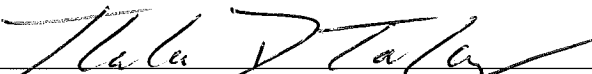

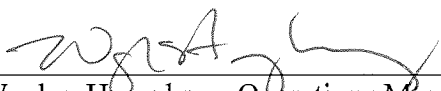


MCALPINE LOCKS & DAM
WILDLAND FIRE MANAGEMENT PLAN

Prepared by:  8/12/16
Theodore D. Takacy, Lockmaster, OPL-MA (Date)

Reviewed by:  8/12/16
Keith C. Chasteen, Natural Resources (Date)
Management Specialist, OPT-O

Approved by:  8/19/16
Waylon Humphrey, Operations Manager, OPL (Date)

1. **Purpose and Authority.** This plan is provided in accordance with the 20 APR 2016 Louisville District Wildland Fire Management Program Policy and ER/EP 1130-2-540, Chapter 8. Additional guidance is provided by EM 385-1-1, Chapter 9. This plan provides for the internal process to adhere to all guidelines in order to successfully implement a wildland fire program on project lands in a manner that provides for safety of the environment, public, and project personnel while achieving management objectives.
2. **Fire Protection.** Wildfire suppression and utilization of prescribed fire is an active natural resources management mission. McAlpine Locks & Dam consists of 389 acres with approximately 330 acres of that being land and the remainder being water, pavement/parking areas, and buildings. All project lands fall within the boundaries of Jefferson County and the City of Louisville, Kentucky.

a. General

- 1) Wildfire Suppression: The Kentucky Division of Forestry is responsible for fighting wildland fires on private lands. With McAlpine lying within the city limits of Louisville and within District 1 of the Louisville Fire Department, initial wildland fire response would be by the local fire department.

McAlpine personnel are not trained or equipped to undertake full suppression actions on a wildland fire occurring within the boundaries of the project. Although incipient actions can be taken, all wildfires will immediately be reported by calling 911. Upon arrival of trained fire control specialists, project personnel will withdraw from suppression actions and will only participate in supportive roles, unless adequately trained/certified and operates under the supervision of the fire boss or fire chief at the scene.

- 2) Prescribed Burning: Prescribed burning is a management technique and tool utilized to safely treat designated areas with fire in order to achieve identified resource objectives. Objectives may include, but are not limited to, site preparation for native meadow seed planting, woody plant suppression, wildlife habitat improvement, invasive species suppression and native plant release.

Only properly trained personnel who meet requirements in Section 4 are allowed to actively participate in prescribed burning operations.

- 3) Wildland: Wildland fire is defined as a fire occurring in vegetation within undeveloped landscapes, including wildfires and prescribed fires. Not included within the definition of wildland are structures, non-vegetative materials (trash, debris, etc.), vehicles and other constructed or man-made materials.

b. Fire Seasons

Kentucky has two identified fire seasons where wildland fires are most frequent. The Spring Forest Fire Hazard Season is February 15 – April 30 and the Fall Forest Fire Hazard Season is October 1 – December 15.

c. Access

Project entry is via North 25th Street coming from the Portland neighborhood of Louisville. This roadway crosses two railroad tracks. In the event that the railway blocks ingress and egress, an underpass is available via North 27th Street which passes under the tracks.

Once within project boundaries, North 27th Street continues on the Louisville side of the locks (south side of canal/locks) to the vicinity of the Resident Engineers Office and interpretive/overlook area.

Access to project lands north of the canal and locks is via a bridge which connects the Louisville side with Shippingport Island.

Much of the perimeter boundary of the project is accessible by boat, since it is surrounded by water, including the Ohio River and Shippingport Canal/lock chambers.

Occasional flooding events within the Ohio River may prevent vehicular traffic throughout the project. This should not affect the wildland fire management program.

d. Available Resources

The project lands are nearly surrounded by the waters of the Ohio River and Shippingport Canal. Additionally, potable water, including fire hydrants, are located in the vicinity of project buildings.

Cooperators exist for prescribed burning within the Louisville community, including Kentucky Department of Fish & Wildlife Resources, Division of Forestry, Bernheim Experimental and Research Forest, Kentucky Chapter of The Nature Conservancy, Louisville Fire Department and private entities, such as native seed companies and environmental consulting firms. In the event that the need arises in order to accomplish prescribed burning objectives, McAlpine Locks & Dam may enter into agreements and/or contracts for prescribed burning services.

