

Columbia Urban Conservation Areas

Henry Jackson Waters and C.B. Moss Memorial Wildlife Area
Hinkson Woods Conservation Area

Fifteen-Year Area Management Plan FY 2018-2032



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Forestry Division Chief

3-28-18

Date

OVERVIEW

Area Name	Area Number	Year Acquired	Acreage	County	Administrative Responsibility	Maintenance Responsibility
Hinkson Woods Conservation Area (CA)	9122	1991	70	Boone	Forestry	Forestry
Henry Jackson Waters and C.B. Moss (Waters/Moss) Memorial Wildlife Area	7211	1972 ¹	113	Boone	Forestry	Forestry

¹Waters /Moss Memorial Wildlife Area is owned by the Missouri Department of Conservation and leased to the City of Columbia since 2009.

Statements of Purpose:

A. Strategic Direction

These areas are managed to provide compatible recreational activities and wildlife habitat.

B. Desired Future Condition

The desired future landscape conditions of these areas are landscapes that promote recreation and provide wildlife habitat in an urban setting.

C. Federal Aid Statement

N/A

GENERAL INFORMATION AND CONDITIONS

I. Special Considerations

Area Name	Priority Areas	Natural Areas
Hinkson Woods CA	None	None
Waters/Moss Memorial Wildlife Area	None	None

II. Important Natural Features and Resources

Area Name	Species of Conservation Concern	Caves	Springs
Hinkson Woods CA	Yes ¹	None	None
Waters/Moss Memorial Wildlife Area	Yes ¹	None	None

¹Species 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.

III. Existing Infrastructure

Area Name	Parking Area #	Trails	Privy	Other
Hinkson Woods CA	0	0	0	0.5-mile multi-use (hike/bike) trail with three benches
Waters/Moss Memorial Wildlife Area	2 ¹	1 ¹	1 ¹	1 communications tower, 1 fishless pond (0.02 acres), 0.5-mile trail runs along the south side of the area which is a segment of the City of Columbia’s Grindstone Creek Trail

¹Americans with Disabilities Act (ADA) accessible

IV. Area Restrictions or Limitations

Area Name	Deed Restrictions	Federal Interest	Easements	Cultural Resources	Endangered Species	Boundary Issues
Hinkson Woods CA	None	Yes ²	None	None known	None observed	None
Waters/Moss Memorial Wildlife Area	Yes ¹	Yes ²	Yes ³	None known	None observed	None

¹In 2009, the Department entered into a 99-year agreement with the City of Columbia to manage the area and infrastructure as a city park.

²Federal 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.

³Sewer easement

MANAGEMENT CONSIDERATIONS

V. Terrestrial Resource Management Considerations

Challenges and Opportunities:

- 1) Control the spread of invasive trees and herbaceous plants.
- 2) Reforest bottomlands.

Management Objective 1: Reduce the population of invasive plants.

Strategy 1: Monitor on a routine basis for invasive plants. (Forestry)

Strategy 2: Use management techniques including but not limited to chemical and mechanical treatments to remove invasive plants including tree species.

(Forestry)

Strategy 3: Partner with interested parties to conduct honeysuckle removal.
(Forestry)

VI. Aquatic Resource Management Considerations

Challenges and Opportunities:

- 1) Maintain or develop and implement management strategies, as needed, to enhance diversity and quality of all stream aquatic resources.
- 2) Maintain or develop and implement strategies, as needed, to provide high quality pond/marsh aquatic resources to promote amphibian, reptile, and other wildlife management.

Management Objective 1: Maintain and improve water quality and critical stream habitat areas for fish and other aquatic species to support diverse aquatic life.

Strategy 1: Maintain, expand, and restore a 200-foot wide wooded corridor (100 feet on each side of stream) on all area streams where inadequate, through natural regeneration and tree planting to enhance watershed management, improve in-stream habitat, and reduce stream bank erosion. (Forestry)

Strategy 2: Utilize best management practices as described in the Department's manual: *Missouri Forest Management Guidelines: Voluntary Recommendations for Well-Managed Forests* (Missouri Department of Conservation, 2014). (Forestry)

Strategy 3: Establish and/or maintain area fields in native cover year-round to avoid excess soil erosion. (Forestry)

Strategy 4: Inventory area stream fish communities by electrofishing and seining to determine species composition and status. (Fisheries)

Management Objective 2: Maintain or develop and implement strategies, as needed, to provide pond/marsh aquatic resources to promote amphibian, reptile, and wildlife management.

