

**HAROLD E.
ALEXANDER
SPRING RIVER
WILDLIFE
MANAGEMENT
AREA**



HAROLD E. ALEXANDER SPRING RIVER WILDLIFE MANAGEMENT AREA



Prepared by:

Randy Brents Jr (Fire Management Officer)
Dallas Harrell (Area Biologist)
David Henley (Area Technician)
Matt Mourot (Assistant Biologist Supervisor)
A. J. Riggs (Biologist Supervisor)
Rob Willey (Habitat Biologist)

Table of Contents

Public Facilities	3
Rock Creek Natural Area	3
Glades Map	4
● Glade Restoration 2	5
Hardwood Burn Only	5
Openland Habitat Map	6
Openland Habitat	7
● David's Glade Restoration	7
● Crazy Fields	8
MI Woodland	8
● Birchfield Woodland	9
● Glade Restoration 1	9
● Woodland Mulching	10
● Restoration Complex	10
Quail Focal Area Treatment Maps	11
Monitoring	12
Photo Plots	13
Whitetail East - Recovery	14
Fire History Maps	15 & 16
HEA Treatment Maps	17
Tour Guide Map	Back Cover



Summary

Approved for purchase in 1976, Harold E. Alexander Spring River Wildlife Management Area (HEASRWMA) encompasses 13,939 acres within the Salem Plateau of the Ozark Highland Ecoregion. The region is characterized as gently rolling to hilly with narrow ridges and drainages ranging from 397' to 793 msl. The Spring River Watershed and the Strawberry River Watershed, which are tributaries of the Black River, affect drainage on HEASRWMA. Rock Creek Natural Area (415 acre), which contains one of the highest concentrations of rare plants in Arkansas, is located along Rock Creek and is managed under a conservation easement with the Arkansas Natural Heritage Commission (1991).

Upland Hardwoods represent approximately 91% of HEASRWMA and are composed of hickories, black oak, red and white oak species with eastern red cedar encroachment. The habitat resources are maintained and managed for both habitat and wildlife species diversity. Emphasis is placed on management of forested habitats to maintain forest health and sustainability.

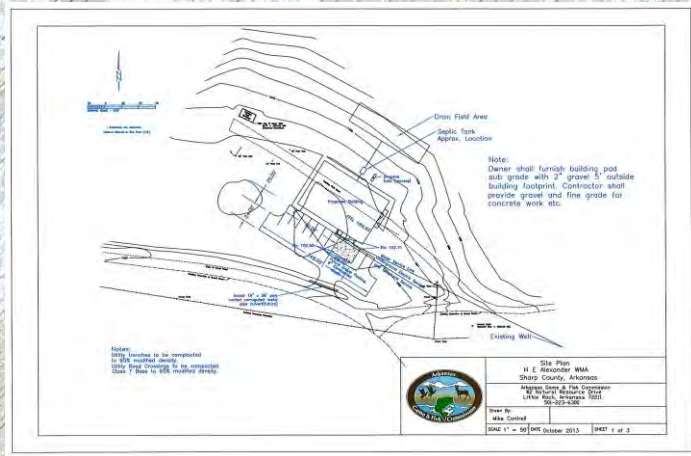
Management activities prior to AGFC acquisition present unique challenges for managers. The WMA faces unique challenges, including increasing demand for public land, white nose syndrome, and threatened and endangered species present unique challenges for managers, while implementing habitat restoration and management projects for desired future habitat conditions. To facilitate these projects, in alignment with the Arkansas State Wildlife Action Plan's Species of Greatest Conservation Need, a variety of grants have been utilized to complete maintenance and operations functions along with special projects.



PUBLIC FACILITIES

Work Center

Officially approved in 2014, a new work center was recently funded to provide office space, storage space, heated and cooled shop space and facilities to accommodate overnight stays for AGFC staff working on the WMA. Expected completion Fall 2018.



Archery Range

In coordination with the Arkansas Game and Fish Commission's Arkansas National Archery in the Schools Program, Harold E. Alexander WMA provides an archery shooting range.

