Hamby Unit Rx

Ozark Plateau National Wildlife Refuge, Oklahoma

DECLARED WILDFIRE REVIEW

U.S. FISH & WILDLIFE SERVICE

FIRE MANAGEMENT

FINAL REPORT

May 15, 2025

Prepared By: TOMMY LOWDER Digitally signed by TOMMY LOWDER Date: 2025.08.07 18:19:07 -05'00'

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Reviewed By: JEFFREY ADAMS Digitally signed by JEFFREY ADAMS Date: 2025.08.12 09:54:59 -06'00'

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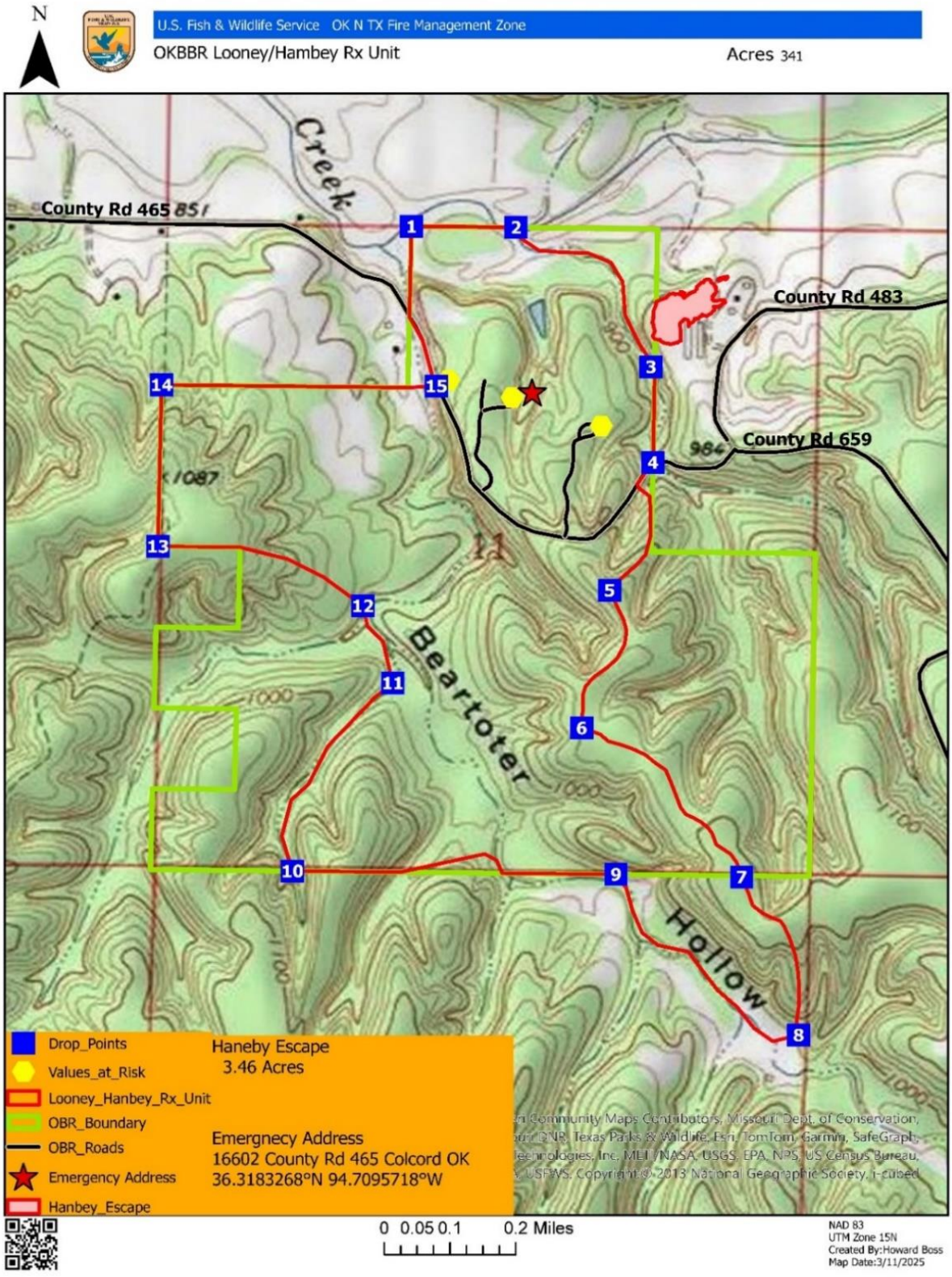
Damon Taylor – Agency Administrator

INTRODUCTION

On the afternoon of March 11, 2025, during a prescribed fire operation on the Ozark Plateau National Wildlife Refuge in Eastern Oklahoma, a spot fire occurred on private lands that consumed 3.5 acres and portions of an abandoned outbuilding. The Hamby Unit Prescribed Fire was implemented by the U.S Fish and Wildlife Service's (USFWS) Oklahoma/North Texas Fire Management Zone, with assistance from firefighting resources from Wyoming Bureau of Land Management and a module from the National Interagency Prescribed Fire Training Center (NIPFTC). The burn unit is 341 acres and was rated as a moderate complexity level burn that could be separated into two units, north (80 ac) and south (261 ac), or burned together.

At approximately 0800 CST on March 11, fire personnel and resources arrived at the Hamby Unit to review the unit layout and plan fireline strategy for burning the southern portion of the unit. After initial scouting, resources indicated that it was difficult to determine where all the control lines (leaf blower lines) were located. The RXB2 qualified (Q) went to assist with line location and after identifying lines were not completed, the decision was made to implement burning on the north portion of the Hamby Unit only. The northern portion of the unit is considerably smaller (80 acres) with control lines that consist of county roads, the Spavinaw Creek, and a dry creek bed. After a delay due to the change in units, a test fire was started at 1245. Operations proceeded as planned, with moderate fire behavior observed even though relative humidity (RH) values dropped below the forecasted minimums.

At 1600, fire personnel received a call from the Zone Fire Management Specialist, indicating a neighbor adjacent to the unit reported fire moving toward some chicken coops and their neighbor's house. The prescribed fire was declared a wildfire at approximately 1630 when resources identified a 3.5-acre spot fire on private property. The spot fire was burning native grass pasture, and a portion of an out-of-service chicken coop. Mutual aid resources were notified and responded from three neighboring Volunteer Fire Departments (VFD) to support on-scene resources.



