




Missouri TNC Prescribed Burn Unit Plan


Preserve/Site: Chilton Creek Preserve

Burn Unit ID: Chilton Master Plan


Fire Planner, prepared by: Ryan Gauger
Qualification Title: RxB3, ICT4

Signature: 
Date: 2/11/2022

Reviewed By: McRee Anderson
Qualification Title: RxB2

Signature: 
Date: 2/11/2022

Approved By: Scott Moats
Qualification Title: RxB2, IA/MO Fire Manager

Signature: 
Date: 3/1/2022

Consequence Rating: Not High High
Complexity Rating: Low Medium High
Minimum Burn Boss Qualification: RxB3* RxB2 RxB1

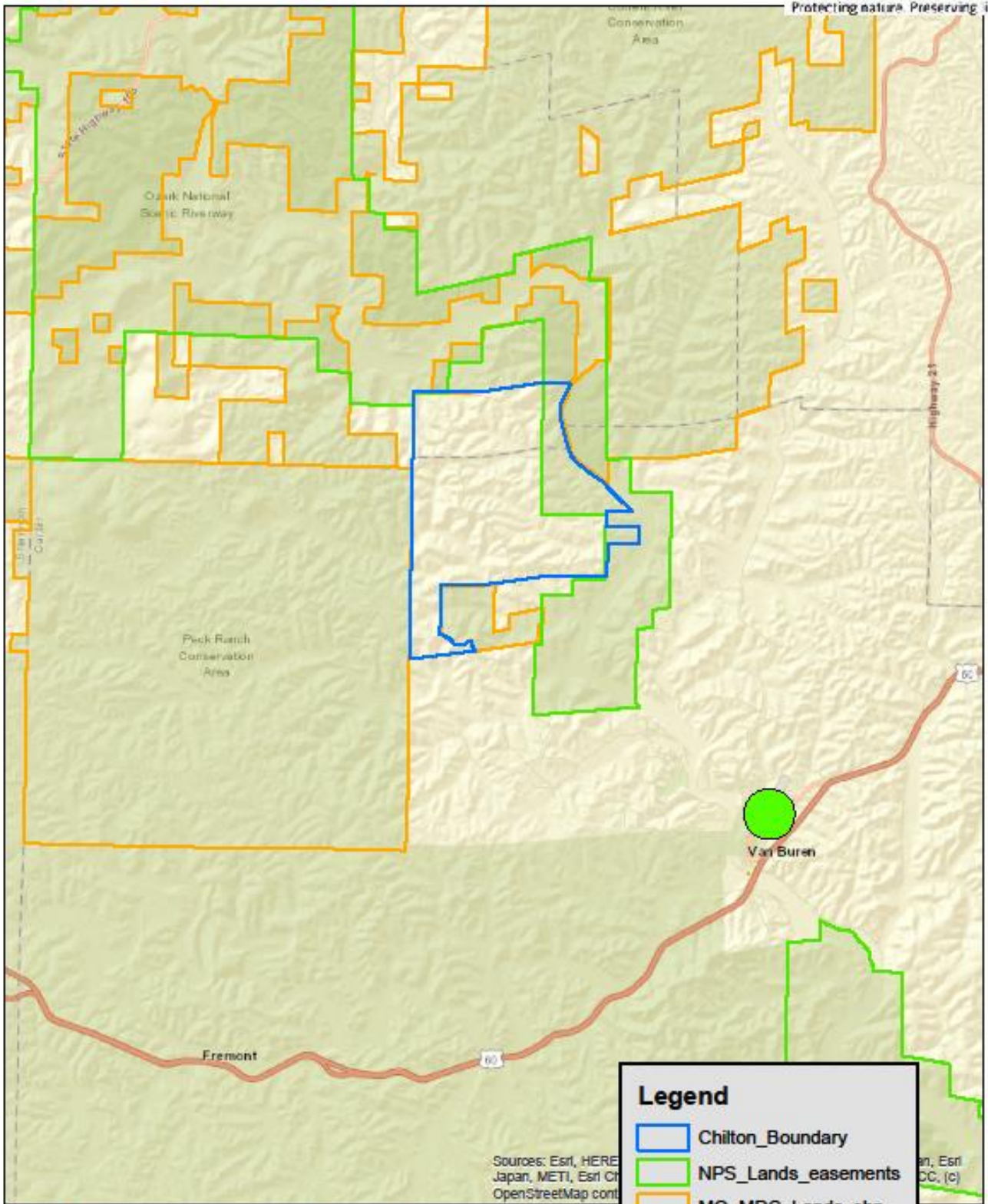
*If both RxB3 and RxB2 are checked, must include Appendix A: RxB3 prescription

Technical Review Required: Yes No Technical Review attached : Yes No

Plan Expiration: [Click here to enter a date.](#)

Disclaimer: The following prescribed burn unit plan (the "Plan") was prepared by or on behalf of The Nature Conservancy. To the extent the Conservancy has authorized a third party to use this Plan, the authorization is explicitly limited to the prescription set forth in the Plan. In addition, use of the Plan is not authorized if the Conservancy gives verbal or written indication that burning is not appropriate on any given day. Any use of this Plan is at the user's own risk. By using this Plan, the User agrees to indemnify and hold the Conservancy and its employees harmless from any injury or loss arising from the burn activities or use of the Plan.

Chilton Creek Research and Demonstration Area Map



0 0.75 1.5 3 4.5 6 Miles

Legend

- Chilton_Boundary
- NPS_Lands_easements
- MO_MDC_Lands_shp



County: Shannon and Cater Counties **Ownership of Burn Area:** TNC
Township: 28N **Range:** 17W **Section(s):** 16-21, 28-30 **Latitude:** 37.0677 **Longitude:** -91.0596
 Elevation (Top): 1000 Ft. Elevation (Bottom): 500 Ft.

Purpose

The intent of this Master Prescribed Fire Plan is to satisfy all planning requirements related to prescribed fire use using ground-based ignition at the Chilton Creek Preserve that is owned and managed by TNC.