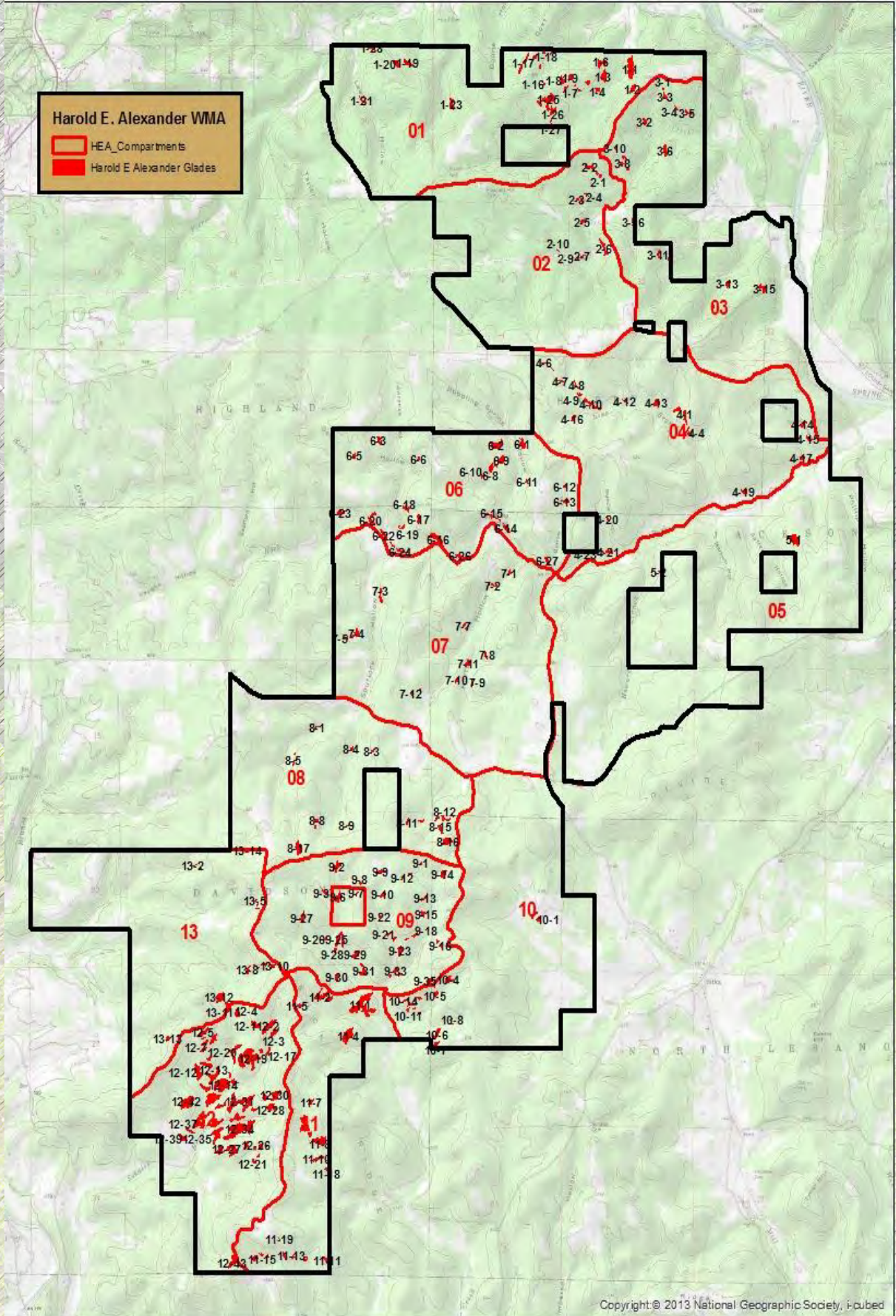
ROCK CREEK NATURAL AREA

Rock Creek Natural Area (415 acres), located within the Salem Plateau of the Arkansas Ozarks, contains one of the highest concentrations of rare plants in Arkansas. Many of these rare plants occur in a series of calcareous seep-fen and dolomite glade plant communities along Rock Creek and its tributaries. Rock Creek, a tributary of the Spring River, has very high water quality due to several springs and seeps feeding the creek, and the lack of development in the watershed. The natural area lies within the Harold Alexander Wildlife Management Area and is co-managed with the Arkansas Game and Fish Commission (AGFC).



Bubbling Springs Nature Trail (1.2 miles roundtrip - Easy to Moderate; not ADA accessible): Rock Creek Natural Area hosts some of the most unique terrestrial and aquatic communities among the system of natural areas. The trail exposes visitors to many of these unique features while it meanders through various habitats such as an upland oak-hickory forest and several glades. After crossing the dirt road at approximately 0.4 mile the trail parallels the Bubbling Springs Hollow tributary to Rock Creek. The appropriately named Bubbling Springs is the main highlight that can be found at the end of the trail.

Glade Map



Glade Restoration 2



Treatment History:

- Prescribed Burn: West side 2016, East side 2017
- Hardwood Thinning - Salvage harvest conducted on east side of road (2015)
- Cedar Cut/Drop- Area Manager performed cut/drop in glade only on west side of road (2011)
- WSI - 143 acres 2016 utilizing Garlon 3A (hardwood) and Pathway (cedar); all cedar, 1" - 9" DBH Hickories, Elm, Maple and Black Jack Oak, and 2" - 6" DBH Post Oak.