The Review Team consisted of (position, station):

-TJ Lowder, Fire Management Officer, OK/N. TX Fire Management Zone
-Howard Boss, Prescribed Fire Specialist, OK/N. TX Fire Management Zone
-Brett Idol, Fuels Specialist, Region 2
-Jeff Adams, Fire Planner, Region 2

SUMMARY NARRATIVE

The Hamby Unit is located on the Ozark Plateau National Wildlife Refuge southeast of Jay, Oklahoma. The refuge is complexed with Sequoyah National Wildlife Refuge and all permanent employees are stationed at Sequoyah NWR, including the Agency Administrator.

Conditions of the unit prior to the implementation suggested that there was no level of drought with very low KDBI and the refuge had received over .75" of rain on the 7th and 8th of March. The unit had experienced several storms that damaged trees, resulting in above normal dead and down timber debris.

Resource Management and Prescribed Fire Plan objectives are listed as:

- Maintain Fire Regime Condition Class 1 (FRCC1) ecosystem
- Reduce natural fuel load to prevent future large wildfires
- Maintain ecosystem sustainability in a fire dependent ecosystem
- Maintain an open understory and mid-story for foraging bats
- 85%-95% reduction of surface fuels (1-hour and 10-hour)
- 25%-50% reduction of 100-hour fuels
- 25%-50% reduction of mid-story species

Incident Timeline

March 11, 2025

0815 - Resources, Oklahoma/North Texas Fire Management Zone fire resources along with detailed out-of-state resources arrived at the Hamby Unit and were sent to perform reconnaissance on the southern portion of the burn unit.

1000 – Firefighting resources communicated control lines were difficult to find, and preparation work was not complete.

1015 - RXB2 qualified (Q) and RXB2 trainee (T) went to scout the southern unit with a utility vehicle (UTV).

1100 – Due to incomplete preparation work and time of day, the RXB2-Q determined the smaller northern unit of Hamby would be a better option to complete.

1115 - RXB2 sent the out-of-state resources to recon the north Hamby unit, where they completed additional preparation work around structures in the middle of the unit.

1145 - An operational briefing was conducted by the RXB2-T and followed up by breakout briefings from the two firing groups.

1245 - Test fire was started at drop point (DP) 1 and DP2. Fuel type consisted of mixed hardwood leaf litter and pine needle cast.

- Winds – Southwest 5-10 mph
- Temperature – 77°F
- RH – 23%

1300 - The test fire was deemed successful, and ignitions continued with one ignition group working counterclockwise from DP1 and another clockwise from DP2, while an interior ignitions group worked from north to south on an interior ridge top. Minor blow line, between DP2 and DP4, relocation was being conducted on the east line to exclude debris piles near the creek.

1345 - Operations normal. Relative humidity drops below the minimum prescription (Attachment 1) value of 20% (weather observations – ICS-214)

- Winds – Southwest 8-12 mph
- Temperature – 83°F
- RH – 16%

1350 - RXB2 talked with two firing groups about the option to terminate the prescribed fire given the low relative humidity values, which were now lower than predicted and out of prescription. However, due to the amount of fire on the ground, completing the unit was the safer and more effective option.

1400 - Discussed completing an RH amendment to the burn plan with the refuge manager/AADM. The amendment was approved and prescribed fire operations continued (Attachment 3).

1530 - Report of a spot on the west line that was extinguished.

1600 - Received report from the off-site Fire Management Specialist, who received a call from a neighboring property owner, that the prescribe fire was moving toward their neighbor's house and chicken coop.

1605 - RXB2, Engines 4464 and 2865, and three UTVs with water arrive at the location of the report (on the ridge east of the east holding line).

1615 - Forward progress was stopped. The perimeter of the spot was secured, but not before the fire damaged the northern 1/3 of the chicken coop. RXB2 called 911 to request VFD assistance with the involved chicken coop.

1645 - Three VFD engines (Colcord, Eucha, and Jay) arrived on scene and RXB2 worked with them to manage the fire impacting the chicken coop.

1700 – The VFDs extinguished the fire in the chicken coop and Jay and Eucha VFDs returned to their station, leaving Colcord VFD engine to complete the mop up of the chicken coop.

1715 - Colcord VFD returned to their station. Two UTVs and E-2865 remained on location continue

mop up. The rest of the fire resources returned to the burn.

1830 - Perimeter ignitions completed on the Hamby Unit.

1900 - After action review.

1930 - Last check of the burn unit and spot fire.

2000 - All fire resources released.

PRIMARY FINDINGS & RECOMMENDATIONS

An analysis of seasonal severity, weather events, and on-site conditions leading up to the wildfire declaration. Include fire weather forecasts including any spot forecasts, Remote Automated Weather Station (RAWS) data and National Fire Danger Rating System (NFDRS) data:

Findings

- Ozark Plateau NWR (OK-OPR) does not have a Remote Automated Weather Station (RAWS) and relies on a network of non-NFRDS weather stations maintained by Oklahoma Mesonet that utilize the Oklahoma Fire Danger Model (OKFD). A full assessment of on-site NFRDS data is limited to the use of nearby RAWS stations and the Oklahoma Fire Departments (OKFD) Network. The OK-OPR prescribed burn plan identifies the Idabel and Broken Bow RAWS for observations to be monitored prior to ignition. This is potentially problematic as theses RAWS locations are more than 150 miles to the south. For analysis the Oklahoma Mesonet station at Jay (~6 mi) and the Wedington RAWS (Station ID 30901) (~20 mi) were used.
- Seasonal Predicted Services products do not show anticipated significant wildfire potential (Fig 1). Traditional drivers of wildfire during this period are associated with dry frontal boundaries with high winds and dry air mass. Forecasted drought indices (KBDI) at the Jay Mesonet site were 16 (0-800) on the day of implementation and the unit had received approximately .75” of rain on 3/8/2025. Observed Energy Release Component (ERC) values for Fire Danger Rating Area 17A were approaching the seasonal maximum and the 90% percentile of observations (Fig 2).