Narrative Description

Landscape description: The Chilton Creek Preserve is nestled in the heart of the Current River Hills Conservation Opportunity Area. This rugged landscape is mainly made up of a mixed oak and short leaf pine creating complex ecological communities that harbor an amazing amount of biodiversity. These mixed oak/pine communities are reliant on periodic fires to maintain their structure and composition. Historical images of this area show widely spaced large, short-leafed pines with a robust understory. Due to historical timber activities and loss of a regular fire return interval many of these areas have converted to overgrown woodlands.

Burn area description: The Chilton Preserve lies between the Current River on the east side and the Peck Ranch Conservation Area that is owned by the Missouri Department of Conservation on the west and north sides. Chilton lies approximately five miles north-north-west of the city of Van Buren. There are eight established burn units within the preserve. Primarily each burn unit is composed of TL6/TU3 fuels. Perimeter of each burn unit is a series of ridgetop ATV trails or creek drainages that will serve as burn breaks. The Slusher Hollow burn unit’s west line is on a mid-slope following the property line with MDC’s Peck Ranch where an important study is taking place that is excluding fire. Burn units may be burned in combination with adjacent burn units (excluding Slusher Hollow and not to exceed 2000 acres in a single burn event without Fire manager approval and additional smoke management screening)

Unique Features: There are three metal/plastic TNC signs that are in good condition located along the Mid-ridge Rd. There are 14 marked campsites within the preserve located along the Mid-Ridge and Cemetery roads. National Park Service does hold an easement over portions of the property adjacent to the Current River as part of the Ozark National Scenic Riverway. TNC and NPS have been working together in the region since the late 1990’s and have a good relationship especially when it comes to prescribed fire.

Burn Unit Size and Fuels					
Burn Unit Name	Unit Vegetation types	Fuel Model	% Unit Area	Total Unit Size (Acres)	Burn Unit Perimeter (Miles)
Chilton North	Mixed Oak Pine Forest	TL6/TU3	100%	541	4.3
Chilton South	Mixed Oak Pine Forest	TL6/TU3	100%	582	4.74
Kelly North	Mixed Oak Pine Forest	TL6/TU3	100%	695	5.5
Kelly South	Mixed Oak Pine Forest	TL6/TU3	100%	411	4.4
Cook Hollow	Mixed Oak Pine Forest	TL6/TU3	100%	244	2.64
Chilton East (west half)	Mixed Oak Pine Forest	TL6/TU3	100%	220	5.2
Chilton (east half)	Mixed Oak Pine Forest	TL6/TU3	100%	224	5.2
Slusher Hollow	Mixed Oak Pine Forest	TL6/TU3	100%	412	3.5

Each burn unit will have its own “Burn Unit Map” which will provide more details specific to that unit than is provided within this plan

Picture of Representative Fuels and Topography:



Fire Break Description: All burn breaks other than roads or highways will adhere to these general guidelines. Timber litter fuels will be raked or blown 8 ft. wide (wider when possible or near critical holding areas) down to mineral soil. Any areas that have grassy fuels will have a mowed break 10 ft wide and debris will be raked/blown

the entire width. Drainages/creeks that will be used as burn breaks will be cleared of excessive woody debris as well as leaf litter 4-6 ft. down to the rocky creek bottom unless they have standing water in them.

Adjacent Fuels: Surrounding fuels are nearly identical to the fuels within the burn unit. However, they may be in a more overgrown state.

Additional Considerations: Chilton is open to the public and many people utilize the site for recreation including hunting, camping, and ATV/UTV riding. Elk were reintroduced to the area eight years ago and they utilize the property regularly. MDC Elk managers have cameras in various locations that get moved regularly and they should be made aware of intended burn operations. There are also populations of feral pig on the property that MDC trappers are working to eradicate. There may be trap sites located within burn units and they should also be made aware of any burn operations.

Access points: all units are accessible from the Mid-Ridge Rd. on the west side and Cemetery Rd. on the east. Cemetery Road has some sections that are part of the creek bed and typically have standing water. When water is higher vehicles will not be able to access from this side and will need to go around the Mid-Ridge Rd.

Goals and Objectives

Fire Management Goals: Maintain a high frequency, low/moderate intensity fire regime in the mixed oak pine forests. Maintain areas for ongoing long term fire studies. Generally, reduce coarse woody fuels and promote and increase fine fuels.

Specific Burn Objectives: Top kill 60% shrubs < 3 in DBH, reduce downed woody debris by 30%-50%, reduce duff layer over 75% of the burn unit, limit overstory tree (>8in DBH) to less than 5% during each burn event (limit to small patch occurrences of more severe fire behavior), provide training opportunities for firefighters, and provide for safety of firefighters and public.

Prescription

Wind Directions			
Burn Unit Name	Acceptable	Preferred	Prohibited
Chilton North	Any	Any	None
Chilton South	Any	Any	None
Kelly North	Any	Any	None
Kelly South	Any	Any	None
Cook Hollow	Any	Any	None
Chilton East (west half)	Any	Any	None
Chilton (east half)	Any	Any	None
Slusher Hollow	NW, W, SW	W	E, NE,SE

** NW winds should only be considered if there is good mixing height (>2500) and ventilation rate (>10,000) to prevent a smoke intrusion into the city of Van Buren**

Guidance Prescription Parameters										
Wind Speed (mph)			Temperature (F)		Relative Humidity (%)		1 Hour FM (%)		1000 Hr FM or DCI	
	20'	6'								
Max	20	6	Max	85	Max	70	Max	12	Max	100
Desired	5-10	1.5-3	Desired	65	Desired	35	Desired	8-10	Desired	
Min	3	1	Min	32	Min	25	Min	5	Min	7

Days Since Rain: Min: 1 Desired: 3-8 Max: 14

Outputs Prescription Parameters								
	Spread Rate				Flame Length			
	Head fire (cph)		Backing fire (cph)		Head Fire (ft)		Backing fire (ft)	
Fuel Model	TU3	TL6	TU3	TL6	TU3	TL6	TU3	TL6
Max Rx	115	29	1.6	0.5	14	6	2.0	1
Desired	55	17	1.6	0.5	10	4	2.0	0.7
Min Rx	30	7	1.5	0.5	7.6	3	1.9	0.5

Assumptions built into burn plan: This plan assumes that the area is not experiencing extended drought and that the draws are not likely to carry fire due to lack of available fuel under desired fire behavior. It also assumes that all of burn operations will take place under dormant conditions to prevent excessive damage to large trees.

