

**DEPARTMENT OF THE ARMY**  
**Kansas City District, Corps of Engineers**  
**700 Federal Building**  
**Kansas City, Missouri 64106-2896**

CENWK-OD-TR

10 December 2009

**PROJECT OPERATIONS**

**Wildland Fire Management**

- 1. Purpose.** This NWK Circular establishes District procedures for wildland fire management at lake and river projects in the Kansas City District.
- 2. Applicability.** The provisions of this circular apply to all lake and river projects in the Kansas City District.
- 3. Authority.** Authority for wildland fire activities in the Kansas City District is provided in accordance with Engineering Regulation and Engineering Pamphlet 1130-2-540, Chapter 8, Revision #3, 18 August 2008. Further wildland fire program implementation guidelines are provided by Engineering Manual 283-5-1, Chapter 9.
- 4. References.**
  - a. Engineering Regulation, 1130-2-540, Chapter 8, Revision #3, August, 2008.
  - b. Engineering Pamphlet, 1130-2-540, Chapter 8, Revision #3, August, 2008.
  - c. Engineering Manual, 385-5-1, Chapter 9.
- 5. Availability:** A copy of this circular will be furnished to each natural resource employee by the Operations Manager upon request.
- 6. Program:** It is the policy of the Kansas City District to perform fire management activities as required at Civil Works projects, and to perform them in a manner that provides for the safety of COE personnel, the public and the environment. The Operations Manager is delegated the decision to implement fire management activities. Fire Management activities are limited to utilization of COE employees, contract forces and qualified volunteers.

Wildfire suppression and utilization of prescribed fire to accomplish resource management objectives shall be conducted in accordance with the Wildland Fire Management Plan and in accordance with ER/EP 1130-2-540, Chapter 8. The Wildland Fire Management Plan will be included as a component of the project Operational Management Plan (OMP). A Wildland Fire Management Plan outline is included in **Appendix A**. Fire management activities will be implemented in accordance, but not limited to, the specific requirements as outlined herein.

a. Position Hazard Analysis. All district personnel engaged in fire management activities will have a Position Hazard Analysis (PHA) completed and on file at the project office for the type of work being performed. An approved PHA for district personnel can be found in **Appendix B**.

b. Activity Hazard Analysis. An Activity Hazard Analysis (AHA) will be completed for all appropriate district employees, contractors and volunteers before beginning any wildland fire management activities. An approved AHA for district personnel can be found in **Appendix C**.

c. Health and Fitness Certification. EP 1130-2-540 requires that any employee engaged in wildland fire management activities on Corps lands must have on file at the project office documentation signed by a medical physician to indicate their fitness to perform wildland fire management duties. This requirement may be satisfied through completion of an annual agency sponsored physical for positions covered by the District's Medical Surveillance Program (MSP). Employees in positions that are not covered by the MSP may satisfy the requirement by submitting a written letter from a personal physician documenting the fitness of the employee to engage in wildland firefighting duties.

d. Personal Protective Equipment and Clothing (PPE). All personnel engaged in fireline management activities must wear protective clothing and equipment (PPE) as stated in Safety and Health Requirements Manual, EM 385-5-1, Section 09.K.01. PPE items include but are not limited to fire resistant clothing, hard hat, goggles, leather boots and fire resistant gloves.

e. Prescribed Fire Plans. Prior to implementation of prescribed fires, including debris piles, qualified personnel will develop a site specific burn plan. Burn plans will include an action plan, risk hazard analysis and post burn report. Personnel responsible for development, approval and oversight of fire plans will be properly trained in accordance with "Burn Leader" standards. A copy of the burn plan template is included in **Appendix D**.

**7. Training.** In the performance of wildland fire management activities, the safety of COE personnel and the public is first priority. To ensure an appropriate level of safety ***all personnel directly involved in wildland fire management*** shall be trained in accordance with approved standards as specified below.

a. Burn Crew Member: A Burn Crew Member is defined as an individual 1) assigned to natural resource management responsibilities or to assisting with natural resource management responsibilities; 2) appointed by the Project Manager; and, 3) qualified in accordance with Chapter 8, ER/EP 1130-2-540 and this Circular. The Burn Crew Member works under the direction of the Burn Leader to conduct fire management activities related to planning, ignition, holding, mop up, suppression and evaluation.