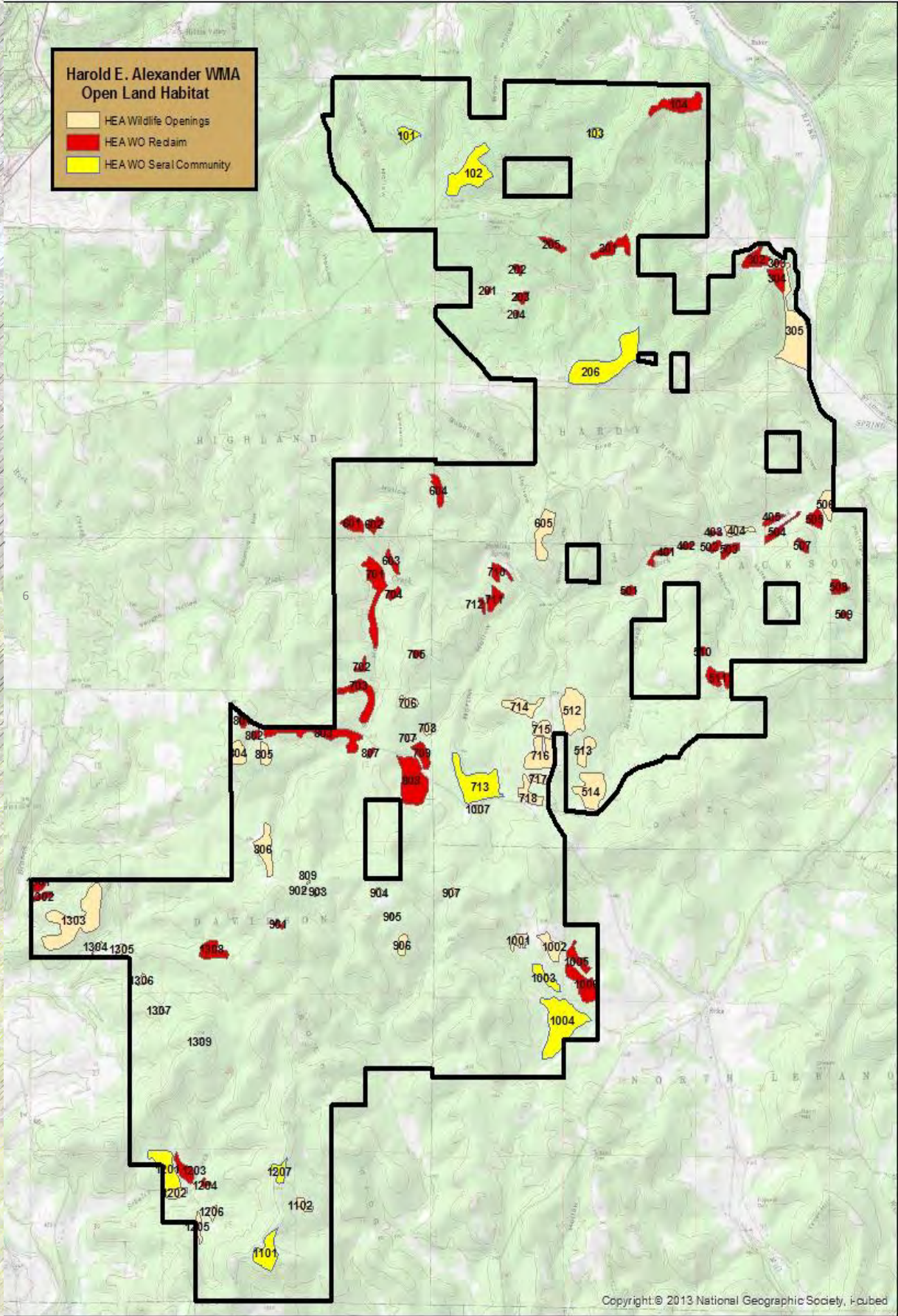
Hardwood Burn Only



Treatment History:

- Prescribed Burn: 2016

Openland Habitat Map



Openland Habitat

Treatment History:

- Prescribed Burn: 2012, 2016 and a growing season burn in 2018
- Reclamation 2013 - 26 acres



David's Glade Restoration

Treatment History:

- Prescribed Burn: 2017
- Cedar cut/drop performed by area manager (2010)



Crazy Fields



- Prescribed Burn: 2011, 2014, 2016 and 2018
- WSI Mastication - glade reclamation 11 acres (2016) and 26 acres (2018).
- WSI Chainsaw - 59 acres (2018)
- Cedar Harvest - 162 acres (2016)
- WSI - 82 acres in 2016 utilizing Element 3A (hardwood) and Pathway (cedar)

8

MI Woodland

Treatment History:

- Prescribed Burn: 2017 & 2018
- WSI - 2016 utilizing Element 3A (hardwood) and Pathway (cedar)



Birchfield Woodland



Treatment History:

- Prescribed Burn: 2014 and 2018
- WSI - 61 acres in 2013 utilizing Polaris AC, MSME Pro and Pathway (cedar). All Cedar >1", 1"-6" post oak, 1"-9" Black Jack Oak, 1"-10" elm, and 1"-10" hickory. In areas with no stems larger than 6" DBH: Post Oaks 4"-6" DBH will be left on a 15'x15' spacing. All other target species criteria will be followed.

