Riverlands Conservation Areas

Franklin Island Conservation Area
Diana Bend Conservation Area
Plowboy Bend Conservation Area
Marion Bottoms Conservation Area
Smoky Waters Conservation Area
Tate Island Conservation Area

Fifteen Year Area Management Plan

FY2015 – FY2029

Wildlife Division Chief

3/9/15
Date

Riverlands Conservation Areas Management Plan Approval Page

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OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Franklin Island CA	7904	1978	1,625	Howard	Wildlife	Wildlife
Diana Bend CA	9710	1997	1,343	Howard	Wildlife	Wildlife
Plowboy Bend CA	9530	1995	2,617	Moniteau	Wildlife	Wildlife
Marion Bottoms CA	9632	1996	2,997	Cole	Wildlife	Wildlife
Smoky Waters CA	9524	1995	1,041	Cole, Osage	Wildlife	Wildlife
Tate Island CA	9903	1999	422	Osage	Wildlife	Wildlife
TOTAL			10,045			

The Riverlands Conservation Areas (CA) are a series of publicly owned or managed properties on both sides of the Missouri River between river miles 110 and 195. With the exception of Franklin Island, these areas were purchased after the Missouri River floods in 1993 and 1995. These floods caused extensive damage to previously productive farmlands when flood control levees breached. Scouring, sand and silt deposition, and debris accumulation precluded continued cultivation without extensive rehabilitation costs.

Following the 1993 and 1995 floods, then Governor Mel Carnahan established a task force to consider options for future management of the floodplain. One of the recommendations made by the Task Force on Floodplain Management was that the state should “encourage the Missouri Department of Conservation (the Department) to develop and implement a plan to purchase floodplain acreage from willing sellers.” The intent was to provide landowners who repeatedly suffer flood damage with an option to relocate to safer ground. By purchasing flood hazard areas, the Department would reduce future flood risks to life and property while at the same time pursue its mission by restoring forest, fish, and wildlife habitat along the state’s big rivers.

Many landowners took advantage of programs, such as the Wetland Reserve Program (WRP) or the Emergency Wetland Reserve Program (EWRP), which allowed them to sell, lease, or exchange their damaged river bottom properties. In some cases, part of the fair market value of the land had been paid by the federal government under the terms of the WRP or EWRP, consequently, the Department was able to purchase properties at a reduced market value.

The U.S. Army Corps of Engineers (COE) also purchased flood damaged land from willing sellers. In 1999, the COE licensed the recently purchased Tate Island Mitigation Site to the Department for habitat restoration and management.

The following areas are protected by levees: Franklin Island, Diana Bend and Plowboy Bend. The following areas are not protected by levees: Marion Bottoms, Smoky Waters and Tate Island.

Statements of Purpose:

A. Strategic Direction

The purpose of these conservation areas is to reconnect the Missouri River with its floodplain, where practical; restore aquatic, wetland and terrestrial habitats; and provide recreational opportunities in a manner that will complement other conservation efforts along the river. These areas are managed to maintain a mixture of riparian habitats to provide for a variety of wildlife.

B. Desired Future Condition

- Provide a mixture of successional stages of bottomland forest.
- Manage for mast bearing trees where appropriate.
- Maintain selected open-land habitats.
- Use natural depressions, levees and water control structures to develop and maintain opportunistic wetlands.
- Use cropping and food plots, where appropriate, to maintain open land.
- Provide riparian habitat and a variety of aquatic habitat depths, including shallow water habitat for aquatic species.
- Provide public access that requires minimal maintenance due to flooding frequency.

C. Federal Aid Statement

- Franklin Island CA, Diana Bend CA, Plowboy Bend CA, Marion Bottoms CA and Smoky Waters CA, or portions thereof, were acquired with Emergency Wetland Reserve Program funds as part of the buy-out of eligible farmland affected by the 1993 Flood to provide wetland habitat.
- Diana Bend CA and Marion Bottoms CA, or portions thereof, were developed with Wetland Reserve Program funds to provide wetland habitat through perpetual easements.
- Marion Bottoms CA was partially acquired with the North American Wetlands Conservation Act (NAWCA) funds to conserve and restore wetland habitats.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Area	Natural Area
Franklin Island CA	Manito Bluffs Conservation Opportunity Area (COA) & Manitou Floodplain Important Bird Area (IBA), Priority Forest Landscape	None
Diana Bend CA		None
Plowboy Bend CA		None
Marion Bottoms CA		None
Smoky Waters CA	Lower Osage COA, Cadet Creek Aquatic COA	None
Tate Island CA	Priority Forest Landscape	None

II. Important Natural Features and Resources

A. **Species of Conservation Concern:** Species of conservation concern are known from all of these areas. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.

B. **Caves:** None

C. **Springs:** None

III. Existing Infrastructure

Area Name	Parking Lots	Boat Ramps	Privies	Water Control Structures	Viewing Blinds	Board-walks	Through-levee Drainage Pipes
Franklin Island CA	4	1	0	5	0	0	3
Diana Bend CA	1	0	0	5	1	1	2
Plowboy Bend CA	3	0	0	0	0	0	5
Marion Bottoms CA	1	0	0	2	0	0	0
Smoky Waters CA	2	0	0	0	0	0	0
Tate Island CA	0	0	0	0	0	0	0

IV. Area Restrictions or Limitations

Area Name	Deed Restrictions	Federal Interests	WRP/ EWRP	Other Easements	Levee District	Cultural Resources
Franklin Island CA	None	Yes[1]	Yes		Yes[4]	Yes[5]
Diana Bend CA	None	Yes[1]	Yes	County Road	Yes[4]	Yes[5]
Plowboy Bend CA	None	Yes[1]	Yes	Railroad	Yes[4]	None
Marion Bottoms CA	None	Yes[1, 2]	Yes	Railroad	No	Yes[5]
Smoky Waters CA	None	Yes[1]	Yes	COE levee	No	None
Tate Island CA	Leased from COE 1998 - 2023	Yes[3]	No		No	Yes[5]

[1]The wetland conservation easements permanently prohibit use of the affected land as cropland and require permanent maintenance of the wetland conditions, except in the case of natural disaster. After the easement has been perfected, no change will be made in the easement without a written request by the participant and the written consent of the NRCS Chief. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

[2]This land must be used to conserve and restore wetlands. The federal funds made available under the NAWCA may not be used for fish and wildlife mitigation purposes under the Fish and Wildlife Coordination Act or the Water Resources Development Act of 1986. Federal funds may also be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

[3]Federal funds may be used in the management of this land. Fish and wildlife agencies may not allow recreational activities and related facilities that would interfere with the purpose for which the State is managing the land. Other uses may be acceptable and must be assessed in each specific situation.

[4]Appendix 2 describes levee district names, miles, acres protected, maintenance and repair responsibilities, river stage flood protection height, and management concerns. Appendix 3 maps WRP and EWRP easements.

[5]Yes, records kept with the Department Environmental Compliance Specialist. Managers should follow Best Management Practices for Cultural Resources found in the MDC Resource Policy Manual.

A. **Hazards and hazardous materials:** None observed.
B. **Endangered Species:** Endangered Species are known from these areas. Area Managers should consult the Natural Heritage Database annually and review all management activities with the Natural History Biologist.
C. **Boundary Issues:** None.

MANAGEMENT CONSIDERATIONS

V. <u>Terrestrial Resource Management Considerations</u>

The range of plant communities along the Missouri River is a result of natural processes of erosion and deposition. Exposed alluvium is rapidly colonized by willow and cottonwood trees. These dominate the canopy for a time and are eventually replaced by sycamore, elm, box elder, silver maple and red mulberry trees. Older floodplain forests are dominated by elm and hackberry with walnut and green ash trees present as well as the aforementioned species. Appendix 4 breaks down each area by acres of different habitat types.

