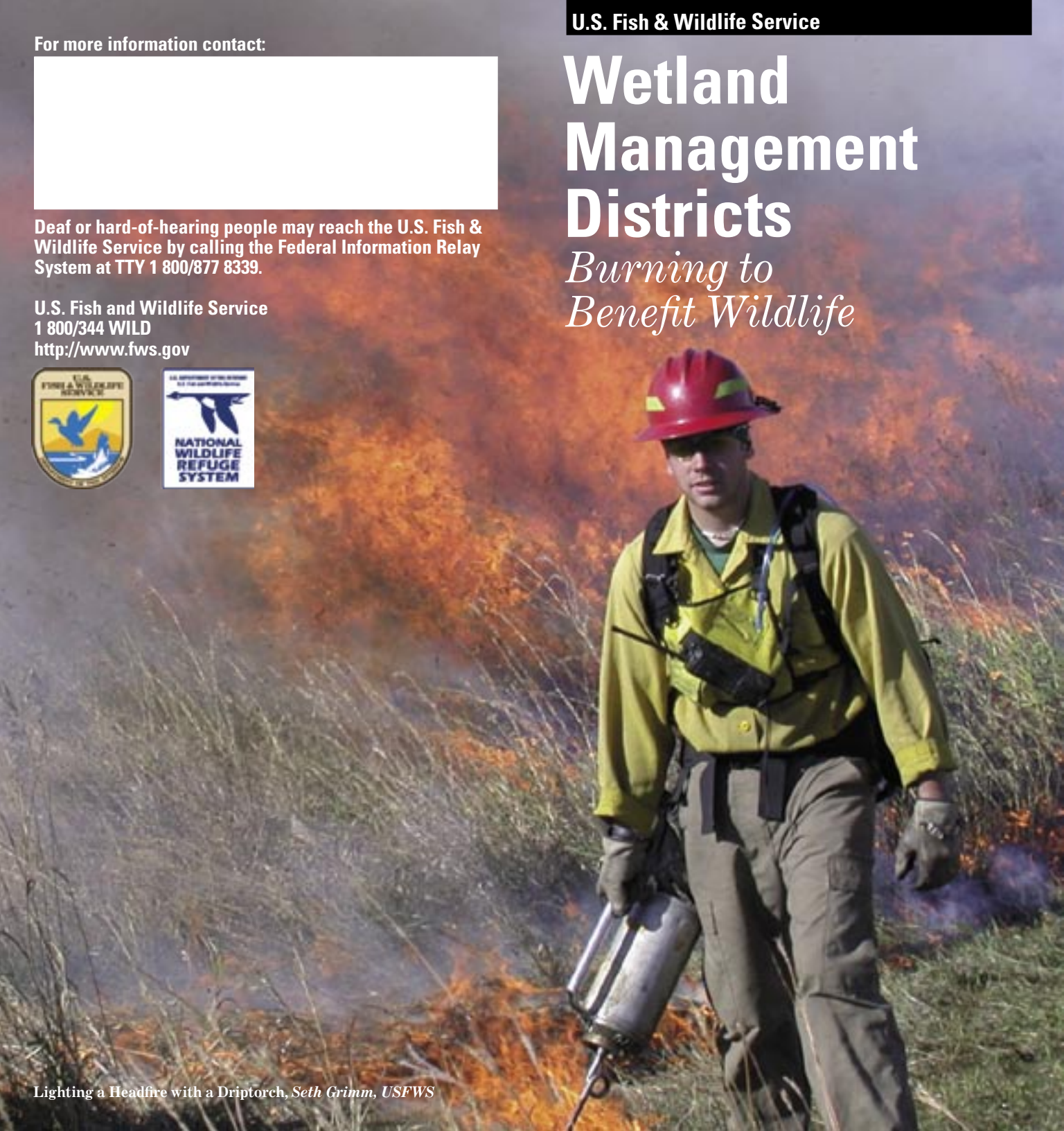
U.S. Fish & Wildlife Service

Wetland Management Districts

Burning to Benefit Wildlife



Lighting a Headfire with a Driptorch, *Seth Grimm, USFWS*

For more information contact:

Deaf or hard-of-hearing people may reach the U.S. Fish & Wildlife Service by calling the Federal Information Relay System at TTY 1 800/877 8339.

U.S. Fish and Wildlife Service
1 800/344 WILD
http://www.fws.gov

NATIONAL WILDLIFE REFUGE SYSTEM

Wood Duck duckling, *D. Menke, USFWS*

Why Burn?

