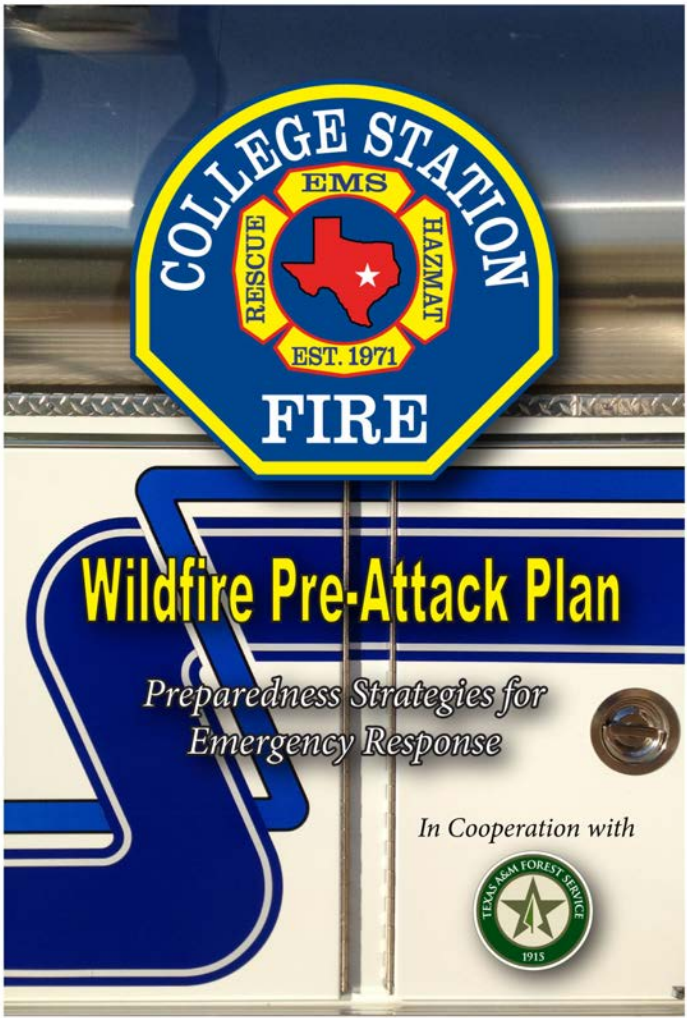

Wildfire Pre-Attack Plan

Preparedness Strategies for Emergency Response

In Cooperation with

TEXAS A&M FOREST SERVICE
1915

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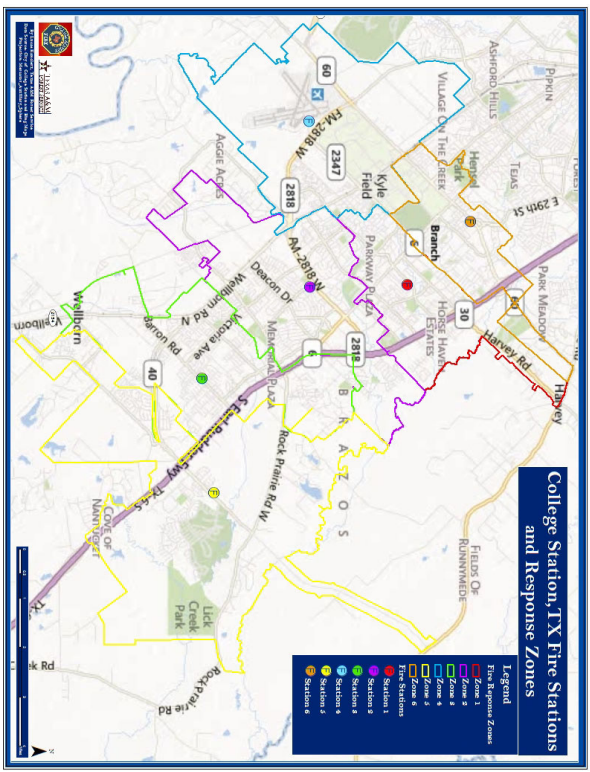
PREPAREDNESS STRATEGIES
INTRODUCTION

Mitigation and response functions directly affect each other. By developing preparedness strategies, the transition from mitigation to response becomes smoother. Additionally, critical information is identified that which assist responders who are not familiar with the community.

College Station Fire Department's Wildfire Pre-Attack Plan is tailored to suit the needs of the community and can be used as one of many tools to guide emergency responders in wildfire a wildfire incident.

PREPAREDNESS STRATEGIES
INTRODUCTION

The City of College Station has six fire stations, each of which has a designated response zone. The Wildfire Pre-Attack Plan includes detailed information for response zones 1-6.



Structure protection is inherently dangerous because it involves indirect firefighting.

Do not commit to stay and protect a structure unless a safety zone for firefighters and equipment has been identified at the structure during size-up and triage. Move to the nearest safety zone, let the fire front pass and return as soon as conditions allow.

Fire Behavior Prediction:

- Base all actions on current and expected fire behavior. Do this first!

- An estimate must be made of the approaching fire intensity to determine if there is an adequate safety zone and time available before the fire arrives.

- Due to the dynamic nature of fire behavior, intensity estimates are difficult to make with absolute certainty. It is imperative that firefighters consider the worst case and build contingency actions into their plan to compensate for the unexpected.

Source: Incident Response Pocket Guide, a publication of the National Wildfire Coordinating Group

INCIDENT OBJECTIVES

• Provide for responders' safety, health, welfare and security.

• Provide for the public's safety, health, welfare and security. When necessary, provide for the safe evacuation and care of the displaced and their animals.

• Limit the amount of homes and land lost to wildland fire.

• Provide for security and investigation of wildfire cause.

• Provide for search and rescue of the trapped and missing; contain, control and mitigate all fires and hazardous substances.

• Protect and maintain access to vital infrastructure and utilities.

• Ensure compliance with the agency administrator and stakeholders' priorities.

Photo:
Stuart Villanueva

COMMAND CONSIDERATIONS

The City of College Station will maintain command of all incidents within the city limits.

The Incident Commander will:

- Establish an Incident Command Post (ICP) and direct and control emergency operations at the scene.
- Determine the need for and implement public warning and protective actions at and in the vicinity of the incident site.
- Determine whether the EOC should be activated.
- Provide periodic situation updates to the EOC, if that facility is activated.
- Identify resource requirements to the EOC, if that facility is activated.

The Emergency Management Coordinator will:

- Develop and maintain the Emergency Operations Center (EOC) staff roster and EOC operating procedures.
- Activate the EOC when requested or when the situation warrants.
- Serve as an EOC Manager.
- Coordinate resource and information support for emergency operations.
- Coordinate emergency planning and impact assessment.
- Coordinate analysis of emergency response and recovery problems and development of appropriate courses of action.

Source: Brazos County Interjurisdictional Emergency Management Plan, Annex N, Direction and Control

COMMAND CONSIDERATIONS

General Command Considerations:

- Structure protection groups should be created when high-risk areas are threatened.
- The City EMC may begin staffing Incident Management Team (IMT) positions as an incident transitions into extended attack.
- Any incoming resources should be checked in and demobilized during extended attack.
- All resources should be accounted for while at the incident.
- Heavy smoke over the city may require evacuations for special populations.
- The City of College Station EMC will establish shelter locations and coordinate the process for notifying evacuees of locations.
- The closest local Texas A&M Forest Service dozers are staged in Huntsville and LaGrange.
- PHI Air Medic, which provides helicopter transport for medical purposes, is permanently housed at St. Joseph Regional Health Center, 2801 Franciscan. PHI also can provide reconnaissance flights to locate or assist with mapping a wildfire.
- Air One, a two-seat Cessna, can provide reconnaissance flights when available. Contact Brazos County Dispatch.
- Consider a Wildland Alarm though Brazos County Dispatch-This is comprised of all 4 county departments, College Station FD brush engine and tender, and closest municipal structural engine.

TACTICAL CONSIDERATIONS

Information provided in the Tactical Considerations section can be used when making decisions about the best strategies for suppressing a wildfire.

General Tactical Considerations for the City of College Station:

- Some neighborhoods are vulnerable to structure-to-structure ignition because of the close proximity of homes.
- Some mobile home parks do not have hydrants.
- Most high-risk areas have combustible attachments and will require attention before and after the head fire passes.
- A significant amount of neighborhoods have dead-end streets and cul-de-sacs that make escape difficult during structure triage.
- Responders should attempt to protect the ignition point to allow the College Station Fire Marshal's Office to investigate.
- Temperatures can exceed 100° F in the summer. Firefighters should stay hydrated and a firefighter rehab group should be established to ensure responder safety.
- When in a drought situation, using water lines should be done carefully and minimally. Pipes can break when the ground is hard and dry. Valves on hydrants and trucks should be opened and closed slowly.
- Remote Automated Weather Stations (RAWS), which can observe potential wildfire conditions, are housed at Easterwood Airport in College Station and Coulter Airfield in Bryan.

TACTICAL CONSIDERATIONS

An Incident Command Post normally will be established at the incident scene, according to the Brazos County Interjurisdictional Emergency Management Plan, Annex N, Direction and Control.

Options for Incident Command Posts include:

- The College Station Police Department Mobile Operations Center. This unit is staged at the College Station Police Department. This unit will come staffed with a driver and a Communications Operator. Vehicle is self contained, has mobile communications and Computer Aided Dispatch abilities.
- The Bryan Mobile Command Post. This unit is staged at Bryan Fire Station 1 and is a regionally available asset. This unit will come staffed with a driver, a Communications Operator, a Geographical Information Systems member, and a group of Incident Management Team members from the Brazos Valley Search and Rescue Group. Vehicle is self contained, has mobile communications, multi radio frequency patching capability, computer networking, satellite communications, printing, GPS tracking devices, and a remote mast mounted camera.

TACTICAL CONSIDERATIONS

Fuel Model	Description	Rate of Spread	Flame Length	% of Land in City Limits	Acres of Land in City Limits
NB 91	Urban/Developed Land	n/a	n/a	46.1%	14,024
FM 9 HWD	Hardwood timber litter, with fluffy duff layer	Low	Low	15.9%	4,847
GR 1	Short, patchy, normally heavily grazed grass	Moderate	Low	14.2%	4,308
GR 2	Moderately coarse continuous grass (1 foot)	High	Moderate	13%	3,948
FM 8	Closed timber litter	Low	Low	8.4%	2,552

Peak Fire Seasons:

Primary – July through September with summer drying

Dry vegetation due to little or no rain, combined with temperatures of 98° to 105° F on a daily basis. Hurricanes or tropical storms close to Southeast Texas bring in dry, strong to gusty winds from the north and northeast.

Secondary – December through March with cured grasses and wind events

Cold front moves in from the north ushering in drier air. Relative humidity drops below 20 percent during the afternoon hours with winds gusting anywhere from 25 mph to 50 mph.

TACTICAL CONSIDERATIONS

Fuels:
The primary fuel group within and surrounding the City of College Station is short to tall grasses mixed with stands of hardwood. There are pockets of yaupon, juniper and oak throughout the city.

Under normal fire weather conditions, the grass fuel group will ignite and burn more intensely than timber litter. Under these conditions the rate of spread normally drops dramatically once it enters the timber, giving firefighters a better chance of extinguishing it.

Under more extreme fire conditions the grasses will ignite, burn intensely and spread rapidly. Hardwood stands also may produce group torching and, in the most extreme conditions, running crown fires. Since fires burn so intensely under these conditions, initial attack may be less successful.