Challenges and Opportunities:

1) Rapid succession in bottomland areas
2) Flood events and seepwater can both augment and hinder management efforts.

Management Objective 1: Maintain old field and scrub/shrub openings by setting back succession.

Strategy 1: Use mechanical and chemical means to maintain openings.
Strategy 2: Conduct occasional prescribed burns to maintain openings.

Management Objective 2: Use cropping and food plots to set back succession and provide a food source.

Strategy 1: Bid crop permits and work with permittee farmers to maintain crop fields and provide an overwinter source of food and summer/fall forage to help alleviate crop damage to neighboring landowners. Use rotational/sporadic farming to curb succession and introduce disturbance.
Strategy 2: Use Department staff to establish food plots where permittee cropping is lacking due to flood risks or access.

Management Objective 3: Control invasive species on areas (purple loosestrife, Johnson grass, sericea lespedeza).

Strategy 1: Survey areas to identify and map populations of invasive species.

Strategy 2: Apply appropriate techniques to control loosestrife, sericea lespedeza, Johnson grass and other undesirable vegetation.

Management Objective 4: Maintain a variety of successional stages of bottomland hardwood forests.

Strategy 1: Allow some open areas to succeed to hardwood forests.
Strategy 2: Where appropriate, plant or maintain plantings of flood tolerant, mast producing trees.
Strategy 3: Rely on natural events (flooding, ice storms, etc.) to create gaps in existing forest cover.
Strategy 4: Where permissible (i.e., where there are no WRP easement prohibitions), consider harvest to set back succession.
Strategy 5: Maintain forest inventory schedule.

Management Objective 5: Restore wetlands and seasonal marshes. Create, enhance and manage wetlands and seasonal marshes through opportunistic water management to provide habitat for fish, wildlife and desirable wetland plants.

Strategy 1: Open water control structures to create wetlands during the year as the Missouri River rises, particularly for the spring and fall months.
Strategy2: Utilize low profile berms to trap water inland in shallow water ephemeral pools to create habitat for fish, salamanders, toads and migratory birds.
Strategy 3: Identify opportunities to create or expand seasonal wetlands when levee degradation occurs. When possible during levee construction or repair, excavate borrow areas using irregular design, variable side slopes and water depths to enhance wetland diversity and multi-species use.

VI. Aquatic Resource Management Considerations

The Missouri River flows 192 miles across the Central Region, 35 percent of its length in Missouri, and provides approximately 26,000 surface acres of water. Historically, the Missouri River occupied a large floodplain, having a wide braided channel with numerous islands, sand bars, sloughs and wetlands. However, much of the 2,315 miles of riverine habitat in the Missouri River basin has been significantly altered to enhance navigation and reduce flood risk along the river.

Modifications to the Missouri River resulted in a deep, narrow, fast-flowing, restructured channel which now extends over 50 percent of the river's length. Big river development resulted in the loss of 98 percent of island habitat, 95 percent of wetlands, and 50 percent of surface water acreage in the lower Missouri River.

The loss of habitat diversity, including backwaters, has been associated with reduced fish diversity and biomass. Shallow and backwater habitats provide important nursery areas for larval and juvenile fishes because they typically have higher water temperatures, more abundant food and slower current velocity. These shallow water areas also provide protective habitat for larval and juvenile fish from larger predatory fishes. Lack of quality big river aquatic habitat has contributed to the federal listing of large river fishes such as the pallid sturgeon. In addition, nearly half of the state-listed rare and endangered plant species are associated with wetlands.

Flooding of the Missouri River during the 1900s created many floodplain scours at levee breaks. Recent studies have shown that these areas are functioning analogously to natural backwaters although many of these scours have subsequently filled in with sediment. A post-1993 flood study recommended a 300 foot wide wooded corridor along each bank of the river to lessen the adverse effects of flooding. Another source of shallow and quiet water habitat occurs within dike fields along the main channel, especially along the inside of river channel bends. Habitat in these areas can be maintained or improved by working with the United States Army Corps of Engineers to modify dike maintenance practices for fish and wildlife benefits. Maintaining river connectivity to the floodplain is necessary to provide habitats that accommodate life requirements for riverine fish and other aquatic species. Where possible, management should allow the river to flow periodically through these public areas.

One of the most important things that can be done to improve habitat is to re-establish floodplain connectivity. However, the dynamic nature of an open floodplain creates uncertainty in creating permanent, predictable habitats and in implementing management. Floodplain features to consider will include floodplain and tributary watersheds, flood height, frequency and duration, topography, hydrology, soils, drainage and plant succession. Important structural features like protection levees and opportunities for levee realignment, setback or degradation of levees, location of borrow areas, and dike field management will influence habitats as reconnection of the river to the floodplain occurs. Silt, debris, high flow channels, floodplain erosion or damage from floodwaters may impact access, management and monitoring.

Challenges and Opportunities:

1) Aquatic Habitat: Wetland and other backwater habitats provide seasonally important feeding, spawning, and nursery habitat for numerous species of fish inhabiting big rivers (Missouri Department of Conservation, 2002). The biggest challenge that managers currently face in maintaining or enhancing plant and animal communities along the river is trying to restore and/or enhance habitat that has been lost over the last century.

2) Aquatic Species Conservation: There are 23 species of concern currently listed in the Department's *Missouri Species and Communities of Conservation Concern Checklist* (2013), associated with the Missouri River and its floodplain. Of the 66 fishes listed as species of concern in Missouri, 16 occur along Central Region's section of the Missouri River and its floodplain. Sampling on the Missouri River in Central Region by Department staff since 1945 has resulted in the capture of 83 fish species and 3 hybrids (the Department's Resource Science Division's Integrated Aquatic Database). Of the fish captured, four are currently state-listed as endangered or threatened and six others are listed as species of concern.
3) Endangered and Threatened Species: Conservation and management of all native, aquatic species also includes federally endangered and threatened species which are on or near these riverland areas. Of particular concern, are big river adapted fishes such as the federally listed endangered pallid sturgeon and state listed endangered lake sturgeon, sturgeon chub, sicklefin chub and flathead chub.
4) Invasive Species: Invasive species disrupt ecological processes andoften result in less diverse natural communities.
5) Recreation: According to a 2004 Missouri River public use assessment survey (Sheriff, Renken, & Treiman**,** 2011), river users at conservation areas and public accesses were involved in 69 different activities, including sightseeing (29%), fishing (24%), and boating (12%). During that year, resource users in and adjacent to Missouri made approximately 1.2 million visits to the Missouri River and generated more than $39 million in economic impact. Missouri River public use over the last three decades has nearly tripled based on the above survey and information from a similar study done in 1974 (Gillespie & Lind, 1974).
6) Restrictions or Conditions: Various conditions exist that may limit the type or extent of management practices on each area. Licenses, agreements, easements, and conditions associated with state and federal programs must be taken into consideration before any management is implemented.

Management Objective 1: Create and improve habitat diversity for fish and wildlife in and along the Missouri River adjacent to public lands. Maintaining river connectivity to the floodplain is necessary to provide habitats that accommodate life requirements for aquatic species. Where possible, management should allow the river to periodically flow through these riverlands. Enhance aquatic habitat abundance and diversity within the main channel border areas along the Missouri River. Wherever possible, management of these public riverlands should allow the river to periodically flow through to prevent siltation and habitat loss. Dynamic river flow will help provide a diversity of off-channel habitats for a longer period of time.