Glade Restoration 1

Treatment History:

- WSI Mastication: 10 acres in 2016
- Cedar Cut/Drop: 1 acre in 2016 and 43 acres in 2018
- Prescribed Burn: 2018



Woodland Mulching

Treatment History:

- Prescribed burn: 2011, 2017 and 2018
- WSI Mastication: 9 acres in 2016
- WSI Chainsaw: 17 acre in 2016



Restoration Complex

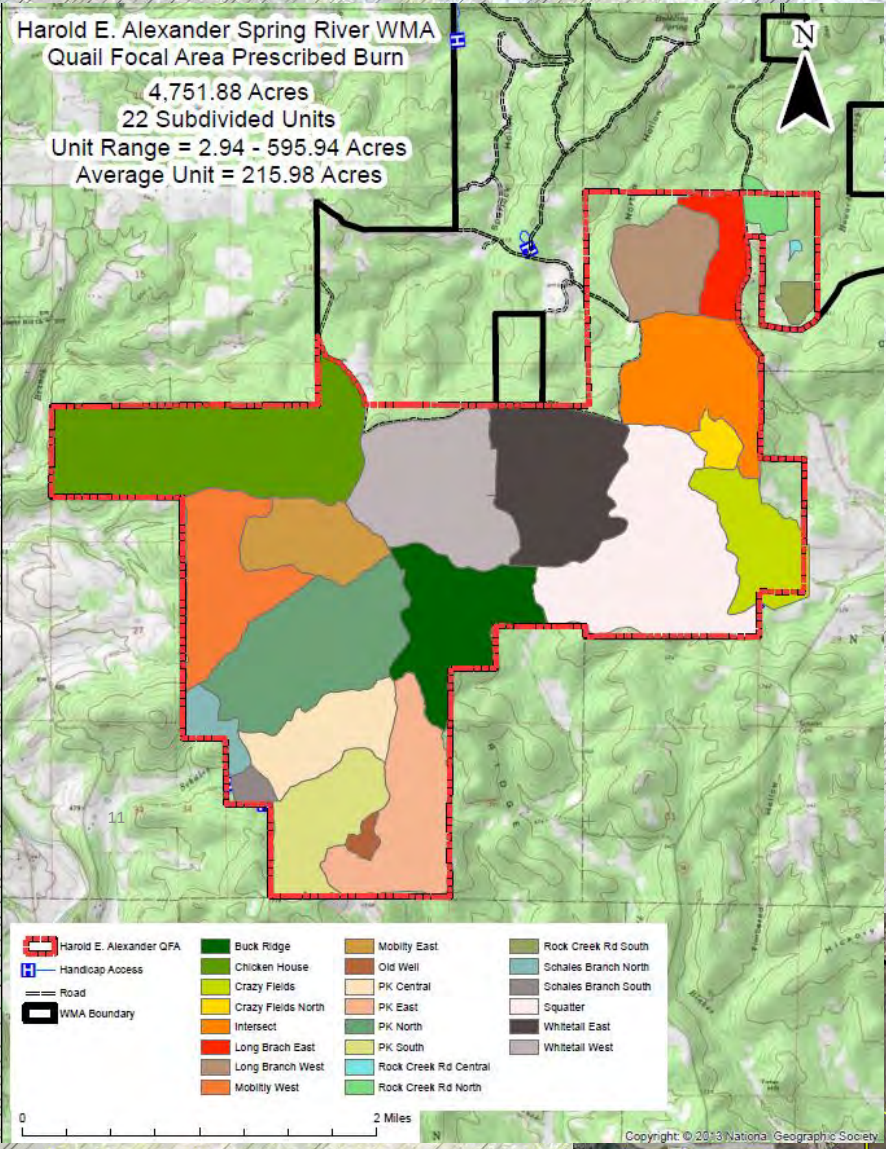
Treatment History:

- Prescribed burn – 2011, 2017 and 2018
- WSI Mastication – 118 acres in 2016 & 2017
- Cedar Harvest – 196 acres between 2014-2016
- WSI Chainsaw 226 acres in 2013 & 2016