Local Thresholds – Watch Out (combinations of any of these factors can greatly increase fire behavior):
- Winds – Greater than 15 mph *
- Relative humidity – Less than 25 percent
- Temperature over 90° F
- 100-hour fuel moisture – Less than 13 percent

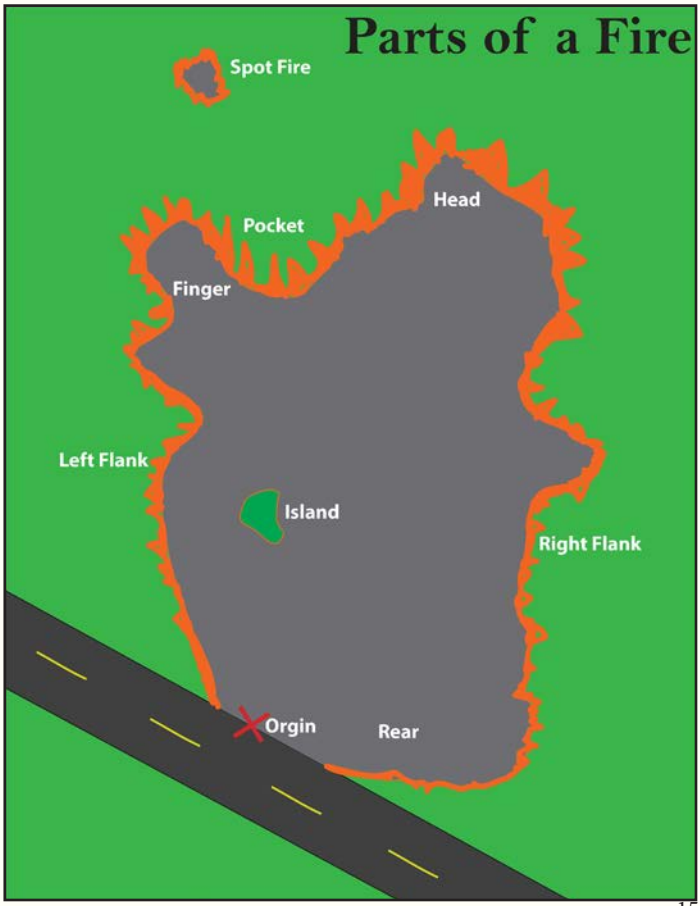
** To best determine wildfire behavior, analysts calculate windspeeds 20 feet above the forest canopy. This calculation is commonly referred to as "20-foot winds."*

Past Experience:
When grass fuels are cured, rapid rates of spread can be expected on windy days when:

Photo: Stuart Villanueva

- 10-hour fuel moistures are below 7 percent
- Energy Release Component values above 46 exceed the 90th percentile
- 1,000-hour fuel moistures are less than 13 percent and below the 10th percentile
- Live woody fuel moistures are less than:
  - 90 percent in juniper
  - 120 percent in southern yellow pine
- KBDI values of 648 are at the 90th percentile

Information on fuels and fire danger is monitored by Texas A&M Forest Service and can be found at the Texas Interagency Coordination Center (TICC) website at **http://ticc.tamu.edu/PredictiveServices/FuelsFireDanger.htm**


Parts of a Fire
Spot Fire
Head
Pocket
Finger
Left Flank
Island
Right Flank
Orgin
Rear

COMMUNICATION

Communication is critical on wildfire incidents. Identifying the channels that will allow multiple resources to communicate will limit the amount of confusion and potentially dangerous situations on an incident. College Station Fire Department uses the 700 Mhz digitally trunked Brazos Valley Wide Area Communication System (BVWACS). Additional local and statewide narrowband VHF frequencies include:

Channel Name	System	Receive	Rx PL	Transmit	TX PL
CSFD 1	BVWACS				
CSFD 2	BVWACS				
CSFD 3	BVWACS				
Brazos Co. VFD 1*	BVWACS				
Brazos Co. VFD 1*	VHF	155.9400	141.3	153.9800	141.3
VFIRE21	VHF	154.2800	156.7	154.2800	156.7
VFIRE22	VHF	154.2650	156.7	154.2650	156.7
VFIRE23	VHF	154.2950	156.7	154.2950	156.7

**Channels have a full time operational patch for normal operations*

Brazos County VFD 1 is typically used to communicate with incoming resources. Brazos County VFD 1 is typically used by operations on the scene during wildland incidents. Additionally, the Mobile Command Post has capabilities that allow resources to communicate by radio on different frequencies.

WATER SOURCES

There are approximately 412 miles of pipe, 7,694 valves and 2,700 fire hydrants in the city's distribution system.

The largest body of water in the area is Lake Bryan. Managed by Bryan Texas Utilities, the lake has a surface area of about 829 acres and a maximum depth of 45 feet. The surface elevation is 356 feet. The lake serves as a cooling reservoir for the Dansby Power Plant.

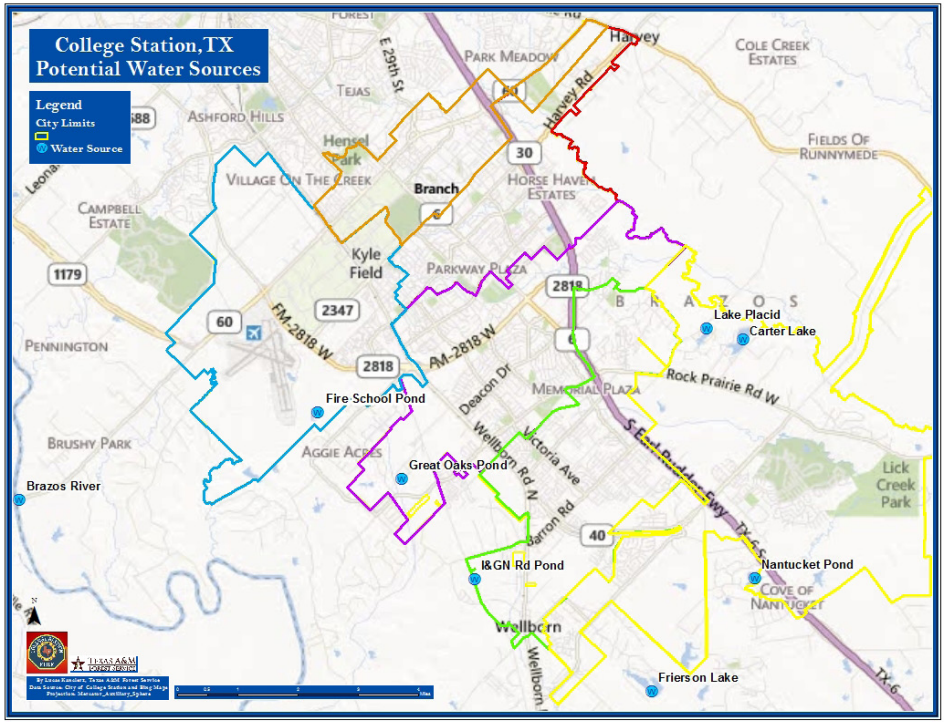
There are numerous small ponds and bodies of water throughout and surrounding the City of College Station. Some of these water sources may be available to draft from but could potentially not have enough capacity to assist with wildfire suppression during dry conditions.

Lake Bryan

WATER SOURCES

Name	Location	Address	Draft	Dip
Fire School Pond	30° 34′ 37″ N 96° 21′ 7″ W	Access from Stillwater Rd at TEEX Fire Training Field	X	X
Great Oaks Pond	30° 33′ 49″ N 96° 19′ 52″W	Access from Abbate Rd and Twin Lakes Circle	X	
I&GN Rd Pond	30° 32′ 35″ N 96° 18′ 49″ W	Access from I&GN Rd between Capstone Dr and S. Dowling Rd	X	
Frierson Lake	30° 31″ 11′ N 96° 16′ 17″ W	Between Woodlake Dr and Calumet Trail	X	X
Carter Lake	30° 35′ 33″ N 96° 14′ 58″ W	Access from Carter Lake Dr	X	X
Lake Placid	30° 35′ 41″ N 96° 15′ 29″ W	Access from Bird Pond Rd and E. Placid Dr	X	X
Nantucket Pond	30° 32′ 35″ N 96° 14′ 47″ W	1500 Nantucket Drive	X	X
Lake Bryan	30° 42′ 33″ N 96° 28′ 19″ W	8200 Sandy Point Dr	X	X
Indian Lakes	30° 30′ 51″ N 96° 14′ 59″ W	Access from Indian Lakes Dr and Aparaho Dr	X	X
Wichman Lake	30° 31′ 45″ N 96° 07′ 45″ W	Access from Land Ends Lane	X	X
Brazos River	N 30° 33′ 32″ W 96° 25′ 24″	Access from Hwy 60	X	X

*Lake Bryan and Wichman Lake not shown on map


College Station, TX
Potential Water Sources
Legend
City Limits
Water Source
Harvey
Cole Creek Estates
Park Meadow
E 29th St
Tejas
Harvey Rd
Ashford Hills
Hensel Park
Village On The Creek
Branch
Horse Haven Estates
Fields Of Runnymede
Campbell Estate
Kyle Field
Parkway Plaza
1179
2347
60
2818
FM-2818 W
Pennington
Fire School Pond
Deacon Dr
Memorial Plaza
Lake Placid
Carter Lake
Rock Prairie Rd W
Brushy Park
Aggie Acres
Great Oaks Pond
Wellborn Rd N
Victoria Ave
Brazos River
Barron Rd
40
I&GN Rd Pond
Nantucket Pond
Cove of Nantucket
Lick Creek Park
Wellborn
Friersons Lake
TX-6

AIR RESOURCES

- Easterwood Airport could serve as a helibase for air resources on the west side of the city.
  Lat/Long: N 30° 35' 17"/ W 96° 21' 39"
  Address: 1770 George Bush Dr West
  College Station, TX

Easterwood Airport

HELICOPTERS

Type I Helicopters (Helitankers)
• Similar to a military Chinook helicopter, a helitanker is the most common aircraft used by Texas A&M Forest Service. They are equipped with snorkels that allow them to draw from shallow water sources such as stock tanks, swimming pools, small creeks, lakes and ponds.
• Generally carries 800 to 1,500 gallons of water.

Type 2 Helicopters
• Similar in size to a military Huey helicopter, these aircraft can be used to haul water or transport passengers.
• While some are tanked and snorkeled, most used in Texas have 300- to 350-gallon buckets. They generally are used in East Texas where buckets can dip out of ponds or lakes.

Type 3 Helicopters
• Similar to a civilian Jet Ranger helicopter or civilian Life Flight helicopter, these aircraft can be used to haul water or carry two to three passengers for reconnaissance flights.
• The aircraft can haul between 100 to 180 gallons of water, but are primarily used in Texas for recon missions by command or operations personnel or for mapping purposes.

EVACUATION CONSIDERATIONS

State law provides a county judge or mayor with the authority to order the evacuation of all or part of the population from a stricken or threatened area within their respective jurisdictions. Hence, the mayor of College Station may order an evacuation of the city upon issuing a local disaster declaration.

The Incident Commander or, for large-scale evacuations, the EOC shall assess the need for evacuation and plan the evacuation effort. Evacuations that must be conducted because of incidents that occur without warning may have to be planned quickly and carried out with only those resources that can be mobilized rapidly. The decision to recommend an evacuation in and around the area of an incident site rests with the Incident Commander. In general, the county judge and/or mayor shall issue the order for large-scale evacuations.

General Evacuation Considerations:

- When necessary, a law enforcement group should be established to develop an evacuation plan that covers traffic control, security issues and how best to safely evacuate residents, special needs populations and non-English speakers.
- Provide for safe evacuation of residents while also considering access for incoming resources (structure protection).
- Shelter locations should be identified during evacuations.
- If evacuation routes are cut off, safety zones should be considered.
- Utilize reverse 911

EVACUATION CONSIDERATIONS

Re-Entry Considerations:

- Initiate return of evacuees, when it is safe to do so.
- Coordinate temporary housing for those who cannot return to their homes.
- Provide traffic control for return.
- Initiate recovery activities for evacuees who have suffered loss of or damage to their homes or businesses.
- Carry out appropriate public information activities.
- Utilization of CART Team for re-entry.

Source: Brazos County Interjurisdictional Emergency Management Plan, Annex E, Evacuation

SPECIAL POPULATIONS

Special populations to consider for smoke management and evacuation include schools, hospitals and nursing homes.

College Station ISD Schools:
A&M Consolidated High, 1801 Harvey Mitchell Parkway South

A&M Consolidated Middle, 105 Holik Street

Alternate Education Programs, 105 Timber Avenue

Barbara Bush Parent Center, 1200 George Bush Drive South

College Hills Elementary, 1101 Williams Street

College Station Middle, 900 Rock Prairie Road

College Station High, 4002 Victoria Avenue

Community Education, 1812 Welsh Avenue

Creek View Elementary, 1001 Eagle Avenue

Cypress Grove Intermediate, 900 Graham Road South

Forest Ridge Elementary, 1950 Greens Prairie Road West

SPECIAL POPULATIONS

Greens Prairie Elementary, 4315 Greens Prairie Trail

Oakwood Intermediate, 106 Holik Street

Pebble Creek Elementary, 200 Parkview Drive

Rock Prairie Elementary, 3400 Welsh Avenue

South Knoll Elementary, 1220 Boswell Street

Southwood Valley Elementary, 2700 Brothers Boulevard

Private Schools:
Aggieland Country School, 1500 Quail Run

Balcones Kindercare, 937 Balcones Drive

Brazos Valley Adventist School, 1350 Earl Rudder Fwy South

Cornerstone Christian Academy, 2475 Earl Rudder Fwy South

Saint Thomas Early Learning Center, 906 George Bush Drive

Village Drive Kindercare, 1711 Village Drive

SPECIAL POPULATIONS

Higher Education:
Texas A&M University: Evacuation orders for campus are issued via Code Maroon messaging system

Treatment Centers:
St. Joseph Regional Health Center, 2801 Franciscan Drive
- 303 licensed beds; 36-bed medical/surgical ICU; 14 operating rooms
- MRI scanner, two CT scanners, dialysis unit (five machines)
- Emergency room: four trauma rooms, 16 exam rooms, five minor care/urgent care exam rooms, six-bed observation area
- 18 isolation beds
- Emergency power for indefinite number of hours (up to 96 without refueling)

The Physicians Centre Hospital, 3131 University Drive
- 16 licensed beds; no ICU; four operating rooms and two minor procedure rooms
- MRI scanner, CT scanner, no dialysis unit
- Unstaffed first aid suite with on-call doctor, no emergency rooms
- Emergency power for 24 hours

Scott and White Healthcare, 700 Scott & White Drive
- 143 beds; Level III emergency department
- MRI scanner, 64-slice CT scanner

SPECIAL POPULATIONS

Nursing Homes:
Arbor on the Brazos, 1103 Rock Prairie Road

Bluebonnet House, 3901 Victoria Avenue
• 39 beds, emergency power for 168-plus hours; propane generator

The Waterford at College Station, 1103 Rock Prairie Road
• 40 beds; 18 memory care

Fortress Health and Rehab, 1105 Rock Prairie Road
• 120 beds; emergency power for 72 hours

Magnified Health and Rehab, 1115 Anderson Street
• 115 beds; emergency power for 24 to 48 hours

POSSIBLE SHELTER LOCATIONS

Sheltering efforts should be coordinated with the College Station Emergency Management Coordinator and American Red Cross.