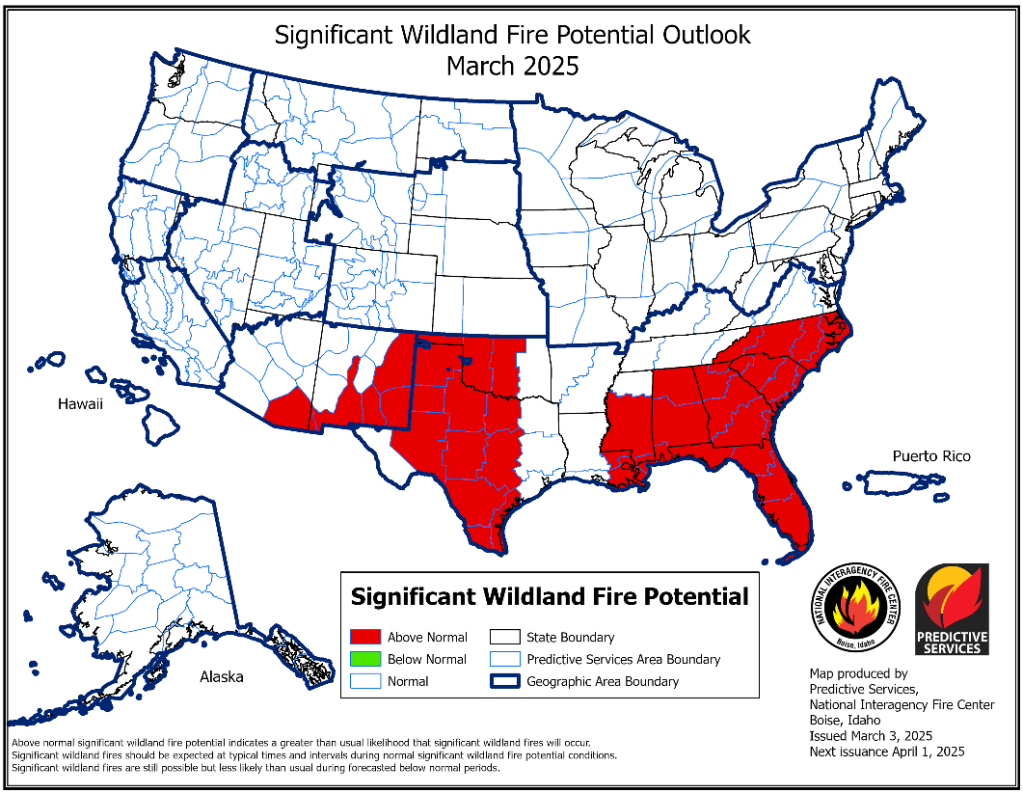

Significant Wildland Fire Potential Outlook
March 2025
Hawaii
Alaska
Puerto Rico
Significant Wildland Fire Potential
Above Normal
Below Normal
Normal
State Boundary
Predictive Services Area Boundary
Geographic Area Boundary
Map produced by
Predictive Services,
National Interagency Fire Center
Boise, Idaho
Issued March 3, 2025
Next issuance April 1, 2025
Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur.
Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions.
Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Fig. 1

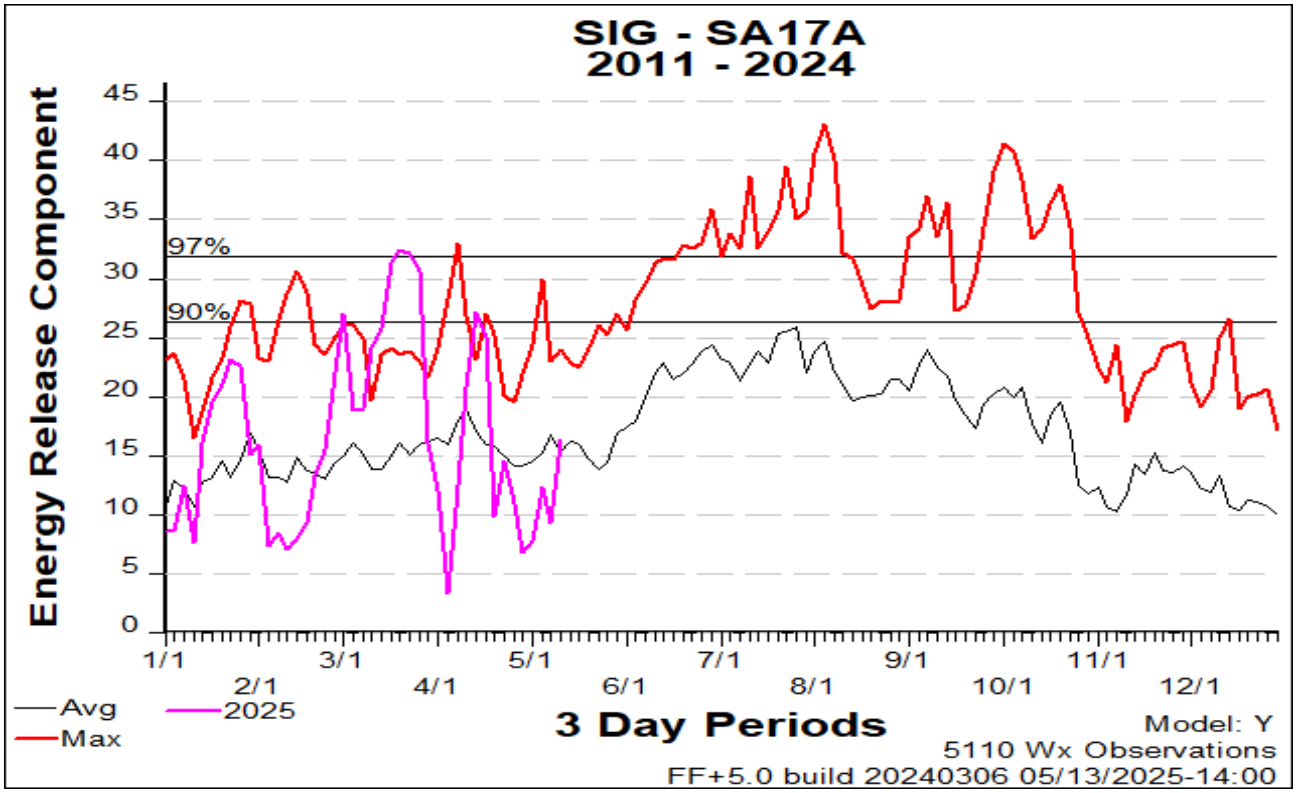

SIG - SA17A
2011 - 2024
Energy Release Component
45
40
35
30
25
20
15
10
5
0
97%
90%
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
10/1
11/1
12/1
Avg
Max
2025
3 Day Periods
Model: Y
5110 Wx Observations
FF+5.0 build 20240306 05/13/2025-14:00

Fig. 2

- The spot weather (Attachment 2) forecast indicated that shortly after ignitions at 1245 relative humidity values were predicted to fall below the 20% threshold identified in the Prescribed Burn Plan from 1400 to 1800. Relative humidity values were predicted to be their lowest at 17% at 1500 and continue to 1600. On site weather was recorded at 14% at 1500. Fire resources identified this change thus sought and received a verbal one-time approval from the Agency Administrator to continue the prescribed fire with the relative humidity out of prescription. The approval was captured in an amendment to the plan post ignitions. The additional risk associated with low relativity humidity was mitigated by the low KDBI values, additional staffing, additional equipment above the required amounts, and the relatively small size of the burn unit (80 acres).
- The OKFD weather station in Jay, OK (closest to burn unit) was used for planning purposes, but may not capture and communicate in detail the unexpected drying that occurred. NFRDS and weather observations from the day are included below in Chart 1 and 2.

