

PRESCRIBED BURN PLAN

IRVINE PRAIRIE 2022 1 of 1

SITE/TRACT: Irvine Prairie- South Tract, West Unit

LANDOWNER/OPERATOR: Tallgrass Prairie Center, University of Northern Iowa

ADDRESS: 1173 55th St, Dysart, IA 52224

ACRES TO BURN: 25

TOWNSHIP: Bruce, T86NR12W **SECTION:** 32

PLANNED DATE FOR BURN: 4-15-22

EXPIRATION DATE: 5-20-22

Notification of units of government:

Local Fire Dept.: Dysart Fire Department* (City of Dysart)

Phone: 319-476-5690

Sheriff/County Dispatch: Benton County Sheriff Office

Phone: 319-472-2337

Other: Tama County Sheriff Office

Phone: 641-484-3760

Notification of neighbors (in advance and day of):

Name: Cathy Irvine (north)

Phone: 319-640-5919 (cell)

Name: Larry Fleschner (northeast)

Phone: 319-342-2729 (landline)

Name: Duane Christian (southeast)

Phone: 319-476-3829 (landline)

A. DESCRIPTION OF BURN AREA: Program/Land use: NA

A1) Woody Plant Species (list species, size, and plants/acres):

None

A2) Herbaceous Plant Species (list species, height, condition):

Tallgrass prairie vegetation throughout, approximately 5ft vegetation height. Dense warm season grasses, with forbs co-dominant.

A3) Fuel Load:

Fine fuel (grass/forbs)	Tons/acre	%Volatile Fuels
Predominant fuel ht. 2-6 ft	~ 2	None

A4) Soil Types:	Slope%	Aspect:	%Area
Dinsdale silty clay loam	2-5%	W	32
Dinsdale silty clay loam	5-9%	W	44
Ely silty clay loam	2-5%	SW	12
Colo-Ely silty clay loam complex	0-5%	NW	12

B. OBJECTIVE AND TIMING OF BURN

General objective is to remove accumulated dead biomass to promote native prairie growth. Other objectives include suppressing non-native cool season grass, perennial noxious weeds, and trees/shrubs.

C. SPECIFIED CONDITIONS FOR DAY OF BURN

Condition	Preferred:	Lowest Acceptable:	Highest Acceptable:
Air temperature	50-65 F	40 F	75 F
Relative humidity	40-50%	30%	70%
Wind speed	10-15 mph	7 mph	20 mph
Wind direction	N, NNW, NW, WNW, W, WSW, SW		

D. PREPARATION OF AREA FOR BURNING (see attached burn plan map)

- Firebreak Construction: (type of fire line, width in feet. Also indicate on burn plan map.)**
East, south, west breaks 15ft wide. N break appx. 50ft wide to road. Mowed breaks into existing prairie, stubble height 2in, thatch thrown out of breaks.
- Existing firebreaks: (streams, roads, tilled field, etc. Show on burn plan map)**
Road to north provides primary existing fire break.
- Items to address: (protection of power line poles, signs, cable/phone junction boxes, dead tree removal, etc.)**
Visitor sign-in box at NE corner should be protected. Surrounding vegetation will be trimmed a crew member will it spray with water prior to fire reaching area.

4. **Potentially Hazardous Areas within Burn Area:** (power lines, snags, structure, obstacles to vehicle access, plastic drain tile, under-ground utilities, etc.)
None.

E. ADJACENT AREAS

1. **Vegetation and Fuels Description:**

The field bordering the west boundary is bean stubble. The field bordering the south boundary is chopped corn residue. The area bordering the east boundary is tallgrass prairie vegetation. The farm to the north consists of mixed mowed cool season grass, cool-season ornamental forbs, shrubs 15-30 ft tall, and trees 30-60 ft tall. The field bordering the north boundary is chopped corn residue.

2. **Special Precaution Areas: (also drawn on attached burn plan map)**

The primary special precaution area is Irvine Farm, north of the road. Other special precaution areas include adjacent fields of cover cropped corn stubble (south and east) and an unmanaged brome stand adjacent to the southwest corner of the property.