Additional USACE personnel qualified/certified for participating in prescribed burning may be available from other projects and from the District Office.

3. Prevention

Fire prevention is promoted by the Kentucky Division of Forestry through activities such as enforcement of forest fire laws, school fire prevention programs, community events, Smokey Bear appearances and distribution of fire prevention information. Radio and television interviews as well as newspaper and magazine articles are also used by the Division of Forestry to educate citizens about fire prevention.

4. Preparedness

a. Training/Safety Plans

All participants in prescribed fire operations will meet or exceed requirements indicated in Section 5, d., of the Louisville District Wildland Fire Management Program policy document of April 20, 2016. In order to meet or exceed these requirements, it is anticipated that all personnel participating will have successfully completed online training components (or equivalent) of S-110 Basic Wildland Fire Orientation (online course), S-130 Basic Firefighter (online portion) and S-190 Introduction to Wildland Fire Behavior (online course). The online components of these courses are available through the National Wildfire Coordinating Group website (<http://onlinetraining.nwccg.gov>). Additionally, participating personnel will have completed the online Basic Prescribed Fire Training course available through the eXtension website at <http://campus.extension.org/> (click on Energy & Environment category, select Rangelands, and then select Basic Prescribe Fire Training). Prior to being able to begin the course, a login and password will need to be set up within the eXtensions website.

Additional hands-on training will be conducted prior to burning operations for participants who have never participated on a prescribed burn before.

Personnel conducting ignitions on a prescribed burn must have completed the above mentioned training, as well as the online portion of S-219 Firing Operations.

On April 4, 2016, Kentucky Governor Bevin signed into law the that prescribed burn boss requirements will be set by the Kentucky Prescribed Fire Council (KPBC) through their Burn Boss program. At this time, the KPFC has not developed requirements for the Burn Boss program. Anyone serving as Burn Boss on prescribed fires at McAlpine Locks & Dam will have completed the required Burn Boss program, unless exempted (due to federal, state or private equivalent certifications).

Until the KPBC training is created and available, the designated Burn Boss will have completed the above agency requirements, as well as S-290 Intermediate Fire Behavior (online course) and must have participated on at least 3 previous prescribed burns of equal or greater complexity.

Advanced training opportunities exist and would require advanced planning, such as inclusion on Individual Development Plans, in order to obtain certifications above Burn Boss for low complexity burns. Available advanced courses include RX-301 Prescribed Fire Implementation (classroom), RX-340 Prescribed Fire Plan Preparation (classroom) and RX-410 Smoke Management Techniques (classroom), to name a few.

All prescribed burning participants will complete annual refresher training consisting of fire line safety, basic wildland fire behavior and tactics, communication procedures, first aid, standards for survival, and the use, limitations and care of firefighting equipment. This will be accomplished via online training (National Wildfire Coordinating Group's annual Standards for Survival refresher) and through direct on-the-ground demonstrations, such as prior to prescribed burn implementation.

Authorized participants engaged in wildland fire management activities will have a Position Hazard Analysis (PHA) on file.

The Activity Hazard Analysis (AHA) attached as Appendix A will be reviewed by all authorized employees participating in wildland fire activities prior to each action. All participants will sign off after having reviewed the AHA prior to burning actions.

Prescribed burning participants in active roles will have medical clearance for the performance of their duties in writing from a licensed physician.

Prescribed burning participants will retain their own physical fitness condition in order to perform these duties. If a participant cannot satisfactorily perform their duties during prescribed burning operations, they will be removed from direct burning activities and will participate only in a supporting role, such as performing as a lookout, vehicle driver, or similar indirect activity.

All active prescribed burning participants will have the following Personal Protective Equipment, at a minimum:

- Hard hat
- "Nomex" shirt
- "Nomex" pants
- Leather gloves
- Goggles
- Leather boots, lace up, non-steel toed, at least 8" in height.

Alternative PPE to the above list includes brush jackets and similar protective equipment used by local fire departments.

b. Equipment and Tools

McAlpine Locks & Dam will retain the following equipment specifically for prescribed burning operations:

| <u>Item</u> | <u>Number</u> |
|------------------------------|---------------|
| Fire shovel | 5 |
| Pulaski | 3 |
| Flapper | 3 |
| Backpack water pump (5 gal.) | 4 |
| Drip torch | 3 |
| Prescribe burning/smoke sign | 2 |

These items will be identified with “Fire use only” on them and will be stored separately from other project tools. In the event that a tool is taken out of fire-use service, this identifier must be removed.