Excluded Combinations of Parameters: When any parameters approach a maximum or minimum, an evaluation must be made to determine if objectives can be met safely. A combination of any two of the following -max temp, min RH, max wind will trigger a call to the fire manager to discuss the situation prior to the go/no-go decision for the day.

Prescribed Fire Behavior: The desired fire behavior would consist of a backing and flanking fire that is a solid uniform line with high residence time. Flame lengths from the backing fire should not exceed 2' in timber litter and head fire flame lengths would be less than 6' except when fire is moving up topography.

Personnel and Equipment

Crew Organization

Burn Boss Qualification Level: **RxB2**

Minimum number and Types of Firefighters Required			
Burn Unit Name	FFT1 or FFT1 Trainee	FFT2 or RxCM	Total Fire Fighters (excluding RxB2)
Chilton North	1	7	8
Chilton South	1	7	8
Kelly North	1	7	8
Kelly South	1	7	8
Cook Hollow	1	5	6
Chilton East (west half)	1	6	7
Chilton (east half)	1	5	6
Slusher Hollow	2	11	13

Minimum PPE Requirements for staff: Nomex or Nomex-style flame resistant clothing, hard hat, leather gloves, fire/heat resistant boots, eye protection, ear protection (available but not necessarily worn at all times). Other optional items: headlamps. Fire shelters will be required. All crewmembers will have an ignition device to create areas of black for use as a safety zone.

Equipment Needs

Vehicles

- 1 Engine (200 gal)
- 1 UTV w/pump (>50 gal)
- 1 ATV w/pump (>15 gal)

Support Equipment

- 1 Portable Pump:
- 2 Chainsaw w/ support equip & PPE:
- 6 Backpack Pumps: (+2 for Slusher Hollow Burn Unit)
- 2 Backpack Blowers: (+1 for Slusher Hollow Burn Unit)
- 1 Cell Phone:
- 6 Radios:
- 6 Drip Torches:
- 2 Smoke Ahead/Prescribed Fire Signs:
- 1 First Aid Kit:
- 1 Weather kit and/or Kestrel:
- 12 Hand Tools: Combination of leaf rakes, council rakes

Type and Location of Water Sources: A portable pump location will be identified by the burn boss ahead of the burn. Depending on recent rain events the creeks that run through TNC property may be holding enough water to use as a fill site but, these will need to be checked prior to the burn operation as the creeks dry out regularly. Alternatively, there are two NPS river access' on M-Hwy that pumps could be set up in the Current River. The northern most is the Pin Oak access which has a concrete boat ramp (located here 37.066036, -91.044297), Waymeyer access is the southern location (37.054190, -91.055182) it is a canoe access without a ramp but suitable for a portable pump.

Scheduling

Timing/Phenological Considerations: Each of these burns will be planned to be completed during the dormant season (Mid-October – Early April). The timing for each of the burns should be conducted in such a way that limits overnight smoke generation. Ideally this means that spreading fire is complete an hour before sunset.

Expected Burn Duration: 8-12 Hours (for planning purposes only). 2-3 hr(s) Baseline Prep, 3-5hr(s) Spreading Fire, 3-4hr(s) Mop-up

Night Operations Expected: Yes the possibility exists for night operations No

Expected Operational Periods: While night operations are not expected it is highly likely that fuels will continue to consume through the night and will likely require an additional day of mop up. All crew members will have headlamps and clear safety glasses in the event fire operations continue past sundown.

Pre-Burn Preparations

Notifications	
Carter County Sheriff	573-323-4146
Shannon County Sheriff	573-226-3615
MDC Forestry (Eminence)	573-226-3616 ext. 222 or 221
MDC Ozark Region Dispatch	417-256-7161 ext.279
MDC Peck Ranch	573-323-4249
USFS Dispatch	573-341-7425 or 573-341-7455
USFS Zone 2 FMO Jim Krizman	641-521-7881
NPS-ONSR Main Office (Van Buren)	573-323-4236
NPS FMO, Bobby Bloodworth	573-323-8234 Office 573-707-0334 cell
NPS AFMO, Scott Bressler	573-323-8031 Office 573-996-6561 cell
Holly Neil and Kristy Stoyer	Email acceptable
Scott Moats: MO TNC Fire Manager	515-360-4280

Permit Requirements: None

Firebreak Preparations: Firelines will consist of the Mid-Ridge Rd and Cemetery Roads (regularly traveled natural gravel road, and established ATV/UTV two tracks throughout the preserve. Roads and handline will be blown or raked free of fuel to a minimum width of 6’-8’ (10 ft. in grassy sections). Creeks will be checked to ensure no heavy fuels are lying across them. Dead standing trees (snags) within one chain (66 feet) of fireline will be mitigated by either raking/blowing around or felling. Crew members should evaluate each snag for hazardous potential, while recognizing the ecological importance of these trees. Unnecessary felling of snags should be avoided. Large piles of heavy fuels within 30’ of the fireline will be cut and dispersed or excluded from the unit. Aerial fuels (e.g., treetops) within 30’ of the line should be slashed to a height of no greater than 36 inches.

Site Preparations: The perimeter of the burn until will be flagged along handlines and drop points will be marked. Smoke on road signs will be set up on any roads that may be impacted by smoke during the fire operation for any amount of time. Roadside should be checked for unattended vehicles. Portable pump will be set up at one of the two river access points or Chilton Creek if it has sufficient water for a portable pump.

Weather and Air Quality Forecasts: Fire weather forecast and spot weather forecast will be obtained from the National Weather Service. Weather will be monitored prior to and throughout the burn operation using a belt weather kit or digital weather instrument (i.e. Kestrel or local RAWS).