3. **Smoke Management Plan:**

Avoid sending smoke to the north. Irvine residence is appx. 200 ft. to the north of the burn area and gravel road is appx. 50 ft. to the north. Flaggers and signage should be assigned to 55th St. on the east and west boundaries of Irvine Prairie if smoke is expected to cross the road (southerly winds). If smoke is on the road, flaggers will direct traffic.

F. TOOLS/EQUIPMENT NEEDED:

Include type and number of rakes, swatters, drip torches, backpack pump, other

F1) Equipment Checklist

- 2 Pumper Vehicles (Polaris Ranger w/ 50 gal tank, Chevy Silverado w/ 225 gal tank)
- 2 Drip torches (Igniters must wear all-leather boots)
- 1 Personal weather station (burn boss)
- 5 Two-way radios
- 5 gal Drip torch fuel (30 gas:70 diesel)
- 4 Flappers
- 5 gal Drinking water (or 2 case bottled water)
- 5 gal Pumper engine fuel (unleaded gas)
- 4 Rakes
- 4 Lighters (line leaders and igniters)
- 4 Backpack pumps
- 12 NOMEX coveralls, leather gloves, safety glasses

1 Fencing tool

G. PERSONNEL REQUIRED FOR BURN

Include number of people and their role. It's recommended that burning be done by certified personnel.

Position	Name
Fire Boss	Justin Meissen (FFT2 Coursework)
A Team Line Leader	Laura Walter (FFT2 Coursework)
B Team Line Leader	Andrew Rust (FFT2 Coursework) or Andy Olson
A Team Igniter	Andy Olson or volunteer, must wear all-leather boots
B Team Igniter	Bri Hull (FFT2 Coursework) or volunteer, must wear all-leather boots
A Team Pumper/Driver	Damien Lindsey or volunteer
B Team Pumper/Driver	TBD volunteer
A Team Mop/Spotter	TBD volunteer
B Team Mop/Spotter	TBD volunteer
Traffic Control (S winds only)	TBD volunteer
Traffic Control (S winds only)	TBD volunteer

H. SPECIAL CONSIDERATIONS

Precautions to prevent fire escape

Wide burn breaks make escape unlikely, but airborne embers may cause spot fires in heavy fuels. Look-outs will be assigned to watch and extinguish spot fires downwind from airborne embers.

I. SUPPRESSION PLAN IF FIRE ESCAPES

Note any contingency plans, i.e. secondary firebreaks: creeks, roads, disked breaks, authorities to contact. Provide burn map to fire dept. noting field access, hazards, etc.

Roads exist along the entire north and east edges of the property. A creek and cool season waterway runs northwest to southeast in the adjacent southern property. If fire escapes to the west and cannot be suppressed at escape location safely from the flanks, crews should follow the west burn break north to follow a mowed trail and cool season waterway to access the fields to the west and south. Engine crews should be prepared to suppress spot fires in the adjacent fields. Call 911 if fire in fields cannot be suppressed. If fire escapes to the east and cannot be suppressed at escape location safely from the flanks, crews should move to the area to the east of the mowed cool season water way and prepare to suppress fire that moves into this break.

J. PATROL AND MOP UP PLAN

Look-outs should be assigned to periodically watch for spot fires downwind from airborne embers. Crews will extinguish or spread out any smoking material within 100 ft of burn perimeter. Crew may be dismissed 30 min. after no-smokes. Burn boss will remain on site for 1 hr 30 min after crew dismissed to ensure no flare ups.

K. IGNITION PLAN (See attached burn plan map)

1. Ignition Time:

1pm

2. Method of Firing/Firing Sequence:

For north winds (Map 1): Ignite centrally on the southern line and start back firing to the west and east to create sufficiently wide black line. Team A and B should move approximately the same speed toward DP3 and DP1 respectively. Both Teams should hold at DP1, DP3 until black lines >50 ft wide. Team B should then begin flank firing along the west line until reaching DP2, while Team A begins flank firing along the east line until reaching DP4. Team A should proceed cautiously given directionality of the fire line and wind direction. Once Team A has reached DP4, Team B should hold at DP2 while Team A proceeds with backfire northeast towards DP5. Once Team A reaches DP5, Team B may begin lighting head fires along the northwest line to DP6. Team A should hold at DP5 until Team B reaches DP6 and can then light final head fires across the north line.