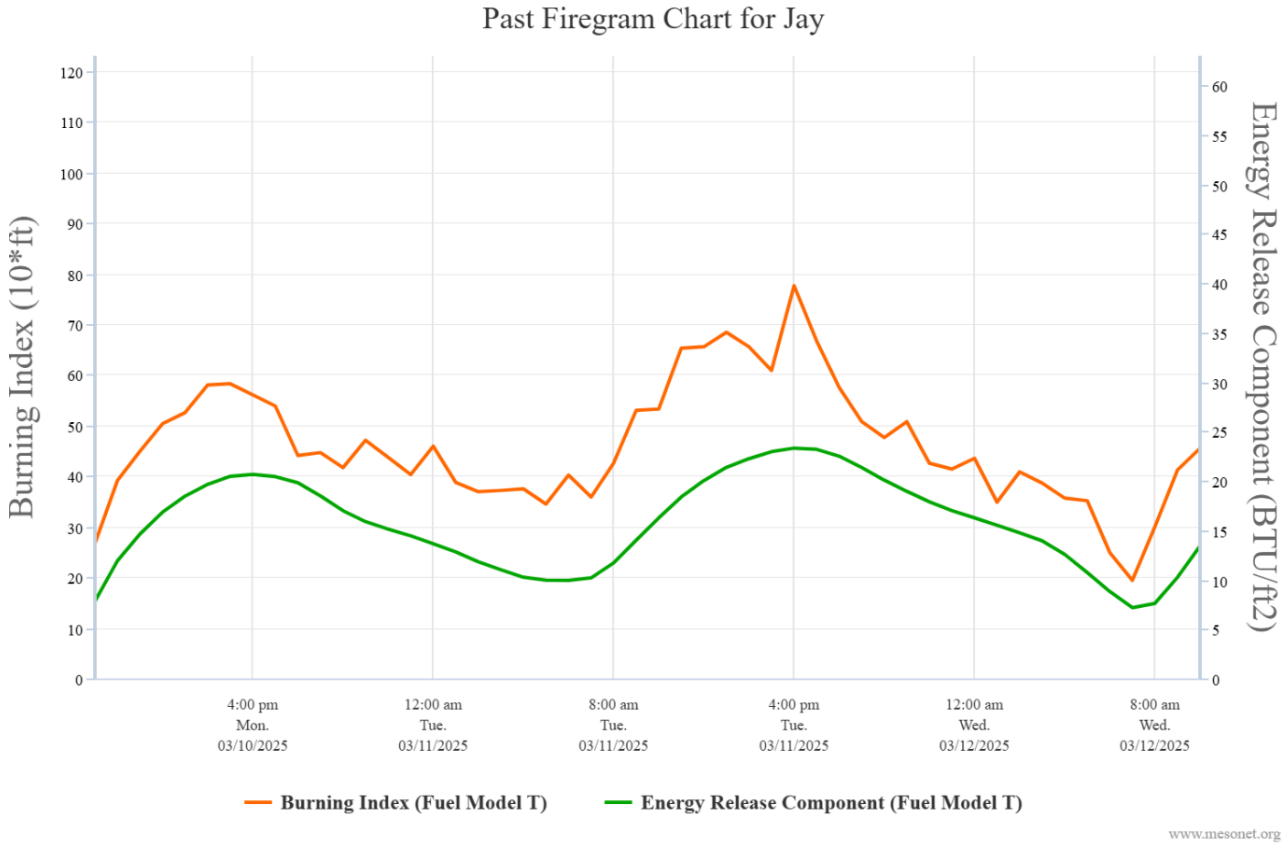


Chart 1

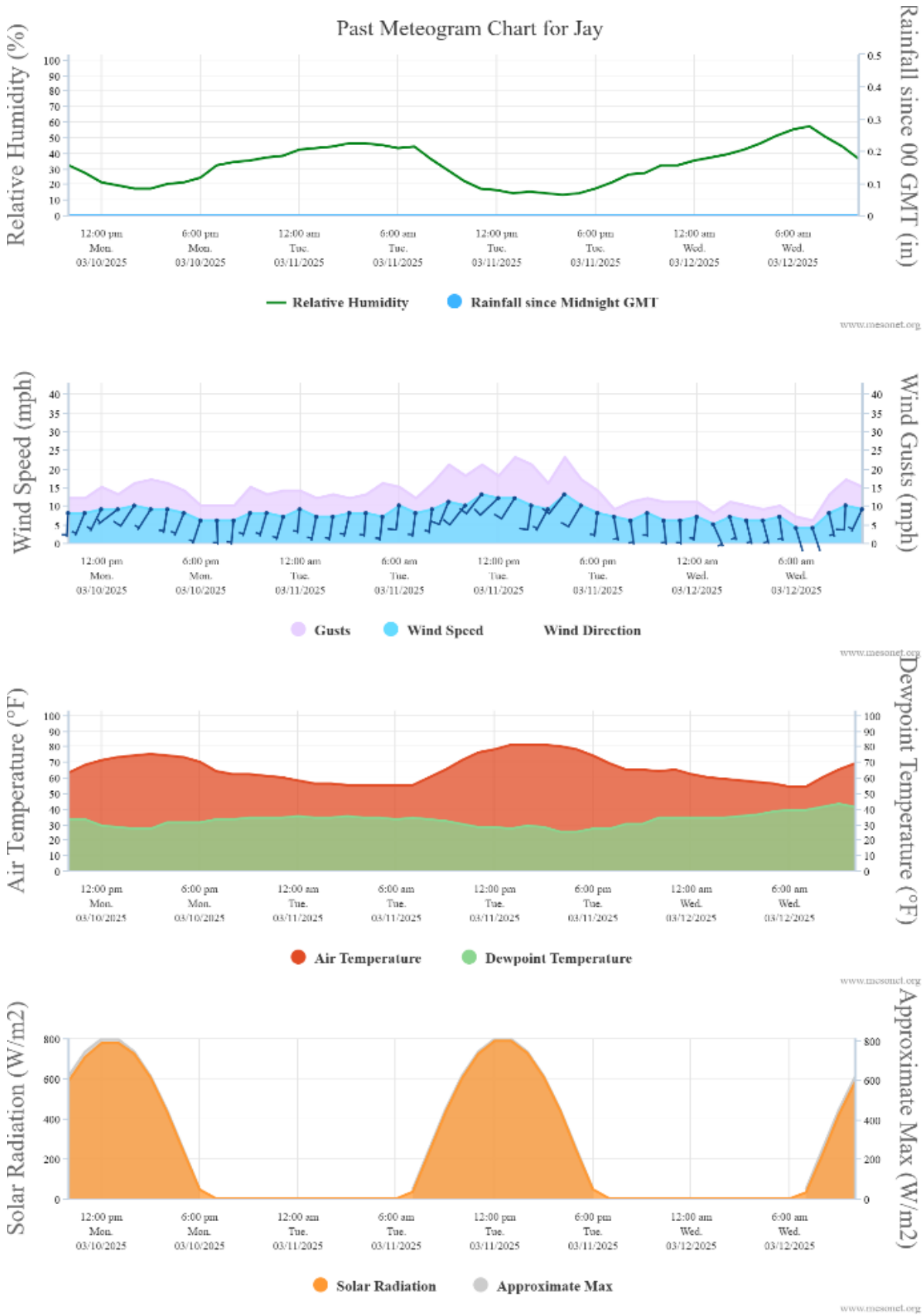

Past Meteogram Chart for Jay
Relative Humidity (%)
Rainfall since 00 GMT (in)
12:00 pm Mon. 03/10/2025
6:00 pm Mon. 03/10/2025
12:00 am Tue. 03/11/2025
6:00 am Tue. 03/11/2025
12:00 pm Tue. 03/11/2025
6:00 pm Tue. 03/11/2025
12:00 am Wed. 03/12/2025
6:00 am Wed. 03/12/2025
Relative Humidity
Rainfall since Midnight GMT
www.mesonet.org
Wind Speed (mph)
Wind Gusts (mph)
Gusts
Wind Speed
Wind Direction
www.mesonet.org
Air Temperature (°F)
Dewpoint Temperature (°F)
Air Temperature
Dewpoint Temperature
www.mesonet.org
Solar Radiation (W/m2)
Approximate Max (W/m2)
Solar Radiation
Approximate Max
www.mesonet.org

Chart 2

- The USDA Forest Service maintains the Wedington (30901) RAWS located 20 miles from the Hamby Burn Unit. Observations (Table 1) from the Wedington RAWS indicated that while KBDI values were below prescription, conditions had rapidly dried in the preceding days before ignition. Beginning March 6, observations indicate that one-hour fuel moistures were out of prescription for four of the five preceding days and the day of ignition. Ten-hour fuel moistures were out of prescription the day before and day of the prescribed fire.

Date	1 Hr Fuel	10 Hr Fuel	100 Hr Fuel	KBDI	ERC	BI
3/1/2025	6.49	8.36	11.63	27	36.42	28.18
3/2/2025	6.79	7.87	11.3	27	37.86	26.19
3/3/2025	10.69	9.68	11.3	29	36.08	24.97
3/4/2025	11.26	16.79	11.58	35	26.93	20.16
3/5/2025	8.42	12.81	20.73	35	21.74	24.84
3/6/2025	5.84	8.69	16.85	27	26.13	21.24
3/7/2025	5.44	7.59	13.8	31	30.93	30.35
3/8/2025	13.08	12.07	13.89	35	26.58	18.77
3/9/2025	5.52	9.22	13.69	35	32.6	24.71
3/10/2025	5.32	6.58	12.19	39	37	24.79
3/11/2025	4.43	5.69	10.82	51	41.41	29.12
3/12/2025	6.98	7.13	10.39	63	41.82	25.4

Table 1

Recommendations

Both long- and short-term fire danger ratings should be evaluated prior to prescribed implementation. Conditions should be evaluated to understand the potential for unexpected fuel scenarios. In Oklahoma, the KBDI has proved to be more useful during the growing season than during the dormant season. Also, as it was developed mainly for forested landscapes, its usefulness for grassy landscapes is somewhat questionable (Mesonet). Prescribed fire prescription parameters