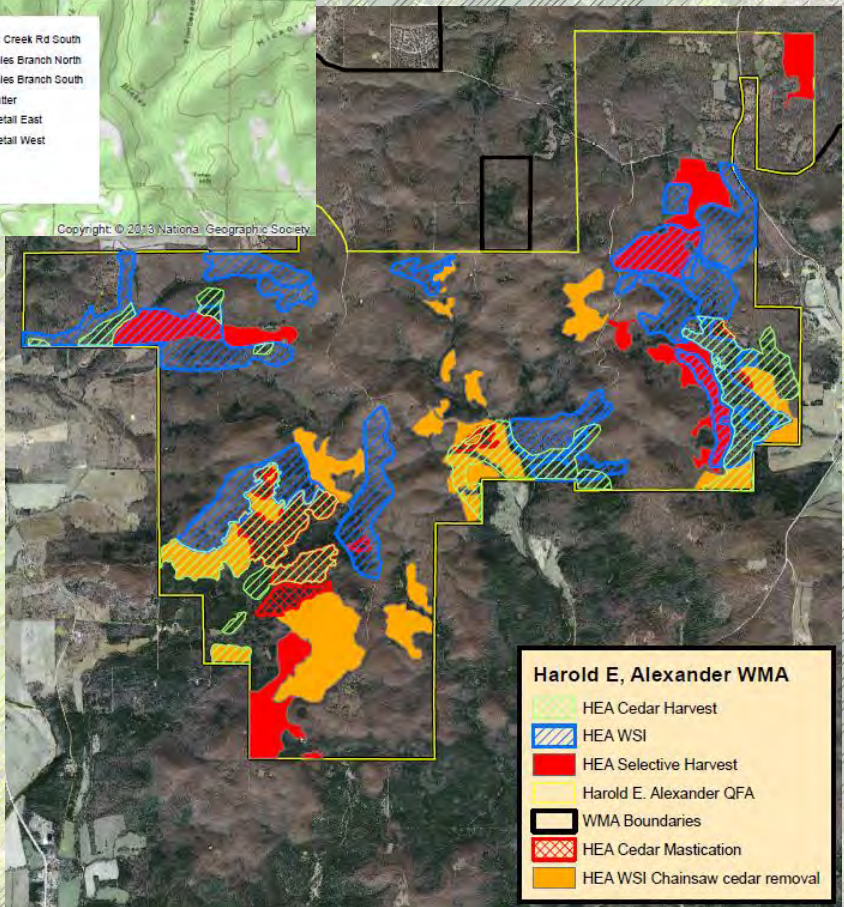


Quail Focal Area Treatment Maps

Harold E. Alexander Spring River WMA
 Quail Focal Area Prescribed Burn
 4,751.88 Acres
 22 Subdivided Units
 Unit Range = 2.94 - 595.94 Acres
 Average Unit = 215.98 Acres



- | | | | |
|-------------------------|--------------------|-----------------------|----------------------|
| Harold E. Alexander QFA | Buck Ridge | Mobility East | Rock Creek Rd South |
| Handicap Access | Chicken House | Old Well | Schalee Branch North |
| Road | Crazy Fields | PK Central | Schalee Branch South |
| WMA Boundary | Crazy Fields North | PK East | Squatter |
| | Intersect | PK North | Whitetail East |
| | Long Branch East | PK South | Whitetail West |
| | Long Branch West | Rock Creek Rd Central | |
| | Mobility West | Rock Creek Rd North | |



- Harold E. Alexander WMA**
- HEA Cedar Harvest
 - HEA WSI
 - HEA Selective Harvest
 - Harold E. Alexander QFA
 - WMA Boundaries
 - HEA Cedar Mastication
 - HEA WSI Chainsaw cedar removal

Monitoring

Vegetation Monitoring

Vegetation monitoring in glade and woodland restoration areas on Harold Alexander Spring River began in 2011 associated with a series of State Wildlife Grants.

- Theo Witsell, Arkansas Natural Heritage Commission's Botanist / Ecologist / Curator (ANHC Herbarium)
- Annotate Checklist of Vascular Plant Taxa Documented at Harold E. Alexander Spring River WMA (alphabetically and by family) – 796 species
- Plant species of state conservation concern (tracked by the Arkansas Natural Heritage Commission) – 29 species