Operations

Ignition Plan: Ignition patterns will vary for each burn unit and be at the discretion of the burn boss to meet burn objectives. In general, the crew will be divided up into two squads that work in opposite directions working into the wind whenever possible. The test fire will start on the downwind and/or upslope side of the burn unit. Once the downwind perimeter(s) are secured (at least 50 ft. of solid black) internal ignition will proceed. Firing patterns could range from a dot fire pattern to minimize fire intensity all the way to strip headfires, upslope to generate more intensity if the goal is to open more of the canopy. Anytime there is internal ignition it will be performed by experienced crew members and will be assigned a lookout as they proceed. Interior ignition may also be accomplished by handheld launchers (PyroShot or Stubby Launcher). Prior to the burn day any operator of those devices will have been specifically trained on that launcher and will receive permission from the burn boss prior to utilizing that device. Ignition along roadsides may be accomplished by ATV torch. The operator of the ATV torch will need to be very experienced using ATVs and have had a safety briefing on using the ATV torch prior to the burn day. A separately drafted IAP will have a more detailed ignition patterns specific to the burn unit and forecasted wind pattern.

Holding/Patrol Plan: Holding will be accomplished with personnel on ATVs/UTVs and foot patrol with water and/or hand tools as appropriate. Holding should follow perimeter ignition and regular back-patrol along the perimeter. The burn boss will determine appropriate intervals for perimeter monitoring and patrol based upon

weather and site conditions. Majority of burn breaks within Chilton are accessible with vehicles. Holding will mainly be completed by hand tools, water backpacks, and leaf blowers. Leaf blowers and backpack water packs should be staged in strategic locations that could be easily accessible to either crew or in critical holding locations (if any exist for that burn unit). The engine should be staged in a strategic location that would allow easy egress and not be in burnable fuels.

Mop-Up: Immediately after ignitions have been completed squads will begin mop up. Priority should be given to extinguishing any smoking or smoldering within 20 ft. of the burn break. The burn boss may require more if forecasted weather conditions call for higher winds the following days. Any snags within 100 ft. that caught fire will either be extinguished or felled unless they present a safety hazard.

Post Fire Patrol: The burn boss will determine post fire patrol/monitoring needs based on the progression of mop-up operations, the consumption of woody fuels, and current/expected conditions. The burn boss will make the determination and plans for next day patrol or additional mop up to manage long term smoke.

Monitoring: On site weather will be monitored immediately prior to, during and after ignitions.

Contingency

Escape Response Procedures:

All spot fires should be sized up over the radio by the nearest crew member and suppressed immediately. If the spot becomes more than one crew member can handle, the burn boss or a designee will take the appropriate measures to handle the situation. If direct attack is not possible, indirect attack may be implemented with the use of secondary control lines and the contingency map provided. Providing protection to life and private dwellings will be the priority.

Wildfire Declaration: *If any escape becomes too large for resources available on site, the **Burn Boss will notify the local fire department** for assistance. The Burn Boss will also delegate an experienced crew member to act as Incident Commander on the Escaped Fire while the Burn Boss and remaining crew secure the original burn unit (or vice versa at the discretion of the Burn Boss). Upon arrival of the wildfire responding agency, they become the Incident Commander on the Escaped Fire or Wildfire.*

Secondary Control Lines: (See contingency Map for specific locations)

North: There are a couple unmarked logging trails on adjacent MDC property but for the most part we will rely on the Current River for our northern contingency line which is . Approximately 1-1.25 miles to the north. There is one cabin on private property directly north of the preserve. Creek drainages will help slow the progression of the escape.

West: The closest hard break is an unnamed road within the Peck Ranch which is approximately 2 miles to the west. Creek drainages may also be suitable for contingency response.

East: The Current River lies along the eastern perimeter of the preserve. Max distance 1.5 miles

South: Rodgers creek will serve as our southern contingency line. It typically has moving water in it and is approximate 5-15 ft. wide with rocky sides. Max distance 1.5 miles

Nearest Emergency Resources:

Missouri Department of Conservation Dispatch 417-256-7161, estimated 1 hour response time (they prefer to utilize tractor plow operations)

National Parks Service 573-707-4290 (Mon-Fri). Scott Bressler Cell 573-996-6561, estimated 1 hour response time

Fire Shut-down: In the event that the fire needs to be shut down, the burn boss will direct the crews to stop ignition, mobilize resources and begin working the backing fire back to the ignition point. If the fire has progressed

to the point in which flanking fire has been started, the burn boss will make the decision to suppress the fire or continue “ringing” the unit to secure the perimeter. This decision will be based on the crew resources and safety, fire behavior, and expected fire behavior.

Communications

Emergency Assistance:

Title	Name	Phone
Fire Dept:	Van Buren Fire Department	911 or 573-323-4567
Sheriff:	Carter and Shannon County Sheriff	911
Medical:	Carter and Shannon County Sheriff	911
Hospital	Mercy St. Francis Hospital 100 US-60 Mountain View, MO 65548	417-934-7000
TNC Fire Manager:	Scott Moats	(c): 515-360-4280
TNC Project Supervisor:	Holly Neil	(c): 417-827-4864
TNC Legal:	Steve Hitchcock	(o): 612-331-0781

Operational Communications Plan:

Communication will be via handheld radios using plain text, chain of command using position titles or proper names. Tactical frequency: TNC Fire Ops 151.6250 MHz. Alternate frequency: Missouri Department of Conservation 154.570 MHz. In the case of an escape requiring additional resources, it is unlikely that radio communications will be possible with Volunteer fire Departments, if response comes from the Missouri Department of Conservation communications will likely be on their tactical frequency (151.475 MHz).

Public Access/Conflicts with Public Use: Chilton is open to the public and is heavily used during hunting seasons. The roadsides should still be checked for unattended cars in the event of someone could be within the burn unit.

Public Relations: The need for additional public relations effort is not expected, however if the need arises, the burn boss or their designee will address the situation at the time.