plan for KBDI above 100, and while this indicates the absence of underlying drought, rapidly drying atmospheric patterns may present higher than perceived fire danger within the finer fuels. In this case, it is recommended to evaluate NFRDS ratings that may provide a more complete understanding of the fire environment. This may include evaluating the appropriateness of installing a new RAWS station within the refuge.

- Caution should be taken when planning for prescribed fire implementation, especially when

spot weather forecasts indicate conditions may fall out of prescription during the period of burning. Despite mitigations (staffing), administrative approval (amendment), and perceived moist conditions (KDBI), low RH for prolonged periods rapidly increase the available fuels and increase the opportunity for fine fuels to carry fire and for spots to establish.

- Evaluate current prescription parameters and explore the use of alternatives to KBDI during winter burns.

An analysis of the actions taken leading up to the wildfire declaration for consistency with the prescribed fire plan. This will include whether it was adequate and whether it was followed:

Findings

- In accordance with agency policy, the OK-OPR Prescribed Fire Plan specifies that any fire spreading onto private lands without an established Memorandum of Understanding (MOU) will be reclassified as a wildfire.
- Notification of the spot on to private land was relayed to the RXB2/Fire Management Officer (FMO) and upon verification of land ownership, the prescribed fire was declared an escape.
- The AA and the regional office were notified of the escape within 30 minutes of the incident occurring.
- Contingency resources were called and were on scene within 45 minutes.

Recommendations

- No Recommendations – The prescribed fire plan and wildfire declaration process is clearly stated and was followed appropriately.

An analysis of the prescribed fire plan for consistency with policy:

Findings

- The plan is a programmatic plan and is in the required Prescribed Fire Plan (PMS-484) format. All signatures (FMO, Fire Management Specialist, and AADM) are current and valid as of 2/23/2024.

Recommendations

- No Recommendations – All elements are included and appropriate.