Strategy 1: Continue to work with the U.S. Army Corps of Engineers (COE) to modify dikes to create sand island/sandbar complexes having a diversity of

depths, flows and braided channels. This will create more suitable low velocity flows and shallow water habitat for small fish species (chubs, etc.) and larval and juvenile stages of larger species such as the federally endangered pallid sturgeon, lake sturgeon and paddlefish.

Strategy 2: Continue to work with the COE on experimenting with dike modification (reverse dikes, etc.) to widen the river and create more shore/bankline habitat diversity (ephemeral/secondary channels) and stop sediment accretion and subsequent loss of aquatic habitat.

Strategy 3: Remove old levees, if feasible, to decrease interference with high flows and re-establish floodplain function.

Strategy 4: Where feasible, work with other agencies and the area's administering division to realign or set back levees. This will re-establish floodplain connectivity, restore riparian and wetland areas, and allow opportunistic use by fish and other aquatic life.

Management Objective 2: Enhance aquatic habitat diversity by improving, restoring, or creating side channels where feasible.

Strategy 1: Continue to work with other agencies to restore and improve structural and flow diversity in existing side channels. Look for opportunities to create or reopen side channels, where feasible, as dictated by topography, hydrology, economics, etc.

Management Objective 3: Provide sloughs and backwater areas that are connected to the river or are susceptible to seasonal inundation.

Strategy 1: Investigate the possibilities of reconnecting some old sloughs and oxbows by modifying downstream ends to allow for more frequent inundation and improvement in functionality.

Strategy 2: Work with COE, as opportunities arise, to maintain or increase depth of oxbows and sloughs. Create deepwater pockets (minimum 6 feet) in shallow sloughs, where feasible, in order to extend their life and increase the habitat value for aquatic and terrestrial species.

Strategy 3: Take advantage of levee relocation and repair to create borrow sloughs and deeper backwater habitats.

Strategy 4: Where feasible, modify levees by notching to reconnect the river to its floodplain. Allow high flows to create/scour new sloughs and enhance existing backwater areas.

Management Objective 4: Where feasible and practical, maintain and enhance connected and isolated scour holes to provide spawning, nursery and overwintering habitat for riverine fish species.

Strategy 1: Work with the COE to modify or develop structures (dikes, hard points, etc.) which can create, maintain or extend the life of scour holes along the river.

Management Objective 5: Where feasible and desirable, improve stream habitat by restoring and expanding riparian corridors using native vegetation and stream bank stabilization practices.

Strategy 1: Maintain or establish at least a 300 foot wide riparian buffers (on each side of the river) along the Missouri River on Department areas and accesses. On smaller area streams, establish and/or maintain at least a 200 foot wide wooded corridor (100 feet on each side of stream) by fiscal year 2020 (FY20). Establish and maintain riparian corridors, where inadequate, using natural regeneration and/or tree planting to enhance watershed/riverbank protection. Improve in-stream habitat. Reduce streambank erosion throughout the areas. Follow the Department's *Watershed and Stream Management Guidelines* (2009) on riparian corridor management.

Management Objective 6: Promote the conservation and management of all aquatic species. Emphasize species listed in the current *Missouri Species and Communities of Conservation Concern Checklist*; and monitor the status and health of listed aquatic species.

Strategy 1: Cooperate and/or participate with state and federal monitoring and research projects involving aquatic species listed in the current *Missouri Species and Communities of Conservation Concern Checklist*.

Strategy 2: Design and/or implement Department monitoring projects to track the status of listed species. When necessary, cooperate with Resource Science Division to plan the design of monitoring or research projects.

Strategy 3: Based on the aquatic species population's status or health, recommend appropriate management strategies to Department Administration to restore, enhance or sustain that population.

Management Objective 7: Monitor status and health of other riverine fish and aquatic species particularly those considered sport fish under the Department's fishing regulations.

Strategy 1: Plan and implement routine monitoring of riverine fish species and other aquatic species to determine status and management needs. When necessary, cooperate with Resource Science Division to plan the design of monitoring or research projects.

Strategy 2: Based on the aquatic species population's status or health, recommend appropriate management strategies to Department Administration to restore, enhance or sustain that population.

Management Objective 8: Determine status and effect of biological conditions that may exist on the areas which limit the type or extent of management practices implemented. Particular attention should be given to restrictions or conditions with implications for area management pertaining to invasive species. Monitor status and effect of invasive species such as purple loosestrife, zebra mussels, Asian carp, etc. which occur in or along the Missouri River in Central Region**.**

Strategy 1: Continue to monitor or implement monitoring projects to detect and/or determine the status of invasive species. Report status of invasive species to Fisheries and Wildlife divisions to see if further management is warranted.

Strategy 2: If warranted and feasible, implement practices which effectively control/eradicate invasive species to improve management and sustainability of native species.

VII. <u>Public Use Management Considerations</u>

Challenges and Opportunities:

1) Public access
2) Multiple use opportunities
3) Area regulations

Management Objective 1: Provide public access.

Strategy 1: Provide low maintenance trails and access roads that limit infrastructure (asphalt, gravel, culverts, etc.) to reduce maintenance cost in flood prone areas.

Strategy 2: Avoid establishing trails where they would be frequently scoured or silted over by flood events.

Strategy 3: Maintain boat ramps, privies, camp sites, ADA accessible facilities, signage, boundary signage, etc.

Strategy 4: Promote Adopt an Access. It invites the public to become strong stakeholders and partners with the Department.

Management Objective 2: Provide area users compatible and inviting multiple use opportunities for recreation, education and information.

Strategy 1: Provide dove management in flood protected areas for dove hunters.

Strategy 2: Maintain access trails for mushroom collectors and hunters.

Strategy 3: Provide signage and brochures explaining bottomland ecology and river functions.

Strategy 4: Abide by Chapter 12 of the Wildlife Code 3 CSR 10-11.130 that only permits equestrian use by special use permit at Marion Bottoms CA. Other areas in the counties included in the Riverlands provide additional equestrian opportunities (Prairie Home, Scrivner Road, Rudolf Bennitt & Three Creeks CAs).

Management Objective 3: Area regulations are an important tool in maintaining a balance between recreation and resource conservation. Monitor adherence to area regulations by resource users.

Strategy 1: Propose adjustments to area regulations to provide consistency, when possible, for hunting and fishing methods as well as other area uses.

Strategy 2: Provide clear and appropriate signing and information to convey area regulations and permitted activities, while providing clarity for enforcement.

Strategy 3: Provide adequate enforcement for inappropriate activities like vandalism, littering, fish and wildlife code violations, off-road use by vehicles, etc.

Strategy 4: Increase protection emphasis on species of conservation concern such as paddlefish, pallid sturgeon, and lake sturgeon, as well as other aquatic species, from illegal harvest.

VIII. <u>Administrative Considerations</u>

Challenges and Opportunities:

1) Cooperating with existing levee districts, despite opposing opinions regarding water retention and water level manipulation

Management Objective 1: On areas with multiple ownerships, establish relationships with other landowners to work cooperatively toward management goals.

Strategy 1: Maintain and formulate working relationships with levee districts to ensure fish, forest and wildlife interests are fully incorporated at every possible opportunity when levee related issues are decided upon.

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29
Terrestrial Resources Management															
Objective 1															
Strategy 1	X			X			X			X			X		
Strategy 2		X			X			X			X			X	
Objective 2															
Strategy 2	X	X		X	X		X	X		X	X		X	X	
Objective 3															
Strategy 1	X	X	X		X	X	X		X	X	X		X	X	X
Strategy 2	X	X	X		X	X	X		X	X	X		X	X	X
Objective 4															
Strategy 2					X										X
Strategy 4					X										X
Strategy 5		X		X										X	
Public Use Management Considerations															
Objective 1															
Strategy 4		X			X			X			X			X	
Objective 3															
Strategy 1		X		X		X		X		X		X		X	

APPENDICES

References:

Gillespie, G. A., Lind, W.L., & United States Army Corps of Engineers, Kansas City District. (1974). *A recreation base line study of the Missouri River: Rulo, Nebraska to mouth near St. Louis, Missouri*. Columbia, Missouri: University of Missouri.