Smoke Management

Downwind Smoke Sensitive Areas: No known smoke sensitive areas close to this preserve. Local residences are marked on the contingency map and nuisance smoke should be avoided whenever possible.

Other Smoke Issues: All firefighters will be encouraged to avoid prolonged exposure to smoke and rotated to different positions on the line to minimize smoke exposure.

Map of Smoke Sensitive Areas Attached: Yes No

Smoke Management Techniques: If smoke becomes an issue, actions to limit the impact will occur. Some options would be to utilize ignition techniques to lift smoke, shut down the burn, wait for more appropriate wind, ring fire the unit to allow the smoke to lift up and out of the area, and/or other options. Oak/Pine Woodland fuels could contribute to sustained smoke in the area and prevention of excessive overnight fuel consumption should be considered if following day(s) weather pattern may allow smoke to settle into the Van Burn area.

Safety and Medical

Hospital Location and Route: Mercy St. Francis Hospital, Mountain View (50 minutes)
Nearest Ambulance: Van Buren Fire and Rescue (20 minutes)

Nearest Air Ambulance: Medevac Service- Air Evac dispatch 800-247-3822 (unknown response time) Ask for a Dispatch Supervisor and say- *“We request a primary response Aircraft because we are a long way from EMS. The closest LZ is at LAT/LON 37 Deg 03.816' by -91 Deg 02.999' a mowed field 5 miles north of Van Buren along the Current River.”*

General first aid kits are available in each truck. Any firefighters on scene that are EMT qualified will be identified during the briefing. If immediate medical attention beyond the capabilities of on-site personnel is needed, the burn boss or a designee will call 911 and coordinate emergency response through dispatch.

LCES:

Lookouts: each crew member will be a lookout for each other.

Communications: will take place on handheld radios with cell phones being back up. Cell service is challenging in draws and creek beds but, reliable on top of ridges.

Escape Routes: will be down cold black or following creek beds out to the nearest road.

Safety Zones: Will almost exclusively be in the cold back but will be discussed on a unit-by-unit basis with the burn crew prior to the operation.

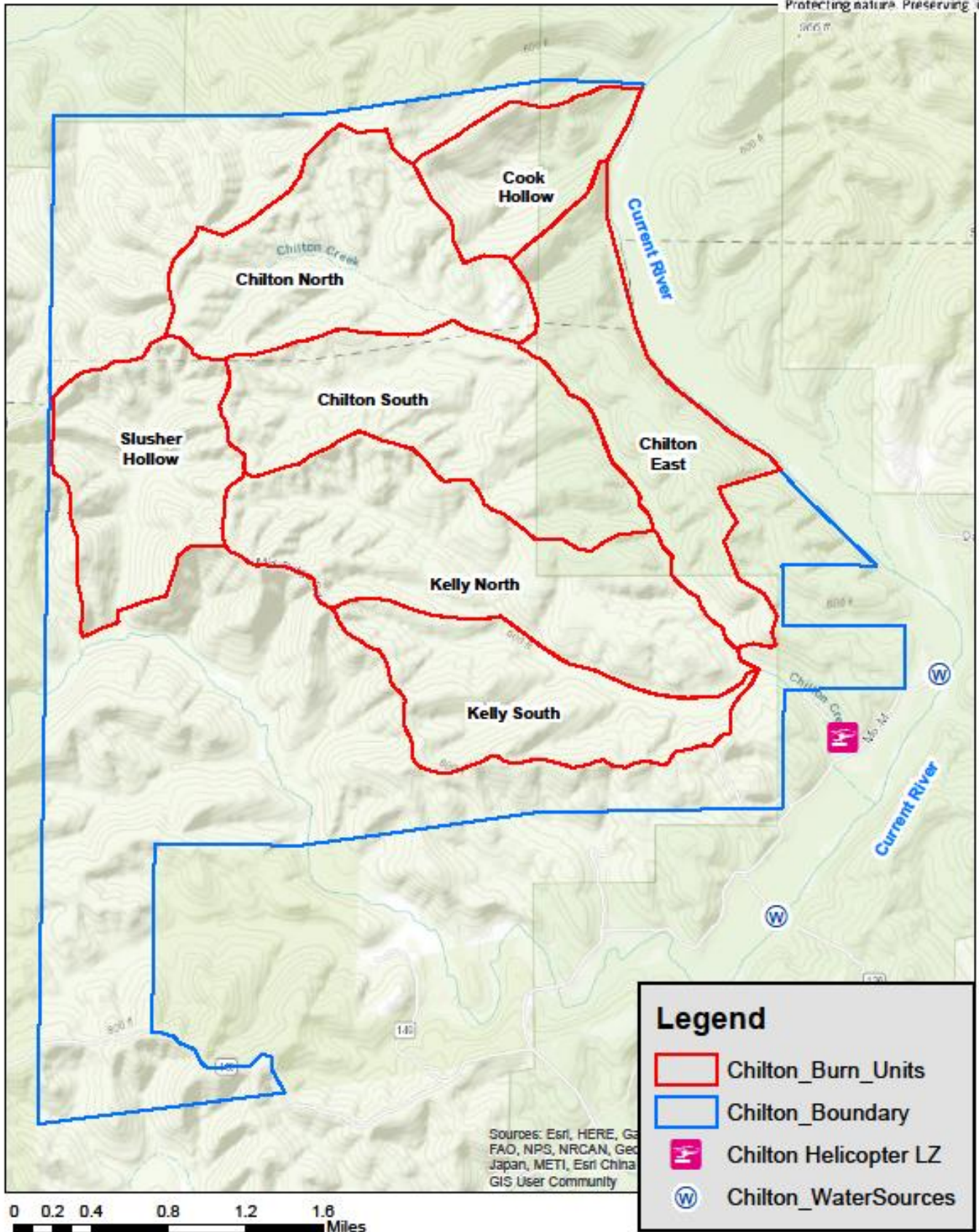
Unique Hazards: Topography, prolonged smoke exposure, stinging/biting insects, and heavy snag loading in some areas.