Strategy 1: Develop and implement management recommendations, as needed, for area pond. Manage the pond to provide amphibian and reptile habitat based on recommendations provided in *Amphibian and Reptile Management on Conservation Department Impoundments* (Johnson, 1994), *The Amphibians and Reptiles of Missouri* (Johnson, 1997), and the *Amphibian and Reptile Management Guidelines* (Johnson, 1998). (Fisheries)

Strategy 2: Renovate pond, as needed, if it contains unbalanced or undesirable fish communities, using management techniques, including, but not limited to, chemical application. (Fisheries)

Strategy 3: Continue to maintain/enhance aquatic habitat in area pond/marsh, for instance, by establishing desirable aquatic vegetation, removing or reducing

undesirable aquatic vegetation, planting trees around shorelines for amphibians and reptiles, reducing siltation, and maintaining good water quality. (Fisheries)

VII. Public Use Management Considerations

Challenges and Opportunities:

- 1) Inform the public of opportunities available at these areas.
- 2) Maintain areas in desirable condition.
- 3) Allow hunting and fishing opportunities.

Management Objective 1: Maintain suitable public access at each area.

Strategy 1: Maintain mowed trails. (Wildlife)

Strategy 2: Investigate partnerships to help with trail improvements. (Forestry)

Strategy 3: Investigate enhanced access at Hinkson Woods CA. (Forestry)

Management Objective 2: Continue to inform the public of the opportunities at these areas.

Strategy 1: Maintain signage at the accesses in accordance with Department policy. (Forestry)

Strategy 2: Work with local media specialist to highlight underutilized resources. (Forestry, Outreach and Education)

Strategy 3: Maintain accurate and timely information on the Department's Atlas Database. Review information annually. (Forestry)

Management Objective 3: Provide areas for hunting and stream fishing opportunities in urban areas.

Strategy 1: Partner with the City of Columbia to continue to provide urban conservation area hunting and fishing opportunities. (Forestry)

Management Objective 4: Facilitate educational and interpretive opportunities for schools, groups, and the public.

Strategy 1: Provide areas for field trips (through special-use permits) for schools and groups, when not in conflict with other area uses. (Forestry, Outreach and Education)

Strategy 2: Place signage where significant management activity has occurred to inform area users about resource management practices. (Forestry)

VIII. Administrative Considerations

Challenges and Opportunities:

- 1) Partner with the City of Columbia on access opportunities and area maintenance.

Management Objective 1: Open dialogue with the City of Columbia on management opportunities.

Strategy 1: Meet with City of Columbia staff at least annually to discuss management issues and opportunities on both areas. (Forestry)

Management Objective 2: Maintain clearly identified property lines.

Strategy 1: Inspect and maintain boundaries on a regular cycle. (Forestry)

Strategy 2: Resolve boundary issues with adjoining landowners as they arise. (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.

APPENDICES

Public Input Summary:

The draft Columbia Urban Conservation Areas Management Plan was available for a public comment period February 1–28, 2017. The Missouri Department of Conservation received comments from six respondents (Appendix A). The Columbia Urban Conservation Areas 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 Columbia Urban Conservation Areas Management Plan public comment period.

Supports invasive species removal. Concerned that invasive honeysuckle has damaged “the best kept secret in Columbia” in Waters-Moss Conservation Area.

Thank you for your interest and support for removing invasive, exotic shrubs such as honeysuckle on Waters/Moss Conservation Area. In the spring of 2017, we began a project to remove honeysuckle on the area, starting with a heavily infested tract in the bottomland forest on the north side of the Grindstone Creek Trail. Completion of the first 5 acres was finished in May. Further steps to remove honeysuckle are in our plans for management of the area in the upcoming several years.

Suggests planting additional native grasses, forbs, and wildflowers.

The Department is working in partnership with the City of Columbia to plant native wildflowers for pollinators on public sites along the MKT Trail, adjacent to Hinkson Woods CA.

Suggests managing for woodcock habitat.

Maintaining the bottomland hardwoods and woodlands in a forested condition provides nesting habitat for these birds. As we continue to explore management opportunities with the City of Columbia, additional practices such as exotic control may be added.

