

Appendix 2. The initial survey sent to floodplain managers to compile and document management objectives and targets of floodplain conservation lands along the Upper Mississippi River, Middle Mississippi River, and Lower Missouri River.

Q1 Please select the management agency you currently work for:

- US Army (Go to Q2)
- US Fish and Wildlife Service (Go to Q3)
- US Forest Service (Go to Q4)
- US National Park Service (Go to Q5)
- Illinois Department of Natural Resources (Go to Q6)
- Iowa Department of Natural Resources (Go to Q7)
- Kansas Department of Wildlife, Parks, and Tourism (Go to Q8)
- Minnesota Department of Natural Resources (Go to Q9)
- Missouri Department of Conservation (Go to Q10)
- Missouri Department of Natural Resources (Go to Q11)
- Nebraska Game and Parks Commission (Go to Q12)
- Wisconsin Department of Natural Resources (Go to Q13)
- Other (Go to Q14) _____

Q2 Please identify the U.S. Army properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Fort Leavenworth, KS
- Other _____
Go to Q16

Q3 Please identify the U.S. Fish and Wildlife Service properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Big Muddy National Fish and Wildlife Refuge
- Boyer Chute National Wildlife Refuge
- Clarence Cannon National Wildlife Refuge
- Desoto National Wildlife Refuge
- Great River National Wildlife Refuge
- Middle Mississippi River National Wildlife Refuge
- Port Louisa National Wildlife Refuge
- Trempealeau National Wildlife Refuge
- Two Rivers National Wildlife Refuge
- Upper Mississippi River Wildlife and Fish Refuge
- Other _____
Go to Q16

Q4 Please identify the U.S. Forest Service properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Shawnee National Forest
 - Other _____
- Go to Q16

Q5 Please identify the U.S. National Park Service properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Mississippi National River and Recreation Area
 - Missouri National Recreation River
 - Other _____
- Go to Q16

Q6 Please identify the Illinois Department of Natural Resources properties of which you are actively engaged in managing (conservation lands within the floodplain of the Upper and Middle Mississippi River only).

- Big River State Forest
 - Cape Bend State Fish and Wildlife Area
 - Cedar Glen State Natural Area
 - Chouteau Island State Fish and Wildlife Area
 - Delabar State Park
 - Devil's Island State Fish and Wildlife Area
 - Elton Hawks Bald Eagle Refuge Nature Preserve
 - Henderson Creek State Fish and Wildlife Area
 - Horseshoe Lake Nature Preserve
 - Mississippi River Sand Hills Natural Area
 - Mississippi River State Fish and Wildlife Area
 - Union County State Fish and Wildlife Area
 - Other _____
- Go to Q16

Q7 Please identify the Iowa Department of Natural Resources properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Allen Green Refuge
- Auldon Bar WMA
- Blackbird Bend WMA
- Blackhawk Bottoms WMA
- Blackhawk Point WMA
- Boyer Bend WMA
- California Bend State Wildlife Refuge
- Copeland Bend WMA
- Dakota Bend WMA
- Deer Island State Game Management Area
- Fawn Island WMA
- Fish Farms Mounds WMA
- Frazer's Bend WMA
- Galland School State Park Preserve
- Gifford State Forest
- Glover's Point WMA
- Green Island WMA
- Ivy Island WMA
- Kains Lake WMA
- Lansing WMA
- Louisville Bend WMA
- Lower Blencoe Bend WMA
- Lower Hamburg Bend WMA
- Middle Decatur Bend WMA
- Mile Long Island WMA
- Mines of Spain State Recreation Area
- Mississippi River Island State WMA
- Monona Bend WMA
- New Albin Big Lake WMA
- Nettleman Island WMA
- Odessa WMA
- Omadi Bend WMA
- Omaha Mission Bend WMA
- Pecan Grove State Preserve
- Pigeon Creek WMA
- Pool Slough WMA
- Princeton WMA
- Rand Bar WMA
- Snyder Bend WMA
- Soldier Bend WMA
- St. Mary's Island WMA
- Tieville Bend WMA
- Three Rivers WMA
- Tyson Bend WMA
- Upper Blencoe Bend WMA

- Upper Bullard Bend WMA
 - Upper Decatur Bend WMA
 - Upper Monona Bend WMA
 - Waukon Junction WMA
 - Wilson Island Recreation Area
 - Winnebago Bend WMA
 - Yellow River State Forest
 - Other _____
- Go to Q16

Q8 Please identify the Minnesota Department of Natural Resources properties of which you are actively engaged in managing (conservation lands within the floodplain of the Upper Mississippi River only).