Forty-six locations within Brazos County have been identified as available for sheltering. Of those, 35 are designated for general purposes, four are designated for local needs, four are designated for special needs and three are designated for responders.

The Emergency Management Coordinator can provide a list of available facilities upon request.

Evacuations will require coordination with:
- EMC
- Fire Department
- Police Department
- Mayor's Office
- City/Incident Public Information Officers
- Dispatch
- Public Works

Contingency Planning:
Contingency plans identify high-risk neighborhoods and areas with the potential for large wildland incidents. These plans contain information that may be beneficial to incoming resources, including fuel types, water sources, staging areas and ICP locations.

A map of each high-risk neighborhood also is provided to give users an elevated view of the area and its potential threats.

Photo: Stuart Villanueva

ZONE 1
CONTINGENCY PLAN

Keep the Fire:
North of Highway 30
Southeast of Pate Road
North of Carters Creek

Additional Water Sources:
Lake Bryan
N 30° 42' 33"
W 96° 28' 19"
Access from Sandy Point Road

*Closest hydrant at FM 158 and Highway 30

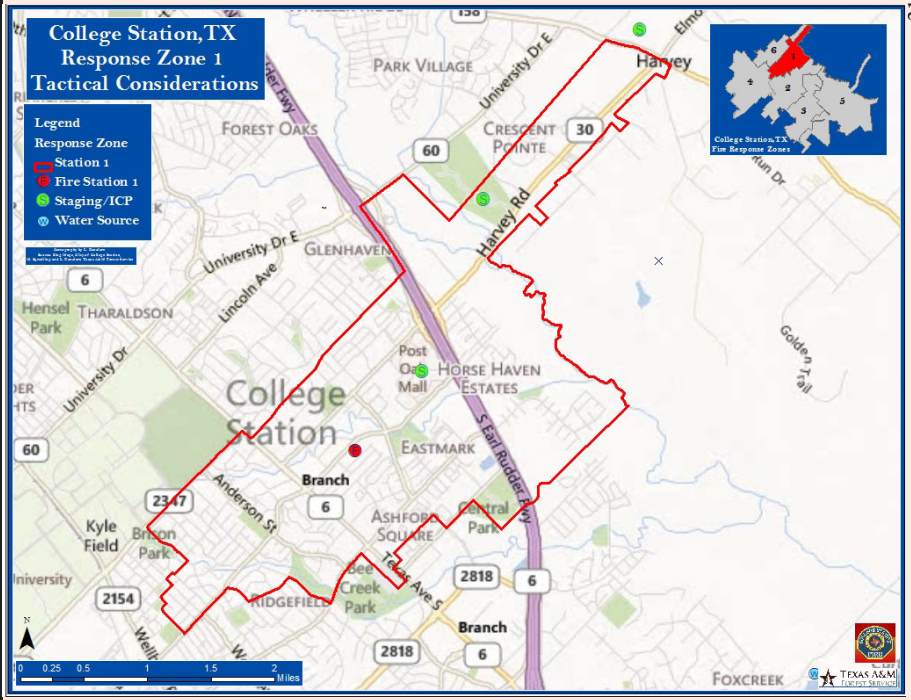
Fuels:
Grass – High rates of spread and flame lengths

Juniper – High flame lengths

Oak – High flame lengths

Local Thresholds – Watch Out:
- Winds – Greater than 15 mph
- RH – Less than 25 percent
- Temperature – Over 90° F
- 100-hour fuel moisture – Less than 13 percent

ZONE 1
CONTINGENCY PLAN



ZONE 1
CONTINGENCY PLAN

General tactical considerations:
- Pipelines and electrical lines
- Refined Fuels

Evacuation Trigger Points:
- Extreme fire conditions
- Fire jumps Highway 30 or Pate Rd
- Heavy smoke within neighborhood

Evacuation Considerations:
- None

ZONE 1
CONTINGENCY PLAN

Potential Staging and ICP Locations in Response Zone 1:

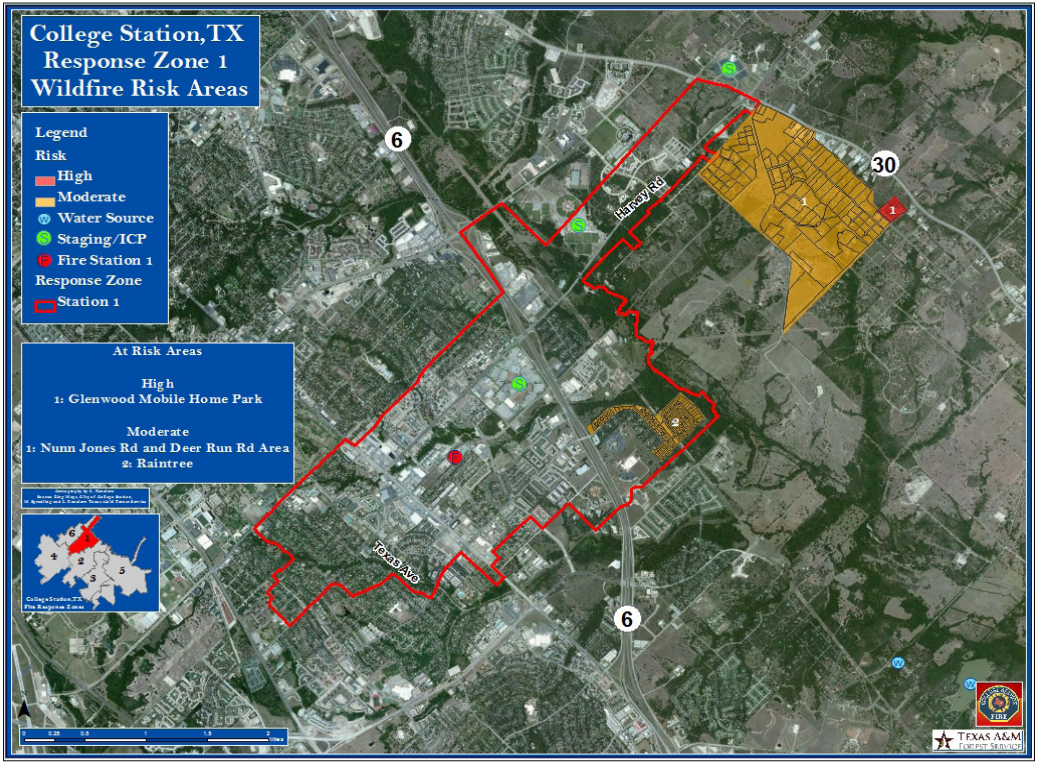
Central Baptist Church, 1991 FM 158
N 30° 38' 24"
W 96° 16' 40"

Post Oak Mall, 1500 Harvey Rd
N 30° 37' 29"
W 96° 18' 11"

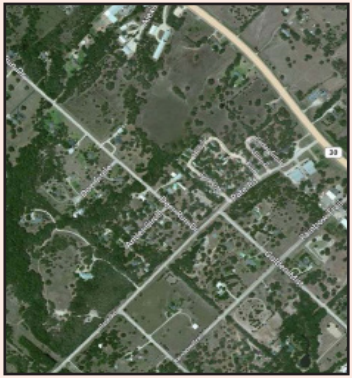
ZONE 1
CONTINGENCY PLAN

Veterans Memorial Park, 3101 Harvey Rd
3101 Harvey Rd
N 30° 38' 24"
W 96° 17' 34"

College Station,TX Response Zone 1 Wildfire Risk Areas



Glen Oaks Mobile Home Park



Location: Highway 30 and Pate Road
N 30° 38’ 36”
W 96° 15’ 29”

Responding Station: 1

Wildland Areas:
Approximately 33 acres, N, NE, NW
Fuels: Yaupon, oak, cedar (heavy fuel loading)
Primary Threats: Direct flame contact, ember intrusion (from N, NW, W)
Fire Behavior: Low-intensity grass fire – Extreme crown fire
Access: One point (Pate Road)
Home Construction: Vinyl with wooden **combustible attachments**
Defensible Space: Less than 30 feet/Not present
Fire Occurrence: Low

Estimated Values at Risk:
- $383,210 total value
- 10 acres

ZONE 2
CONTINGENCY PLAN

Draft Site 1:
Great Oaks Pond
30° 33' 49" N
96° 19' 52"W
Access from Abbate Rd and Twin Lakes Circle

Additional Water Sources:
Fire School Pond
30° 34' 37" N
96° 21' 7" W
Access from Stillwater Rd at TEEX Fire Training Field

*No fire hydrants located in high risk areas.

Keep the Fire:
North of F.M. 2818
Southwest of N. Dowling Rd

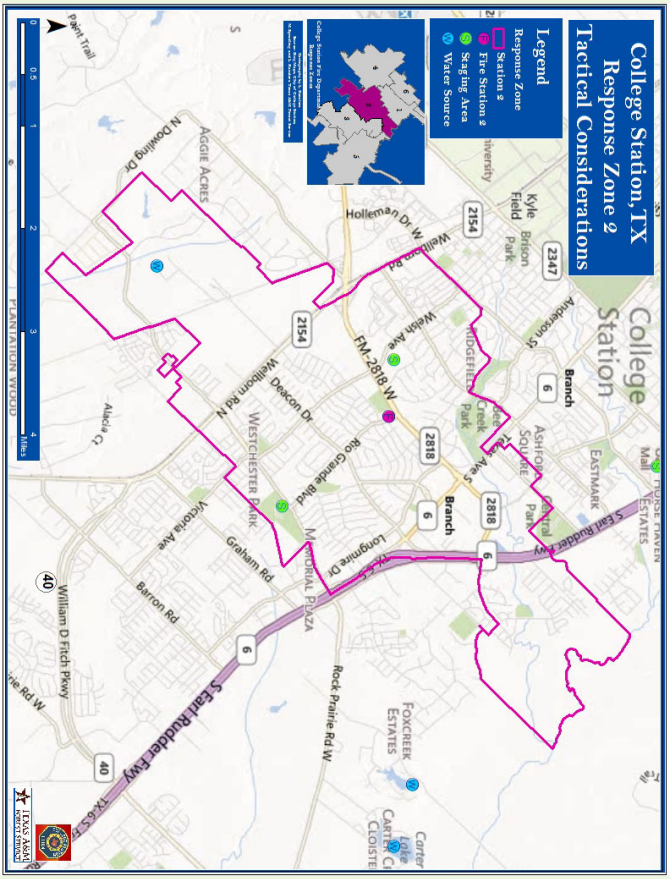
Fuels:
Primarily grasses, – High rates of spread and moderate flame lengths

Yaupon, juniper and oak – High flame lengths

Mobile homes at greatest risk

Local Thresholds – Watch Out:
- Winds – Greater than 15 mph
- RH – Less than 25 percent
- Temperature – Over 90° F
- 100-hour fuel moisture – Less than 13 percent

ZONE 2
CONTINGENCY PLAN



ZONE 2
CONTINGENCY PLAN

General tactical considerations:
- Pipelines and electrical lines
- Union Pacific Railroad

Evacuation Trigger Points:
- Extreme fire conditions
- Fire jumps F.M. 2818
- Heavy smoke within neighborhood
- Fire reaches Union Pacific railroad

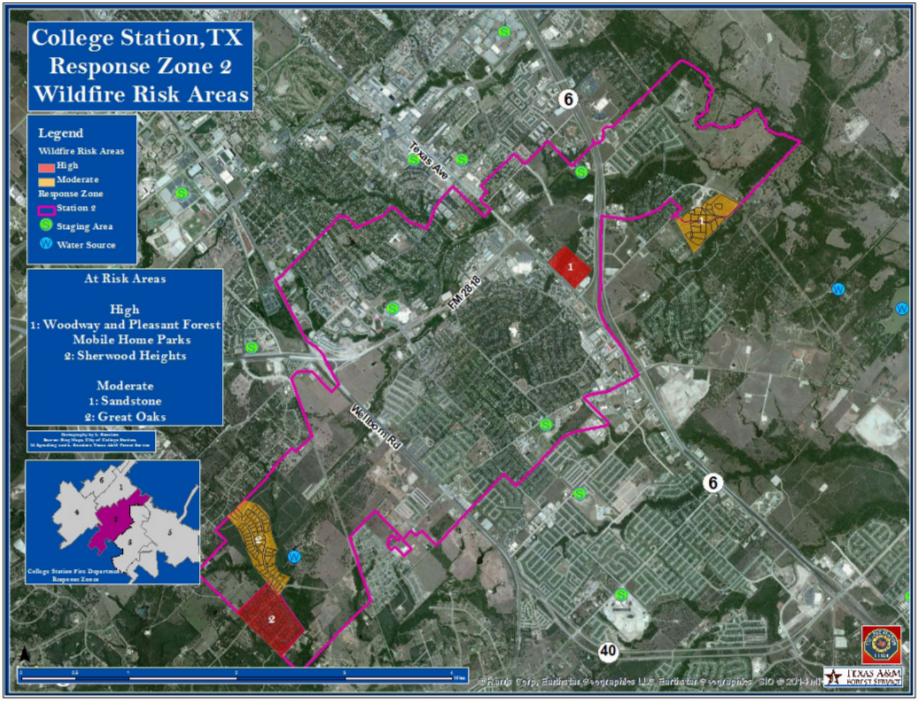
Evacuation Considerations:
- None

ZONE 2
CONTINGENCY PLAN

Potential Staging and ICP Locations in Response Zone 2:

A&M Consolidated High School, 1801 Harvey Mitchell Pkwy South
30° 35' 31" N
96° 19' 05" W

Brian Bachmann Community Park, 1600 Rock Prairie Rd
30° 34' 45" N
96° 17' 52" W


College Station,TX
Response Zone 2
Wildfire Risk Areas
Legend
Wildfire Risk Areas
High
Moderate
Response Zone
Station 2
Staging Area
Water Source
At Risk Areas
High
1: Woodway and Pleasant Forest Mobile Home Parks
2: Sherwood Heights
Moderate
1: Sandstone
2: Great Oaks
Texas Ave
FM 2818
Wellborn Rd
6
40
1
2
TEXAS A&M FOREST SERVICE

Woodway and Pleasant Forest Mobile Home Park

Location: Mile Drive and Texas Ave
N 30° 35’ 48”
W 96° 17’ 39”

Responding Station: 2

Wildland Areas: Approximately 20 acres, N
Fuels: Grass, juniper and oak
Primary Threats: Direct flame contact, ember intrusion, radiant heat (from N)
Fire Behavior: Low-intensity grass fire – Group torching
Access: One point (Texas Ave)
Home Construction: Homes have vinyl siding, open at foundation, and **combustible attachments**
Defensible Space: Less than 30 feet
Fire Occurrence: High

Estimated Values at Risk:
- $907,420total value
- 34 acres

Sherwood Heights/Robin Drive

Location: Rock Prairie Road and Dowling Road
N 30° 33' 23"
W 96° 20' 0"

Responding Station: 2

Wildland Areas: Approximately 125acres, SW, S, SE, NE
Fuels: Yaupon, juniper and oak
Primary Threats: Direct flame contact, ember intrusion (from SW, S, SE, NE)
Fire Behavior: Low-Moderate intensity fire – Group torching
Access: Two access point on Rock Prairie Road
Home Construction: Ignition-resistant material and vinly sided homes with **combustible attachments**
Defensible Space: Less than 30 feet
Fire Occurrence: Low

Estimated Values at Risk:
• 110 homes • $8,505,110 total value • 74 acres

ZONE 3
CONTINGENCY PLAN

Fuels:

Large areas of grasslands surround the neighborhood.

Depending on grazing methods, grasses may range from short to tall and can produce extreme fire behavior.

Grass - High rates of spread and moderate flame lengths

Local Thresholds – Watch Out:

- Winds – Greater than 15 mph
- RH – Less than 25 percent
- Temperature – Over 90° F
- 100-hour fuel moisture – Less than 13 percent

Zone 3 fuels

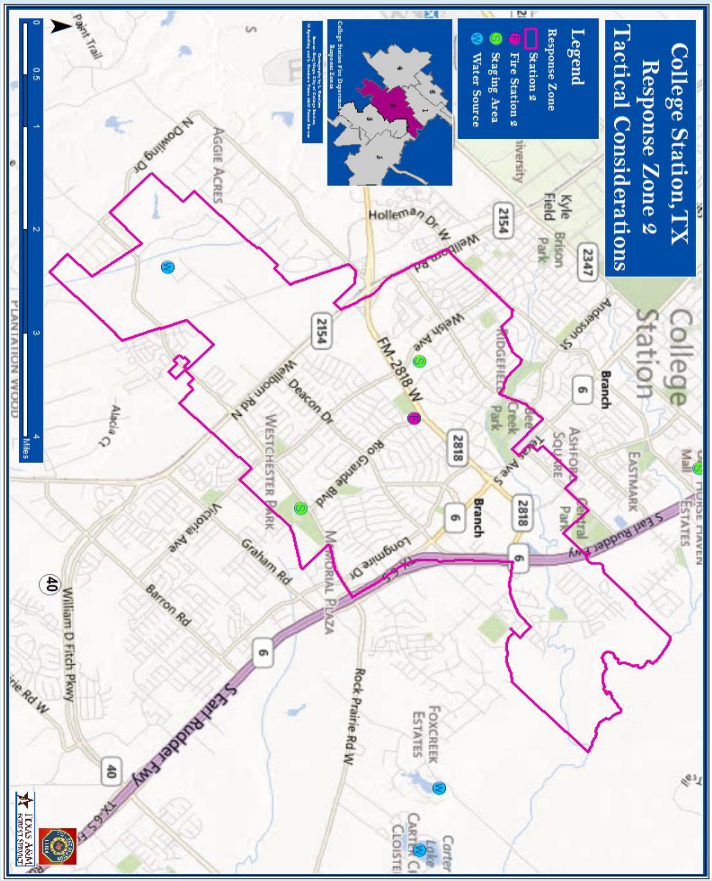
Keep the Fire:
North of Capstone Dr
West of S. Dowling Rd

Draft Site 1:
I&GN Road Pond
30° 32' 35" N
96° 18' 49" W
Access from I&GN Rd between Capstone Dr and S. Dowling Rd

Additional Water Sources:
Lake Placid
30° 35' 41" N
96° 15' 29" W
Access from Bird Pond Rd and E. Placid Dr

Fire School Pond
30° 34' 37" N
96° 21' 7" W
Access from Stillwater Rd at TEEX Fire Training Field
*Hydrants are located thoughout area

ZONE 3
CONTINGENCY PLAN



ZONE 3
CONTINGENCY PLAN

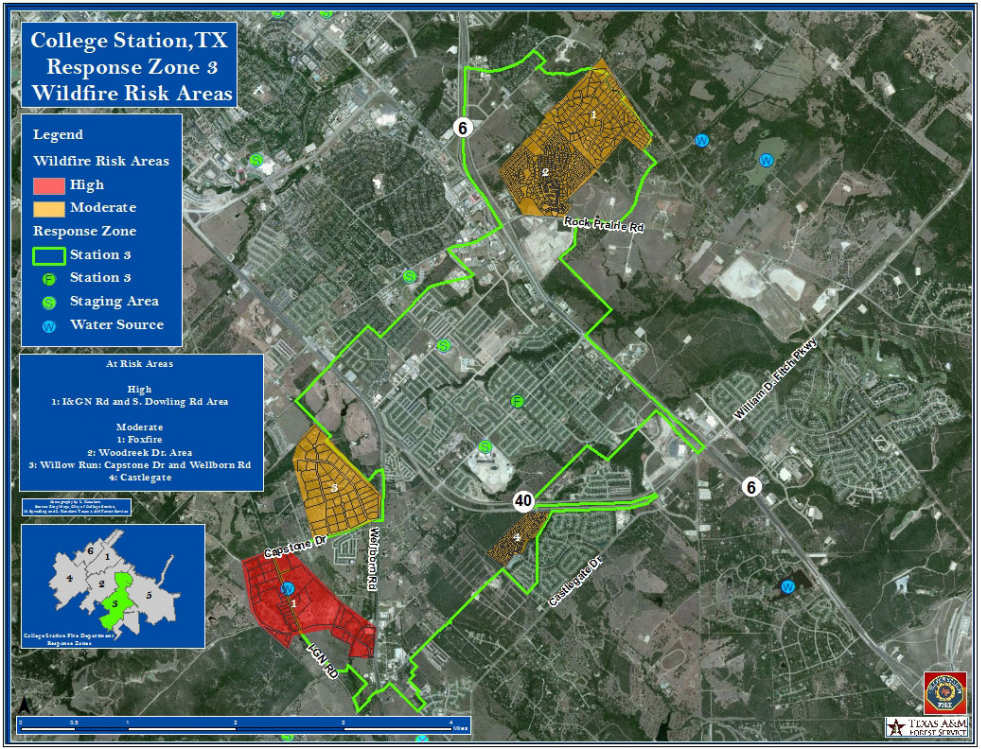
Evacuation Trigger Points:
- Extreme fire behavior and high rates of spread
- Heavy smoke within neighborhood
- Heavy smoke within Wellborn
- Bluebonnet House-Assisted Living Center

Evacuation Considerations:
Villas of Rock Prairie-Assissted Living Center

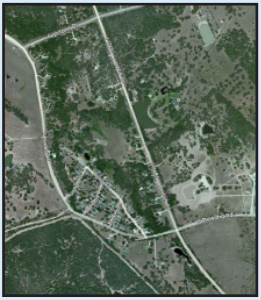
Potential Staging and ICP Locations in Response Zone 3:

College Station High School, 4002 Victoria Ave
30° 33' 34" N
96° 17' 14" W

Cypress Grove Intermediate School, 900 Graham Rd
30° 34' 16" N
96° 17' 35" W


College Station, TX
Response Zone 3
Wildfire Risk Areas
Legend
Wildfire Risk Areas
High
Moderate
Response Zone
Station 3
Station 3
Staging Area
Water Source
At Risk Areas
High
1: I&GN Rd and S. Dowling Rd Area
Moderate
1: Foxfire
2: Woodcreek Dr. Area
3: Willow Run: Capstone Dr and Wellborn Rd
4: Castlegate
6
40
Rock Prairie Rd
William D. Fitch Pkwy
Capstone Dr
Wellborn Rd
Castlegate Dr
I&GN Rd
TEXAS A&M FOREST SERVICE

South Dowling and I&GN Road



Location: South Dowling and
I&GN Road
N 30° 32’ 17”
W 96° 18’ 43”

Responding Station: 3

Wildland Areas: Approximately 80 acres, S, W, E
Fuels: Grass, juniper and oak
Primary Threats: Direct flame contact, ember intrusion, radiant heat (from S, W, E)
Fire Behavior: Low-intensity grass fire – Group torching
Access: Several points to I&GN Rd
Home Construction: Homes constructed of brick and composite roofs with **combustible attachments**
Defensible Space: 30 feet
Fire Occurrence: Moderate

Estimated Values at Risk:
- 36 homes
- $12,538,680 total value
- 252 acres

ZONE 4
CONTINGENCY PLAN

Keep the Fire:
East and North of S. Traditions Drive
South of Highway 60

Fuels:
Short grass with patches of tall grass – Low to high rates of spread

Yaupon – Moderate to high flame lengths

Oak – High flame lengths

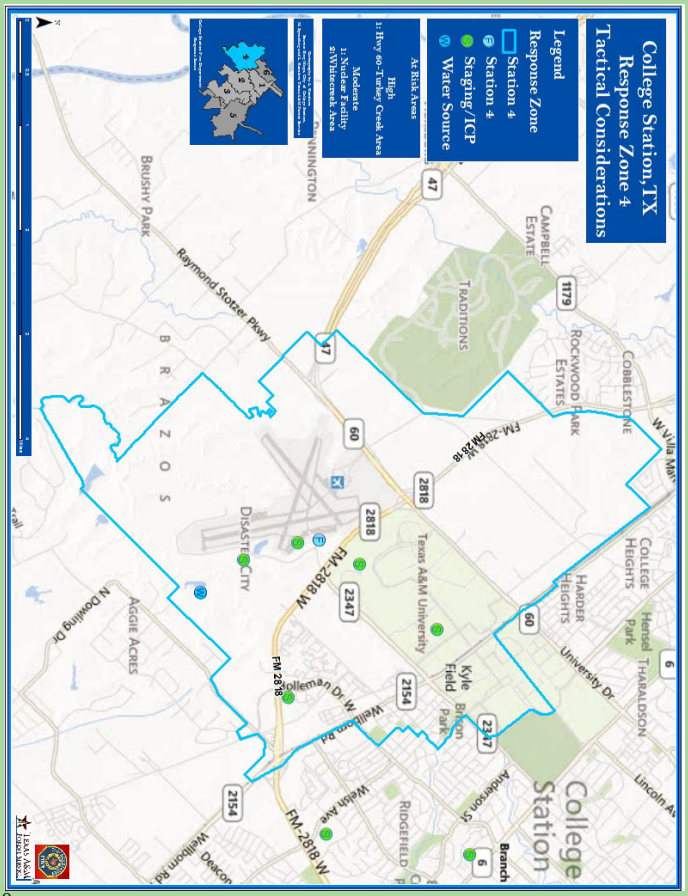
Local Thresholds – Watch Out:
- Winds – Greater than 15 mph
- RH – Less than 25 percent
- Temperature – Over 90° F
- 100-hour fuel moisture – Less than 13 percent

Draft Site 1:
Fire School Pond
30° 34' 37" N
96° 21' 7" W
Access from Stillwater Rd at TEEX Fire Training Field

Additional Water Sources:
Lake Bryan
N 30° 42' 33"
W 96° 28' 19"
Access from Sandy Point Road

Brazos River
N 30° 33' 32"
W 96° 25' 24"
Access from Highway 60

ZONE 4
CONTINGENCY PLAN



ZONE 4
CONTINGENCY PLAN

General Tactical Considerations:

- Easterwood Airport is located in Zone 4 and can be used as a Helispot
- Air traffic from to and from Easterwood Airport
- Radioactive waste building from Nuclear Science Center

Evacuation Trigger Points:

- Fire jumps Highway 60 or S. Traditions Drive
- Extreme fire conditions and high rates of spread

Evacuation Considerations:

- None

Potential Staging and ICP Locations in Response Zone 4:

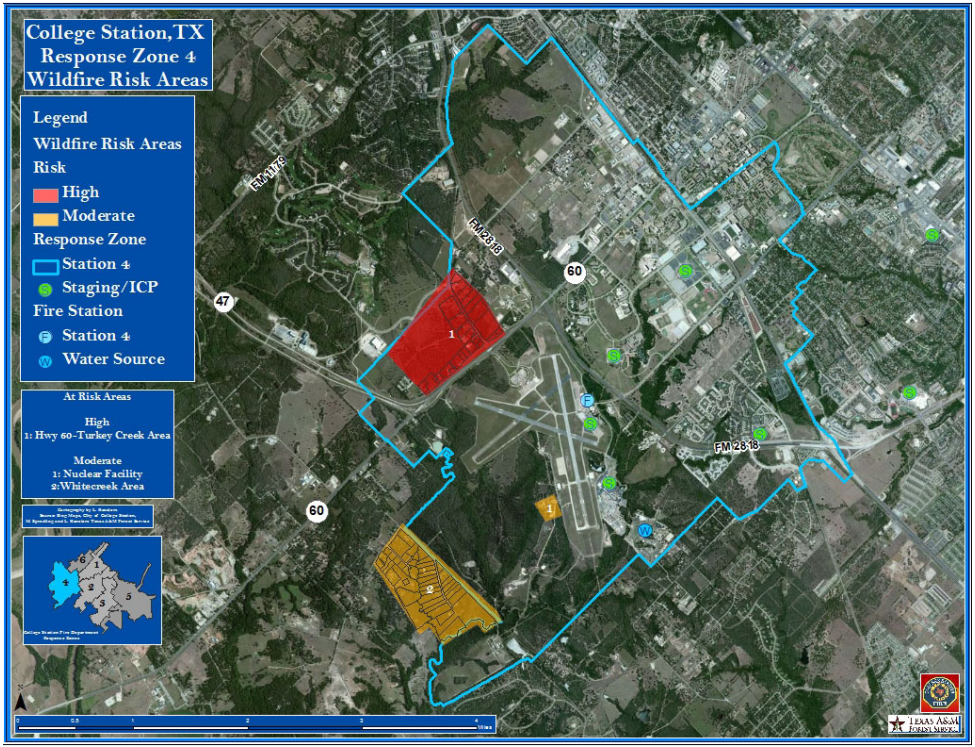
TEEX Brayton Fire Training Field, 1595 Nuclear Science Road
N 30° 33' 32"
W 96° 25' 24"

ZONE 4
CONTINGENCY PLAN

Easterwood Airport, 1770 George Bush Drive West
N 30° 35' 17"
W 96° 21' 39"

George Bush Library, 1000 George Bush Drive West
N 30° 35' 17"
W 96° 21' 39"

Reed Arena, 730 Olsen Blvd
N 30° 36' 20"
W 96° 20' 46"


College Station, TX
Response Zone 4
Wildfire Risk Areas
Legend
Wildfire Risk Areas
Risk
High
Moderate
Response Zone
Station 4
Staging/ICP
Fire Station
Station 4
Water Source
At Risk Areas
High
1: Hwy 60-Turkey Creek Area
Moderate
1: Nuclear Facility
2:Whitecreek Area
FM 2818
FM 2818
60
47
60
1
2
1
F
W

Highway 60 and Turkey Creek Road

Location: Highway 60 and
Turkey Creek Road
N 30° 35' 51"
W 96° 22' 37"

Responding Station: 4

Wildland Areas:
Approximately 140 acres, intermix
Fuels: Grass, yaupon and oak
Primary Threats: Direct flame contact, ember intrusion, radiant heat
Fire Behavior: Low-intensity grass fire – Group torching
Access: Two points to Highway 60 and S. Traditions Drive
Home Construction: Homes are constructed of wood and vinyl with **combustible attachments**
Defensible Space: Less than 30 feet
Fire Occurrence: Moderate

Estimated Values at Risk:
- 23 homes
- $4,622,380 total value
- 108 acres

ZONE 5
CONTINGENCY PLAN

Keep the Fire:
Southeast of Royder Rd
East of Bird Pond Rd

Fuels:
Primarily grass fields intermixed with areas that have oak, yaupon and floodplain forest

Grass - High rates of spread and moderate flame lengths

Juniper – High flame lengths

Yaupon – Moderate flame lengths

Floodplain Forest– High flame lengths (drought conditions)

Draft Site 1:
Lake Placid
30° 35' 41" N
96° 15' 29" W
Access E. Placid Dr and Bird Pond Rd

Draft Site 2:
Carter Lake
30° 35' 33" N
96° 14' 58" W
Access from Carter Lake Dr

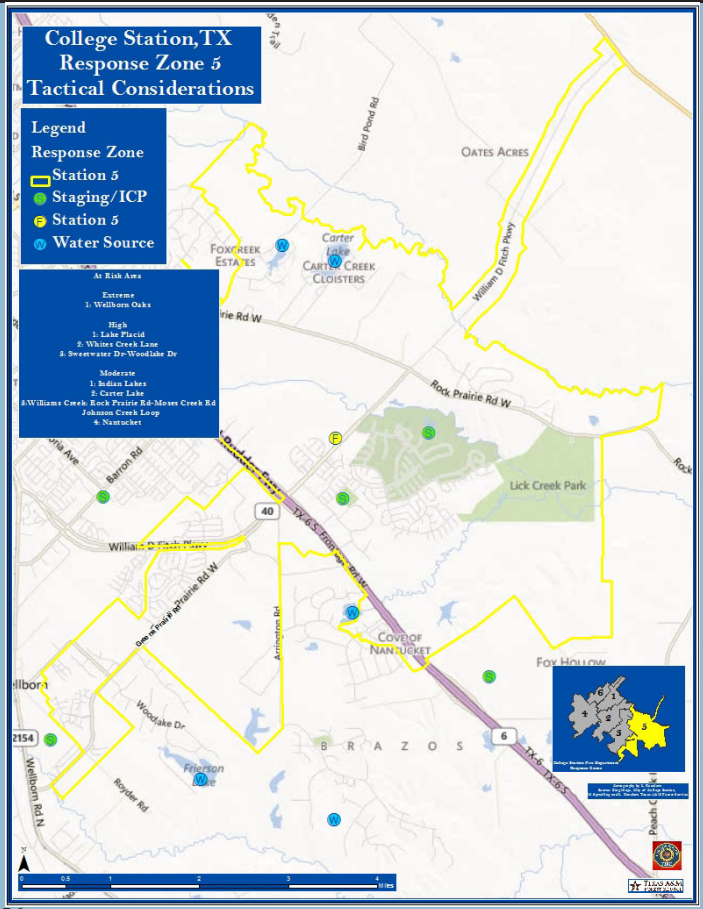
Draft Site 3:
Nantucket Pond
30° 32' 35" N
96° 14' 47" W
Access at 1500 Nantucket Dr

Additional Water Sources:
Frierson Lake
30° 31" 11' N
96° 16' 17" W
Between Woodlake Dr and Calumet Trail

Indian Lakes
30° 30' 51" N
96° 14' 59" W
Access from Indian Lakes Dr and Aparaho Dr

Local Thresholds – Watch Out:
- Winds – Greater than 15 mph
- RH – Less than 25 percent
- Temperature – Over 90° F
- 100-hour fuel moisture – Less than 13 percent

ZONE 5
CONTINGENCY PLAN



ZONE 5
CONTINGENCY PLAN

Evacuation Trigger Points:
- Extreme fire behavior
- High rates of spread
- Group torching and crown runs
- Fire jumps Highway 6, Royder Rd, or Carters Creek

Evacuation Considerations:
- Narrow roads

Potential Staging and ICP Locations in Response Zone 5:

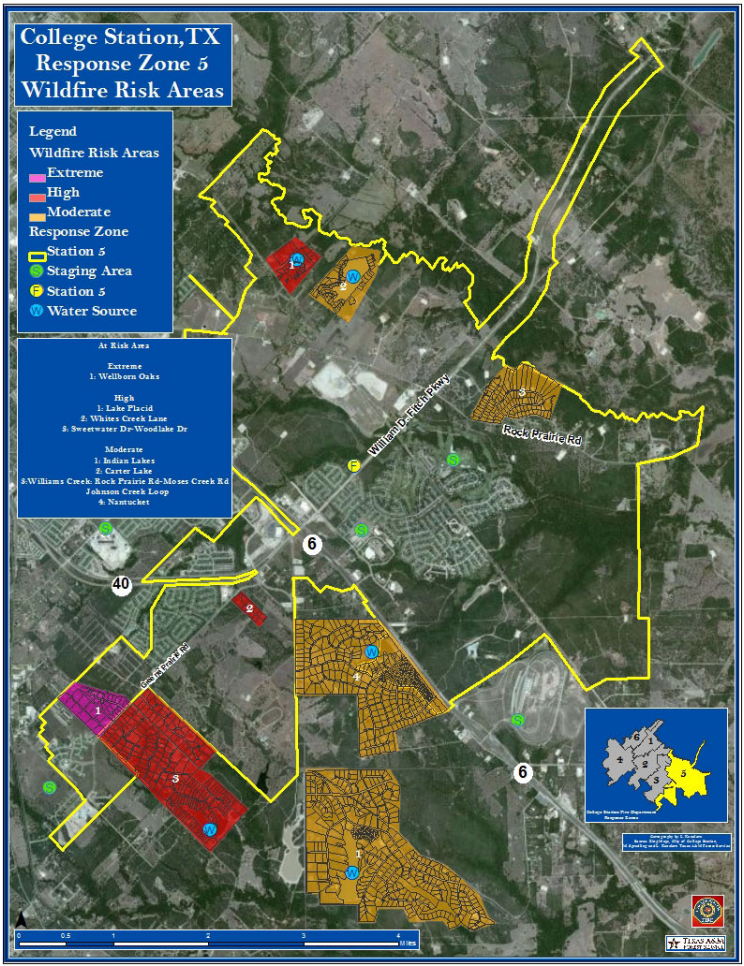
Pebble Creek Country Club, 4500 Pebble Creek Pkwy
N 30° 34' 01"
W 96° 14' 09"

Pebble Creek Elementary, 200 Parkview Dr
N 30° 33' 31"
W 96° 14' 56"

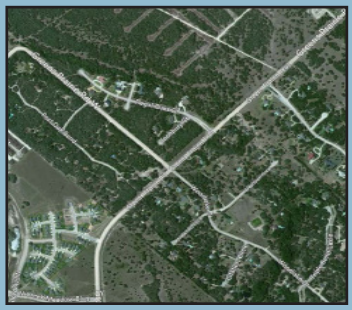
ZONE 5
CONTINGENCY PLAN

Texas World Speedway, 17529 State Highway 6 South
N 30° 33' 31"
W 96° 14' 56"

Texas A&M Forest Service, 200 Technology Way
N 30° 33' 06"
W 96° 14' 34w"


College Station, TX
Response Zone 5
Wildfire Risk Areas
Legend
Wildfire Risk Areas
Extreme
High
Moderate
Response Zone
Station 5
Staging Area
Station 5
Water Source
At Risk Area
Extreme
1: Wellborn Oaks
High
1: Lake Placid
2: Whites Creek Lane
3: Sweetwater Dr-Woodlake Dr
Moderate
1: Indian Lakes
2: Carter Lake
3:Williams Creek: Rock Prairie Rd-Moses Creek Rd
Johnson Creek Loop
4: Nantucket
William D. Fitch Pkwy
Rock Prairie Rd
Deer Creek Rd
6
40
0 0.5 1 2 3 4 Miles

Wellborn Oaks



Location: Greens Prairie Road and Royal Oak Drive
N 30° 32’ 7”
W 96° 17’ 24”

Responding Station: 5

Wildland Areas:
Approximately 91 acres, N, NE
Fuels: Grass, yaupon, and oak
Primary Threats: Direct flame contact, ember intrusion
Fire Behavior: Low-intensity grass fire – Extreme crown fire
Access: One point (Greens Prairie Road)
Home Construction: Mix of Brick and Vinly with **combustible attachments**
Defensible Space: Less than 30 feet/Not Present
Fire Occurrence: Low
No Fire Hydrants Present

Estimated Values at Risk:
- 133 homes
- $34,467,640 total value
- 377 acres

Lake Placid

Location: Bird Pond Road and East Placid Drive
N 30° 35’ 36”
W 96° 15’ 24”

Responding Station: 5

Wildland Areas: Approximately 100 acres, NW, W
Fuels: Grass, yaupon, oak, flood plain forest
Primary Threats: Direct flame contact, ember intrusion, radiant heat (from N and E)
Fire Behavior: Low-intensity grass fire – Group torching
Access: One access point to from Bird Pond Road
Home Construction: Brick with compisite roofs
Defensible Space: Less than 30 feet
Fire Occurrence: Low

Estimated Values at Risk:
- 15 homes
- $3,135,300 total value
- 50 acres

Sweetwater Dr-Woodlake Dr

Location: Sweetwater Dr-Woodlake Dr off Green Prairie Rd
N 30° 31’ 58”
W 96° 16’ 36”

Responding Station: 5

Wildland Areas: Approximately 580 acres, NE, E, SE, S, S, SW
Fuels: Grass, yaupon, cedar and oak
Primary Threats: Direct flame contact, ember intrusion, radiant heat (from NE, E, SE, S, S, SW)
Fire Behavior: Low-intensity grass fire – Group torching
Access: One point each to Green Prairie Road
Home Construction: Brick and Stucco with Composite roofs or vinly siding with **combustible attachments**
Defensible Space: Less than feet
Fire Occurrence: Moderate

Estimated Values at Risk:
- 168 homes
- $53,050,000 total value
- 470 acres

Whites Creek Lane

Location: Greens Prairie Road and Whites Creek Lane
N 30° 32’ 57”
W 96° 15’ 58”

Responding Station: 5

Wildland Areas:
Approximately 308 acres, intermix
Fuels: Grass, yaupon, and oak
Primary Threats: Direct flame contact, ember intrusion
Fire Behavior: Low-intensity grass fire – Extreme crown fire
Access: One point to Greens Prairie Road
Home Construction: Ignition-resistant with **combustible attachments**
Defensible Space: 30 feet
Fire Occurrence: Low

Estimated Values at Risk:
- 12 homes
- $2,297.770 total value
- 21 acres

ZONE 6 INFORMATION

Response Zone 6 does not have any risk areas due most of the area being urban. Station 6 could be used as a staging location or incident command post.