Suggests investigating the possibility of some prairie restoration in a portion of Hinkson Woods CA.

The Department is working in partnership with the City of Columbia to plant native wildflowers for pollinators on public sites along the MKT Trail, adjacent to Hinkson Woods CA. The Department is also partnering with the City of Columbia to remove honeysuckle in these areas.

Suggests keeping development to a minimum to keep the Columbia Urban Conservation Areas natural.

The Department's current plans for the area include a focus on removal of exotic, invasive plants, encouraging trees and native wildflowers along the trail, and promoting native plants where exotic plants are removed.

Suggests posting area restrictions on Hinkson Woods CA.

This is a good suggestion and one we will consider. If the public notices questionable use on the area, the Department would appreciate being contacted so that we can address the problem.

Supports the continued maintenance on these areas.

We are glad the public is using and enjoying the Grindstone Creek Trail that runs through Waters/Moss Conservation Area. This trail was built in partnership with the City of Columbia.

Encourages not mowing a path to the creek at Waters-Moss CA.

The plan for the service road that is being referred to is to maintain it only infrequently, but enough to keep it serviceable for access to the lower portion of the area. The Department used this service road, for instance, to gain access to the site to remove honeysuckle.

Appreciates the efforts made by the Department to conserve natural spaces.

Thank you for your kind words of encouragement.

References:

Johnson, T. R. (1994). *Amphibian and reptile management on Conservation Department impoundments*. Jefferson City, MO: Missouri Department of Conservation.

Johnson, T. R. (1997). *The amphibians and reptiles of Missouri*. Jefferson City, MO: Missouri Department of Conservation.

Johnson, T. R. (1998). *Amphibian and reptile management guidelines*. Jefferson City, MO: Missouri Department of Conservation.

Missouri Department of Conservation. (2014). *Missouri forest management guidelines: Voluntary recommendations for well-managed forests*. Jefferson City, MO: Conservation Commission of the State of Missouri.

Appendices:

Appendix 1. Columbia Urban Conservation Areas General Location Map

Appendix 2. Hinkson Woods CA Area Background

Appendix 3. Map of Hinkson Woods CA

Appendix 4. Land Cover Map of Hinkson Woods CA

Appendix 5. Waters/Moss Memorial Wildlife Area Background

Appendix 6. Map of Waters/Moss Memorial Wildlife Area

Appendix 7. Land Cover Map of Water/Moss Memorial Wildlife Area

Appendix 8. Easement Map of Waters/Moss Memorial Wildlife Area

Appendix 9: Waters/Moss Memorial Wildlife Area Map of Areas Under Maintenance by the City of Columbia

Appendix 10: Columbia Urban Conservation Areas Management Plan Public Comments

Appendix 1. Columbia Urban Conservation Areas General Location Map



Appendix 2. Hinkson Woods CA Area Background

This 70-acre area in southwest Columbia was acquired from the Jose estate in 1991. Two miles of the meandering Hinkson Creek and a section of the MKT Trail form its boundaries. Hiking and bicycling trails are mown for area users. The property is adjacent to and can be accessed from the Twin Lakes Recreation Area and is a short distance from the MKT trailheads at Scott Boulevard and Forum Boulevard. The area is 1 mile east of the Scott Boulevard trailhead, and 1 mile west of the Forum Boulevard trailhead.

Thirty acres are forested while the remainder is open land. Deer and turkey hunting is allowed using archery methods only. All other hunting is prohibited.

Current Land and Water Types:

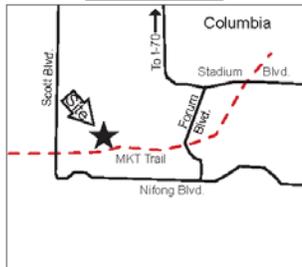
Land/Water Type	Acres	Miles	% of Area
Open land	40		60
Forest	30		40
Total	70		100
Stream Frontage		2	