List of Attachments

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Project Maps* | <input type="checkbox"/> Appendix A: RXB3 prescription | <input type="checkbox"/> Permission to burn Agency Land |
| <input checked="" type="checkbox"/> Go/No-Go Checklist* | <input type="checkbox"/> Technical Reviewer Checklist | <input type="checkbox"/> Medical evac 9-line |
| <input checked="" type="checkbox"/> Complexity Analysis* | <input type="checkbox"/> Private Benefit Disclosure | |
| <input checked="" type="checkbox"/> TNC Documentation* | <input type="checkbox"/> Permission to burn Private Land | |

*Items required for all TNC burn plans

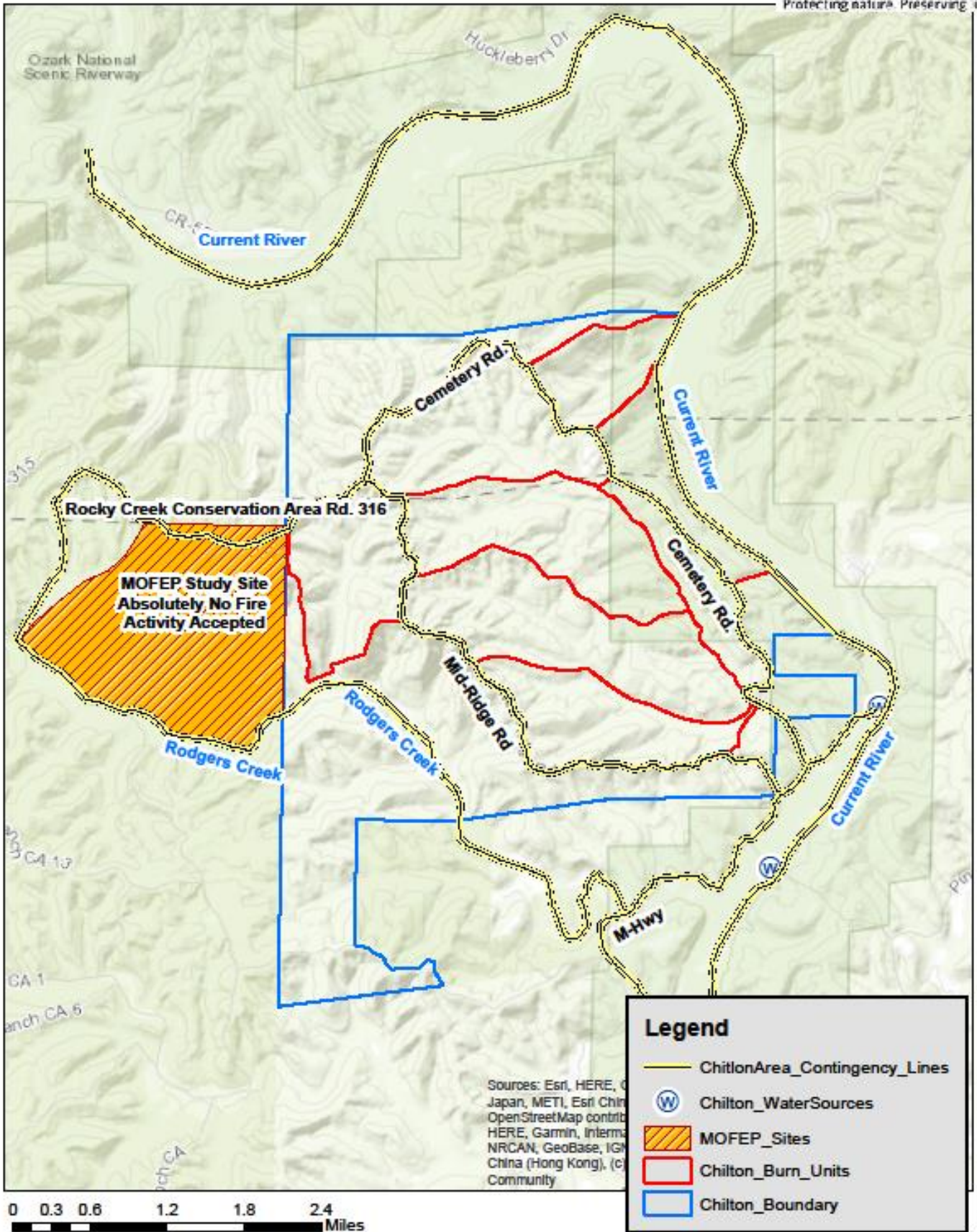
Chilton Creek Burn Units Map



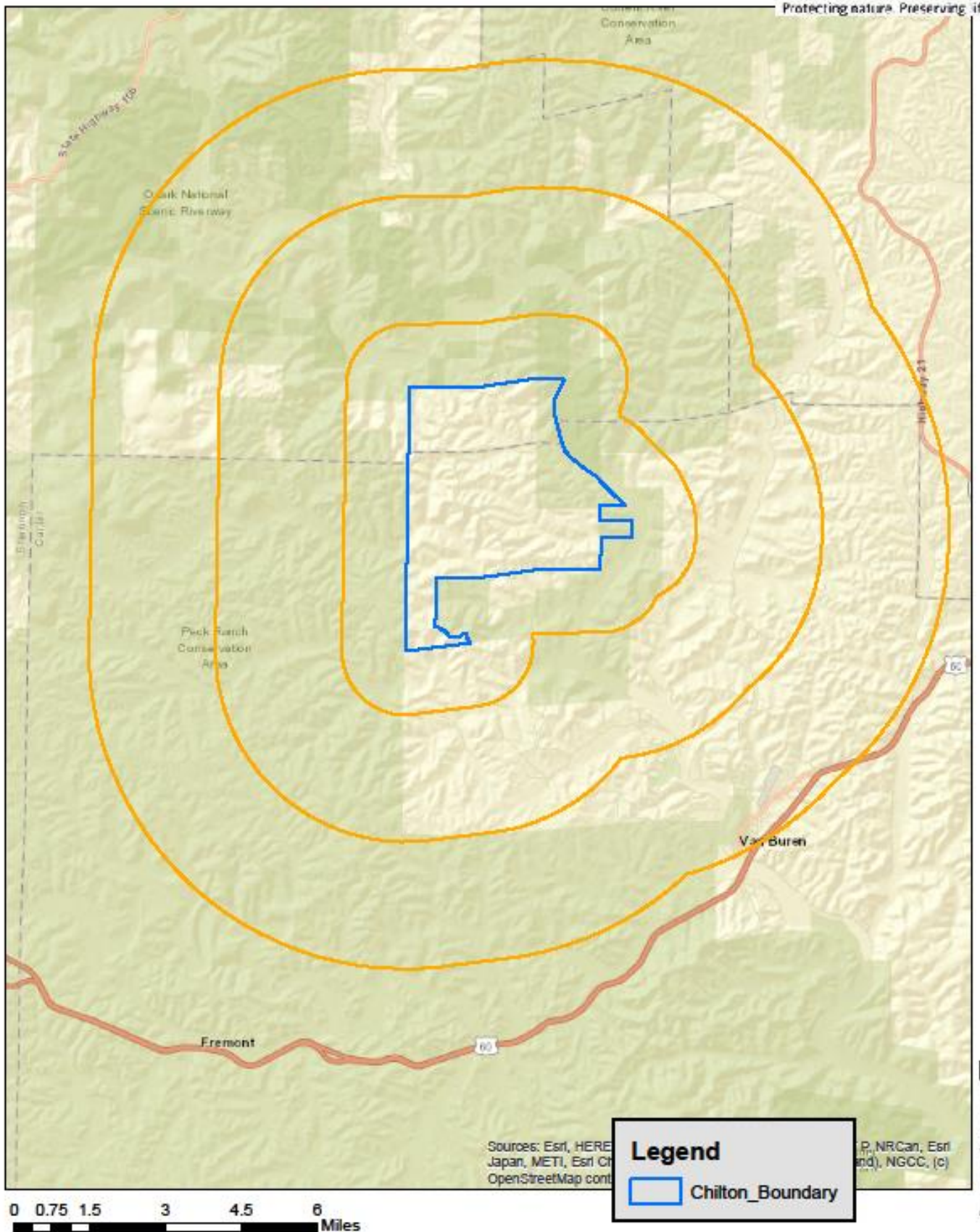
Legend

- Chilton_Burn_Units
- Chilton_Boundary
- Chilton Helicopter LZ
- Chilton_WaterSources

Chilton Creek Contingency Map



Chilton Creek Research and Demonstration Smoke Map



2/6/22, 3:51 PM

Carter Township, Missouri to US-60, Mountain View, MO 65548 - Google Maps



Carter Township, Missouri to US-60, Mountain View, MO 65548 Drive 47.6 miles, 48 min

Carter Township
Missouri

- ↑ 1. Head southeast on State Hwy M toward Co Rd M144
7.0 mi
- ↪ 2. Turn right onto US-60 W
40.6 mi
- ↪ 3. Turn right onto N Elm St
144 ft
- ↑ 4. Continue straight
148 ft
i Destination will be on the right

US-60
Mountain View, MO 65548

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Prescribed Fire Complexity Rating Worksheet

Site: Chilton Burn Units (excluding Slusher Hollow) State: Missouri Date: 2/9/2022

Complexity Score: Moderate (81-150 pts)

Weighting Factor X Complexity Value = Total Points. Sum of Total Points = Complexity Score.

Low = 44-80 pts Moderate = 81-150 pts High = 151-220 pts

Complexity Element	Weighting Factor	Complexity Value (1-5)	Total	Rationale and/or Mitigation Procedures
Safety	5	3	15	Moderate topography across the entire preserve. Use of ATV torch and or internal ignition.
