

Tower Rock Natural Area

Ten-Year Area Management Plan

FY 2018-2027



Lisa B. Allen

Forestry Division Chief

6-14-17

Date

Tower Rock Natural Area Management Plan Approval Page

PLANNING TEAM

Mike Keeley, Resource Forester

Dave Knuth, Fisheries Management Biologist

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Bruce Henry, Natural History Biologist

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SOUTHEAST REGION

RCT Chair




Signature

5-24-17

Date

FORESTRY DIVISION

Forest Management Chief



Signature

5-12-17

Date

OVERVIEW

- **Official Area Name:** Tower Rock Natural Area, # 7106
- **Year of Initial Acquisition:** 1973
- **Acreage:** 32 acres
- **County:** Perry
- **Division with Administrative Responsibility:** Forestry
- **Division with Maintenance Responsibility:** Forestry
- **Statements of Purpose:**
 - A. Strategic Direction**

Maintain the area's unique forest community.
 - B. Desired Future Condition**

The desired future condition of Tower Rock Natural Area (NA) is a resilient oak-pine and mixed hardwood forest community.
 - C. Federal Aid Statement**

This area, or a portion thereof, was developed with Land and Water Conservation Fund dollars to provide land or facilities for public outdoor recreation.

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

- A. Priority Areas:** Cape Hills Forest and Woodland Conservation Opportunity Area, Priority Forest Landscape, Perry County Karst Watershed – Fisheries Priority Watershed
- B. Natural Areas:** Tower Rock Natural Area - Tower Rock is an erosional remnant left as a result of Mississippi River channel shifts. The rock is composed of limestone of the Devonian period formed some 400 million years ago. Surrounding softer rocks were eroded away by the Mississippi River leaving the rock which stands about 60 feet above the average river level.

Tower Rock has been the subject of much historical legend and lore. The first written description of this feature was by Father Jacques Marquette from 1673. William Clark mapped the rock in 1803 during their ascent of the Mississippi to begin the exploration of the Missouri River. At the end of the Civil War the U.S. Army Corps of Engineers proposed clearing rocks from the river at this location to eliminate obstacles to navigation. Upon a recommendation of the Secretary of Interior, then President Ulysses Grant issued an executive order March 4, 1871, which spared Tower Rock from blasting.

II. Important Natural Features and Resources

- A. **Species of Conservation Concern:** Species of conservation concern are known from this area. 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
- D. **Other:** Most of the Tower Rock Natural Area is in the Cape Oak-Mixed Hardwood Forest Hills Landtype Association (Nigh & Schroeder, 2002). The forest is composed of a unique mix of shortleaf pine/upland oak on the ridges and American beech/yellow poplar/oak in the coves and protected slopes. A small percentage of the area is in the Ozark-Mississippi River Alluvial Plain (Nigh & Schroeder, 2002). This area occurs along the Mississippi River. It is mostly composed of young trees of sycamore, persimmon, cottonwood, and sweetgum.

III. Existing Infrastructure

- One parking lot
- One picnic table
- One interpretive sign
- Hiking trail (easy, 0.2 miles)
- One scenic overlook platform

IV. Area Restrictions or Limitations

- A. **Deed Restrictions or Ownership Considerations:** None
- B. **Federal Interest:** This land must provide land/facilities for public outdoor recreation in perpetuity. 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.
- C. **Easements:** Burlington Northern Santa Fe Railroad easement
- D. **Cultural Resources Findings:** Yes, records kept with Missouri Department of Conservation (Department) environmental compliance specialist. Managers should follow best management practices for cultural resources found in the Department Resource Policy Manual.
- E. **Endangered Species:** Endangered species are known from this area. Area managers should consult the Natural Heritage Database annually and review all management activities with the natural history biologist.
- F. **Boundary Issues:** None

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain and promote the unique natural community that exists.
- 2) Control invasive species.

Management Objective 1: Maintain and promote the area's unique natural community that exists.

Strategy 1: Monitor plant species' trends and stability. (Wildlife)

Strategy 2: Continue conducting prescribed burns, as appropriate. Assess the site to determine if it can be safely burned (i.e., since the 2009 wind storm); and determine if the desired effects can be accomplished. (Forestry, Wildlife)

Management Objective 2: Control invasive species.

Strategy 1: Monitor the area for invasive species. Suppress any infestations that may develop. (Forestry, Wildlife)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain riparian corridor along the Mississippi River.

Management Objective 1: Maintain a quality riparian corridor along the Mississippi River frontage.