For northwest winds (Map 2): Ignite in the southeast corner and start back firing the south and east line to create sufficiently wide black line. Team A and B should move approximately the same speed toward DP3 and DP1 respectively. Both Teams should hold at DP1, DP3 until black lines >50 ft wide. Team B should then continue backfiring along the east line until reaching DP2, while Team A begins flank firing along the west line ensuring corner is well blackened and widened before continuing toward DP4. Team A should hold at DP4 until blackline in NE corner (between DP1 and DP2) is sufficiently. Team B may then proceed headfiring across northern line in concert with Team A.

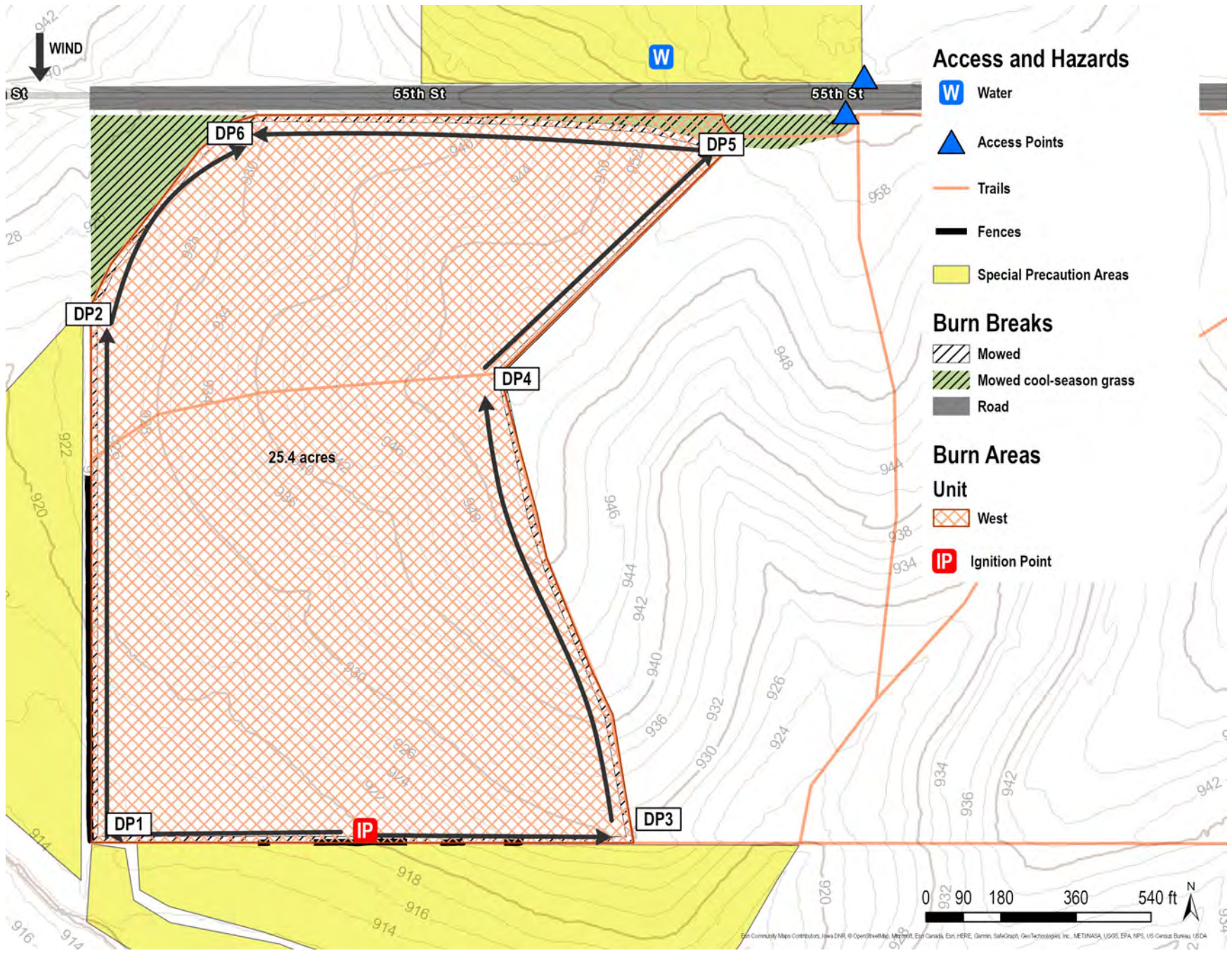
For west winds (Map 3): Begin with backing fires ignited in the middle of the east line to create sufficiently wide black line along the east line. Team A moves south to DP3, Team B north to DP1. Both Teams should hold at DP1, DP3 until black lines >50 ft wide. Team B can then ignite flank fires on the north line to DP2, while Team A ignites flank fires on the south line to DP4. Once Team A has reached DP2 and Team B reaches DP4, Team A can begin head fires along north east line while Team B can begin head fires along south west line.