- Kellogg-Weaver Dunes State Natural Area (TNC)
 - Pool 4 Wildlife Management Area
 - Frontenac State Park
 - Other _____
- Go to Q16

Q9 Please identify the Kansas Department of Wildlife, Parks, and Tourism properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River only).

- Benedictine Bottoms
 - Other _____
- Go to Q16

Q10 Please identify the Missouri Department of Conservation properties of which you are actively engaged in managing.

- Anderson CA
- Baltimore Bend CA
- BK Leach CA
- Brown CA
- Buck and Doe Run CA
- Columbia CA
- Corning CA
- Cuivre Island CA
- Deroin Bend CA
- Diana Bend CA
- Dupont Reservation CA
- Dupree Memorial CA
- Eagle Bluffs CA
- Franklin Island CA
- Grand Pass CA
- Howell Island State Wildlife Area
- Liberty Bend CA
- Lower Hamburg Bend CA
- Magnolia Hollow CA
- Marais Temps Clair CA
- Marion Bottoms CA
- Monkey Mountain CA
- Nishnabotna CA
- Pelican Island Natural Area
- Plowboy Bend CA
- Prairie Slough CA
- Red Rock Landing CA
- Rose Pond CA
- Rush Bottoms CA
- Sandy Island CA
- Seventy-Six CA
- Shanks Conservation Area/ Ted Shanks Wildlife Management Area
- Smoky Waters CA
- St. Stanislaus CA
- Tate Island CA
- Thurnau CA
- Upper Mississippi CA
- Weldon Spring CA
- Windy Bar CA
- Wolf Creek Bend CA
- Worthwine Island CA
- Other _____

Q11 Please identify the Missouri Department of Natural Resources properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River and Upper and Middle Mississippi River only).

- Wakonda State Park
 - Weston Bend State Park
 - Other _____
- Go to Q16

Q12 Please identify the Nebraska Game and Parks Commission properties of which you are actively engaged in managing (conservation lands within the floodplain of the Lower Missouri River only).

- Aspinwall Bend WMA
 - Brownville Bend WMA
 - Elk Point Bend WMA
 - Gifford WMA
 - Hamburg Bend WMA
 - Indian Cave State Park
 - Kansas Bend WMA
 - Langdon Bend WMA
 - Middle Decatur Bend WMA
 - Mulberry Bend WMA
 - Omadi Bend WMA
 - Peru Bottoms WMA
 - Ponca State Park
 - Randall W. Schilling WMA
 - William Gilmour WMA
 - Wiseman WMA
 - Other _____
- Go to Q16

Q13 Please identify the Wisconsin Department of Natural Resources properties of which you are actively engaged in managing (conservation lands within the floodplain of the Upper Mississippi River only).

- Lake Pepin Wildlife Area
- Merrick State Park
- Mississippi Islands Wildlife Area
- Nelson Dewey State Park
- Nelson - Trevino Bottoms State Natural Area
- Perrot State Park
- Pierce County Islands Wildlife Area
- Rush Creek State Natural Area
- Trempealeau Lakes Fishery Area
- Van Loon Wildlife Area
- Whitman Bottoms Floodplain Forest State Natural Area
- Whitman Dam Wildlife Area
- Wyalusing Hardwood Forest State Natural Area
- Wyalusing State Park
- Other _____

Go to Q16

Q14 Please provide the name of the agency or organization who owns or manages the floodplain conservation land property.

Q15 Please provide the name and general location description of the property/properties.

Q16 Please identify the management priority and intensity of management of the following objectives for the property or majority of the properties you identified in the previous question.