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Missouri Department of Conservation. (2009). *Watershed and stream management guidelines for lands and waters managed by Missouri Department of Conservation* (32 pages). Jefferson City, Missouri: Missouri Department of Conservation.

Missouri Department of Conservation. (2013). *Missouri species and communities of conservation concern checklist*. Jefferson City, Missouri: Missouri Department of Conservation.

Sheriff, S.L., Renken, R.B., & Treiman, T.B. **(**2011). *Missouri River public use assessment: final report. Results from the 2004 survey of river users.* Jefferson City, Missouri: Missouri Department of Conservation.

Public Input Summary:
The draft Riverlands Conservation Area Management Plan was available for a public comment period October 1–31, 2014. The Missouri Department of Conservation received comments from 2 respondents (Appendix 17). The Riverlands Conservation Area Planning Team carefully reviewed and considered these ideas as they finalized this document. A brief summary of public input themes, including how they were incorporated or why they were not, can be found below. Rather than respond to each individual comment, comments are grouped into general themes and are addressed collectively.

Department responses to themes and issues identified through Riverlands Conservation Area public comment period

Concern about private individuals appropriating Department lands.
We contacted the individual that expressed the concern and explained the apparent taking was due to a change in our boundary posting to more accurately reflect the actual boundary, and that while it may have appeared we lost land, that was not the case.

Suggests permitting horseback riding on existing trails, access routes and/or levees on Franklin Island, Plowboy Bend, and Marion Bottoms Conservation Areas.
Added strategy 4 to our management objective #2 under Public Use Management Considerations explaining the Wildlife Code does not permit equestrian use beyond Marion Bottoms by special use permit; and, that other areas in counties included in the Riverlands offer horseback riding (including Three Creeks CA, Prairie Home CA, Rudolf Bennitt CA, Scrivner Road CA, Rock Bridge Memorial State Park, and Mark Twain National Forest – Dry Fork Recreation Area). In addition, several levies protect private property as well as MDC land, and levee districts generally prohibit vehicles and horses from traveling on protection levees.

Appendices:
Appendix 1: Riverlands Conservation Areas Area Map
Appendix 2: Extant Levee Districts Functioning on Riverlands Conservation Areas
Appendix 3: WRP Easement Map
Appendix 4: Current Land and Water Types
Appendix 5: Franklin Island CA Area Background
Appendix 6: Franklin Island CA Area Map
Appendix 7: Diana Bend CA Area Background
Appendix 8: Diana Bend CA Area Map
Appendix 9: Plowboy Bend CA Area Background
Appendix 10: Plowboy Bend CA Area Map
Appendix 11: Marion Bottoms CA Area Background
Appendix 12: Marion Bottoms CA Area Map

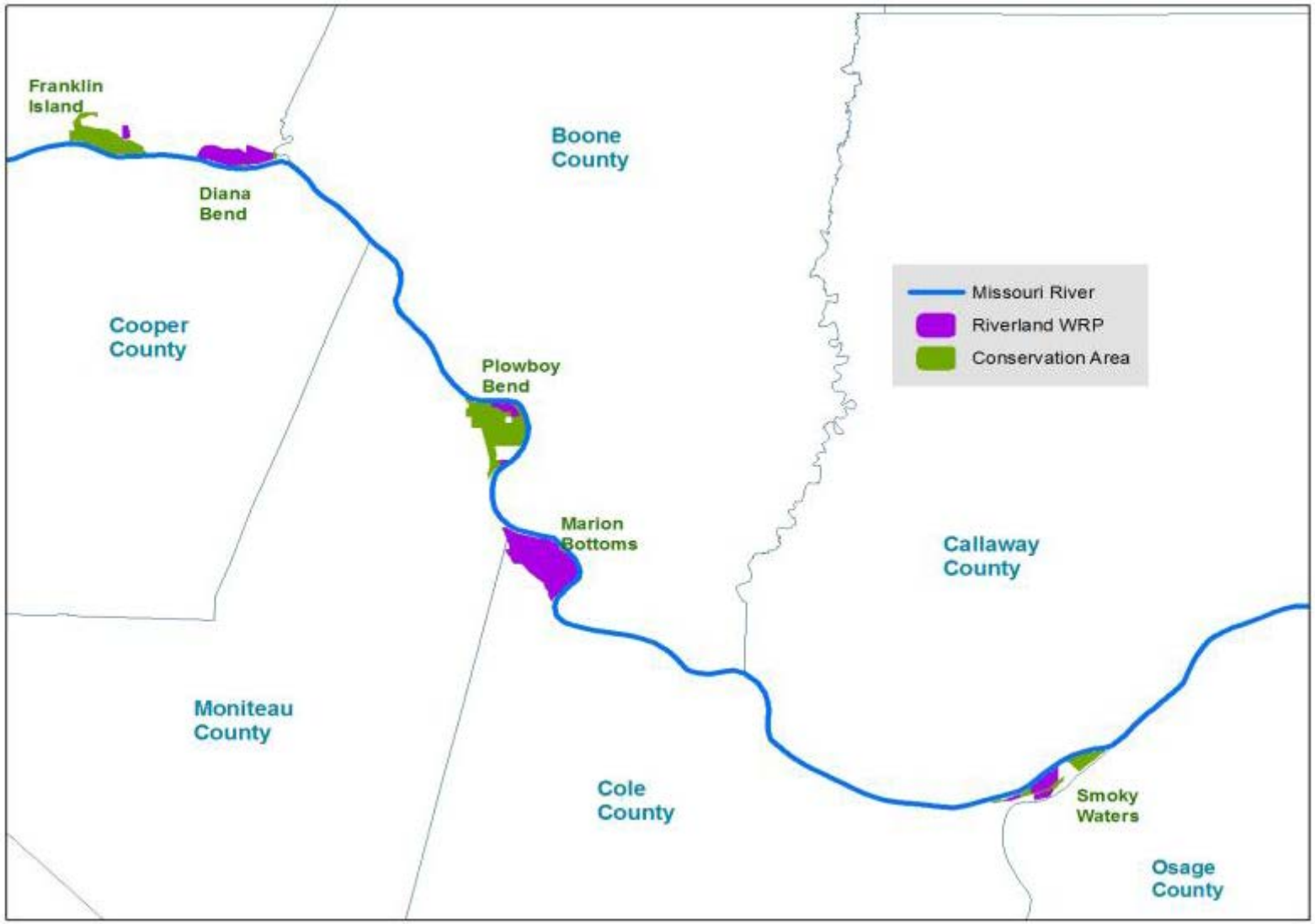
Appendix 13: Smokey Waters CA Area Background
Appendix 14: Smokey Waters CA Area Map
Appendix 15: Tate Island CA Area Background
Appendix 16: Tate Island CA Area Map
Appendix 17: Draft Riverlands Conservation Areas Management Plan Public Comments

Appendix 1: Riverlands Conservation Areas Area Map

Appendix 2: Extant Levee Districts Functioning on Riverlands Conservation Areas

Area Name	Levee District	Miles of Levee	Flood Stage	Protection Stage	River Mile	Maintenance Responsibility
Franklin Island CA	Howard County Levee District 4	7.0	21' at Boonville	35'	193-195	Levee district
Diana Bend CA	Bonne Femme	6.8	21' at Boonville	35'	186-190	Levee district
Plowboy Bend CA	Unverified Association	8.8	21' at Boonville	32'	167-172	Landowner shared