For southwest winds (Map 4): Ignite in the northeast corner. Team A should start backing fire along north line to DP6. Once Team A has progressed a few hundred feet to the west, Team B can begin flank firing the east line toward DP4. Team A should hold at DP6 until Team B reaches DP4. Team A can then begin flank firing the northwest line towards DP2 while Team B backfires along east line toward DP3. Team A should hold at DP2 until Team B reaches DP3, then both teams may begin head fires along south and west lines toward DP1.

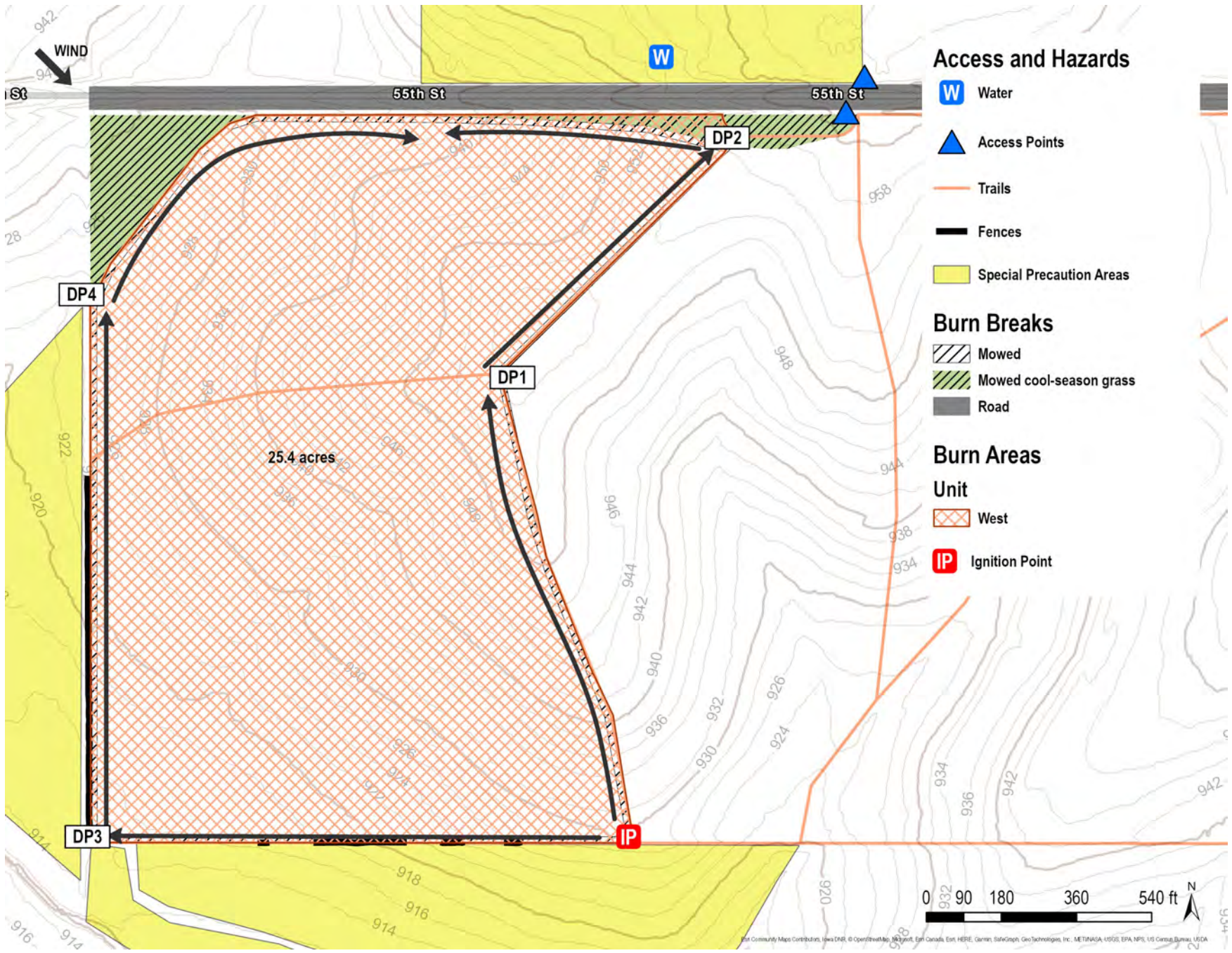
Plan Prepared By:

Justin Meissen

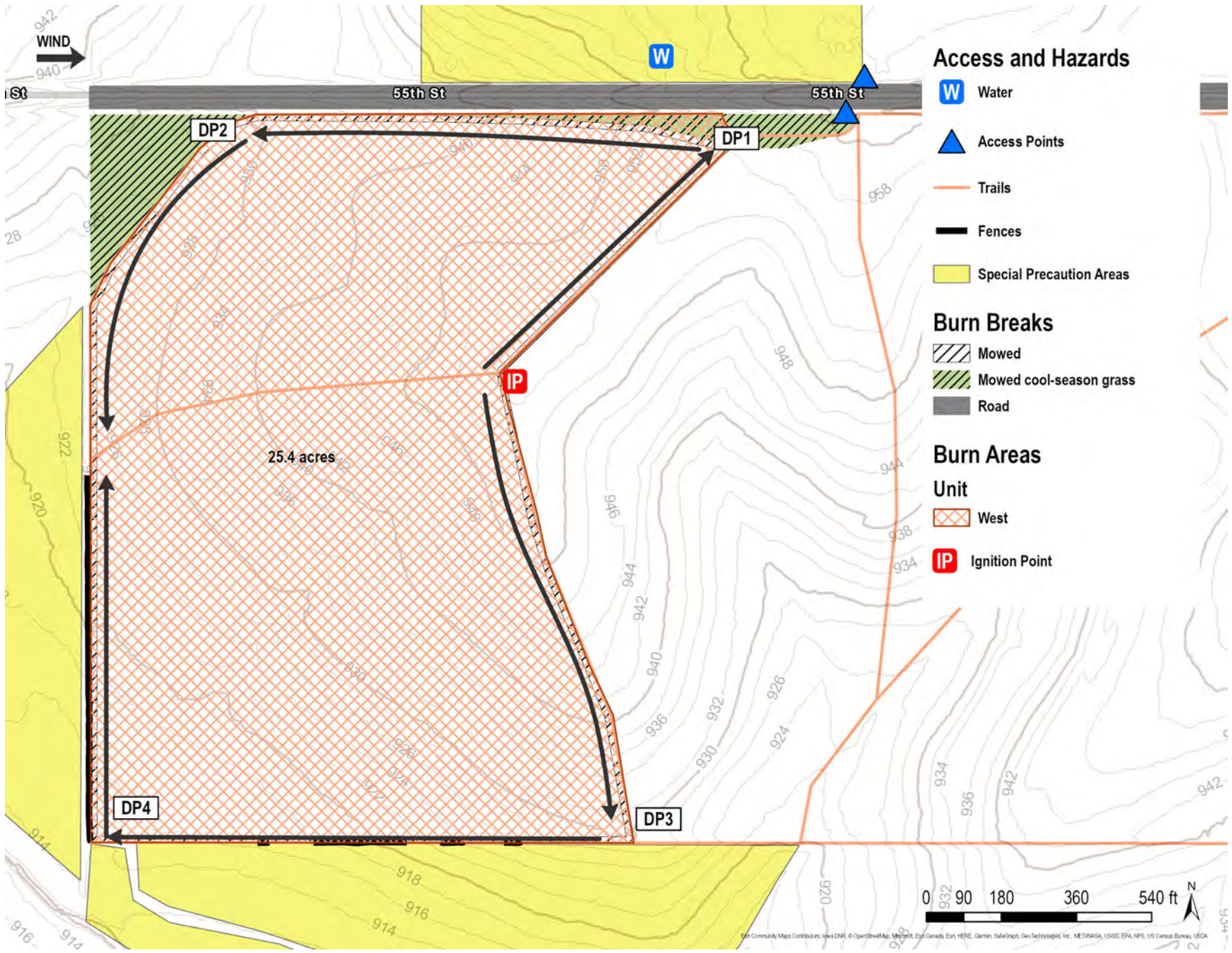
Research and Restoration Program Manager, Tallgrass Prairie Center, University of Northern Iowa