Difficulty of containment	5	2	10	Each burn unit utilizes ridgetops for its perimeter and so most escapes will be moving downhill in timber litter.
Fuels and Fire Behavior	5	2	10	Fuels will have a longer residual burn time.
Wildland/Urban Interface	5	1	5	Preserve is very remote.
Objectives	4	2	8	Objectives able to be met under a variety of conditions
Management Organization	4	2	8	Simple management system but, may involve partners or volunteers.
Contingency Planning and Resources	4	3	12	The response time of the local VFD NPS, and MDC could take up to an hour due to its remoteness.
Natural, Cultural, Social Values	3	1	3	None known
Air Quality Values	3	2	6	Van Buren is approximately 5 miles to the southeast. Each burn unit may emit smoke multiple days.
Logistics	3	2	6	Lighter logistics to attend to
Tactical Operations	2	3	6	Tactical operations are not very complex due to size and fuel types. But they may involve an ATV torch and/or internal ignition.
Cooperator Coordination	1	2	2	Local partners may join for fire operations.
Complexity Score (Total Points)			91	

Consequence Analysis

Primary Factors	
Wildland Urban Interface (WUI)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Smoke Sensitive Areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Public/Political Sensitivity	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Secondary Factors	
Burn Complexity	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Escape Containment	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Residual Burning Fuels	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Third Party Lands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Consequence and Complexity rated by: Ryan Gauger 2/9/2022

Prescribed Fire Complexity Rating Worksheet

Site: Slusher Hollow burn unit State: Missouri Date: 2/9/2022

Complexity Score: Moderate (81-150 pts)

Weighting Factor X Complexity Value = Total Points. Sum of Total Points = Complexity Score.

