

## ANNUAL FIRE MANAGEMENT PROGRAM FY 86

### Refuge Manager

Refuge Assistant - South

Refuge Supervisor - South

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FY 86 ANNUAL FIRE MANAGEMENT PROGRAM  
PRIME HOOK NATIONAL WILDLIFE REFUGE

A. Area Identification

If habitat conditions permit, prescribed burning will be used for management in eight areas totaling 1,685 acres:

- Area 1. 625 acres of phragmites, salt marsh grasses (predominately Spartina patens and Distichlis spicata), switchgrass and brush. The area is bounded on the north by County Road (CR) 224, the east by the Refuge boundary and sand dunes, the south by CR 199 and the west by Slaughter Canal and Area 2. The desired result - remove standing canes of phragmites and accumulated litter; kill or stress brush species encroaching on upland grasslands and marsh grasses; and remove litter in brush.
- Area 2. 270 acres of phragmites, brush (high tidebush), salt marsh grasses (predominately Spartina patens and Distichlis spicata) and switchgrass. The area is bounded on the north by CR 224, the east by Slaughter Canal, the south by Draper-Bennett Tax Ditch and the west by the Refuge boundary and private agricultural lands. The desired result - remove accumulated fuels and standing phragmites canes; kill or stress woody vegetation encroaching on salt marsh; and kill or stress brush species (myrtle) to set back succession and maintain edge habitat.
- Area 3. 250 acres of switchgrass, brush (high tidebush) and shrubs (myrtle). The area is bounded on the north by Draper-Bennett Tax Ditch and Area 2, the east by Slaughter Canal and Area 1 the south by CR 199 and Field 111 and the west by the Refuge boundary and private agricultural lands. The desired result - remove accumulated litter in switchgrass; kill or stress brush encroaching on switchgrasses and marsh grasses; and remove accumulated litter in dense brush.
- Area 5. 80 acres of brush, switchgrass and poison ivy. The area is edge and understory of woodlands. It is bounded on the north, east and south by wetlands and the west by upland croplands on the Refuge boundary. The desired results - remove brush, litter etc. from understory to maintain area for Delmarva Fox Squirrels.
- Area 6. 60 acres of brush and undergrowth and grasses. The area is edge and understory of woodlands. It is bounded on the north by wetlands and croplands, the east by croplands and marsh, the south by the Refuge boundary and the west by upland croplands. The desired results - remove litter, brush etc. from understory to maintain clearings for Delmarva Fox Squirrels.

- Area 7. 125 acres of switchgrass, marsh grasses (predominately Spartina patens and Distichlis spicata) and brush. The area is bounded on the north and east by marsh, the south by CR 16 and the west by upland croplands. The desired results - remove accumulation fuels and dead canes of phragmites; and kill or stress brush species encroaching on salt marsh.
- Area 8. 75 acres of marsh grasses (predominately Spartina patens and Distichlis spicata), brush and switchgrass. The area is bounded on the north by CR 16, the east by Petersfield Ditch and the south and west by ditches and the Refuge boundary. The desired results - kill or stress woody vegetation encroaching both on upland and marsh grasses; and kill or stress brush species to set back succession.
- Area 9. 200 acres of marsh grasses (predominately Spartina patens and Distichlis spicata), brush, switchgrass and phragmites. The area is bounded on the north by CR 16, the east by Petersfield Ditch, the south by the Broadkill River and the west by Petersfield Ditch. The desired results - remove accumulated fuels; kill or stress brush encroaching on both marsh and upland grasses; and remove dead canes and duff from phragmites. Phragmites stalks should be burnt off at ground level.

#### B. Burning Plan

- Area 1. No firebreaks will be necessary here as both units will be burned at the same time. The burn will be conducted in March by personnel of the Memorial Fire Department, Inc., Slaughter Beach, Delaware - a volunteer company, with refuge personnel standing by. The fire company will supply flares or drip torches if desired. A minimum of 15 men and three pumper trucks will be required. The Memorial Fire Department has obtained permission from private landowners adjacent to the refuge to burn brush and phragmites on their property at the same time as the refuge burn is accomplished.

Cost - 3 man days of refuge staff. Estimate \$450 charges to 1260-255-00.

Ignition - Winds should be northeast or southeast. Given northeast winds, burnout will be along CR 224, while a southeast wind will require a burnout along CR 199. The main fire in Area 1 will be a head fire ignited along the eastern boundary of the refuge. For Area 2, the main fire will be set along the western boundary of the refuge and will back burn to Slaughter Canal.

Holding/Control - This will be obtained by burning out the perimeter of the burn area and allowing the fire to burn in to the interior of the refuge. On the western side of Area 2, the burn will backburn into the interior of the refuge. County roads on the north and south of the burn area, Slaughter Canal in the center and backburns along the eastern and western boundaries will control (contain) the burn.

Mop up - Once the fire has burned into the interior of the refuge, it will offer few problems. Burning snags will be removed by refuge personnel, and refuge personnel will monitor the burn until all smoldering has stopped. Past burns have indicated that this occurs within 24 hours.

- Area 3. The purpose of this burn will be to favor switchgrass, a warm season grass. The burn will be conducted in late April by the Memorial Fire Department. Firebreaks have been mowed in selected blocks to help contain the burn. No other firebreaks will be necessary. Two trucks and 10 firemen will be needed.

Cost - 2 man days of refuge staff. Estimate \$300 charged to 1260-225-00.

Ignition - Winds must be southwest, 5-10 mph. Ignition will be along CR 199 at Slaughter Canal and along CR 199 to Gum Woods. At Gum Woods firing will be along the edges of woods and croplands.