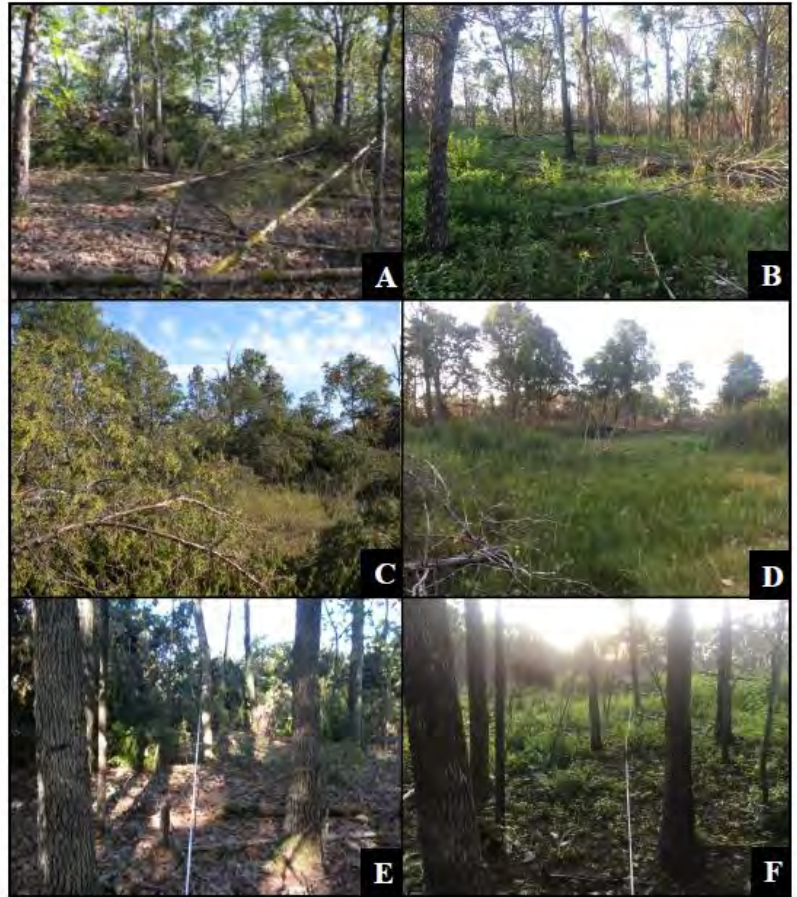


FIGURE 10. Paired photopoints showing before and after treatment conditions at Harold Alexander Spring River WMA. A and B. Woodland restoration along northern transect. C and D. Glade restoration along the northern transect. E and F. Woodland restoration along southern transect. All photos by Theo Witsell (ANHC).

Avian Monitoring

Point counts, to monitor avian response, were conducted to provide species richness and abundance/density estimates utilizing a contractor on Harold E. Alexander Spring River began in 2010. Data analysis is pending.

Quail Focal Area Monitoring

- Spring Breeding Bird Surveys
- Fall Covey Counts
- NBCI Habitat Monitoring



Photo Plots

Harold E. Alexander WMA Glade Restorations Photo Plot

**2016
Cedar Harvest**



**2017
Cedar Mastication
/Cedar Cut-Drop**



**2018
Prescribe Burn**



Harold E. Alexander WMA Glade Restorations Photo Plot



2016



2017 Post Mulch



White Tail East - Recovery

White Tail east burn unit lies within the Quail Focal Area which has received WSI chainsaw cedar removal (A), followed immediately by a prescribed burn in March 2018 (B). Photo C and D were taken on May 31st, 2018 approximately 2 months post burn.



A.



B.



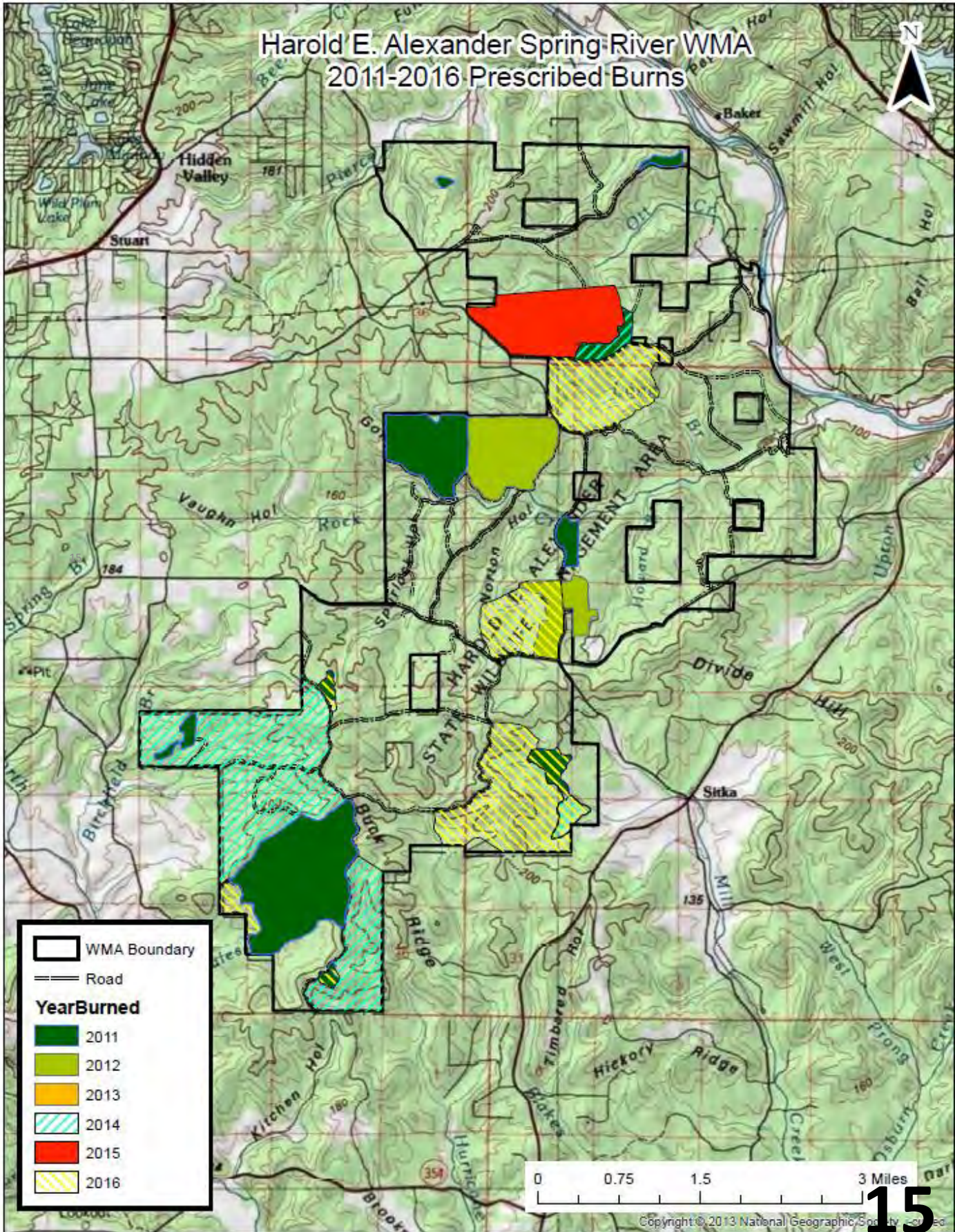
C.