Fire Station 6 is located at 610 University Drive East.

REGIONAL FIRE RISK LEVELS

Fire managers at the regional and state level use Fire Risk Levels as a planning and staffing tool. The state is divided into 18 fire risk regions. A regional fire risk level is determined for each region. One preparedness level is determined for the state.

Fire Risk Level I

- Low to moderate daily fire danger when critical fire weather is present
- Low to moderate fire occurrence
- Drought Monitor lists no drought levels in region
- Fuel dryness is at normal moisture (blue level)
- Herbaceous fuel moistures are above 150 percent and grasses are green
- 1,000-hour dead fuel moisture is above the 50th percentile
- ERC percentile is below the 50th percentile

Fire Risk Level II

- Moderate to high daily fire danger when critical fire weather is present
- Moderate to active fire occurrence
- Drought Monitor defines D1 (moderate) drought or abnormally dry areas within region
- Fuel dryness is at normal moisture (blue level) or dry (yellow level)

- Herbaceous fuel moistures are cured or transitioning from green to cured
- 1,000-hour dead fuel moisture is between the 26th and 50th percentile (blue)
- ERC percentile is between the 50th and 75th percentile (blue)

Fire Risk Level III

- High to very high daily fire danger when critical fire weather is present
- Active fire occurrence
- Drought Monitor defines D1 or D2 (moderate to severe) drought in region
- Fuel dryness is at dry (yellow) or critically dry (orange) level
- Herbaceous fuels are cured
- 1,000-hour dead fuel moisture is between the 10th and 25th percentile (yellow)
- ERC percentile is between the 75th and 90th percentile (yellow)

Fire Risk Level IV

- Very high to extreme daily fire danger when critical fire weather is present
- Very active fire occurrence
- Drought Monitor defines D2 or D3 (severe to extreme)

drought in region
- Fuel dryness is at critically dry (orange) or extreme (red) level
- Herbaceous fuels are cured
- 1,000-hour dead fuel moisture is between the 3rd and 10th percentile
- ERC percentile is between the 90th and 97th percentile (orange and red)

Fire Risk Level V
- Very high to extreme daily fire danger when critical fire weather is present
- Very active to extreme fire occurrence
- Drought Monitor defines D3 or D4 (extreme to exceptional) drought in region
- Fuel dryness is at critically dry (orange) or extreme (red) level
- Herbaceous fuels are cured
- 1,000-hour dead fuel moisture is at or below the 97th percentile (red)

Source: Texas Fire Response Handbook

STATE PREPAREDNESS LEVELS

Listed below are the criteria for determining State Preparedness Levels (PL). The PL is established by Texas A&M Forest Service's Planning and Preparedness Section in conjunction with the Risk Assessment Section.

Preparedness Level 1

- Fire activity is within the capabilities of local fire departments with minimal support from TFS.
- TFS fire expenditures are within budgeted funds.
- Consider when no more than two regions are in a Risk Level (RL) II.
- Supervisors should expect minimal impact on daily activities.

Preparedness Level 2

- Freeze-cured fuels are present in winter months.
- Fire activity may begin to exceed local capabilities.
- Mobilization of additional fire departments and TFS resources may be required.
- External fire resources may be required.
- TFS fire expenditures may begin to exceed budgeted funds.
- Consider when one or more regions are in a RL III or multiple regions are in RL II.
- Supervisors should be aware of regional risk levels when planning daily activities.

STATE PREPAREDNESS LEVELS

Preparedness Level 3

- Fire activity may exceed the capabilities of local fire departments and TFS.
- External fire resources may be required.
- TFS fire expenditures begin to exceed budgeted funds.
- Consider when at least one region is in RL IV or a significant number of regions are in RL III.
- Supervisors will consider regional risk levels when planning daily activities.

Preparedness Level 4

- Fire activity may exceed the capabilities of state agency resources.
- External fire resources are required.
- TFS fire expenditures exceed budgeted funds.
- Consider when a significant number of regions are in RL IV or higher.
- Supervisors will consider regional risk levels when planning daily activities.

STATE PREPAREDNESS LEVELS

Preparedness Level 5

- Fire activity exceeds the capabilities of state agency resources.
- The scope of fire operations typically requires multiple Zone Commands.
- External resources are required.
- TFS fire expenditures exceed budgeted funds.
- Consider when a significant number of regions are in RL IV or higher.
- Supervisors will consider regional risk levels when planning daily activities.

The State Preparedness Level may be elevated due to response to all-hazard incidents.

Source: Texas Fire Response Handbook

TEXAS WILDFIRE RESPONSE PROCESS

The State of Texas is composed of 254 counties with approximately 98 percent privately-owned land. The eastern one-seventh of the state is heavily forested with loblolly pine plantations, while the remainder of the state has a wide range of fuel models from coastal grasses to thick oak and mesquite stands to sparsely vegetated areas in parts of the west.

Fire seasons in Texas can occur any time of the year. A fall and winter fire season typically starts in grass fuels after the first hard freeze. In spring and early summer, fires mostly occur in West Texas, and the summer fire season occurs during periods of drought, strong winds and lower relative humidity.

The majority of wildfires in Texas are handled by the 1,900 fire departments throughout the state, 1,500 of which are volunteer departments. However, by Texas State statute, Texas A&M Forest Service has been given the authority to "... take any actions deemed necessary to prevent and extinguish forest fires." Therefore, direct communication between local government and TFS is authorized. Additionally, all TFS employees and their representatives have the authority to enter onto privately-owned land whenever it is necessary to investigate or suppress forest and grass fires when they are known to be burning uncontrolled.

Source: Texas Fire Response Handbook

REQUESTING RESOURCES

For immediate resource requests on a Type 5, 4 or 3 incident, the on-duty College Station Fire Department Battalion Chief or Incident Commander should contact the College Station Emergency Managment Coordinator.

The College Station EMC will contact the appropriate personnel at Brazos County for notification of additional requests and the information will be passed on to the Texas Division of Emergency Management District Coordinator and the Disaster District Chairman as needed.

Emergency responders assigned to an incident in the City of College Station should consult with the Incident Commander about the preferred process for requesting resources, as it may vary depending on the complexity of the incident.

The Incident Commander is responsible for managing emergency resources at the incident site and may begin staffing Incident Management Team positions as the incident grows in scope or complexity.

The Incident Command System (ICS) structure includes a Logistics Section which is responsible for obtaining and maintaining personnel, facilities, equipment and supplies committed to the emergency operation.

REQUESTING RESOURCES

If the EOC is activated, the Incident Commander will continue to manage emergency resources committed at the incident site. The Resource Manager in the EOC will monitor the state of all resources, manage uncommitted resources and coordinate with the Incident Commander to determine requirements for additional resources at the incident site.

Source: Brazos County Interjurisdictional Emergency Management Plan, Annex M, Resource Management

TRANSITIONING INTO EXTENDED ATTACK

Incident Complexity:
A fire complexity analysis should be conducted as part of initial size-up and subsequent size-ups to ensure that the appropriate level of management is applied to an incident and to determine the need for transitioning into extended attack.

There are five levels of complexity that have been defined. Type 1 is the most complex and requires the highest level of skill and management. Type 5 is the least complex incident. Type 3 complexity requires a transition to extended attack.

The complexity analysis of an incident is not a completely objective process. There are many factors to consider that can influence the determination of incident complexity.

Some of the major factors that should be considered in an incident complexity analysis include the number and type of resources engaged or needed for suppression operations, values at risk, threat to life and property, jurisdictional boundaries, fuel types, fire behavior, significant fire potential and firefighter safety.

Type 5 Complexity:
- Generally a small fire or a larger fire with a high percentage of inactive perimeter.
- Two to seven firefighters with one to two units and the local

fire department are an adequate number of resources to contain fire.
• Fire presents low resistance to control. Initial attack will be successful.
• Fire behavior and fire intensities allow for direct attack.

Type 4 Complexity:
• Fire is large enough to require multiple units and a designated supervisor with no collateral responsibilities.
• Local resources include two to five units and one to five fire departments.
• A reconnaissance aircraft and/or one to two tactical aircraft may be present.
• Fire behavior and intensities can cause containment problems near the head fire with slopovers and short-range spotting.
• Direct tactics are generally used but indirect tactics may sometimes be used to cross the head fire due to high fire intensities or high rate of spread.
• Fuel dryness levels may require extended mop-up after containment.
• Fire behavior drops off significantly with sunset and increased moisture recovery.
• Fires are contained in one burning period.

Type 3 Complexity Transition Indicators:
The more indicators that are present increase the likelihood that you have transitioned to a Type 3 fire.
- Attempt(s) to contain head have failed.
- Indirect tactics are being used.
- Significant fire potential rating is high or very high.
- Peak burning period has yet to occur.
- Cannot see the entire fire.
- Tactical aircraft are engaged or ordered.
- Evacuations have occurred or are recommended.
- Number of resources (agency, fire departments, law enforcement) exceed span of control.
- Difficult to manage/monitor all communications.
- Fuels and/or terrain limit access.

Regardless of size or complexity, if any of the following are present an ICT3 must be ordered:
- Entrapment
- Shelter deployment
- Burnover
- Fatality or serious injury

Type 3 Complexity:
- Cannot see the entire fire or cannot gain access to the entire fire.
- Resources may include 20 to 50 responders from a variety of

organizations including wildland agencies, fire departments, law enforcement and relief agencies.

- Regional resources may be dispatched to fill some of the command and general staff positions, usually at the division/group or unit leader level.
- Tactical aircraft are dispatched when available.
- Fire will be an extended attack fire.
- Containment in a single burning period will not be possible due to fuel types, dry to critically dry fuel conditions, active fire behavior or limited access to fire.
- Indirect tactics and structure protection are part of containment strategies.
- Public safety is at risk prompting evacuations or road closures.

Source: Texas A&M Forest Service State Fire Operations Plan

FMAG PROCESS

A Fire Management Assistance Grant (FMAG) offers federal financial assistance to states and local government for the mitigation, management and control of fires on public or private land. If approved, an FMAG can reimburse 75 percent of eligible expenses on a specific incident or wildfire.

To be eligible for an FMAG, an incident has to constitute the threat of a major disaster.

To begin the FMAG application process, the governor or the governor's authorized representative submits to FEMA a request for an FMAG program declaration. The application must be submitted while the fire is burning uncontrolled and threatening such destruction as would constitute a major disaster.

When submitting a declaration request, the governor should provide factual data and professional estimates as available to support the request. The state's verbal request must be followed up with official, completed forms.

FMAG PROCESS

Local officials are responsible for providing accurate and sufficient data to the state documenting costs incurred in response to an FMAG Declaration and fire suppression efforts.

Information required:
- Size of fire(s) in acres or square miles
- Name, location and population of area (or areas) threatened
- Number of primary and secondary residences and businesses threatened
- Distance of fire to nearest neighborhoods
- Number of persons evacuated to date, if applicable
- Current and predicted (24-hour) weather conditions
- Degree to which state and local resources are committed to this fire and other fires in federal, state or local jurisdictions

To further support a declaration request, the state may append additional documentation including:
- Fire severity maps
- Geographic, topographical or land assessment maps
- Incident status summary report (ICS-209)

Source: Federal Emergency Management Agency FMAG Program Guide

ATTACK STRATEGIES: DIRECT ATTACK

Advantages:

- Minimal area is burned; no additional area is intentionally burned.
- Safest place to work; firefighters can usually escape into the burned area.
- The uncertainties of firing operations can be reduced/ eliminated.

Disadvantages:

- Firefighters can be hampered by heat, smoke and flames.
- Control lines can be very long and irregular.
- Burning material can easily spread across mid-slope lines.
- May not be able to use natural or existing barriers.
- More mop-up and patrol is usually required.

Source: Incident Response Pocket Guide, a publication of the National Wildfire Coordinating Group

ATTACK STRATEGIES: INDIRECT ATTACK

Advantages:

- Control lines can be located using favorable topography.
- Natural or existing barriers can be used.
- Firefighters may not have to work in smoke and heat.
- Control lines can be constructed in lighter fuels.
- There may be less danger of slopovers.

Disadvantages:

- More area will be burned.
- Must be able to trade time and space for line to be constructed and fired.
- Firefighters may be in more danger because they are distant from the fire and have unburned fuels between them and the fire.
- There may be some dangers related to firing operations.
- Firing operations may leave unburned islands of fuel.
- May not be able to use control line already built.

SAFETY ZONES

A safety zone is an area where a firefighter can survive without a fire shelter. Considerations for effective safety zones:

- Take advantage of heat barriers such as lee side of ridges, large rocks or solid structures.

- When possible, burn out safety zones prior to arrival of fire front.

- Avoid locations upslope or downwind from the fire; chimneys, saddles or narrow canyons; and steep uphill escape routes.

- Not intended for structure protection.