An analysis of the prescribed fire plan and associated environmental parameters:

Findings

- The spot weather forecast (attachment 2) indicated that the RH would fall out of prescription after the expected burn period.
- Due to poor line preparation and the adjustment of which part of the unit would be burned, ignitions began later than expected.
- Ignitions of the prescribed fire started within the written prescription based on the forecast and

on-site weather at the time of the test fire.

- The recording of the next on-site weather taken (1345) identified RH values had dropped lower than the minimum prescription value and lower than the spot weather forecast for that time of day.
- An amendment and mitigation measures were discussed, during implementation (1400), and approved by the RXB2 and AADM. Discussed mitigation measures included:
    - Exceeding the minimum personnel, five, with 19 total personnel.
    - Exceeding the minimum equipment, one engine ENG and one UTV, with a total of three engines and four UTVs.
    - Smaller unit (80 acres) that takes less time to complete.
    - Good holding lines on the south, west, and north side of the unit.
- Staffing level exceeded the written plan with additional resources assisting from NIPFTC and detailers.

Recommendations

- The prescribed fire plan would benefit from considerations for additional fuel conditions and parameters, such as ERC and fuel moistures. KDBI should be used with caution, as it is not an effective indicator of immediate fuel conditions on rapidly drying weather trends. This could be addressed in either the prescription or the pre-burn considerations. Identifying thresholds and trends in short, moderate and long-term fuel conditions and NFRDS metrics can help identify appropriate staffing, line prep and other mitigation.
- In general, it is not advised to conduct firing operations when the prescription parameters are predicted to fall out of prescription when denoted in the spot weather forecast. While an amendment to the plan was authorized during the burn, such adjustments should be identified and conducted prior to the beginning of ignitions.

A review of the approving line officer's qualifications, experience and involvement including adequate program oversight:

Findings

- The Agency Administrator is currently qualified as AADM. AADM Training Complex Comp 3/7/2023 and has had RT-300 on 11/5/2024.
- The Agency Administrator completed a one-time amendment, by request of the RXB2, to burn under RH values below prescription minimums. The amendment was completed during burn operations, after the RH values dropped below prescription minimums, as the spot weather predicted. Although several mitigations were in place to support the amendment to continue burning under prescription minimums, the timeliness of the amendment was in question.

Recommendations

- Continue to work closely with the AADM during refreshers and preseason planning and coordination, so implementation continues to run smoothly during prescribed fire season on the Zone.
- When predicted weather elements are expected to fall outside of prescription parameters, approvals for amendments should be secured prior to implementation. Starting ignitions, knowing that conditions will fall out of prescription, and not having AA approval exposes the organization to potential liability in the event of an escape or incident.

A review of the qualifications and experience of key personnel involved:

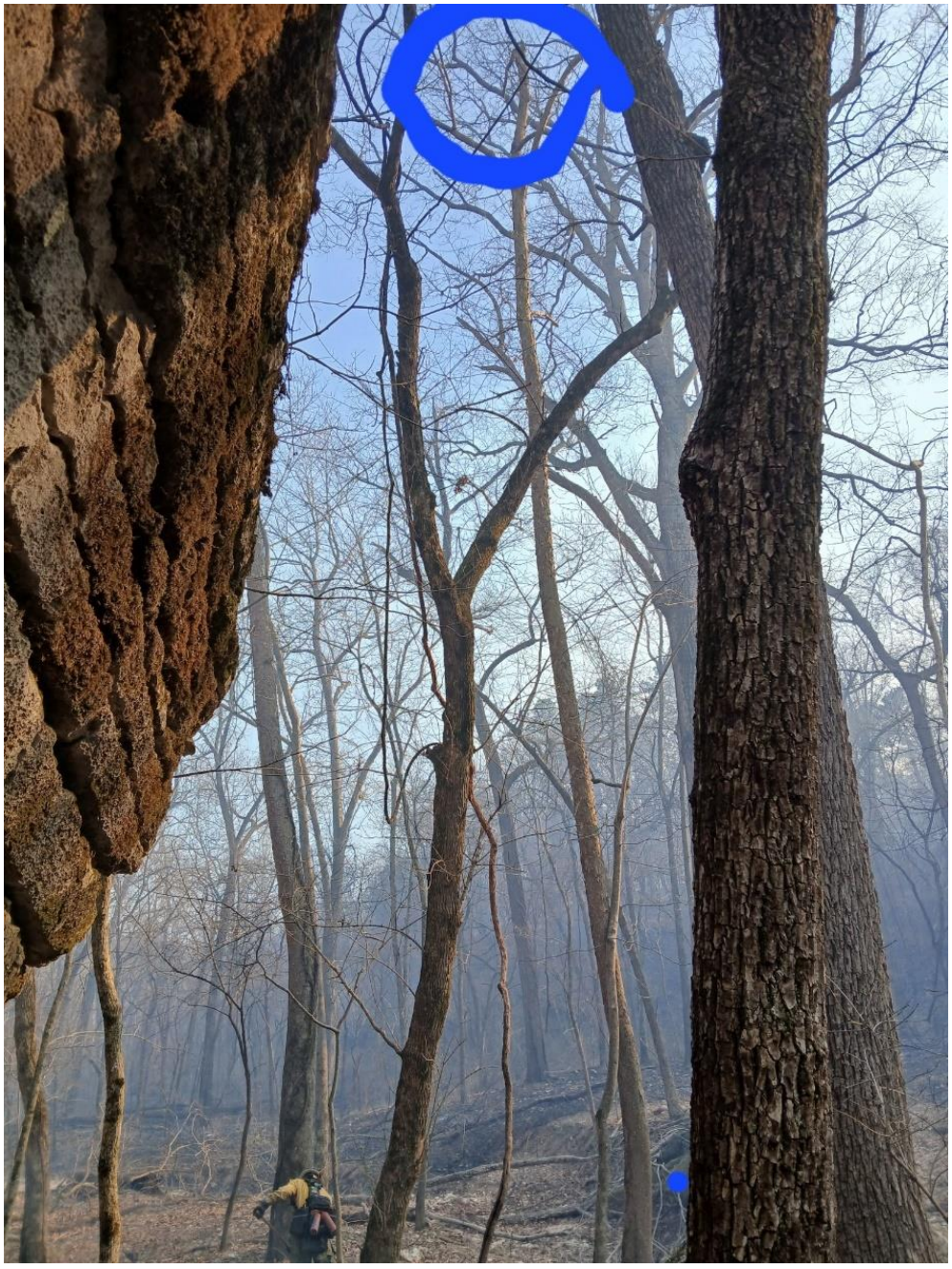
Findings

- All USFWS personnel on the prescribed fire were fully qualified in the positions they functioned in during implementation.
- All BLM and NIPFTC staff on the prescribed fire were fully qualified in the positions they functioned in during implementation.