Tools will be serviced immediately after use and prior to being placed back into storage. Maintenance will include cleaning, sharpening, repairing and replacing as needed.

As the need arises or is determined, additional tools may be added for fire use only, such as additional hand tools, chainsaw, pumps, hoses and others.

Due to the project’s proximity to roadways, temporary road signs indicating prescribed burning activities and smoke will be maintained as part of the fire use only tools.

The project has other equipment available for use during prescribed burning activities, including portable pumps/hoses, portable water tanks, plus various power equipment and hand tools.

c. Agreements

Non-USACE parties participating in prescribed burning activities on project lands will have an agreement document in place prior to active involvement. Applicable agreements will be utilized, including volunteer forms, MOA’s and MOU’s.

d. Fuels Management

Woodland edges will be maintained by regular mowing in order to separate the finer fuels found within the grassland/meadow areas and the forested areas consisting of heavier woody fuel loads. Additionally, natural and manmade fuel breaks exist throughout the project, including the Ohio River and Shippingport Canal, roads, lock walls and parking lots.

With easy access to water, the use of wet lines will be utilized if determined to be needed during all burning activities.

Normal disposal of woody materials, such as brush and tree branches, is through commercial disposal contractor as solid waste. This practice will continue and serves as a way to not increase fuel loads by creating disposal sites. Pile burning is not an anticipated objective of the project's wildland fire management plan.

5. Suppression

As indicated in part 2 above, in the event of a wildfire, including escape of a prescribed burn, local fire response will be contacted by calling 911.

6. Record Keeping/Reporting Requirements

Prior to each prescribed burn, a burn plan will be developed and reviewed/approved by the Operations Manager. Each burn plan will address smoke management. A post burn report will be completed on each prescribed burn within 30 days of burn completion. The report found in Appendix D of the Louisville District Wildland Fire Management Program document will be utilized and kept in the project file at least until the next burn is conducted or management objectives change for the site.

Completed prescribed burns will be recorded within the ES OMBIL data entry program as required on a fiscal year basis.

Project burns completed within the boundaries of Kentucky will be submitted to the Kentucky Prescribed Fire Council reporting system. This should be coordinated through the District Environmental Stewardship Coordinator (Chasteen) in OPT-O as they occur.

7. Coordination

- a. State** – If burning from February 15 – April 30 and October 1 – December 15, written approval must be obtained for permission to set fires under KRS 149.400(4) from the Division of Forestry at least 24 hours prior to implementation. This request must be made to:

Kentucky Division of Forestry
North Central Region
PO Box 516
Frankfort, KY 40601
502-573-1085

If conducting prescribed burns outside of the above dates, the North Central Region Office should be notified by phone 24 hours prior to planned ignition.

Falls of the Ohio State Park (IN) will be notified the day of planned ignition for prescribed burning by calling 812-280-9970.

- b. Local** – Louisville Fire Department will be notified the day of planned ignition for prescribed burning by calling 502-574-3701.

Louisville Metro Air Pollution Control District will be contacted at least 6 weeks prior to planned burn in order to obtain an Open Burning Permit for Agricultural Purposes (permit template attached as Appendix C). The permit application is submitted through the Soil & Water Conservation District, 4233 Bardstown Rd., Suite 100-A, Louisville, KY 40218 and their phone number is 502-499-1900.

Louisville Gas & Electric, Ohio Falls Generating Station, will be notified the day of planned ignition for prescribed burning by calling 502-627-2831 (Kerry Johnson, Plant Manager).

When determined to be needed, river traffic will be notified directly of burning operations or via a Notice to Navigation.

- c. Other Federal Government Entities** – The Louisville FSDO (FAA) will be notified the day of planned ignition for prescribed burning by calling 502-753-4200.

The US Coast Guard, Ohio Valley Sector, Louisville, KY, will be notified the day of planned ignition for prescribed burning by calling 502-779-2242.