Q17 Based on your experience, please rate the level of scientific information available on each objective (in general, not just on the identified properties).

	Scientific information available			
	No opinion	Severely limited information available	Limited information available	Adequate information available
Restore hydrology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reconnect river to floodplain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restore bottomland forests	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restore wetlands	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restore bottomland prairies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provide public recreation opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain respectful relationships with neighbors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flood risk reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutrient cycling/ improve water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Improve soil health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contaminant retention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agricultural production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage game species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage endangered/ threatened species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Manage other native, nongame species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Control invasive species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Maintain current conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 Are there other management objectives for the selected properties that we missed?

- Yes (Go to Q19)
- No (Go to Q21)

Q19 Please identify (write in) any additional objectives, their management priority and intensity of management for the property or majority of properties you identified in the previous question.

	Management priority				Management intensity			
	None	Low priority	Medium priority	High priority	Not managed	Passive mgmt	Equal mix of passive and active mgmt	Active mgmt
Objective 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q20 Based on your experience, please rate the level of scientific information available on each of the additional objectives (in general, not just on the identified properties).

	Scientific information available			
	No opinion	Severely limited information available	Limited information available	Adequate information available
Objective 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Objective 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 Please indicate the priority and management intensity of the following conservation targets for the property or majority of the properties you selected.

Q22 Based on your experience, please rate the level of scientific information available on each objective (in general, not just for the properties selected).

	Information available			
	No opinion	Severely limited information available	Limited information available	Adequate information available
Pallid sturgeon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Least tern	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Piping plover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aquatic invasive species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Terrestrial invasive species	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Turkey	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pheasant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Waterfowl	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Game fish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bald eagles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Song birds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Shore birds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marsh birds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Aquatic invertebrates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pollinators	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Amphibians	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reptiles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cottonwoods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q23 Are there other conservation targets for the selected properties that we missed?

- Yes (Go to Q24)
- No (Go to Q26)

Q25 For any additional conservation targets, please rate the level of scientific information available on each objective, based on your experience (in general, not just for the properties you selected).

	Information available			
	No opinion	Severely limited information available	Limited information available	Adequate information available
Target 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target 5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Target 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q26 Are there management plans or overarching guiding documents in place for the property/properties selected?

- Yes, up to date plans available
- Yes, old plans available but not up to date
- No, we are currently in the planning process
- No, and not in planning process

Q27 Would you be able to provide the most current management plan(s) or guiding document(s) in the form of a website link, digital copy (e-mailed), or hard copy?

- Yes
- No

Q28 If available online, please provide website link below.

Q29 Please rate the importance of the following sources when incorporating new scientific information into the decision-making process.

	Not important	Slightly important	Important	Very important	No opinion
Peer-reviewed literature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
White papers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internal datasets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration with internal research staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaboration with external researchers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional association meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Word of mouth	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More experienced staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q30 Are there other sources in which new scientific information is incorporated in to the decision-making process?

- Yes (Go to Q31)
- No (Go to Q32)

Q31 Please identify other sources of new scientific information and rate their importance when incorporating new scientific information into the decision-making process.

	Not important	Slightly important	Important	Very important	No opinion
Source 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Source 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Source 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Source 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q32 Please rate the following constraints based on how they limit your ability to obtain or utilize new scientific information in management decisions.

	Not limiting	Slightly limiting	Limiting	Very limiting	No opinion
Time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funding (ability to travel to meetings, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Credibility of scientific information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Credibility of scientific process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High uncertainty in results	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research not applicable due to spatial and temporal differences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to scientific journals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disconnect between research and management activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socio-political factors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33 Are there other constraints that limit your ability to obtain or utilize new scientific information in management decisions?

- Yes (Go to Q34)
- No (Go to Q35)

Q34 Please identify additional constraints and rate them based on how they limit your ability to obtain or utilize new scientific information in management decisions.

	Not limiting	Slightly limiting	Limiting	Very limiting	No opinion
Constraint 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constraint 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constraint 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constraint 4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q35 What capacity does your agency have to conduct and/or fund targeted research to better meet management objectives?

- Low capacity
- Medium capacity
- High capacity