Appendix 3: WRP Easement Map



Appendix 4: Current Land and Water Types

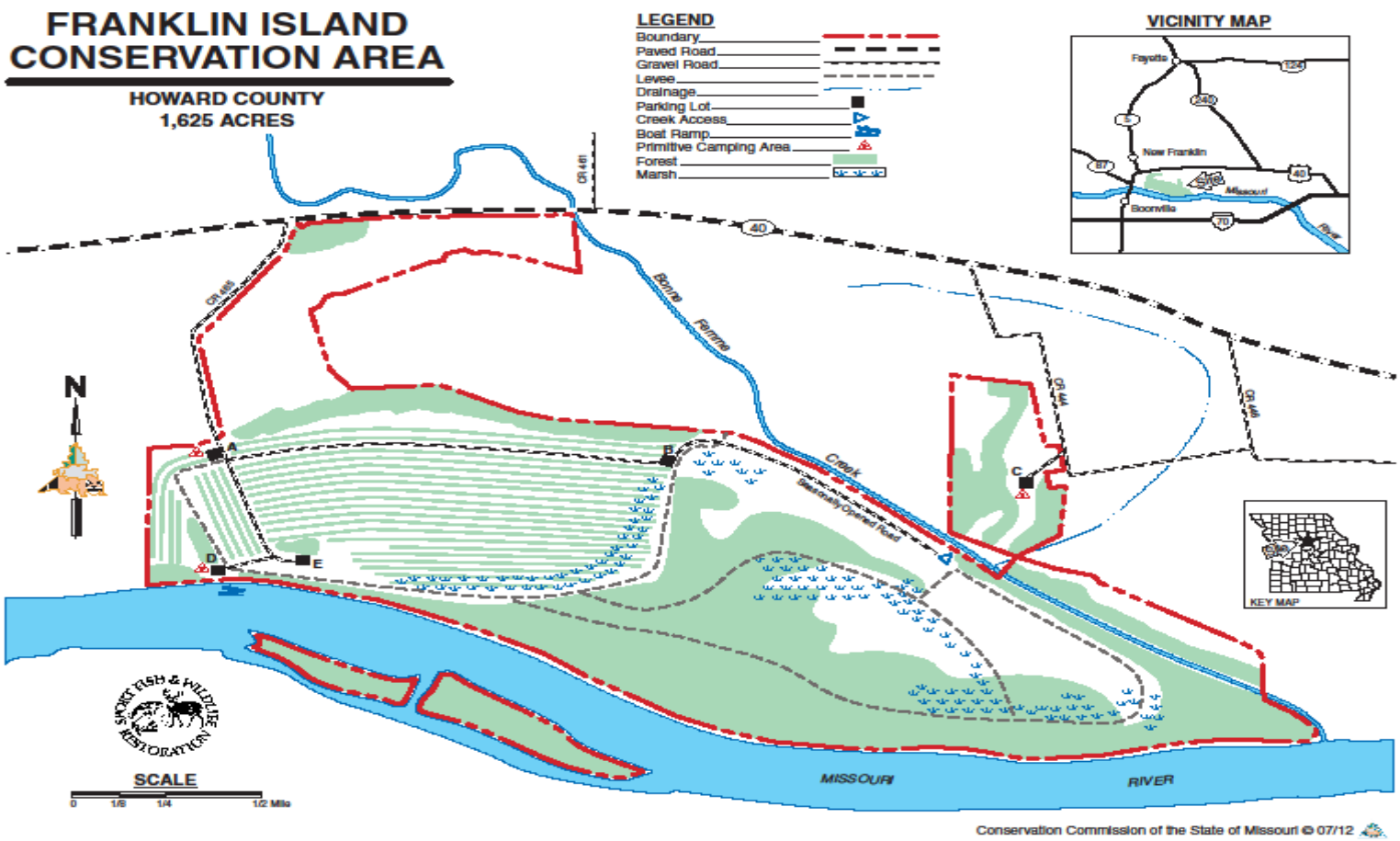
Landcover Type	Franklin Island CA	Diana Bend CA	Plowboy Bend CA	Marion Bottoms CA	Smoky Waters CA	Tate Island CA	TOTAL
Bottomland Forest	1,305	465	195	323	192	422	2,902
Successional Forest			971	2,038	832		3,842
Cropland	160	98	986				1,244
Levee			104	138	10		252
Old Field		155	109	290			554
Wetland	160	620	148	159			1,087
Scour Hole		5	2	47	7		61
Upland Forest			87				87
Other			15	2			17
TOTAL ACRES	**1,625**	**1,343**	**2,617**	**2,997**	**1,041**	**422**	**10,045**

Appendix 5: Franklin Island CA Area Background

Franklin Island CA is located about 2 miles east of New Franklin on Highway 40. The Missouri River once cut a channel on the area's north boundary, and the land was surrounded by water. In 1952, the remnant chute was closed permanently by a flood control levee. The Department purchased the area in 1978.

Legal Description: Township 49N, Range 16W, Sections 34, 36; and Township 48N, Range 16W, Section 1, 2, 3 and 4.