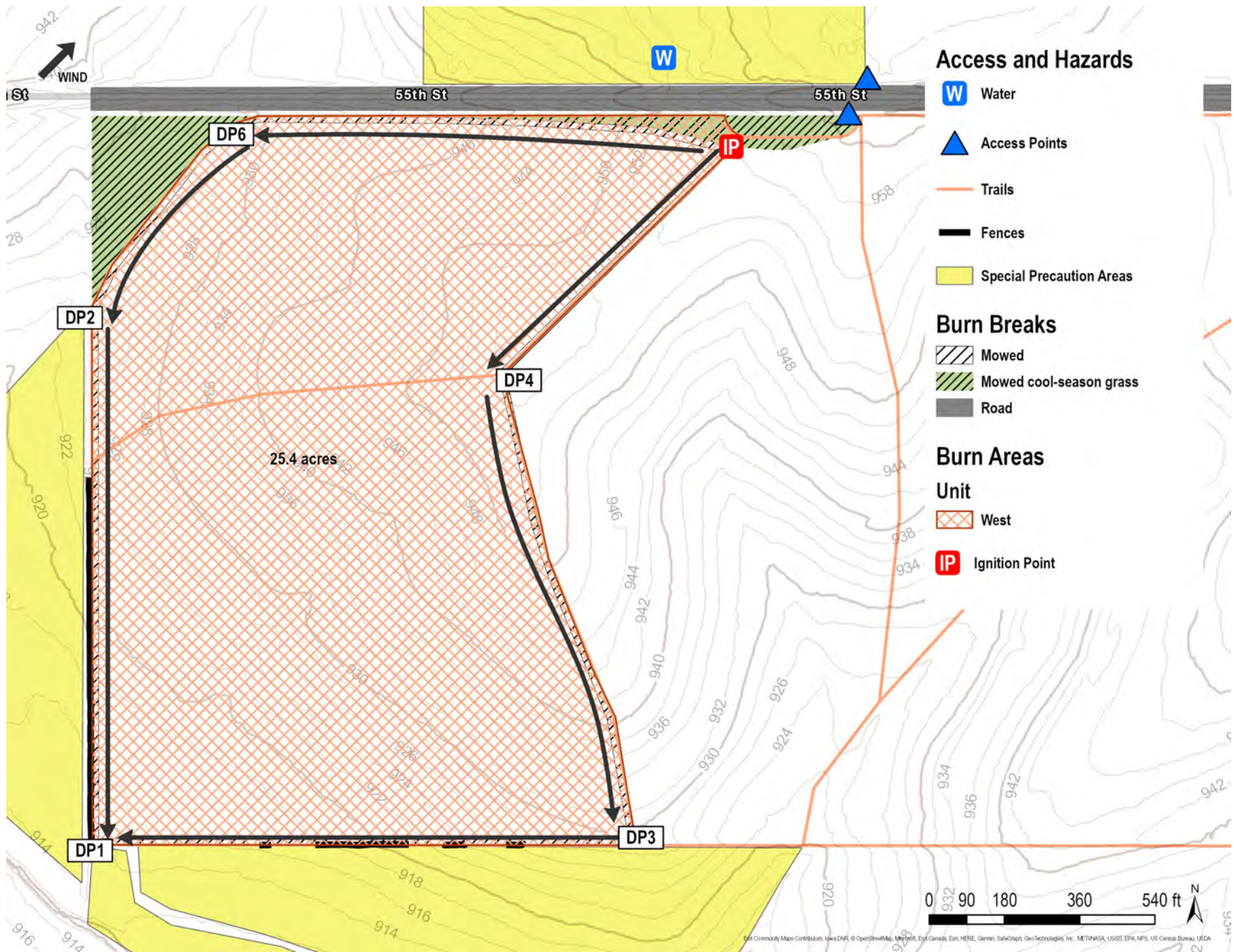
Map 1. West Unit (South Tract) Ignition Plan for North Winds