Recommendations

- Continue ensuring all employees are qualified and required trainings have been completed to avoid any unknown expirations.

A summary of causal agents contributing to the wildfire declaration:



Findings

- Recent wind-storm damage breaking the tops out of live trees adjacent to control lines. Low RH values made adjacent fuels more available and receptive to spotting. Fireline placement at the bottom of a drainage limited visibility of spotting activity on the ridge above.
- No agreement was in place with the private landowner to conduct a joint burn and establish a more effective control line.

Recommendations

- Allocate more time to evaluate control line for holding issues or concerns.
- Evaluate the prescription parameters and incorporate the most reflective fire danger indices

available.

- Coordinate with the regional office and private landowner to establish an MOU for conducting burns on private property.

Determine the level of awareness and understanding of procedures and guidance of the personnel involved:

Findings

- All personnel on scene made proper notifications and followed the chain of command when declaring the incident a wildfire.

Recommendations

- Continue discussions with AADMs and line personnel regarding escaped prescribed fire notifications and procedures.
- Continue to identify and confirm availability of contingency resources.

Establish accountability:

The Agency Administrator and Burn Boss need to ensure that prescribed fire operations are planned with the appropriate NFRDS indices for both the current and forecasted fuel conditions. In addition, the burn plan preparation should consider incorporating prescription parameters that reflect indices that are appropriate to the local environment and seasonality

Findings

- KDBI was below the minimum prescription parameter of 100
- Relative humidity was predicted below the prescription parameter of 20%
- There is not a representative RAWS station identified in the prescribed fire plan.
- ERC within the local predictive service area was near or at seasonal maximums and the 90%, indicating that a rapid drying of the fuels occurred, despite drought indices being well below seasonal averages.

Recommendations

- To provide a more representative prescription parameter than KDBI. KDBI is recognized as having limitations during the winter in grasslands and deciduous forest where fine fuels respond to changes faster that the KDBI model can compensate for.
- Utilize the corresponding National Wildfire Coordinating Group (NWCG) predictive service area (SA17A) to monitor short and long-term NFRDS indices and to incorporate them into prescribed fire operational planning.
- Continue to monitor conditions on-site during implementation.

Synopsis of Lessons Learned

Utilization of KBDI values during winter months as a representation of fuels conditions has limitations. Monitoring and tracking short and long-term NFRDS values may provide a more

complete perspective of expected fire behavior and limitations.

This unit has been burned consistently on a two-to-three-year return interval using the exact line placement. Incorporating a private landowner agreement would allow for a better line placement out of the drainage along with expanding the agency's hazardous fuels reduction footprint.

Increased awareness of storm damaged trees will need to be considered for future implementations. Where snags on the unit were prepped, a live tree with a broken-out top was the source of spotting on the prescribed fire.

The Oklahoma/North Texas Fire Management Zone is responsible for managing fuel treatments and responding to wildfires on 14 National Wildlife Refuges and a Fish Hatchery. Most prep work is completed pre-season leading up to implementation starting January 1st and running through early to mid-April (busy season). When leaf blower lines are present, that preparation is often done a few days leading up to implementation or on occasion the day of implementation. Recognizing additional time is needed to prepare and familiarize resources with the unit perimeter is essential to the success of unit implementation.

Attachments

Attachment 1: Prescribed Burn Plan Prescription Parameters

FIRE BEHAVIOR PARAMETERS			
	LOW	**PREFERRED**	**HIGH**
AIR TEMPERATURE	35	50-65	105
WIND SPEED,20 foot	4 mph	8 to 12 mph	20 mph
1-HR FUEL MOISTURE (1- HR, 10-HR, and 100-HR fuel moistures are directly correlated)	6%	8 to 12%	17%
KEETCH-BYRAM DROUGHT INDEX	100	200-500	700
RELATIVE HUMIDITY	DIRECT CORRELATION BETWEEN HUMIDITY AND FUEL MOISTURE.		
	MINIMUM	**MAXIMUM**	
	20%	65%	
CLOUD COVER	MAXIMUM CLOUD COVER OF 100%.		
SMOKE MANAGEMENT PARAMETERS			
WIND SPEED, 10 M (32.8'	**MINIMUM**	**MAXIMUM**	
	4 mph	30 mph	
WIND DIRECTION	Any		
TRANSPORT WINDS MIXING HEIGHT	MINIMUM MIXING HEIGHT OF 1,700' AGL.		
TRANSPORT WIND SPEED	MINIMUM SPEED OF 9 mph.		

Spot Forecast for OKOZPR Hamby RX...USFWS
National Weather Service Tulsa OK
626 AM CDT Tue Mar 11 2025

Forecast is based on ignition time of 0730 CDT on March 11.
If conditions become unrepresentative...contact the National Weather Service.

Please contact NWS Tulsa at (918)838-7838, if you have questions or concerns with this forecast.

.DISCUSSION...
Sunny and warm conditions will prevail today, with humidity values falling below 20 percent this afternoon. South to southwest winds will increase to around 10 miles an hour today, with gusts between 15-20 miles an hour.

.REST OF TODAY...

Sky/weather.....Sunny (0-5 percent).
Max temperature.....Around 81.
Min humidity.....17 percent.
Dewpoint.....33.
Wind (20 ft).....Southwest winds 6 to 9 mph. Gusts up to 21 mph in the late morning and afternoon.
Mixing height.....4400 ft AGL.
Transport winds.....Southwest 17 to 26 mph increasing to around 28 mph late in the afternoon.
Smoke dispersal.....Good (40000 knot-ft) early in the morning increasing to excellent (108196 knot-ft) in the afternoon.
Stability class.....4.
1700FT Avg MIX T(F).68 increasing to 78 in the afternoon.