Appendix 6: Franklin Island CA Area Map

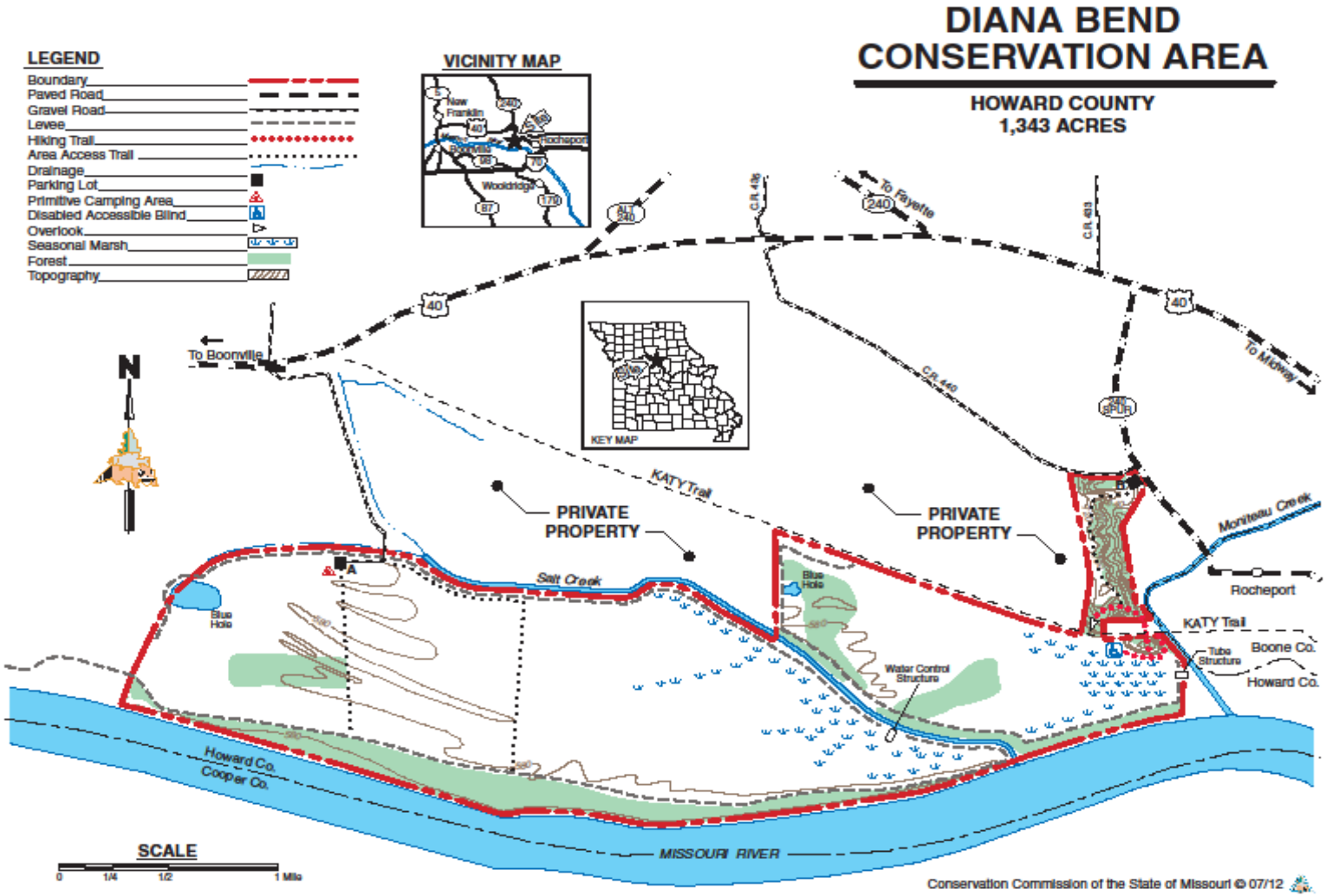


Appendix 7: Diana Bend CA Area Background

Diana Bend Conservation Area is 3 miles west of Rocheport on Highway 40. This area is bounded on the south by the Missouri River, on the east by Moniteau Creek, on the north primarily by the MKT Trail, and on the west by a levee. Diana Bend CA is subject to seasonal flooding depending upon precipitation and river levels. The area was purchased in the late 1990s following several years of flooding. Bottomland hardwoods as well as native grasses have been planted to supplement the wetlands.

Legal Description: Township 48N, Range 15W, Sections: 2, 3, 4, 5, 8, 9, 10, and 11.

Appendix 8: Diana Bend CA Area Map



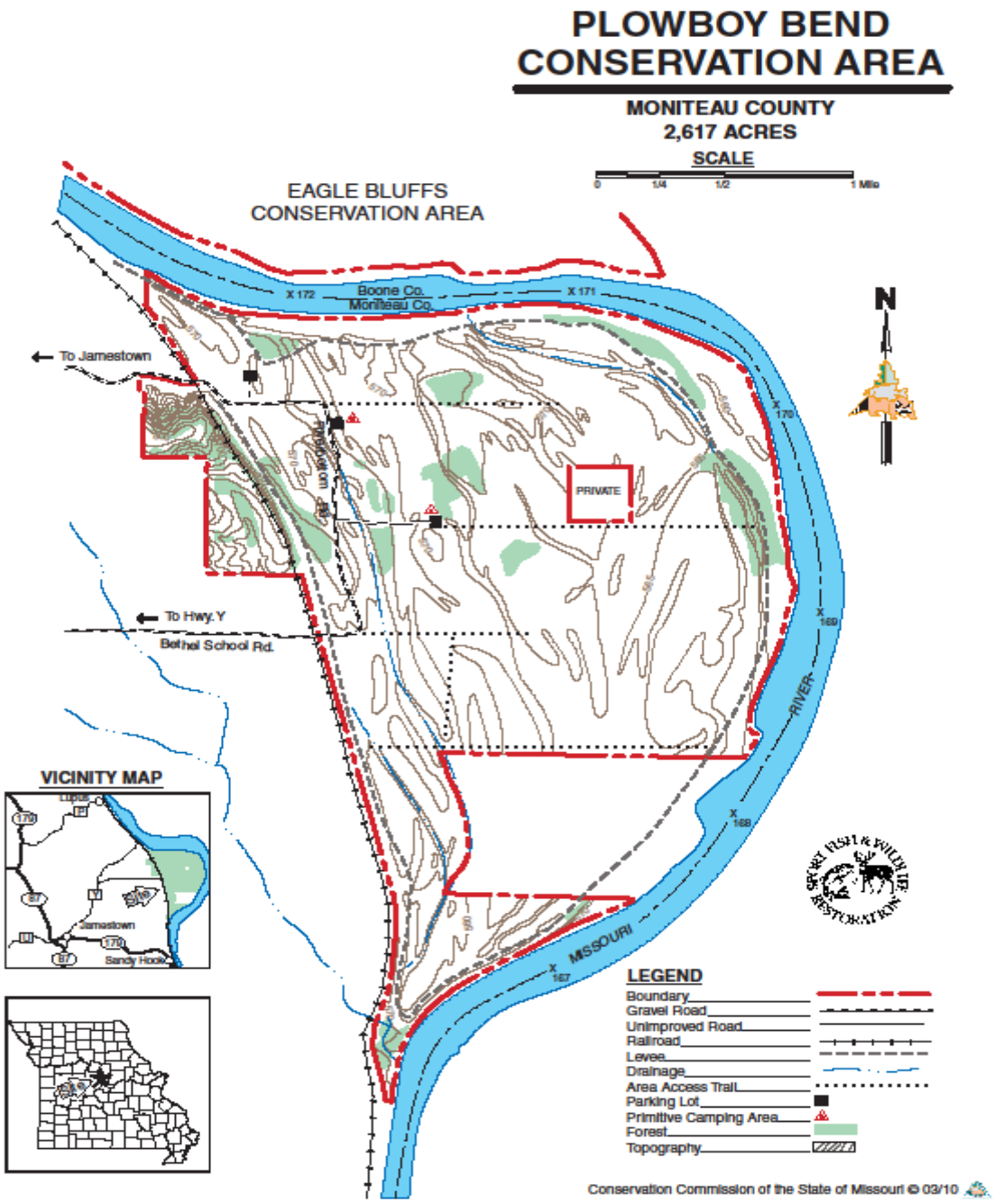
Appendix 9: Plowboy Bend CA Area Background

Plowboy Bend CA is located about 5 miles northeast of Jamestown, Missouri. It takes its name from the bend in the Missouri River along its north boundary that was named for the steamship Plowboy that sank nearby in the mid-1800s. It includes approximately 5 miles of Missouri River frontage. The area is levee protected and includes two privately owned inholdings. There is an active levee association. While primarily a bottomland area, it includes 154 acres of upland habitat to the west of the railroad tracks.

Plowboy levee maintenance and repairs included tree removal and replacing drain pipes. Wetland Reserve Program wetland development was completed by establishing a borrow area for a levee repair project.