Appendix 3. Map of Hinkson Woods CA

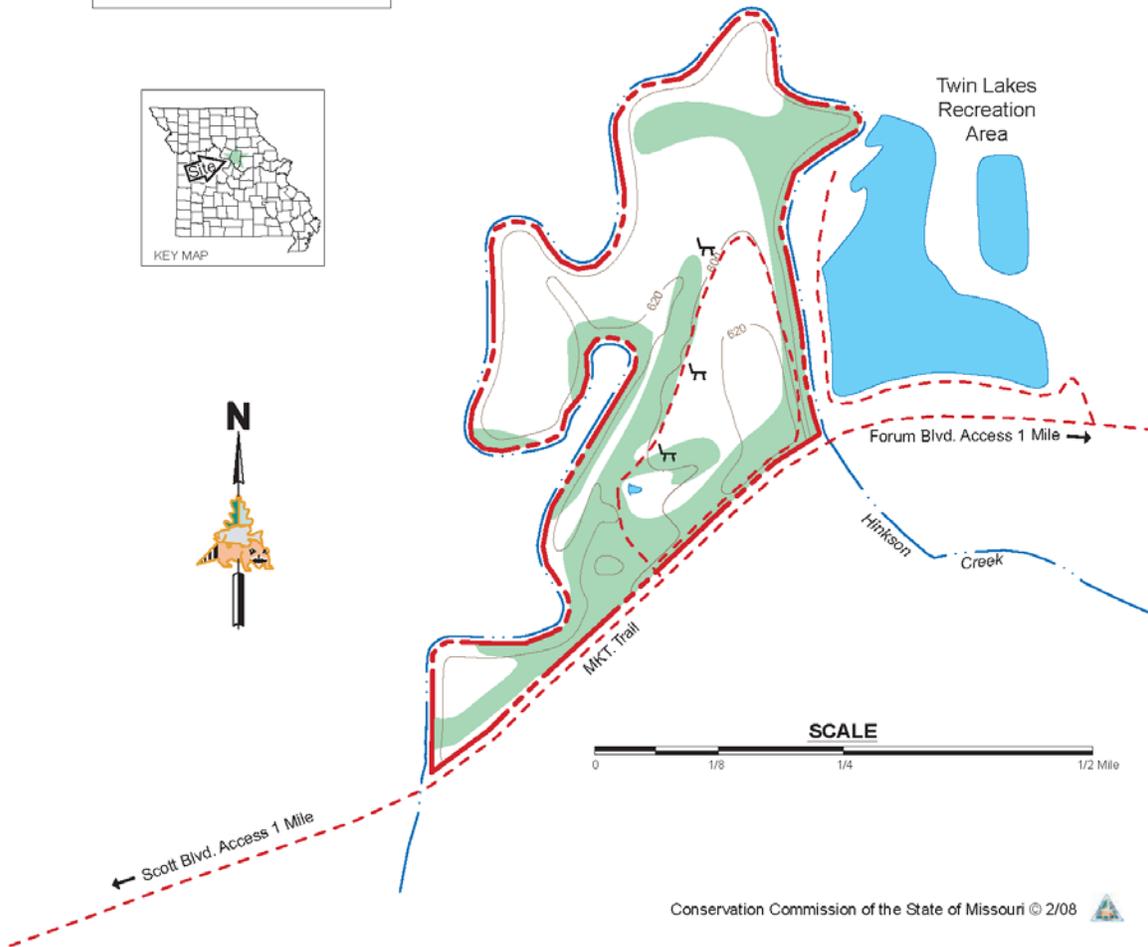
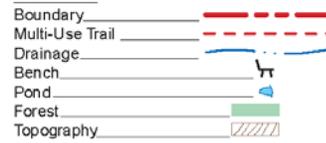
HINKSON WOODS CONSERVATION AREA

BOONE COUNTY
70 ACRES

VICINITY MAP



LEGEND



Appendix 4. Land Cover Map of Hinkson Woods CA

Hinkson Woods CA Land Cover



Appendix 5. Waters/Moss Memorial Wildlife Area Background

In 1853, Daniel Doresy Moss acquired this property which became known as "Hill Crest Farm." Mr. Moss was an associate professor of chemistry at the University of Missouri and he began the business of producing smallpox vaccine at this location. This business continued for several years until competition in the vaccine business made it more profitable to raise cows on the farm. Dairy farming became the chief income operation of Hill Crest Farm, and this business, under several ownerships (but using the same name "Hillcrest Dairy") was the primary use of the property.

The Moss home, a stately two-story, was the site of much social life for City of Columbia residents during the late 19th and early 20th centuries. After the Moss Family ceased living in the home, it was converted to small apartments. During the 1950s and 60s, University of Missouri students frequently rented rooms in the home.