Separation distance between the firefighter and the flames should be at least four times the maximum continuous flame height. Distance separation is the radius from the center of the safety zone to the nearest fuels.

Source: Incident Response Pocket Guide, a publication of the National Wildfire Coordinating Group

MEDICAL PLAN

Incident Command System principles dictate that an Incident Action Plan, to include a Medical Plan (ICS Form 206), be prepared for wildfires and other incidents.

PHI Air Medic, located at St. Joseph Regional Health Center, 2801 Franciscan, transports patients by helicopter.

The closest burn units are:
- Shriners Hospitals for Children Pediatric Burn Center in Galveston
- University of Texas Medical Branch Blocker Adult Burn Center in Galveston

College Station Fire Department responds to medical calls. Fire stations are located at the following addresses:
- Fire Station No. 1, 304 Holleman Drive East
- Fire Station No. 2, 2100 Rio Grande
- Fire Station No. 3, 1900 Barron Road
- Fire Station No. 4, 1550 George Bush West
- Fire Station No. 5, 1601 William D. Fitch Parkway
- Fire Station No. 6, 610 University Drive East

Treatment centers in the area include:
- St. Joseph Regional Health Center, 2801 Franciscan, Bryan
- College Station Medical Center, 1604 Rock Prairie Road, College Station
- Scott & White Healthcare, Highway 6 and Rock Prairie Road, College Station

STRUCTURE PROTECTION CHECKLIST

Rapid mitigation measures

- ☐ Remove small combustibles immediately next to structure.
- ☐ Close windows and doors, including garage (leave unlocked).
- ☐ Clean area around fuel tank and shut off tank.
- ☐ Charge garden hoses.
- ☐ Apply CAF, foam or gel retardants if available.

Equipment and water use

- ☐ Mark entrance to indicate a staffed location if it is not obvious.
- ☐ Charge hose lines.
- ☐ Long hose lays are not recommended.
- ☐ Keep 100 gallons of water in reserve.
- ☐ Identify a backup water source.

STRUCTURE PROTECTION CHECKLIST

Equipment and water use (continued)

- ☐ Identify power lines for aerial resources.
- ☐ Never rely on water for firefighter safety.

Patrol following the fire front

- ☐ Most structures do not burn until after the fire front has passed.
- ☐ Move to closest safety zone and let fire front go through.
- ☐ Return as soon as conditions allow safe access to structures.
- ☐ Secondary ignition is usually due to residual spot fires or creeping ground fire.
- ☐ Take suppression actions within your capability.
- ☐ Call for assistance if needed.

Source: Incident Response Pocket Guide, a publication of the National Wildfire Coordinating Group

ACRONYMS

AAR – After Action Review
AHIMT – All-Hazard Incident Management Team
BI – Burning Index
BLM – Bureau of Land Management
CAF – Compressed Air Foam
CEOC - Community Emergency Operations Center
CTR – Crew Time Report
DHS – Department of Homeland Security
DIVS – Division Supervisor
EAS – Emergency Alert System
EMT – Emergency Medical Technician
EOC – Emergency Operations Center
ERC – Energy Release Component
FAA – Federal Aviation Administration
FD – Fire Department
FEMA – Federal Emergency Management Agency
FMAG – Fire Management Assistance Grant
FMO – Fire Management Officer
GPS – Global Positioning System
HAZMAT – Hazardous Material
IA – Initial Attack
IC – Incident Commander
ICP – Incident Command Post
ICS – Incident Command System
IIMT – Interagency Incident Management Team
JIC – Joint Information Center

ACRONYMS

JIS – Joint Information System
KBDI – Keetch-Byram Drought Index
LAT – Large Air Tanker
LCES – Lookout, Communication, Escape Routes, Safety Zones
LE – Law Enforcement
LEO – Law Enforcement Officer
LODD – Line of Duty Death
MAFFS – Modular Airborne Firefighting System
MCP - Mobile Command Post
MRE – Meal Ready to Eat
NFPA – National Fire Protection Association
NICC – National Interagency Coordination Center
NIFC – National Interagency Fire Center
NIMO – National Incident Management Organization
NIMS – National Incident Management System
PAO – Public Affairs Officer
PD – Position Description
PIO – Public Information Officer
PL – Preparedness Level
PPE – Personal Protective Equipment
RAWS – Remote Automated Weather System
RFC – Regional Fire Coordinator
RFD – Rural Fire District
RH – Relative Humidity
RL – Risk Level
ROS – Rate of Spread

ACRONYMS

SACC – Southern Area Coordination Center
SAIT – Safety Accident Investigation Team
SCBA – Self-Contained Breathing Apparatus
SEAT – Single-Engine Air Tanker
SITREP – Situation Report
SOP – Standard Operating Procedure
TAC – Tactical Channels
TFLD – Task Force Leader
TFR – Temporary Flight Restrictions
TFS – Texas A&M Forest Service
UAC – Unified Area Command
UC – Unified Command
USDA – United States Department of Agriculture
USFS – United States Forest Service
UTF – Unable to Fill
VFD – Volunteer Fire Department
VFR – Visual Flight Rules
WCT – Work Capacity Test
WUI – Wildland Urban Interface

GLOSSARY

The following terms are from the Incident Command System (ICS) National Training Curriculum documentation.

AGENCY REPRESENTATIVE: An individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident. Agency Representatives report to the Incident Liaison Officer.

AREA COMMAND: An organization established to: 1) oversee the management of multiple incidents that are each being handled by an Incident Command System organization; or 2) to oversee the management of a very large incident that has multiple Incident Management Teams assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure that incidents are properly managed and ensure that objectives are met and strategies followed.

BRANCH: The organizational level having functional or geographic responsibility for major parts of incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section. Branches are identified by the use of Roman numerals or by functional name (e.g., medical, security, etc.).

GLOSSARY

CACHE: A pre-determined complement of tools, equipment and/or supplies stored in a designated location, available for incident use.

CHECK-IN: The process whereby resources first report to an incident. Check-in locations include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Helibases, Helispots and Division Supervisors (for direct line assignments).

CHAIN OF COMMAND: A series of management positions in order of authority.

COMMAND: The act of directing and/or controlling resources by virtue of explicit legal, agency or delegated authority. May also refer to the Incident Commander.

COMMAND STAFF: The Command Staff consists of the Information Officer, Safety Officer and Liaison Officer. They report directly to the Incident Commander. They may have an assistant or assistants, as needed.

COMPLEX: Two or more individual incidents located in the same general area which are assigned to a single Incident Commander or to Unified Command.

GLOSSARY

COORDINATION CENTER: Term used to describe any facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.

DELEGATION OF AUTHORITY: A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. The Delegation of Authority can include objectives, priorities, expectations, constraints and other considerations or guidelines as needed. Many agencies require written Delegation of Authority be given to Incident Commanders prior to their assuming command on larger incidents.

DEMOBILIZATION UNIT: Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident resources.

DIRECTOR: The ICS title for individuals responsible for supervision of a Branch.

DISPATCH: The implementation of a command decision to move a resource or resources from one place to another.

DIVISION: Divisions are used to divide an incident into geographical areas of operation. A Division is located within the ICS organization between the Branch and the Task Force/ Strike Team. Divisions are identified by alphabetic characters

for horizontal applications and, often, by floor numbers when used in buildings.

DOCUMENTATION UNIT: Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to the incident.

EMERGENCY MANAGEMENT COORDINATOR/DIRECTOR: The individual within each political subdivision that has coordination responsibility for jurisdictional emergency management.

EMERGENCY MEDICAL TECHNICIAN (EMT): A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

EVENT: A planned, non-emergency activity. ICS can be used as the management system for a wide range of events, e.g., parades, concerts or sporting events.

GENERAL STAFF: The group of incident management personnel reporting to the Incident Commander. They may each have a deputy, as needed. The General Staff consists of:

- Operations Section Chief
- Planning Section Chief
- Logistics Section Chief
- Finance/Administration Section Chief

GLOSSARY

GROUP: Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. Groups are located between Branches (when activated) and Resources in the Operations Section.

HELIBASE: The main location for parking, fueling, maintenance and loading of helicopters operating in support of an incident. It is usually located at or near the incident base.

HELISPOT: Any designated location where a helicopter can safely take off and land. Some helispots may be used for loading of supplies, equipment or personnel.

INCIDENT: An occurrence either human caused or by natural phenomena that requires action by emergency service personnel to prevent or minimize loss of life or damage to property and/or natural resources.

INCIDENT ACTION PLAN: Contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The Plan may be oral or written. When written, the Plan may have a number of forms as attachments (e.g., traffic plan, safety plan, communications plan, map, etc.).

GLOSSARY

INCIDENT COMMANDER: The individual responsible for the management of all incident operations at the incident site.

INCIDENT COMMAND POST (ICP): The location at which the primary command functions are executed. The ICP may be collocated with the incident base or other incident facilities.

INCIDENT COMMAND SYSTEM (ICS): A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

INCIDENT MANAGEMENT TEAM: The Incident Commander and appropriate Command and General Staff personnel assigned to an incident.

INFORMATION OFFICER: A member of the Command Staff responsible for interfacing with the public and media or with other agencies requiring information directly from the incident. There is only one Information Officer per incident. The Information Officer may have assistants.

LIAISON OFFICER: A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies.

GLOSSARY

LOGISTICS SECTION: The Section responsible for providing facilities, services and materials for the incident.

MOBILIZATION: The process and procedures used by all organizations federal, state and local for activating, assembling and transporting all resources that have been requested to respond to or support an incident.

MULTI-AGENCY COORDINATION (MAC): A generalized term which describes the functions and activities of representatives of involved agencies and/or jurisdictions who come together to make decisions regarding the prioritizing of incidents and the sharing and use of critical resources. The MAC organization is not a part of the on-scene ICS and is not involved in developing incident strategy or tactics.

MUTUAL AID AGREEMENT: Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.

NATIONAL INTERAGENCY INCIDENT MANAGEMENT SYSTEM (NIIMS): An NWCG-developed program consisting of five major subsystems which collectively provide a total systems approach to all-risk incident management.

GLOSSARY

NATIONAL WILDFIRE COORDINATING GROUP (NWCG): A group formed under the direction of the Secretaries of the Interior and Agriculture to improve the coordination and effectiveness of wildland fire activities, and provide a forum to discuss, recommend appropriate action or resolve issues and problems of substantive nature.

OPERATIONAL PERIOD: The period of time scheduled for execution of a given set of operation actions as specified in the Incident Action Plan. Operational Periods can be of various lengths, although usually not over 24 hours.

OPERATIONS SECTION: The Section responsible for all tactical operations at the incident. Includes Branches, Divisions and/or Groups, Task Forces, Strike Teams, Single Resources and Staging Areas.

OVERHEAD PERSONNEL: Personnel who are assigned to supervisory positions which include Incident Commander, Command Staff, General Staff, Directors, Supervisors and Unit Leaders.

RESOURCES: Personnel and equipment available, or potentially available, for assignment to incidents. Resources are described by kind and type, e.g., ground, water, air, etc.

GLOSSARY

SECTION: That organization level with responsibility for a major functional area of the incident, e.g., Operations, Planning, Logistics, Finance/Administration. The Section is organizationally between Branch and Incident Commander.

SINGLE RESOURCE: An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

SPAN OF CONTROL: The supervisory ratio of from three-to-seven individuals, with five-to-one being established as optimum.

STAGING AREA: Staging Areas are locations set up at an incident where resources can be placed while awaiting a tactical assignment. Staging Areas are managed by the Operations Section.

STRIKE TEAM: Specified combinations of the same kind and type of resources, with common communications and a leader.

TACTICAL DIRECTION: Direction given by the Operations Section Chief which includes the tactics appropriate for the selected strategy, the selection and assignment of resources, tactics implementation and performance monitoring for each operational period.

TASK FORCE: A combination of single resources assembled for a particular tactical need, with common communications and a leader.

TEMPORARY FLIGHT RESTRICTIONS (TFR): Temporary airspace restrictions for non-emergency aircraft in the incident area. TFRs are established by the FAA to ensure aircraft safety, and are normally limited to a five-nautical-mile radius and 2,000 feet in altitude.

TWENTY-FOOT WINDS: Sustained winds averaged over a 10-minute period and measured 20 feet above the average height of nearby vegetation.

TYPE: Refers to resource capability. A Type 1 resource provides a greater overall capability due to power, size, capacity, etc., than would be found in a Type 2 resource. Resource typing provides managers with additional information in selecting the best resource for the task.

UNIFIED COMMAND: In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies.

ICS FORMS

Incident Command System forms may be tailored to meet an agency's needs. More importantly, even though the format is flexible, the form number and purpose of the specific type of form must remain intact to maintain consistency and facilitate immediate identification and interoperability, and for ease of use.

The following provides brief descriptions of selected ICS forms. This list is not all-inclusive. All ICS forms can be downloaded at **http://www.nwcg.gov/pms/forms/icsforms.htm**

ICS 201 - Incident Briefing

Most often used by the initial Incident Commander, this four-section document (often produced as four pages) allows for the capture of vital incident information prior to the implementation of the formal planning process. ICS 201 allows for a concise and complete transition of command briefing to an incoming new IC. This form is designed to be transferred easily to the members of the Command and General Staff as they arrive and begin work. It is not included as a part of the formal written Incident Action Plan.

ICS FORMS

ICS 202 - Incident Objectives

ICS 202 serves as the first page of a written IAP. It includes incident information, a listing of the IC's objectives for the operational period, pertinent weather information and a general safety message. Signature blocks are provided.