TIME (CDT)	7AM	8AM	9AM	10A	11A	12P	1PM	2PM	3PM	4PM	5PM
Sky (%)	4	3	2	1	1	3	1	0	0	0	0
Weather cov.											
Weather type											
Tstm cov											
Temp	54	54	58	63	69	73	76	79	81	81	81
Dewpoint	35	35	34	34	33	33	33	33	32	32	33
RH	49	48	41	34	26	23	21	19	17	17	18
20 FT wind dir.	S	S	S	S	SW	SW	SW	SW	SW	SW	S
20 FT wind spd.	6	6	7	8	8	8	8	8	9	9	8
20 FT wind gust	14	14	14	16	16	16	16	16	17	16	16
Mix hgt (kft)	0.6	0.6	0.7	1.4	1.5	1.9	2.6	3.3	4.0	4.4	4.4
Transp wind dir.	S	S	SW	SW	SW	SW	SW	SW	SW	SW	SW
Transp wind spd.	18	17	18	23	23	23	23	25	25	26	28
Vrate kt-ft/1K.	40	40	40	40	40	40	108	108	108	108	108
Ventrate Cat.	FR	FR	FR	FR	FR	FR	VGD	VGD	VGD	VGD	VGD
1700FT Mix T(F).	65	64	64	65	68	72	76	79	80	81	81

.TONIGHT...

Sky/weather.....Mostly clear (0-10 percent).
Min temperature.....Around 52.
Max humidity.....63 percent.
Dewpoint.....35 increasing to 39 in the late evening and overnight.

```
Wind (20 ft).....South winds 5 to 7 mph.
Mixing height.....600 ft AGL.
Transport winds.....South 16 to 22 mph.
Smoke dispersal.....Excellent (108196 knot-ft) early in the evening
                    decreasing to poor (12459 knot-ft) late in the
                    night.
Stability class.....5.
1700FT Avg MIX T(F).75 decreasing to 68 overnight.

TIME (CDT)      6PM 7PM 8PM 9PM 10P 11P MID 1AM 2AM 3AM 4AM 5AM
Sky (%).........1   0   1   1   2   3   4   11  7   6   4   4
Weather cov.....
Weather type....
Tstm cov........
Temp............79  75  72  66  65  63  62  61  60  59  56  55
Dewpoint........33  35  36  37  38  38  40  40  40  40  40  40
RH..............19  23  27  34  37  39  44  46  47  49  55  57
20 FT wind dir..S   S   S   S   S   S   S   S   S   S   S   S
20 FT wind spd..8   6   6   6   6   6   6   6   6   5   5   5
20 FT wind gust.14  13  13  13  13  13  13  13  12  12  12  12
Mix hgt (kft)...1.9 0.7 0.6 0.6 0.7 0.8 0.8 0.7 0.7 0.7 0.7 0.6
Transp wind dir.SW  S   S   S   S   S   S   S   S   S   S   S
Transp wind spd.22  17  17  18  17  18  18  20  18  17  17  16
Vrate kt-ft/1K..108 12  12  12  12  12  12  13  13  13  13  13
Ventrate Cat....VGD PR  PR  PR  PR  PR  PR  PR  PR  PR  PR  PR
1700FT Mix T(F).80  79  77  76  74  73  72  71  70  69  68  66

.WEDNESDAY...

Sky/weather.........Sunny (15-25 percent) then becoming partly
                    sunny (55-65 percent).
Max temperature.....Around 80.
Min humidity........25 percent.
Dewpoint............42.
Wind (20 ft).....South winds 5 to 7 mph.
Mixing height.....3600 ft AGL.
Transport winds.....South 15 to 20 mph.
Smoke dispersal.....Fair (13114 knot-ft) early in the morning
                    increasing to excellent (62295 knot-ft) in the
                    afternoon.
Stability class.....4.
1700FT Avg MIX T(F).67 increasing to 77 in the afternoon.

TIME (CDT)      6AM 7AM 8AM 9AM 10A 11A 12P 1PM 2PM 3PM 4PM 5PM
Sky (%).........6   3   4   3   2   5   13  14  23  41  59  65
Weather cov.....
Weather type....
Tstm cov........
Temp............54  52  54  57  63  67  72  75  78  80  80  79
Dewpoint........40  40  41  43  44  44  43  43  41  41  41  43
RH..............59  63  61  59  50  43  35  32  27  25  25  28
20 FT wind dir..S   S   S   S   S   S   S   S   S   S   S   S
20 FT wind spd..5   5   6   6   7   8   8   7   7   7   7   6
20 FT wind gust.12  12  12  13  14  14  14  14  14  14  14  13
Mix hgt (kft)...0.6 0.6 0.6 0.8 1.4 1.9 2.2 2.7 2.8 3.2 3.6 3.0
Transp wind dir.S   S   S   S   S   SW  S   S   SW  SW  S   S
Transp wind spd.15  15  16  17  20  20  18  20  18  18  20  20
Vrate kt-ft/1K..13  36  36  36  36  36  36  62  62  62  62  62
Ventrate Cat....PR  PR  PR  PR  PR  PR  PR  GD  GD  GD  GD  GD
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1700FT Mix T(F).65  64  63  63  64  67  71  75  78  80  80  76

$$
Forecaster...PLATE
Requested by...TJ LOWDER
Type of request...PRESCRIBED
.TAG 2505752.1/TSA
.DELDT 03/11/25
.FormatterVersion 2.0.0
.EMAIL andrew.clark2@usda.gov,tj_lowder@fws.gov
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Attachment 3: Agency Administrators signed Amendment

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Oklahoma/North Texas Fire Management
32 Refuge Hq
Indiahoma, OK 73552

This memo serves to amend the Prescribed Burn Prescription for Hamby Unit on the Ozark Plateau National Wildlife Refuge. The purpose of this amendment is to cover the forecast for the day of ignitions, although there is no intent to burn during the lowest predicted RH values for the day. The prescription parameters have the RH values for this unit as a low of 20%, and the forecast for 3/11/2025 is around 17%. This is a one time amendment to the plan to allow for the low RH values. The Hamby unit a relatively small unit (80 Acres), with County Rd 465 and the Spavinaw Creek around 3 sides of the unit. We will be exceeding the required minimums of personnel (Minimum is 5) to 19 personnel, and equipment (minimum is 1 Engine and 1 UTV) to 3 Engines and 4 UTV's. The Hamby unit typically takes 2-3 hours to complete reducing the heat duration on the perimeter. By exceeding the required minimums for both personnel and equipment, along with short ignition duration it will allow us to effectively manage the Hamby Unit in a safe manner and accomplish the objectives within the burn plan.

Agency Administrator _/s/ Damon Taylor _____ Date 3/11/2025
Zone FMO _/s/ TJ Lowder _____ Date 3/11/25