Both Mr. C.B. Moss and Mr. H.J. Waters donated their respective parts of the Hillcrest farm to the Department in 1972.

In 2009, the Department entered into an agreement with the City of Columbia to manage part of this area as a city park. Department offices and shop were remodeled to accommodate park activities and Grindstone Creek Trail, developed in 2015.

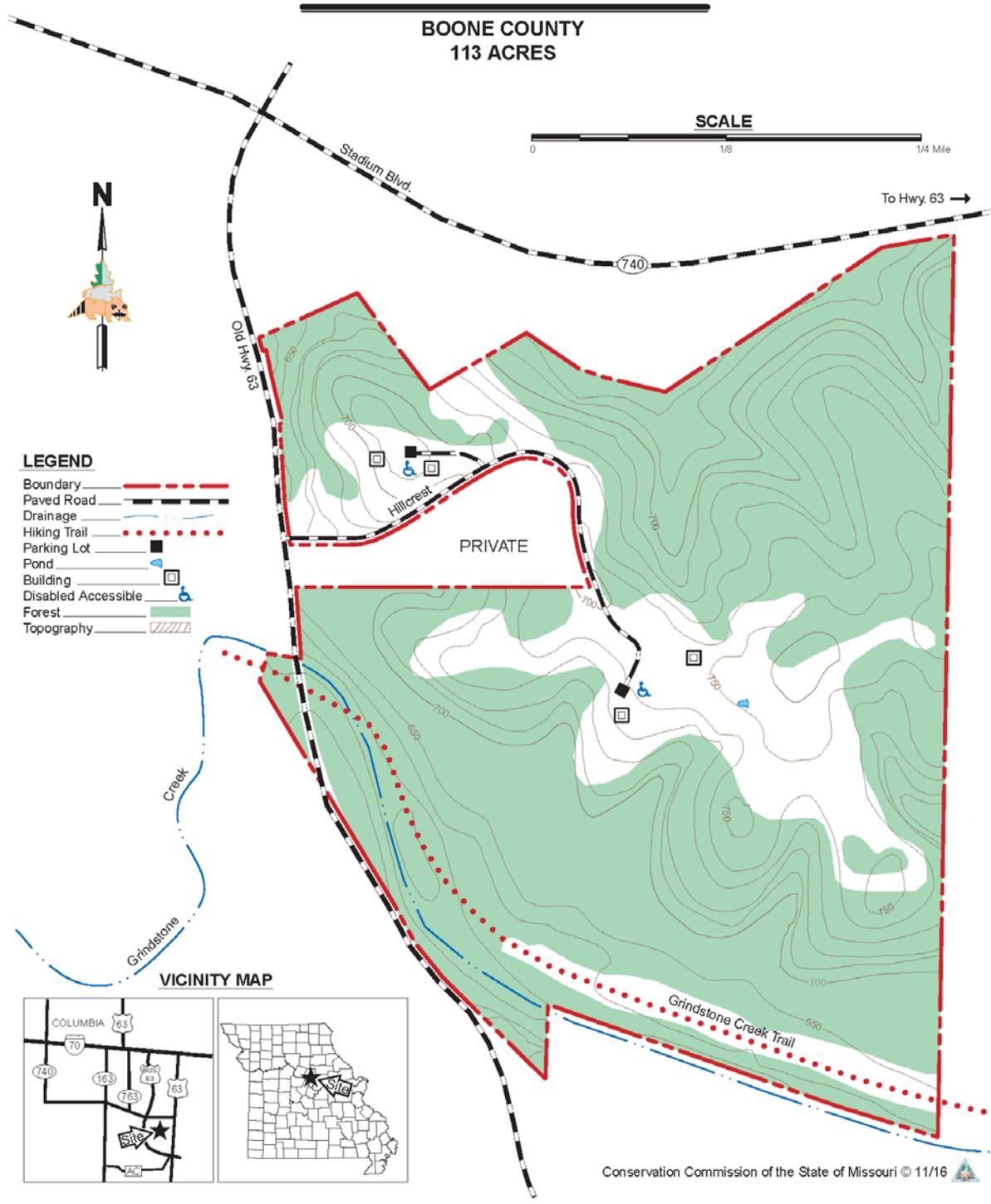
Deer and turkey hunting is allowed using archery methods only. All other hunting is prohibited.