Legal Description: Township 47N, Range 14W, Sections 23, 24, 25, 26, 35 and 36; and Township 47N, Range 13W, Section 30

Appendix 10: Plowboy Bend CA Area Map



Appendix 11: Marion Bottoms CA Area Background

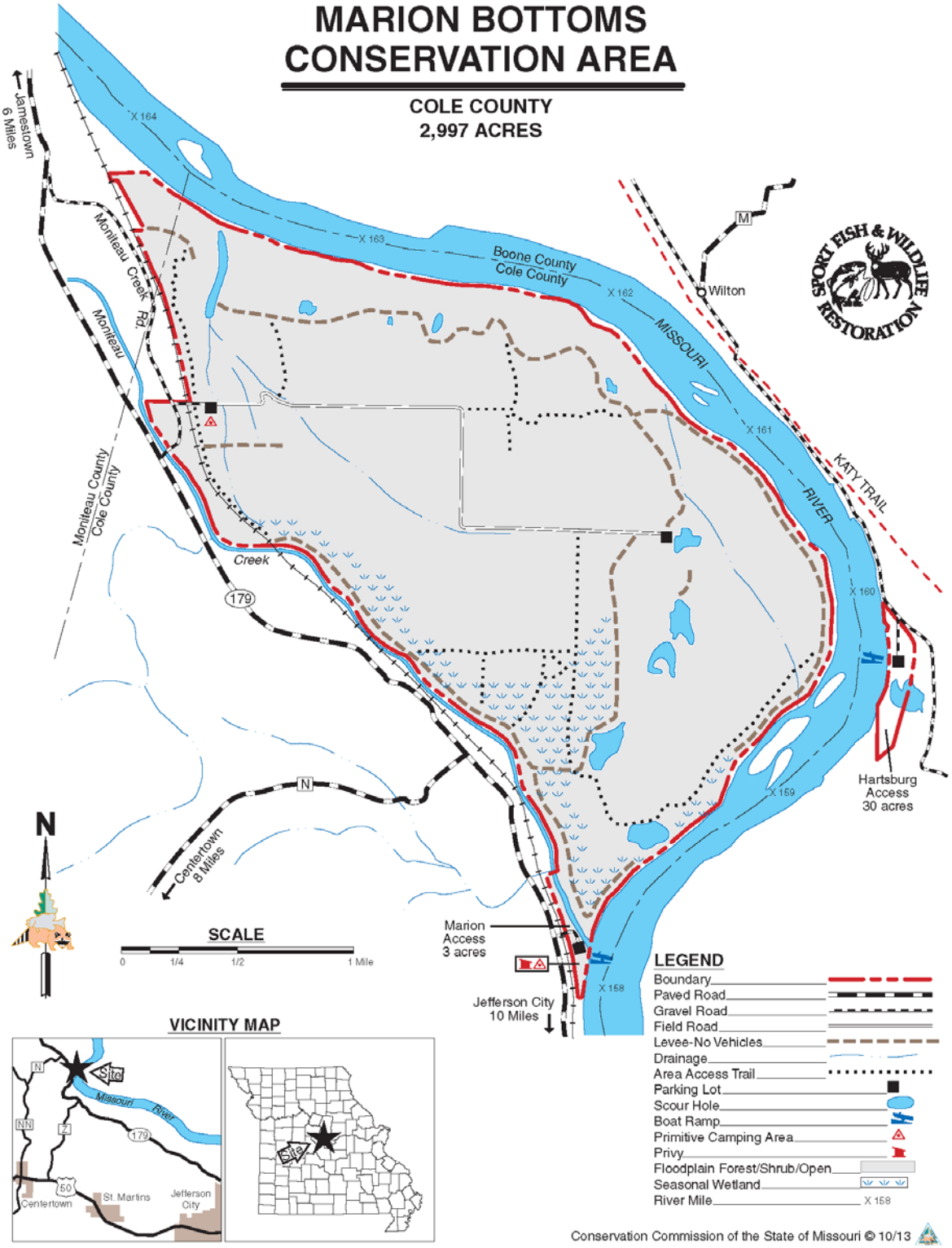
Marion Bottoms CA is surrounded by the Missouri River on its north, east and south boundaries, providing 6 miles of river frontage. Moniteau Creek bounds most of its west edge. It is not levee protected and is frequently flooded when river levels exceed 18 feet at the Boonville gauge. The entire area is under a federal Emergency Wetland Reserve Program easement.

Vehicle access is limited to one parking area. A field trail is open for vehicle travel between May 15 and Sept. 15 with area manager discretion to limit or close the trail due to road conditions, weather or river stage.

Projects completed at Marion Bottoms: Degraded 3,000 ft of Missouri River levee; degraded 300 feet of interior levee to relieve flood water pressure on 97 Wetland Reserve Program (WRP) levee and water control; installed concrete mats to stabilize high flow chutes for field trail access; installed water control structure for wetland enhancement associated with Fischer Lake; ground water monitoring station installed; railroad bridge replacement (Union Pacific temporary easement); and shallow water habitat created by U.S. Army Corps of Engineers included nine bank notches.

Legal Description: In Cole County: Township 46N, Range 14W, Sections 13 and 24; Township 46N, Range 13W, Sections 18, 19, 20, 21, 28, 29 30, 32 and 33. In Moniteau County, Township 46N, Range 14W, Section 13

Appendix 12: Marion Bottoms CA Area Map



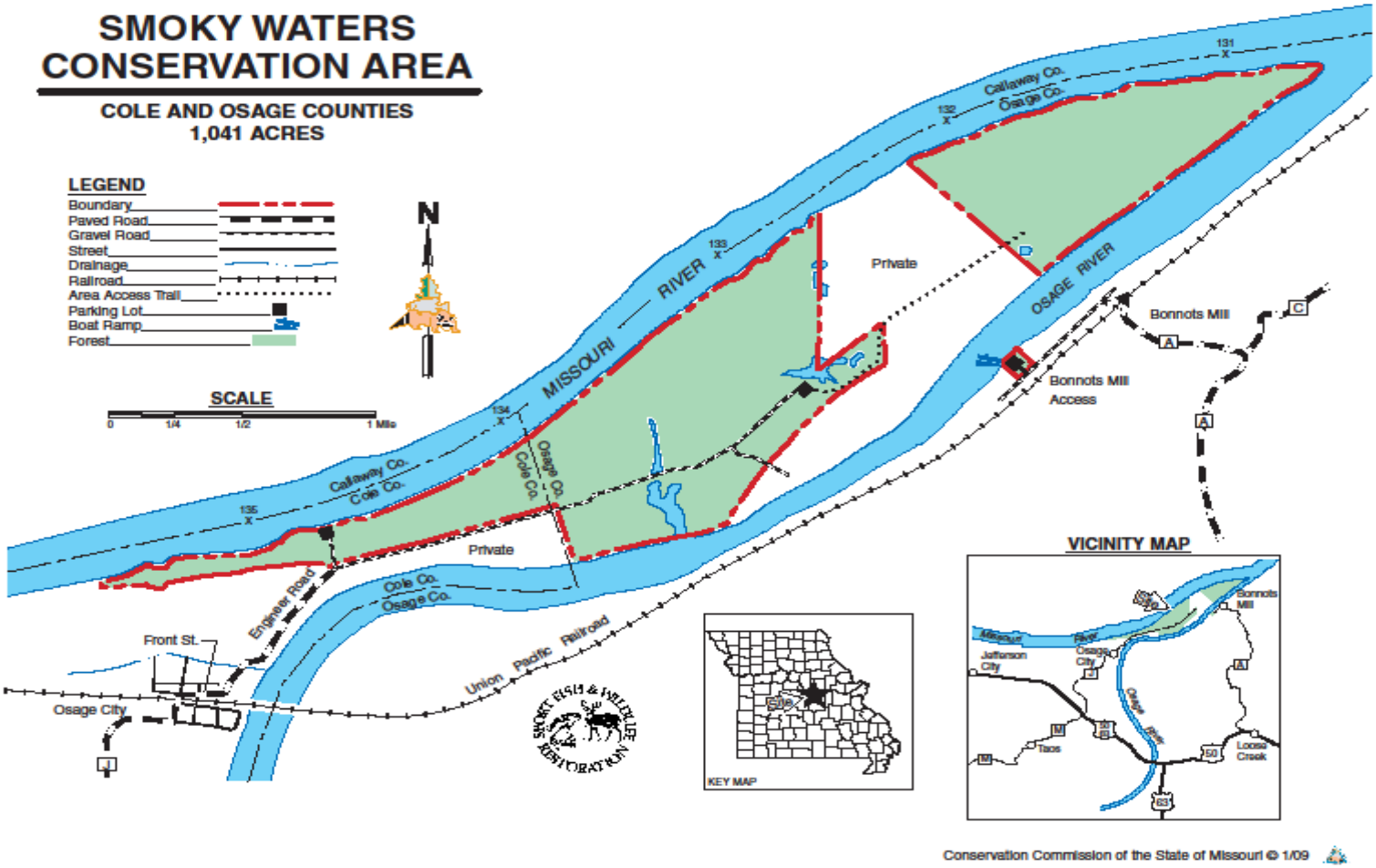
Appendix 13: Smoky Waters CA Area Background

Smoky Waters occupies part of the peninsula formed by the confluence of the Missouri and Osage Rivers. There are two tracts separated by private properties and connected by an Army Corps of Engineers diversion structure. Prior to the structures construction, part of Smoky Waters CA was an island, known as Dodd's Island. The structure was breached during the 1993 flood, and vehicular access is no longer possible to the end of the peninsula.