Map 2. West Unit (South Tract) Ignition Plan for Northwest Winds



Map 3. West Unit (South Tract) Ignition Plan for West Winds



Map 4. West Unit (South Tract) Ignition Plan for Southwest Winds

PRESCRIBED BURN CHECKLIST

For review and completion day of burn

A. Pre-burn Checklist:

- | | | |
|--|-----|----|
| 1. Weather forecast favorable | YES | NO |
| 2. Necessary firebreaks constructed | YES | NO |
| 3. Potential hazards accounted for | YES | NO |
| 4. Special precaution areas noted | YES | NO |
| 5. Safety equipment adequate | YES | NO |
| 6. Tools/equipment on-site | YES | NO |
| 7. Personnel needed available | YES | NO |
| 8. Special considerations reviewed with crew | YES | NO |

B. IF ANY OF ABOVE ARE ANSWERED "NO", DO NOT BURN

1. Actual weather at burn

- | | | | |
|--|--------------|-----------|----------------|
| i. Acceptable Conditions: | Preferred: | Actual: | Time Recorded: |
| ii. Air temperature (40-75 F) | 60 F | _____ F | _____ |
| iii. Relative humidity (30-60 %) | 40% | _____ % | _____ |
| iv. Soil damp to touch | | _____ | _____ |
| v. Wind speed (7-20 mph) | 12 mph | _____ mph | _____ |
| vi. Acceptable wind direction steady from: | N, NW, W, SW | | YES NO |
| vii. Preferred wind direction steady from: | N, NW | | YES NO |
| viii. Actual wind direction: | _____ | | |

2. Fronts or changes expected? YES NO

3. Notification of units of government made:

- | | | |
|-----------------------------|-----------------------|---------------------|
| i. Local Fire Department | Dysart FD* (City) | phone: 319-476-5690 |
| ii. Sheriff/County Dispatch | Benton County Sheriff | phone: 319-472-2337 |
| iii. Other | Tama County Sheriff | phone: 641-484-3760 |

4. Notification of neighbors

- | | |
|--|--------------------------------|
| i. Name: Cathy Irvine (north) | phone: 319-640-5919 (cell) |
| ii. Name: Larry Fleschner (northeast) | phone: 319-342-2729 (landline) |
| iii. Name: Duane Christian (southeast) | phone: 319-476-3829 (landline) |
| iv. Name: _____ | phone: _____ |

5. Necessary permits obtained (if any): YES NO NA

Checklist completed by: _____

Date: _____

A. Post-burn Evaluation:

1. Burning method used _____

2. Start of burn Beginning time: _____

Mop-up completed Ending time: _____

3. Observed change in weather conditions during burn:

4. Fire behavior:

i. Spotting NO FEW MANY

ii. Difficult to control NO YES

iii. Convection column NO YES

iv. Fire whirls NO YES

5. Objective of burn met: NO YES

6. Post-burn management plan (if needed):

7. Other comments:

Evaluation Completed by:

Signature: _____ Date: _____