Strategy 1: Where possible establish and maintain a health riparian corridor to reduce bank erosion according to Department *Watershed and Stream Management Guidelines for Lands and Waters Managed by Missouri Department of Conservation*. (Missouri Department of Conservation, 2009). (Forestry)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Tower Rock is one of the most significant geologic features in the Mississippi River. Provide a user-friendly area to view Tower Rock.
- 2) Provide access to shoreline for bank fishing opportunities.

Management Objective 1: Provide a user-friendly area to view Tower Rock.

Strategy 1: Maintain parking areas and scenic vistas to view and photograph Tower Rock. Trim trees around viewing platform and picnic area. (Forestry)

Management Objective 2: Provide access to shoreline for bank fishing opportunities.

Strategy 1: Follow best management practices to reduce erosion to maintain current size of parking lot and service road. (Design and Development)

Strategy 2: Post rules and regulations on Missouri Atlas and at the area bulletin board for public viewing. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Maintain area infrastructure at current levels.
- 2) Consider acquisition of land, when available.

Management Objective 1: Maintain area infrastructure at current levels.

Strategy 1: Maintain area infrastructure in accordance with Department guidelines. (Forestry)

Lands Proposed for Acquisition:

When available, adjacent land may be considered for acquisition from willing sellers. Tracts that improve area access, provide public use opportunities, contain unique natural communities and/or species of conservation concern, or meet other Department priorities, as identified in the annual Department land acquisition priorities, may be considered.

MANAGEMENT TIMETABLE

Strategies are considered ongoing unless listed in the following table:

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27
Terrestrial Resource Management										
<i>Objective 1</i>										
Strategy 2		X			X			X		

APPENDICES

Area Background:

Tower Rock is one of the most significant geologic features in the Mississippi River. It was well-known by Native Americans and documented by early explorers, such as Marquette and Louis and Clark. In 1970, it was listed as a National Historic Place with the U. S. Department of Interior. In 1973, 32 acres adjacent to Tower Rock were donated to the Department from the Bussen family. These 32 acres became Tower Rock Natural Area. In 1996, the Department accepted ownership of the 0.7-acre bedrock island known as Tower Rock from the U. S. Bureau of Land Management.

Historically, the area’s plants and animals along the Mississippi River were affected by use from Native Americans and early travelers along the Mississippi; the town of Wittenburg (just north of Tower Rock NA); the railroad; and quarrying of the large Sugar Loaf Rock (located next to Tower Rock) and silica mine to the south. The area was cut, burned, and grazed by its early users. However, the area was never extensively cleared due to the steep cherty hills in the area.

Recently, area managers with an interest in maintaining the unique ecosystem at the area, conducted a prescribed burn to slow down succession of shade-tolerate species, expanding from the coves and northeast-facing slopes to the ridges and southwest-facing slopes. Area managers are trying to maintain the shortleaf pine-oak plant community, and limit the expansion of the beech-maple. A burn was conducted in cooperation with adjoining landowners in the spring of 2009. In May 2009, an inland hurricane blew over and broke off limbs from many large saw-timber trees. The openings that were created have been colonized by sassafras, yellow poplar, and grape vines.

Current Land and Water Types:

Land/Water Type	Acres	Feet	% of Area
Woodland/Forest	32		100
Mississippi River Frontage		2,340	

Public Input Summary:

The draft Tower Rock Natural Area Management Plan was available for a public comment period December 1–31, 2016. The Missouri Department of Conservation received comments from seven respondents (Appendix A). The Tower Rock Natural 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 the Tower Rock Natural Area Management Plan public comment period.

Would like more information about minimizing erosion and suppressing invasive species on nearby private land.

For information on private land contact your local Private Land Conservationist.

Wonders what endangered species are listed for this area.

Because this plan is a public document, sensitive data (e.g., listing species of conservation concern or endangered species) is not included directly in these plans. In the past, we have observed that when we list sensitive data they become search areas for “collectors.”

Would like to see more facilities developed (i.e., more parking, pavilions, walking trails, and a boat ramp) for public use.

Tower Rock is limited by size. We have little to no room for additional infrastructure that would not compromise natural community integrity. The railroad, county road, and river corridor are managed by other agencies and limit what can safely be done.

Suggests adding more hiking trails.

Existing hiking trails allow access to almost all 31 acres of the area.

Suggests clearly marking the hiking trail.

Existing signs will be kept current and we will look to improve them.

Suggests clearing some vegetation to allow a better view of Tower Rock.