A 2007 65-acre acquisition increased the area size to the current 1,041 acres. Shallow water habitat created by U.S. Army Corps of Engineers included five bank notches and construction of a 2,500-foot chute.

Legal Description: In Cole County, Township 44N, Range 10W, Sections 10, 15 and 16; and in Osage County.

Appendix 14: Smoky Waters CA Area Map

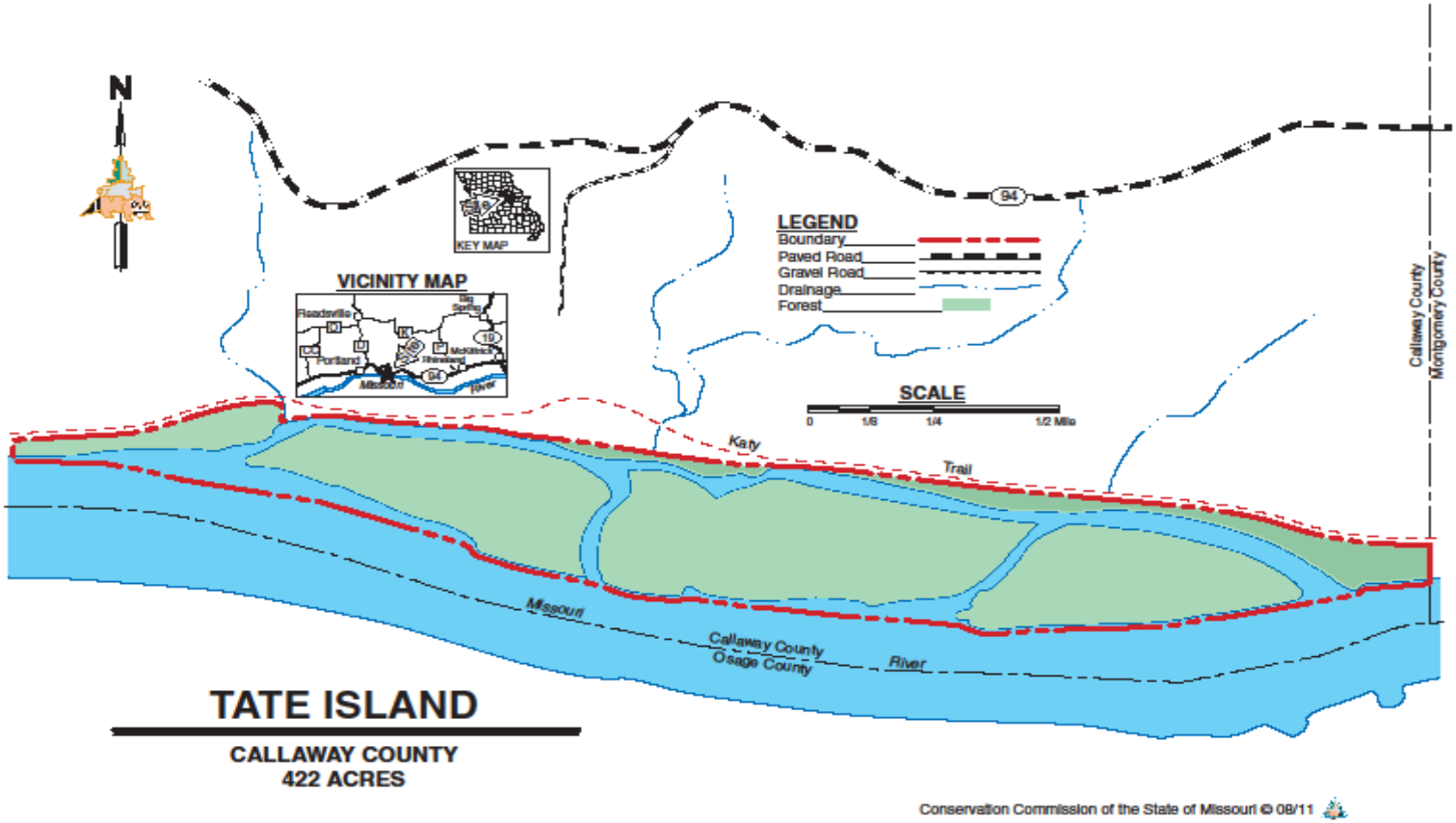


Appendix 15: Tate Island CA Area Background

Tate Island contains three islands and a small tract of land on the north side of the river. Tate Island is limited to river access only. The area is subject to seasonal flooding, depending upon precipitation and river levels. In 1999, the U.S. Army Corps of Engineers licensed the recently purchased Tate Island Mitigation Site to the Department for habitat restoration and management.

Legal Description: In Callaway County, Township 46N, Range 7W, Sections 34, 35 and 36.

Appendix 16: Tate Island CA Area Map



Appendix 17. Draft Riverlands Conservation Areas Management Plan Public Comments

Received during public comment period (October 1-31, 2014)

Does the plan include making sure that private parties do not steal conservation land? It appears that has happened right across from the entrance to the Marion Bottoms conservation area.
SMMBCH recognizes that these CAs are not ideally suited for multi-use trail development due to flooding, debris, mud, scour damage, etc. It is noted, however, that there is a shortage of trail opportunities on public land in Saline, Howard, Cooper and Moniteau Counties. While the Katy Trail offers opportunity to bikers and hikers in Cooper and Moniteau, the only equestrian opportunity is Prairie Home CA—a nice area, but with limited multi-use trails. We would like to recommend that consideration be given to opening existing access routes/trails and levees to public multi-use on Franklin Island, Plowboy Bend, and Marion Bottoms CAs. We are not advocating opening these avenues to motorized vehicles—foot-travel, bicycle, and equestrian use only. We recognize that the floodplain landscape offers a host of problems as mentioned above—flooding, debris, etc., and we realize that these events would necessarily precipitate closing the trails to multi-use. On the other hand these access routes and levee tops are currently maintained and repaired as necessary; designating them available for multi-use would not increase the Department's maintenance burden beyond some additional signage. Franklin Island has no maintained interior access routes, but the several perimeter and interior levees offer several miles with the unique opportunity to observe and appreciate a wetland habitat. Plowboy Bend has a perimeter levee and numerous interior access routes. This area also includes an upland tract west of the railroad with an excellent opportunity for a couple of miles of upland multi-use trail. Marion Bottoms is subject to frequent flooding; associated access route/trail maintenance problems are significant. Again, though, we are not recommending any new trails, only open multi-use designation of existing levee tops and access routes which are currently maintained. SMMBCH would welcome an opportunity to participate in an on-site appraisal of the feasibility of designating multi-use on these Riverlands CAs. Thank you for the opportunity to comment.