Low = 44-80 pts Moderate = 81-150 pts High = 151-220 pts

Complexity Element	Weighting Factor	Complexity Value (1-5)	Total	Rationale and/or Mitigation Procedures
Safety	5	4	20	Steep topography with mid-slope line. Use of ATV torch and or internal ignition.
Difficulty of containment	5	4	20	The MOFEB study site is directly adjacent on the west side of this unit and any escape into it will be unacceptable.
Fuels and Fire Behavior	5	2	10	Fuels will have a longer residual burn time.
Wildland/Urban Interface	5	1	5	Preserve is very remote.
Objectives	4	2	8	Objectives able to be met under a variety of conditions
Management Organization	4	3	12	Simple management system with additional staff and may involve partners or volunteers.
Contingency Planning and Resources	4	4	16	The response time of the local VFD NPS, and MDC could take up to an hour due to its remoteness. West side has bad access.
Natural, Cultural, Social Values	3	5	15	If an escape were to occur in the MOFEB study site there would be major political/relationship issues.
Air Quality Values	3	2	6	Van Buren is approximately 5 miles to the southeast. Each burn unit may emit smoke multiple days.
Logistics	3	3	9	More logistics due to larger crew size and containment issues.
Tactical Operations	2	4	8	Tactical operations are more complex due to location of burn breaks and lack of access and may involve an ATV torch and/or internal ignition.
Cooperator Coordination	1	2	2	Local partners may join for fire operations.
Complexity Score (Total Points)			131	

Consequence Analysis

Primary Factors	
Wildland Urban Interface (WUI)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Smoke Sensitive Areas	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Public/Political Sensitivity	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Secondary Factors	
Burn Complexity	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Escape Containment	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Residual Burning Fuels	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Third Party Lands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Consequence and Complexity rated by: Ryan Gauger 2/9/2022

**GO/ NO GO CHECKLIST: PRE-BURN, CREW BRIEFING, TEST FIRE and POST-BURN CHECKLIST
 Prescribed Burn (Broadcast burning)**

Site Name: _____ Burn Unit: _____ Date: _____

Has the area (inside and outside the unit) experienced unusual drought conditions or does it contain above-normal fuel loadings which were not considered in the prescription development? If YES, go to question below. If NO, continue with Section A.	YES	NO
If YES, have appropriate changes been made to plans for ignition, holding, mop-up and patrol? If YES, continue with Section A. If NO, stop and consult with Fire Manager.		

A. PRE-BURN (Prior to Crew Briefing)

- Fire Unit is as described in plan and copy of plan is on site.
- Required firebreaks complete and are consistent with current and predicted conditions.
- Certified Burn Boss present, permits obtained. Give permit #'s: _____
- Required number of crew present with required protective clothing.
- Weather forecast obtained and within prescription. Long-range forecast checked for severe weather.
- Official and neighbor notifications complete.
- Required equipment for holding, weather monitoring, ignition and suppression is on-site and functioning.
- Crew has reviewed equipment.
- Planned ignition and containment methods are appropriate for current and predicted conditions.
- Planned contingencies and mop-up are appropriate for current and predicted conditions.
- List of emergency phone numbers are in each vehicle.
- Off-site contingency resources are operational and available.

B. CREW BRIEFING

- Each crew member has a map

Each item below has been discussed with crew:

- Burn unit size and boundaries.
- Burn unit hazards and safety issues, including LCES (*IRPG pg. 7*)
- Purpose of burn, anticipated fire and smoke behavior.
- Organization of crew and assignments.
- Methods of ignition, holding, mop-up, communications.
- Contact with the public; traffic concerns.
- Location of main roads, vehicles, keys, and nearest phone.
- Location of back-up equipment, supplies, and water.
- Contingencies for escaped prescribed fire.
- Planning for medical emergency (*IRPG pg. 2*)
- WUI concerns.
- Answer questions from crew.
- Ask crew if they wish to "turn down" an assignment or participation in the burn (*IRPG pg. 19-20*)

C. TEST FIRE

- On-site weather and fuel conditions are within prescription and consistent with forecast.
- Test burn conducted; fire and smoke behavior within prescribed parameters.

D. POST BURN CHECKLIST

- Mop-up completed as described in burn plan.
- Night patrol assigned, if needed.
- Day shift assigned for days following burn, if needed.
- Notifications of completed burn, if required.
- After Action Review (AAR) completed with crew.

Burn Boss sign and date form when burn is completed.

Burn Boss: _____

Date: _____

Attachment: TNC Documentation

Completed for all controlled burns on TNC property or burns contracted or led by TNC.

I. ALL BURNS

A. CONSEQUENCE ANALYSIS:

Does this burn have the potential for High Consequences from smoke or an escaped fire? Yes No

If Yes, the OU Director must be briefed on the burn prior to conducting the burn.

Date OU Director briefed: [Click here to enter a date.](#)

B. REVIEW OF LAWS

Review of Laws and Regulations complete? Yes No

C. TNC FIRE MANAGEMENT GUIDELINE EXEMPTIONS

Any exemptions in this burn plan to TNC Guidelines? Yes No

If Yes, justification for exemption:

D. BURN AREA OWNERSHIP:

Describe the ownership/management responsibility of the area to be burned:

Are TNC lands involved? Yes No

Are government owned lands involved? Yes No

Are third party *private* lands involved? Yes No

If third party private lands are involved, then complete *Section II* below.

E. FIRE PLANNING:

Is the need for and use of fire described in an appropriate management plan? Yes No

(A management plan may take different forms: such as existing preserve plans, site fire management plans, forestry plans, restoration plans, or the like)

If no, the burn plan must clearly describe how the burn advances conservation goals.

II. Private Land Burns

A. PERMISSIONS AND WAIVERS:

Permissions/Releases/waivers attached? Yes No NA

B. CONFLICT OF INTEREST*:

“TNC Disclosure Form for Conflicts of Interest” completed by the landowner, or an alternative conflict analysis been completed if the landowner refused to complete the Disclosure Form?

Yes No NA

Has the conflict screening identified a “covered person”?

Yes No NA

(If no, no further analysis required)

If Yes, has the proposed burn been approved by TNC’s Conflict Committee and are any conditions imposed by the Committee being followed? Yes No

(If No, consult with TNC attorney, and explain how resolved)

C. PRIVATE BENEFIT*:

Private Benefit analysis indicates that:

Conservation is the primary purpose for performing the burn? Yes No

Any landowner benefit is *de minimis* or incidental to the conservation outcome? Yes No

(If “No” to any of the above, consult with TNC attorney and attach/explain how resolved)

***See Memo entitled Conflict and Private Benefit Issues for Prescribed Burns on Private Lands on the TNC Intranet Fire Manual for further guidance.**