Holding/Control - Areas 1 and 2 to the north and east of Area 3 will be burned in March. These areas will contain the fire as will CR 199 and Slaughter Canal.

Mop up - Refuge personnel will standby until the fire is out - an estimated four hours. Any burning snags will be felled and extinguished.

- Area 5. Firebreak construction will not be required as fire will be contained by agricultural lands and flooded woodlands. Permission to enter area must be secured from private landowner as refuge has no legal access. Refuge personnel will conduct the burn during February - April.

Cost - 2 man days. Estimate \$300 charged to 1260-255-00.

Ignition - Wind speed should not exceed 10 mph. Wind direction will not be critical, however a west wind may be best. A night burn may produce good results, if State permit will allow night burning. The burn will be ignited by flares and will start along the western edge of the uplands.

Holding/Control - Wetlands border the north, east and south boundary of Area 5. The fire will be ignited along the western edge of upland croplands and will be allowed to burn eastward. Wetlands will contain the fire.

Mop up - Burning snags will be felled and extinguished by the refuge personnel. The burn will also be monitored by refuge personnel until all smoldering has stopped - an estimated four hours.

- Area 6. The purpose of this burn is to maintain clearings for Delmarva Fox Squirrels. Prior to burning, the firebreak along the southern boundary of the refuge should be maintained and any standing snags should be felled. Burning will occur in February - April. Refuge personnel will conduct the burn.

Cost - 3 man days. Estimate \$450 charged to 1260-226-00.

Ignition - Wind speed should not exceed 10 mph. Desired winds should be southwest, south or southeast to take smoke away from adjacent houses. A drip torch will be used to ignite the fire. Burnout along the northern portion of area then fire along the southern boundary.

Holding/Control - This will be obtained by burning the perimeter of the burn area and allowing the fire to burn into the interior. Burnout along the northern portion of the area, the firebreak on the southern boundary and the burning of the perimeter will contain the fire.

Mop up - Burning snags will be felled and extinguished by refuge personnel. The burn will also be monitored by refuge personnel until all smoldering has stopped. This should occur within 24 hours.

- Area 7. This area will be burned by refuge personnel in February - April. Firebreaks will not be necessary. Fire will be contained by agricultural lands, major tidal ditches and CR 16. Burning here will seek to remove dead phragmites canes to permit sunlight to reach the marsh floor. The area has previously been treated with Rodeo to control Phragmites.

Cost - 2 man days. Estimate \$300 charged to 1260-225-00.

Ignition - The marsh water level should be drawn down to dry the soils and duff. Wind speed should not exceed 10 mph to provide a good burn. Wind direction should be from the southeast. A drip torch will be used to ignite the burn. A burn along CR 16 will be first then along Petersfield Ditch. Finally along the edge of the agricultural fields.

Holding/Control - The area is bounded by marsh on the north and east, the south by CR 16 and the west by upland croplands. These areas will serve as firebreaks and will contain the fire.

Mop up - Refuge personnel will standby until the fire is out - and estimated four hours.

- Area 8. A firebreak must be mowed along our common boundary with the Graves Farm and a wider break along the hunting cabin. Permission to cross the Graves Farm will be needed both to build the break and to enter to conduct the burn. Refuge personnel will conduct the burn in February - April.

Cost - 2 man days. Estimate \$300 charged to 1260-225-00.

Ignition - Winds should not exceed 10 mph. Wind direction should be northeast or northwest. Fuel, litter and marsh should be as dry as possible. Do not burn if high tides are expected. Drip torches will be used to start the burn. A backfire along the edge of Graves Farm will be started first then contained along CR 16. The fire will carry across the area.

Holding/Control - The fire will be contained by CR 16 on the north, Petersfield Ditch on the east and unnamed tidal ditches on the west and south boundaries.

Mop up - Refuge personnel will monitor the fire until it has burned itself out.

- Area 9. This area will be burned by refuge personnel in February or March. Firebreaks will not be necessary. The fire will be contained by CR 16, tidal ditches and the Broadkill River. Burning here will seek to remove dead phragmites canes to permit sunlight to reach the marsh floor.

Cost - 2 man days. Estimated \$300 charged to 1260-225-00.

Ignition - Winds should not exceed 10 mph. Wind direction should be southeast or south to keep smoke from drifting across CR 16. Marsh water levels should be low. A backfire will be ignited along CR 16 by refuge personnel using drip torches. Five refuge personnel will be present including Bombay Hook's Fire Management Officer. Firing will also be along the Island Farm Road and Petersfield Ditch.

Holding/Control - The tidal ditches, Broadkill River, upland croplands and CR 16 will contain the fire.

Mop up - Refuge personnel will monitor the fire until it has burned itself out. Any snags will be felled and extinguished.

C. Summary

In addition, 10 man days will be used for firebreaks along CR 16 and CR 39 west of Prime Hook Beach.

<u>Area</u>	<u>Cost</u>	<u>Man Day</u>	<u>Activity</u>	<u>Additional Equipment Needed</u>
1	\$225	1.5	1260	None
2	225	1.5	1260	None
3	300	2.0	1260	None
5	300	2.0	1260	None
6	450	3.0	1260	2 drip torches
7	300	2.0	1260	2 drip torches
8	300	2.0	1260	2 drip torches
9	300	2.0	1260	2 drip torches

# PRIME HOOK NATIONAL WILDLIFE REFUGE

## SUSSEX COUNTY, DELAWARE

7

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