Current Land and Water Types:

Land/Water Type	Acres	Miles	% of Area
Forest	75		66
Grassland	20		18
Other (developed)	18		16
Total	113		100
Stream Frontage		0.5	

Appendix 6. Map of Waters/Moss Memorial Wildlife Area

H.J. WATERS AND C.B. MOSS MEMORIAL WILDLIFE AREA



Appendix 7. Land Cover Map of Waters/Moss Memorial Wildlife Area

Waters Moss CA Land Cover



Appendix 8. Sewer Easement Map of Waters/Moss Memorial Wildlife Area

Waters Moss CA Sewer Easement Location



Appendix 9. Waters/Moss Memorial Wildlife Area Map of Areas under Maintenance by the City of Columbia

Waters Moss CA Map of City Maintenance



Appendix 10. Columbia Urban Conservation Areas Management Plan Public Comments

Received during public comment period (February 1-28, 2017):

This is great, as a lifelong Missouri resident I've always appreciated the care and planning that goes in to making our natural spaces last forever. Thank you for continuing your efforts on behalf of mine and future generations. Cheers.

Both areas need additional planting of native grasses, forbs and wildflowers. Please consider this in your plans.

My wife and I have lived on a property that borders the eastern side of Waters-Moss for 27 yrs. Shortly after we moved here, an M.U. Botany student identified and photographed numerous wildflower species along the bluff as a class assignment. In a summary to the project, he expressed concern that pedestrian traffic due to an increase in the human population would damage the fragile area. Today, though there are dozens of people daily walking, running, and biking on the sidewalk through the woods, within 20 yds. of this area, there is little danger of excessive foot traffic through the area. It is overgrown with Japanese honeysuckle! Former mayor,

Bob McDavid on several occasions referred to Waters-Moss as the best kept secret in Columbia. Unfortunately, because of the Japanese honeysuckle the best part of the secret will never be revealed.

The city council approved a plan several years ago that complies with the terms of the agreement they made with the Conservation Dept., as well as, the wishes of our property owners association. All areas of the Waters-Moss property are to remain wild except for the city controlled zone and the area around the sidewalk through the woods. We and our neighbors understand this to mean a path will NOT be mowed along the strip formerly used to move equipment to the creek bottom. The city mowed this strip for a couple of years when they first took over the property. It encouraged a lot of foot traffic that we felt was an invasion of privacy plus, there was the nuisance of free ranging dogs running through our yards.

We have thoroughly enjoyed living here. The trees, the birds, the flowers, the wildlife have all been enjoyable.

But, as time has passed we no longer see quail, woodcock, turkeys, coyotes and this past year our sightings of barred owls has diminished.

Thanks for listening!

I consider the Hinkson Woods CA a real gem of peaceful nature for the citizens of Columbia. I enjoy walking there and I have especially enjoyed observing the mating rituals of the Woodcock.

I suggest:

- 1) keeping development to a minimum and managing it for walking and nature study,
- 2) invasive alien plants should be eradicated,
- 3) manage for Woodcock habitat,
- 4) install signs for the area indicating restrictions on uses (I think dogs should be on a leash in

the area and bikes should be banned or at least not be allowed in the area when trails are wet.)
5) investigate the possibility of some prairie restoration in part of the area.

Thanks for providing this area for the public.

I am encouraged to see a focus on keeping Waters-Moss Conservation Area natural. I believe your stated strategic objectives focusing on removal of invasive plants and aquatic/stream management are on target. This is one of the few truly natural, non-developed areas left in urban Columbia. The bike trail on its southern edge has been a great resource for the area, however further development would be unwise and counter the commitment the City of Columbia made to keep Waters-Moss CA natural and hands/off and would significantly diminish the beauty and value of both the Waters-Moss CA as well the bike trail. Therefore I also believe the absence of any planned development (shelters, roads, additional trails, etc.) furthers the overall objectives and mission of the Waters-Moss area and is very important. I appreciate the efforts of the MDC and their commitment to maintaining natural environments.

Respectfully,

Many thanks to MDC and City of Columbia for maintaining the natural environments of the Waters/Moss and Hinkson Woods CA. I'd like to suggest that native flowering plants (including milkweeds) be planted in flat open areas and along walking/biking paths to feed pollinators and support Monarch butterflies.