Vegetation along the river helps stabilize the soil and provide shade to the users. We will prune and cut vegetation judiciously not to compromise the river bank integrity. The steep slopes by the scenic overlook limits how much we can clear.

Suggests building a better scenic overlook.

The overlook is well constructed for the average area use. The footprint of the overlook is limited by the steep topography.

Suggests adding a privy.

We are limited by acceptable soil conditions and small parking lot.

Suggests additional signage to prevent trespassing onto neighboring property.

The boundaries were repainted in January 2017. We will look at putting additional signage by the cable that leads to private land.

Suggests replacing area signs where needed.

Signage will be reviewed and replaced as needed.

Offers volunteer service to paint area gate.

We will coordinate with Mr. Flynn on maintenance and signage of the gate.

Concerned area users are unaware of local roads and could be obstructing traffic.

The county road has standard signage and is not under the management of the Department. We will investigate additional signage about not blocking the county road.

Suggests better clarifying if hunting is allowed on Tower Rock CA.

Hunting regulations are on the bulletin board, *Wildlife Code* book, Annual Fall Deer & Turkey Hunting Regulations and Information publication, and Department website.

Appreciates Tower Rock Natural Area.

Thank You.

References:

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

Nigh, T. A., & Schroeder, W. A. (2002). *Atlas of Missouri ecoregions*. Jefferson City, MO: Missouri Department of Conservation.

Maps:

Figure 1: Area Map

Figure 2: Easement Map

Additional Appendices:

Appendix A. Tower Rock Natural Area Management Plan Public Comments

Figure 1: Area Map

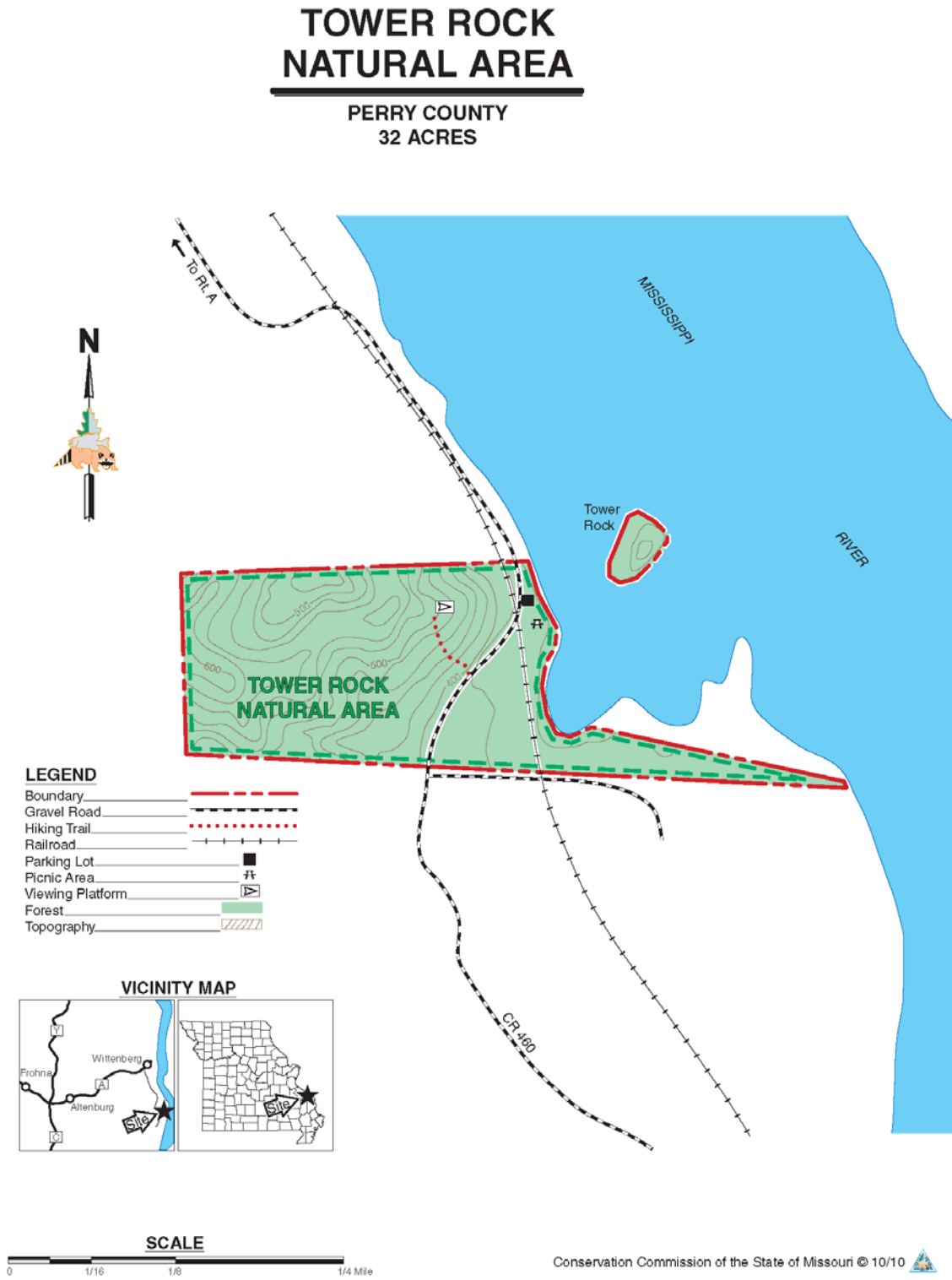


Figure 2: Easement Map



Appendix A. Tower Rock Natural Area Management Plan Public Comments

Received during public comment period (December 1-31, 2016):

<p>Tower Rock is an amazing geological feature and one of the things that make Perry County special. It should be preserved and enhanced. I was there just a couple weeks ago and found parking to be limited. This was just on a regular Saturday in November. It is really busy when the river is down and access to the island possible.</p>
<p>I personally think it would be nice to see a "full" state park develop in that area, complete with adequate parking, pavilions, walking trails and maybe even a boat ramp allowing recreational access to the River.</p>
<p>More hiking trails needed. Local volunteers could help establish and maintain the trails Some clearing of the trees / limbs needs to be done to better view the historic Tower Rock. A better scenic overlook needs to be built.</p>
<p>I think more hiking trails would be nice.</p>
<p>I would like to know what endangered species are listed for this area.</p>
<p>Perry County's Tower Rock truly is a significant geologic feature in the Mississippi River and a natural treasure to the State of Missouri. Its documentation in various historical papers and descriptions among authors, poets and writers has made it legendary and attracts thousands to its banks. As tourism director for Perry County Missouri it is a unique attraction and wondrous natural site that challenges photographers, inspires writers and exhilarates historians. The easy walking trail and scenic look-out platform has given many, both young and old the opportunity to see the Mississippi River and Perry County's natural landscape from a perspective that they would have otherwise never had the opportunity to experience. The department has done a wonderful job of preserving, maintaining and enhancing the outdoor experience at Tower Rock with limited land accessible on the river side of the tracks. The picnic table area is very nice and the rock placed on the bank made getting to the waters edge very accessible for those fishing and visitors. I look forward to hearing more about the future plan.</p>
<p>This is being sent by Tim Flynn for Jim Flynn who is the Dryden Estate Managing Forester. The following is Jim's input for the Tower Rock NA 10 year management plan FY 2017 - 2026.</p> <p>There are a few small points I'd like to raise:</p> <p>1 - The line between TRNA and Dryden (Survey 2175) is painted with your blue for 'boundary' and my purple for 'private, no trespassing'. Could there also be some verbal signage (or map) to further denote where visitors shouldn't stray beyond? BNSF's new signal-works just to the south, with its stairs up to an elevated platform, is going to be quite a temptation to the curious and mischievous.</p>

On page 5, mgt objective 2, strategy 2, you mention posting rules and regulations on area bulletin board. I'd say use extra large type-face if possible.

2 - Similarly, convey that the cabled drive sees active traffic even on weekends, and is not a dead-end spur to be blocked with parking. I don't know if there's a firm, yet succinct way to say this. Or maybe there's some other way around this inconvenience.

3 - Your "authorized vehicles only" sign on that cable is getting battered and scruffy. Can it be reinforced, or replaced, or upgraded?

4 - The posts on the cable gate are rust covered, though perfectly stout. For years now, I've been thinking to paint them white, just to spruce them up. I assume you would not object? And if you beat me to that chore, I will not object.

5 - I'm always interested in efforts to minimize erosion and suppress invasive species. Tell me what you're looking for and doing so that I may observe and spread the word.

Thanks

I think the plan could be improved with the following changes: 1. Promote hiking and picnicking by providing clearly- marked trails and a picnic table and outhouse. Features similar to those planned for

Tower Rock.

2. Clarify availability for hunting.. Is deer hunting included?, Is a special permit required for any types of hunting?