- i. Minimum Training Requirements - Each burn crew member will complete a required minimum eight hours of formal training. The employee must successfully complete a Federal, State or County government burn or prescribed burn workshop. The workshop must include fire line safety, basic wildland fire behavior and control tactics, communications procedures, first aid, use, limitations and care of protective and fire fighting equipment, and standards for survival. Qualified workshops are currently provided by, the Natural Resources Conservation Service, the Missouri Department of Conservation and some local County Extension Services.
  - ii. Refresher Training Requirements - A minimum of two hours of refresher training must be taken each year. This training may be provided by a qualified Burn Leader. The training should include fire line safety, basic wildland fire behavior and control tactics, communications procedures, first aid, use, limitations and care of protective and fire fighting equipment, and standards for survival.
  - iii. Pre-Burn Briefings - All burn crew members must receive a briefing on the project's fire ignition and suppression equipment, communication equipment and first aid supplies at the beginning of each burn from a qualified Burn Leader.
- b. Burn Leader: A Burn Leader is defined as an individual 1) assigned to natural resource management responsibilities or to assisting with natural resource management responsibilities; 2) appointed by the Project Manager; and, 3) qualified in accordance with Chapter 8, ER/EP 1130-2-540 and this Circular. The Burn Leader coordinates and directs Burn Crew Members in the implementation of fire management activities to include planning, igniting, holding, mop up, suppression and evaluation. ***Advanced training is required for individuals that develop, approve and oversee burn plan implementation.***
- i. Burn Leaders shall meet the training requirements established by their respective state statute. In the absence of state requirements, Burn Leaders will be trained in accordance with standards approved by the District Commander. Kansas City District personnel training will include a minimum amount of documented practical experience plus additional advanced classroom training as stated below.
  - ii. Practical Experience – To qualify as a Burn Leader the employee must have the following experience in prescribed burns of at least 10 acres:
    - (a) at least 10 such prescribed burns, or
    - (b) at least 40 hours of experience.The individual must also have successfully written and executed (with proper supervision) three prescribed burn plans and completed the appropriate post burn reports.

- iii. Formal Classroom Training - To qualify as a Burn Leader, the individual must also have an additional 32 hours of advanced classroom training. The following courses meet the minimum standards established to become a Burn Leader. Potential courses are offered from the National Wildland Fire Coordination Group (NWCG) or online from the Federal Emergency Management Agency's (FEMA) Fire Administration site listed below:

- [website.http://www.nfaonline.dhs.gov/browse/index.shtm#Q901](http://www.nfaonline.dhs.gov/browse/index.shtm#Q901)
- ICS-100 Introduction for Operational First Responders (15 hours).
- ICS Simulation Series: Wildland Fire (1 hour).
- Fire Service Suppression Q 318 – FEMA / US Fire Administration Course(15 hours).
- S-130 Wildland Firefighter Training (24 hours).
- S-190 Introduction to Wildland Fire Behavior (8 hours).
- S-290 Intermediate Wildland Fire Behavior (40 hours).
- Missouri Department of Conservation Level 2 Fire Management Training. (32 hours).
- Missouri Department of Conservation Level 3 Fire Management Training. (16 hours).

- iv. Refresher Training - To maintain the Burn Leader status, eight hours of refresher training must be completed every five years. Optional refresher training may include completion of additional courses as specified in b-iii.

**8. Wildfire Suppression:** The Operations Manager may utilize project personnel may suppress wildfires provided these employees are appropriately trained and equipped as described in this Circular. Federal statute 42 USC 1856a and 42 USC 1856a-1 provides the Corps with authority to contract and pay for wildfire suppression. The Operations Manager can initiate action for the Corps to enter into a contract for performance of these services subject to compliance with all applicable Federal procurement regulations. Any contract or agreement for fire protection must receive legal review and approval prior to signature.

**9. Burn Piles:** Project personnel must obtain the appropriate state permit/s if applicable to comply with the Clean Air ACT.

**10. Reciprocal Agreements:** Authority for the Corps to enter into reciprocal agreements with county, state or federal agencies for the purpose of prescribed fire implementation or wildfire suppression is currently provided in ER/EP 1130-2-540, Chapter 2.

## **APPENDIX A**

### **Wildland Fire Management Plan**

A-1. Wildland Fire Management. During preparation of the operational management plan (OMP) a wildland fire management plan will be developed and included as an appendix to the OMP. The wildland fire management plan will outline in detail the specific operation and administration requirements for managing wildland fires.

A-2. The wildland fire management plan will address all aspects of wildland fire management, which includes wildfire control, prescribed fire and debris pile burning. The wildland fire management plan will be used as a tool for establishing specific wildland fire management strategies, such as training, prescribed burn plans, public education and involvement and cooperative agreements and contracts.

A-3. The District Commander may dictate Wildland Fire Management Plan format.