ICS 203 - Organization Assignment List

ICS 203 is typically the second page of the IAP. It provides a full accounting of incident management and supervisory staff for that operational period.

ICS 204 - Assignment List

ICS 204 is included in multiples, based on the organizational structure of the Operations Section for the operational period. Each Division/Group will have its own page, listing the Supervisor for the Division/Group (including Branch Director if assigned) and the specific assigned resources with leader name and number of personnel assigned to each resource. This document then describes in detail the specific actions the Division or Group will be taking in support of the overall incident objectives.

Any special instructions will be included as well as the elements of the Incident Radio Communications Plan (ICS 205) that apply to that Division or Group.

ICS 205 - Incident Radio Communications Plan

ICS 205 is used to provide information on all radio frequency assignments down to the Division/Group level.

ICS 206 - Medical Plan

ICS 206 presents the incident's Medical Plan to care for responder medical emergencies.

ICS 209 - Incident Status Summary

ICS 209 collects basic incident decision support information and is the primary mechanism for reporting this situational information to incident coordination and support organizations and the Agency Administration/Executives.

ICS 211 - Incident Check-In List

ICS 211 documents the check-in process. Check-in recorders report check-in information to the Resources Unit.

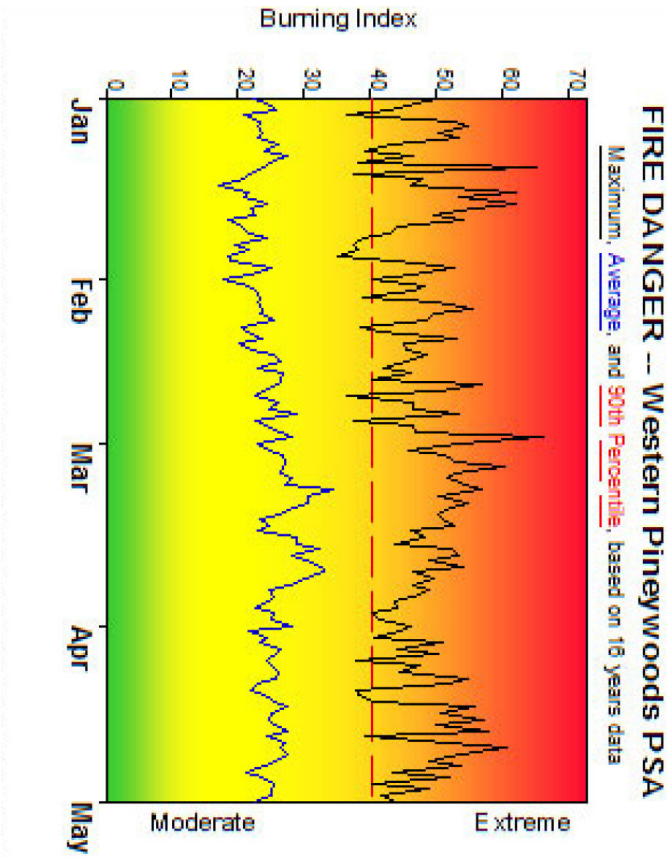
ICS 215 - Operational Planning Worksheet

ICS 215 is used in the incident Planning Meeting to develop tactical assignments and resources needed to achieve incident objectives and strategies.

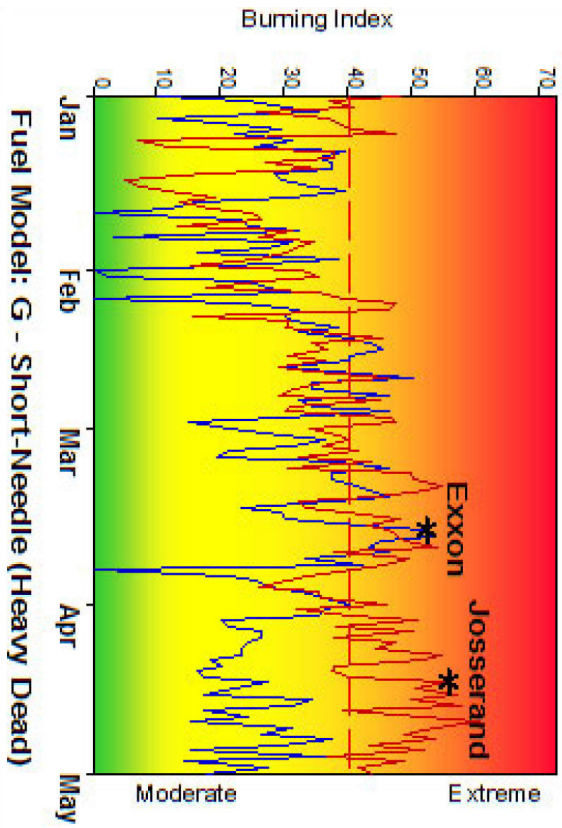
ICS 215A - Safety and Risk Analysis

ICS 215A communicates to the Operations and Planning Section Chiefs the safety and health issues identified by the Safety Officer. It also identifies mitigation measures to address the identified safety issues.

Western Pineywoods Predictive Services Area



Western Pineywoods
Predictive Services Area



Fire Danger Area:

- Dead F.M. Critical %'s
- 10Hr. - 6%, 100Hr. - 13%
- 1000Hr. - 15%

  * Meets NWCG Wx Station Standards

Fire Danger Interpretation:

EXTREME -- Use extreme caution

(Caution) -- Watch for change

Moderate -- Lower Potential, but always be aware

Maximum -- Highest Burning Index by day for 1996 - 2011

Average -- shows peak fire season over 16 years (1927 observations)

90th Percentile -- Only 10% of the 1927 days from 1996 - 2011 had an Burning Index above 40

Local Thresholds - Watch out: Combinations

of any of these factors can greatly increase fire behavior:
20' Wind Speed over 15 mph, **RH** less than 30%,
Temperature over 90, **Energy Release Component** over 38

Remember what Fire Danger tells you:

- ✓ Burning Index gives day-to-day fluctuations
  calculated from 2 pm temperature, humidity, wind,
  daily temperature & rh ranges, and precip duration.
- ✓ Wind is part of BI calculation.
- ✓ Watch local conditions and variations across
  the landscape -- Fuel, Weather, Topography.
- ✓ Listen to weather forecasts -- especially WIND.

Past Experience:

The Josserand South Fire occurred on 4/15/11 in Trinity County, burning 1,389 acres and was started by debris burning. The majority of the fire burned in high risk pine plantation. A minimum RH of 11%, maximum temperature of 80 degrees, sustained winds from 10-15 mph from the Northwest with gusts to 29 mph was observed at the Lukfin RAWS. Extreme fire behavior was observed in plantation fuels, associated with the passage of a strong dry cold front. Live fuel moisture measured from pine in nearby Houston County, was 102%. The 3rd percentile for pine in the Western Pineywoods PSA is 105%.

Responsible Agency: Mike Dunivan, Texas Forest Service
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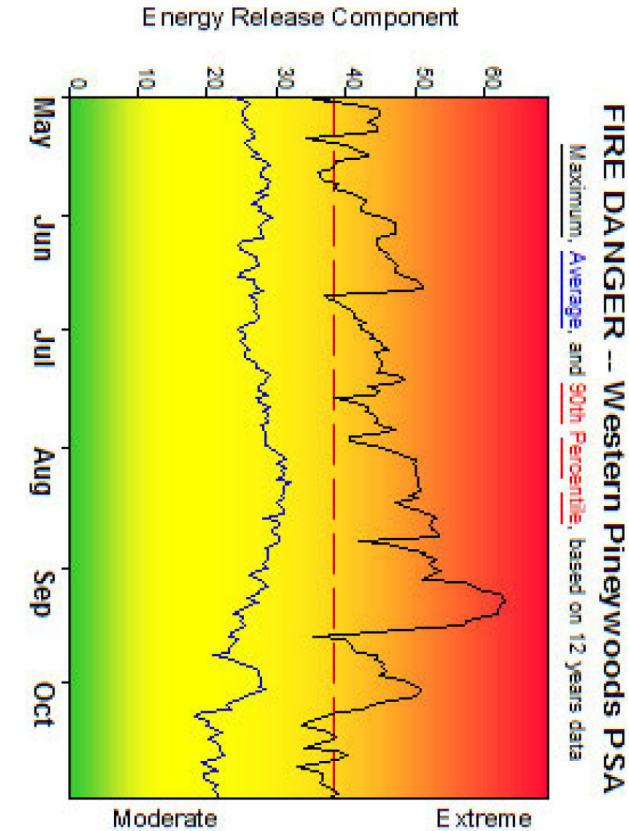
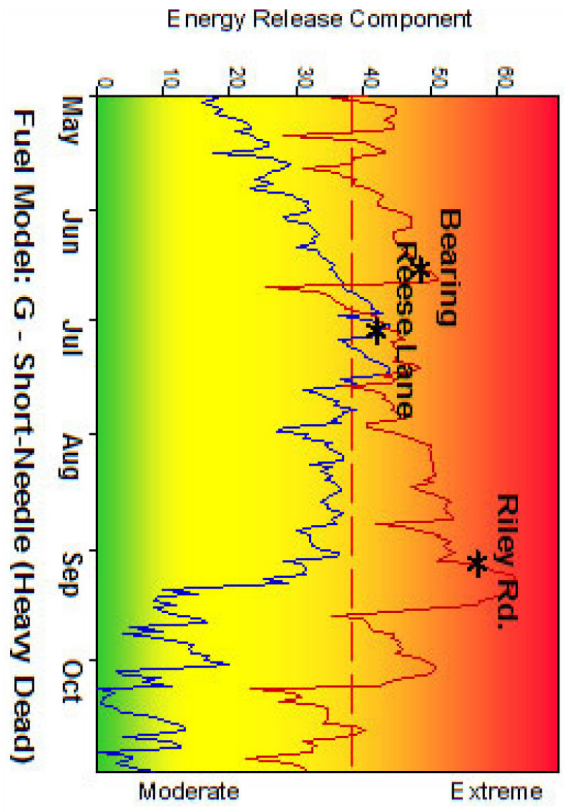
Design by NWCG Fire Danger Working Team

Western Pineywoods Predictive Services Area



Western Pineywoods Predictive Services Area



Fire Danger Area:

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  * Meets NWCG Wx Station Standards

Fire Danger Interpretation:

EXTREME -- Use extreme caution

(Caution) -- Watch for change

Moderate -- Lower Potential, but always be aware

Maximum -- Highest Energy Release Component by day for 2000 - 2011

Average -- shows peak fire season over 12 years (2207 observations)

90th Percentile -- Only 10% of the 2207 days from 2000 - 2011 had an Energy Release Component above 38

Local Thresholds - Watch out: Combinations of any of these factors can greatly increase fire behavior: **20' Wind Speed** over 15 mph, **RH** less than 30%, **Temperature** over 90, **Burning Index** over 44

Remember what Fire Danger tells you:

- ☑ Burning Index gives day-to-day fluctuations
  calculated from 2 pm temperature, humidity, wind,
  daily temperature & rh ranges, and precip duration.
- ☑ Wind is part of BI calculation.
- ☑ Watch local conditions and variations across
  the landscape -- Fuel, Weather, Topography.
- ☑ Listen to weather forecasts -- especially WIND.

Past Experience:

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Design by NWCG Fire Danger Working Team

CONTACT LIST

District Coordinator, Texas Department of Public Safety,
Division of Emergency Management
979-412-0003

Texas A&M Forest Service Contact Info

Regional Fire Coordinator
200 Technology Way, Suite 1162
College Station, TX 77845-3424
979-458-6507

Assistant Chief Regional Fire Coordinator
700 South Reynolds Street
La Grange, Texas 78945
979-968-5555

LaGrange Dispatch
979-968-5555

texaswildfirerisk.com
ticc.tamu.edu
texasforestservice.tamu.edu
texasfirewise.com

STANDARD FIREFIGHTING ORDERS
WATCH OUT SITUATIONS

Standard Firefighting Orders

1. Keep informed on fire weather conditions and forecasts.
2. Know what your fire is doing at all times.
3. Base all actions on current and expected behavior of the fire.
4. Identify escape routes and safety zones, and make them known.
5. Post lookouts when there is possible danger.
6. Be alert. Keep calm. Think clearly. Act decisively.
7. Maintain prompt communications with your forces, your supervisor and adjoining forces.
8. Give clear instructions and be sure they are understood.
9. Maintain control of your forces at all times.
10. Fight fire aggressively, having provided for safety first.

Watch Out Situations

1. Fire not scouted and sized up.
2. In country not seen in daylight.
3. Safety zones and escape routes not identified.
4. Unfamiliar with weather and local factors influencing fire behavior.
5. Uninformed on strategy, tactics and hazards.
6. Instructions and assignments not clear.
7. No communication link with crew members or supervisor.
8. Constructing line without safe anchor point.
9. Building fireline downhill with fire below.
10. Attempting frontal assault on fire.
11. Unburned fuel between you and fire.
12. Cannot see main fire; not in contact with someone who can.
13. On a hillside where rolling material can ignite fuel below.
14. Weather becoming hotter and drier.
15. Wind increases and/or changes direction.
16. Getting frequent spot fires across line.
17. Terrain and fuels make escape to safety zones difficult.
18. Taking a nap near fireline.

TEXAS A&M FOREST SERVICE

COLLEGE STATION FIRE — EMS — RESCUE — HAZMAT — EST. 1971