ACTIVITY HAZARDS ANALYSIS

Date Prepared: Aug 9, 2016

Risk Assessment Code (RAC): L

Project: McAlpine Locks & Dam

Job: Prescribed burning

Prepared by: Dewey Takacy

Reviewed by (USACE): Waylon Humphrey

Recommended Protective Clothing & Equipment:
 Flame resistant pants and shirts, fire-resistant leather gloves, non-steel toe leather safety boots, hard hats, safety goggles or glasses, shovels, flappers, pulaskis, backpack pumps, etc.

| | Probability | | | | |
|---|-------------|--------|------------|--------|----------|
| | Frequent | Likely | Occasional | Seldom | Unlikely |
| S | E | E | H | H | M |
| E | E | H | H | M | L |
| V | H | M | M | L | L |
| E | M | L | L | L | L |
| R | M | L | L | L | L |
| I | M | L | L | L | L |
| T | M | L | L | L | L |
| Y | M | L | L | L | L |

E = Extremely High Risk
 H = High Risk
 M = Moderate Risk
 L = Low Risk

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|--|-----------------------------|---|--|-----|
| 1. Ensure that an Individual Prescribed Fire Plan (IAW EP 1130-2-540) has been developed and all active personnel are properly trained. Obtain required permits. | | | 09.L.01.a | L |
| 2. Contact local fire departments for back-up system | 2. Loss of control | 2. Coordinate with local fire departments for standby assistance. | 09.L.01.g | L |
| 3. Weather check wind speed/direction, humidity level | 3. Loss of control | 3a. Postpone burn due being out of Rx, such as high winds, low humidity. 3b. Burn early in day while humidity levels are higher. | 09.L.01.a – Project Burn Plan 09.L.01.a – Project Burn Plan | L |
| 4. Prepare a fire break, appropriate for area to be burned, by mowing, plowing and/or clearing around perimeter | 4a. Struck by flying debris | 4a. Wear safety gear and check machine guards. | Refer to AHA for equipment being used. | L |

ACTIVITY HAZARDS ANALYSIS

Date Prepared: Risk Assessment Code (RAC):

Project: Job:

Prepared by: Reviewed by (USACE):

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|---|----------------------------|--|--|------------|
| 5. Pre-fire check of equipment to ensure all equipment in working order. Backpacks filled with water and check for operation. Drip torch filled with appropriate mixture. Check radios, if being used for communications. | 4b. Poison plants | 4b. Learn to identify plants, wear proper clothing. | 06.E.03.b | L |
| 6. Walk fire line for final check before starting fires | 5. Equipment failure | 5. Check equipment prior to starting fire. | 09.L.02.b 09.L.01.a – Project Burn Plan | L |
| 7. Team briefing, fire line safety, fire behavior, suppression methods. Communication procedures, equipment care and use | 6. Slips, trips, and falls | 6. Be observant of walking and working surfaces, wear leather safety boots. Be alert for total continuous break. | 09.L.02.c | L |
| 8. Begin ignition operations (drip torches, fusees, etc.) | 7. Loss of control | 7. Ensure each person is assigned specific team and responsibilities. Only properly-trained personnel will be used on Wildland Fire Teams. | 09.L.01.a 09.L.02.a | L |
| 9. Set back/head fires as appropriate | 8. Burns 9. Burns | 8. Lighters will be cognizant of all hazards at all times. 9. Use protective gear, stay clear of flames. Monitor line to ensure fire break is adequate. Maintain communications by voice or radio to ensure complete blackened area around fire. Post lookouts. | 09.L.02.a 09.L.02.c, 09.L.02.e | L L |

ACTIVITY HAZARDS ANALYSIS

Date Prepared: Risk Assessment Code (RAC):

Project: Job:

Prepared by: Reviewed by (USACE):

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | EM 385-1-1 (PARA REF) | RAC |
|------------|----------------------|--|-------------------------------|-----|
| 10. Mop up | 10. Smoke, flare-ups | 10. Monitor site for one hour after burn to ensure no re-ignition. | 09.L.01.a – Project Burn Plan | L |

ACTIVITY HAZARDS ANALYSIS

Date Prepared: Risk Assessment Code (RAC):

Project: Job:

Prepared by: Reviewed by (USACE):

| JOB STEPS | HAZARDS | ACTIONS TO ELIMINATE OR MINIMIZE HAZARDS | RAC |
|-----------|---------|--|--------------------------|
| | | | EM 385-1-1 (PARA REF) |

ACTIVITY HAZARDS ANALYSIS

Date Prepared: Risk Assessment Code (RAC):

Project: Job:

Prepared by: Reviewed by (USACE):

| EQUIPMENT TO BE USED | INSPECTION REQUIREMENTS | TRAINING REQUIREMENTS |
|---|-------------------------|-----------------------|
| Drip torches, hand tools, power tools, backpack pumps, etc. | 09.L.02.b, 09.L.02.e | 09.L.02.a |
| COMPETENT PERSON(S): | | |
| | | |
| | | |
| | | |