakes shore emergent marsh
Wet meadow	F	Interdunal wetland
Deciduous hardwood swamp	G	Black ash - mixed hardwood swamp
Mix of deciduous hardwood swamp and shrub swamp	G/Hd/Ha	Black ash - mixed hardwood swamp / Perched willow swamp / Speckled alder swamp
Great Lakes dune and beach	I	Great Lakes beach
Great Lakes dune and beach	K	Great Lakes beachgrass dune
Great Lakes dune and beach	K/Disturbed	Great Lakes beachgrass dune & disturbed land
Great Lakes dune and beach	L	Great Lakes juniper dune shrubland
Dune pine forest	J	Great Lakes dune pine forest
Dune pine forest	J/Disturbed	Great Lakes dune pine forest & disturbed land
Dune pine forest	J/U	Great Lakes dune pine forest / Aspen - birch - red maple forest
Red clay eroding bluffs	P	Red clay eroding bluffs
Red clay eroding bluffs	P/U	Red clay eroding bluffs / Aspen - birch - red maple forest
Cobble river shore	Ia	Riverine igneous - metamorphic cobble - gravel shore
Maple - northern hardwoods forest	V	Maple - yellow birch - northern hardwoods forest
Mix of aspen - birch forest and/or maple - northern hardwoods forest	U/V	Aspen - birch - red maple forest OR Maple - yellow birch - northern hardwoods forest
Mix of aspen - birch forest and/or maple - northern hardwoods forest	V/U	Maple - yellow birch - northern hardwoods forest / Aspen - birch - red maple forest
Aspen - birch forest	FF	Aspen - balsam poplar lowland forest
Aspen - birch forest	U	Aspen - birch - red maple forest
Aspen - birch forest	U/FF	Aspen - birch - red maple forest / Aspen - balsam poplar lowland forest
Aspen - birch forest	U/Hb	Aspen - birch - red maple forest / Dogwood - willow swamp

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Mix of aspen - birch and shrub swamp	U/Hd/Ha	Aspen - birch - red maple forest / Perched willow swamp / Speckled alder swamp
Aspen - birch forest	U/QQ	Aspen - birch - red maple forest / Black ash - willow - basswood floodplain forest
Aspen - birch forest	U/T	Aspen - birch - red maple forest / Spruce - fir - aspen forest
Mixed forest and shrub swamp	U/T/Hd/Ha	Aspen - birch - red maple forest / Spruce - fir - aspen forest / Perched willow swamp / Speckled alder swamp
Aspen - birch forest	U/T/J	Aspen - birch - red maple forest / Spruce - fir - aspen forest / Great Lakes dune pine forest
Aspen - birch forest	U/T/J/FF	Aspen - birch - red maple forest / Spruce - fir - aspen forest / Great Lakes dune pine forest / Aspen - balsam poplar lowland forest
Mixed conifer and deciduous forest	NN	White cedar - black ash forest (= "Black ash - conifer swamp")
Mixed conifer and deciduous forest	Q	White pine - aspen - birch - mountain maple forest (combination of 2)
Mixed conifer and deciduous forest	Q/T	White pine - aspen - birch - mountain maple forest (combination of 2) / Spruce - fir - aspen forest
Mixed conifer and deciduous forest	Qa	White pine - aspen - birch forest
Mixed conifer and deciduous forest	R	White pine - red pine dry-mesic forest (on clay)
Mixed conifer and deciduous forest	R/Q	White pine - red pine dry-mesic forest (on clay) / White pine - aspen - birch - mountain maple forest (combination of 2)
Mixed conifer and deciduous forest	T	Spruce - fir - aspen forest
Mixed conifer and deciduous forest	T/Z	Spruce - fir - aspen forest / Developed
Conifer forest	OO	White cedar - boreal conifer mesic forest
Conifer forest	OO/NN/QQ	White cedar - boreal conifer mesic forest / White cedar - black ash forest (= "Black ash - conifer swamp") / Black ash - willow - basswood floodplain forest
Disturbed or Dredge material meadow	BB	Disturbed sandy meadow (may or may not be dredge material)
Disturbed or Dredge material meadow	BB/Hc	Disturbed sandy meadow (may or may not be dredge material) / Wet-mesic disturbed shrubland (more upland than wetland)
Disturbed or Dredge material meadow	BB/Hc/Ha	Disturbed sandy meadow (may or may not be dredge material) / Wet-mesic disturbed shrubland (more upland than wetland) / Speckled alder swamp
Disturbed or Dredge material meadow	BB/Hc/U	Disturbed sandy meadow (may or may not be dredge material) / Wet-mesic disturbed shrubland (more upland than wetland) / Aspen - birch - red maple forest

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Disturbed or Dredge material meadow	BB/K	Disturbed sandy meadow (may or may not be dredge material)
Disturbed or Dredge material meadow	BB/Z	Disturbed sandy meadow (may or may not be dredge material) / Developed
Disturbed or Dredge material meadow	MM	Dredge material wet meadow
Disturbed or Dredge material meadow	W/X/BB	Dredge material beach / Dredge material shrubland / Disturbed sandy meadow (may or may not be dredge material)
Disturbed or Dredge material shrubland	Hc	Wet-mesic disturbed shrubland (more upland than wetland)
Disturbed or Dredge material shrubland	Hc/BB	Wet-mesic disturbed shrubland (more upland than wetland) / Disturbed sandy meadow (may or may not be dredge material)
Disturbed or Dredge material shrubland	Hc/U	Wet-mesic disturbed shrubland (more upland than wetland) / Aspen - birch - red maple forest
Disturbed or Dredge material shrubland	X	Dredge material shrubland
Disturbed or Dredge material shrubland	X/Hb	Dredge material shrubland / Dogwood - willow swamp
Developed land	Z	Developed
Developed land	Z/BB	Developed / Disturbed sandy meadow (may or may not be dredge material)
Developed land	Z/BB/Hc	Developed / Disturbed sandy meadow (may or may not be dredge material) / Wet-mesic disturbed shrubland (more upland than wetland)
Developed land	Z/BB/U	Developed / Disturbed sandy meadow (may or may not be dredge material) / Aspen - birch - red maple forest
Developed land	Z/Hc	Developed / Wet-mesic disturbed shrubland (more upland than wetland)
Developed land	Z/Hc/BB	Developed / Wet-mesic disturbed shrubland (more upland than wetland) / Disturbed sandy meadow (may or may not be dredge material)
Developed land	Z/U	Developed / Aspen - birch - red maple forest
Water	WATER	Water