D.

Fire History Map

Harold E. Alexander Spring-River WMA
2011-2016 Prescribed Burns

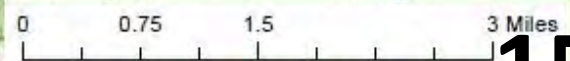


WMA Boundary

Road

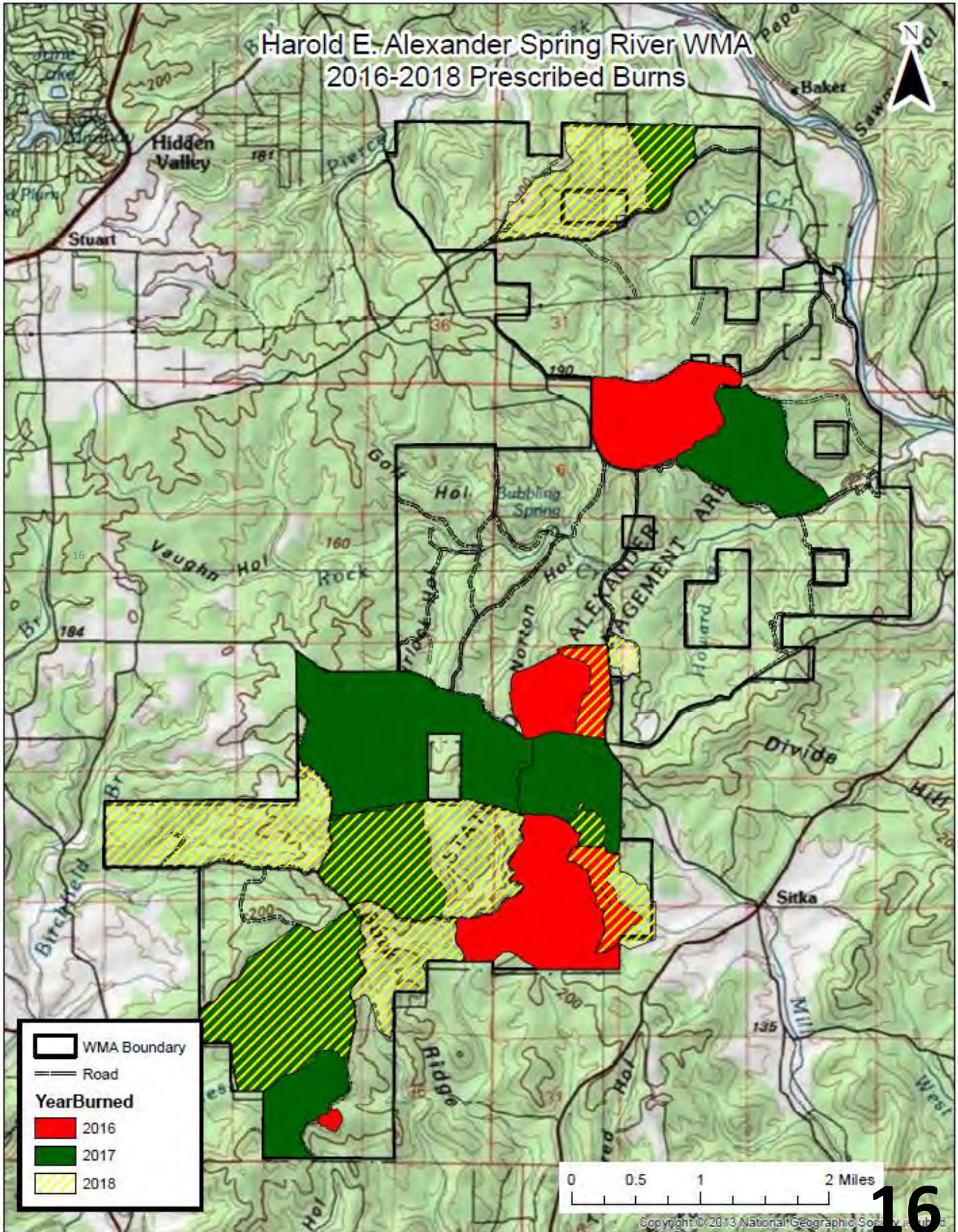
Year Burned

- 2011
- 2012
- 2013
- 2014
- 2015
- 2016

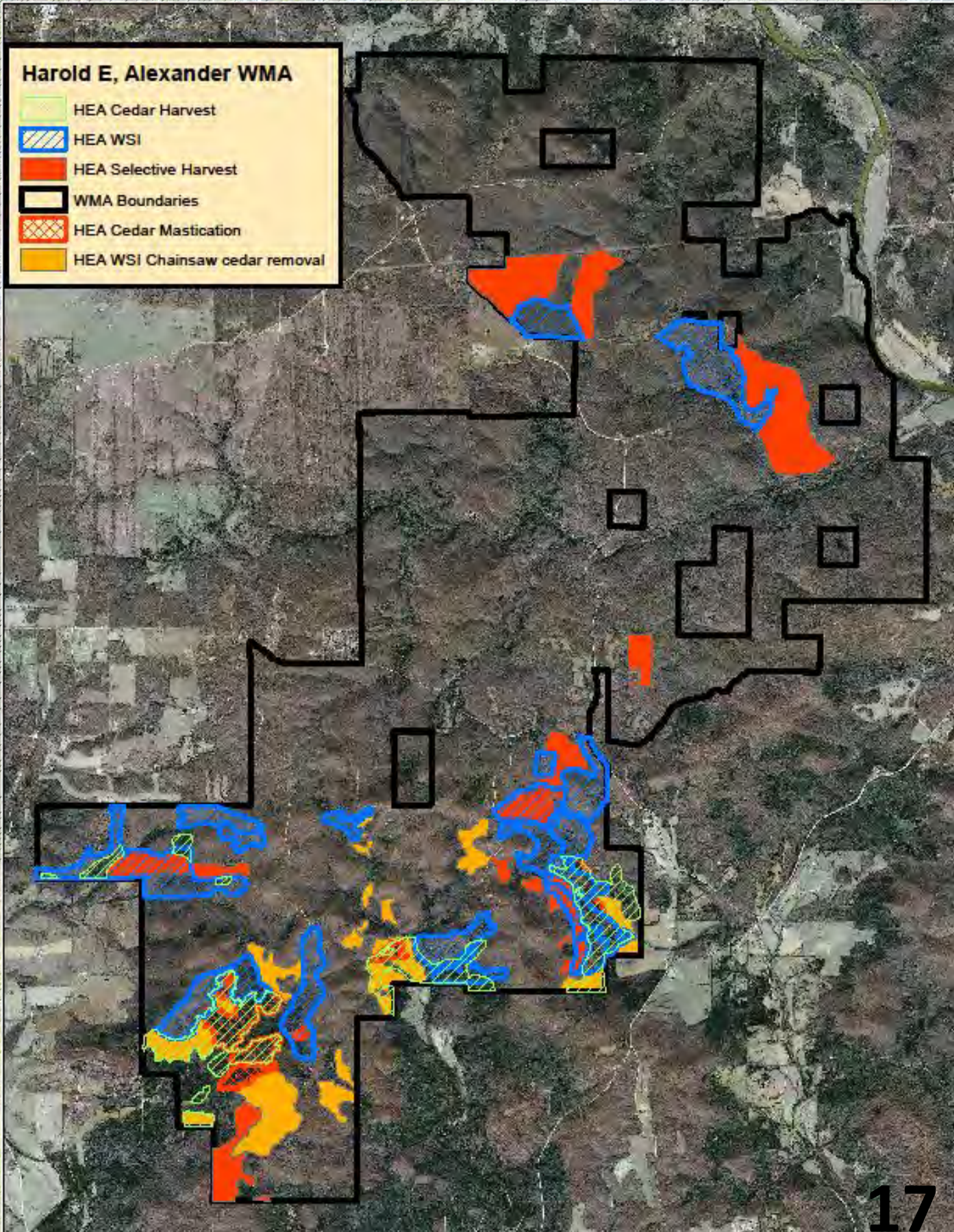


Fire History Map

Harold E. Alexander Spring River WMA
2016-2018 Prescribed Burns









Treatment Map



Tour Map

Harold E. Alexander Spring River Wildlife Management Area Tour Stops

-  HE Alexander WMA Boundary
-  HE Alexander WMA Headquarters
-  MI Access
-  Road
-  Tour Stops
-  Tour Viewing