A-4. The Wildland Fire Management Plan will include:

- i. Introduction
  - a. General
  - b. Purpose
  - c. Authority
- ii. Fire Protection
  - a. General (Wildfire, Prescribed Fire)
  - b. Objectives
  - c. Fire Season (timing)
  - d. Access (roads, bridges, seasonal crossings, ect)
  - e. Available resources
- iii. Protection
  - a. General
  - b. Prevention Activities/Programs
  - c. Preparedness
    1. Training and medical certifications
  - d. Equipment maintenance schedule
  - e. Tool Cache
  - f. Agreements (cooperative, contracts, ect.)
  - g. Fuel Management
- iv. Suppression
  - a. General
  - b. Jurisdictions and Incident Command
  - c. Suppression Operations
- v. Record Keeping/Reporting Requirements
- vi. Coordination with Local, State and Federal entities
- vii. Approval (as required by law).

## APPENDIX B

### Position Hazard Analysis

#### POSITION HAZARD ANALYSIS AND SELECTION OF PERSONAL PROTECTIVE EQUIPMENT (PPE)

Employee Name: \_\_\_\_\_

Office Symbol: \_\_\_\_\_

Series/Title: \_\_\_\_\_

Series/Title: GS-

0401/BIOLOGIST

MAJOR ACTIVITY	LOCATION	HAZARDS	CONTROLS/PPE
Field Inspection/ Surveys	Field	Wildfires	Report wildfires to Local Law Enforcement and advise responsible suppression organizations. Maintain personal safety and assist with public safety and resources. Maintain awareness of heat, smoke and poor air quality. Implement suppression efforts in accordance with policy, training, available PPE and suppression resources.
		Prescribed Fires	Maintain continued awareness of weather conditions. Wear appropriate PPE to include fire resistant clothing, leather boots, gloves, goggles and hard hat. Maintain contact with local law enforcement and responsible suppression entities. Follow approved fire plan and instructions from the Burn Leader.

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

SOHO Certification: \_\_\_\_\_ Date: \_\_\_\_\_

Medical Surveillance: Type: \_\_\_\_\_

Certification/Training: Type: \_\_\_\_\_

CESAJ Form 1254, MAR 97

**APPENDIX C**  
**Activity Hazard Analysis**

See Attachement

**APPENDIX D**  
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**Prescribed Fire Plans**

Project:

1. Prepared by: \_\_\_\_\_ Date: \_\_\_\_\_
2. Approved by (Operations Manager and/or  
Qualified Burn Crew Leader): \_\_\_\_\_ Date: \_\_\_\_\_
3. Burn Dates:
4. Purpose:
5. Burn Location: County, Tract #, OMP Unit and Map of the area (aerial photo)
6. Fuel Type/Fuel Moisture parameters (*optional*):
7. Fireguards/Resource Requirements
8. Required Rangeland Fire Index:
9. Safety Issues requiring discussion:
10. Weather Parameters:
11. Smoke Mgt, Mop-Up and Patrol: Smoldering debris removed from edge and placed  
well within blackened areas.
12. Communication Plans:
13. Escape Plan:
14. NEPA Analysis and Conclusion:
15. Special Concerns:

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## APPENDIX D

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### Risk Hazard Analysis

Purpose: To evaluate the technical difficulty involved with implementing a specific burn.

Assessment prepared by:    Date:            Area:            Acres:            Total Score (RH):

ASSESSMENT CRITERIA	VALUE				SCORE
	1	2	3	4	
<b>Fuel Type</b>	Herbaceous or herbaceous dominated	Old field or shrub dominated	Timber litter – braches and leaves	Slash	
<b>Size of Burn Area (acres)</b>	<80	81-160	161-320	>320	
<b>Escape Potential</b>	No adjacent fuel	Adjacent fuel w/low ignition potential	Adjacent fuel w/moderate ignition potential	Adjacent fuel w/high ignition potential	
<b>Adjoining Hazards</b>	No adjoining private land or high value resources	Adjoining land, but no high value resources	High value developments within ¼ - ½ mile	High value developments within ¼ mile	
<b>Topography</b>	Flat to gently rolling, <5% slopes	Gentle to moderate, 5-10% slopes	Moderate to severe 11-30% slopes	Severe Slopes often >30%	
<b>Potential Impact of Smoke on Traffic</b>	No impact	¼ - ½ mile from secondary roads	< ½ mile from major highway or < ¼ mile from secondary road	< ¼ mile from major highway	
<b>Impact of Smoke on Residential, Industrial or High Public Use Areas</b>	No impact	Isolated residences, low public use.	Small rural community or groups of dwellings, moderate public use.	Large residential area – industrial area, high public use.	
<b>TOTAL</b>					

Level #1; Assessment values 7 – 11; Low Risk

Level #2; Assessment values 12 – 19; Moderate Risk

Level #3; Assessment values >19; High Risk



**APPENDIX D**  
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**Post Burn Report**

1. Burn Location:
2. Recorded Weather and RFI conditions
3. Resources Utilized
4. Goals and Outcomes
5. Ignition Strategy
6. Lessons Learned.
7. Prepared By: \_\_\_\_\_ Reviewed By: \_\_\_\_\_