Fire can be frightening and dangerous. Fire also can be a friend to wildlife. Wildlife managers occasionally set carefully planned and controlled fires to help wildlife and wildlife habitat. While the fires may seem harsh, they are an important tool for wildlife management in the Midwest. Controlled burns are often called prescribed burns because wildlife managers write a careful prescription of the weather conditions, equipment, and people necessary to safely conduct a burn that will have the desired ecological effects.

Photos, from top: Little Bluestem, © *J. Brandenburg*

Prescribed Fire, *USFWS*

Grasslands Need Fire

For thousands of years, the North American prairies were subject to both regular fires, caused by lightning or used as a hunting tool by Native Americans, and short bursts of intense grazing as huge herds of bison moved around. Grassland plants are adapted to short pulses of disturbance. Here, on the eastern edge of the prairie, where trees will grow if given a chance, grasslands and the wildlife that depend on grasslands actually require some sort of harsh disturbance such as an occasional fire for their very survival. A fire stimulates the prairie plants and makes them grow better while setting back the invading trees and other species not adapted to life on the prairie.

Prairie Lightning, © *J. Brandenburg*

Bison Herd, © *J. Brandenburg*

What Happens to the Wildlife?

Prairie animals are also adapted to fire. Some go underground during the fire. Others simply fly or run away from the fire. Sadly, birds often lose their nests to the fire, but native grassland species have an adaptation for this: they quickly respond by building a new nest and laying a new clutch of eggs. While there is some short-term harm to a few eggs or animals, these same species depend on fire for their survival, since many prairie plants and animals cannot survive long once trees take over their grassland habitat.

Rabbit, *E. Smith, USFWS*

Meadowlark, *© J. Brandenburg*

Prescribed Fire on the Prairie, © *J. Brandenburg*

First Flower after Prairie Burn, *© J. Brandenburg*

Blue-winged Teal on Nest, *C. Vukonich, USFWS*

When and How Often?

For years, we burned only in the spring. As we learn more about managing grasslands with prescribed burning, we are beginning to conduct prescribed burns in the summer and autumn too. Fires at different seasons have different effects on the plants and animals. For example, fall burning is often better at killing small trees and shrubs. We are learning that occasionally rotating the season of our burns can be helpful so we may burn an area in the spring one year and in the fall another year. Most experts believe that, before settlement, any single acre of prairie probably burned every four or five years either due to fires caused by lightning or fires set by Native Americans to drive game or improve local pastures to entice game to move in. Prairie plants seem to thrive on this four or five year cycle. Ideally, wildlife managers would match that burn cycle for a patch of grass and allow it to rest for three or four years between burns. Occasionally, we burn a single unit repeatedly over several years to put extra stress on undesirable plants.

Tradeoffs

Wildlife management always involves tradeoffs. There is no decision that is best for every species of wildlife. Burn in the spring and you will destroy some nests but have better nesting cover in future years. Burn in the fall and you lose some winter wildlife habitat but you improve the grass plus make shallow wetlands more attractive to wildlife the following spring. Don't burn at all and you save money and work in the short term but lose prairie wildlife and create a long term expense. Of course, public lands are supposed to benefit the public, not just wildlife, so human needs are always considered too. Wildlife managers balance these and many other competing interests when they decide how to manage an area using prescribed fire or any other tool.

Upland Sandpiper on Nest, © *J. Brandenburg*

Smoke Plume,
USFWS

What About the Smoke?

If you live near a waterfowl production area, you may see us burning or see the results of our burning. All of our fires are carefully planned and controlled to cause as little inconvenience or trouble to local residents as possible.We prefer to burn when the prevailing winds carry the smoke away from homes and busy roads. Occasionally, despite our best efforts, some smoke crosses a road or passes near a rural home. We work hard to minimize such problems and are prepared with road signs to warn drivers of smoke along roads.

Short-eared Owl,
© *J. Brandenburg*

Informing People

We always try to call adjoining property owners before burning near their homes, so they know not to be concerned if they see fire or smell smoke. Unfortunately, it is impossible to inform people more than a few hours in advance because we depend on precise weather conditions to allow us to burn. We don't know where we will work until the day of the burn. Then, as part of our preparation, we notify nearby residents as well as the county dispatch center so they know not to send fire departments to a false alarm call.

Is it Safe?

Yes! We have extensive training and specialized equipment to help us conduct safe burns. We never burn when weather conditions don't allow for safe burning. The critical weather elements are wind, temperature and relative humidity. We only burn when all three are in a safe range. Of course, fire is inherently dangerous, and weather conditions occasionally change from the forecast. We have radios and mobile phones that allow us to call for help from a fire department or other emergency services if it ever should become necessary. We also assist rural fire departments on grass fires when they ask us for help.

Prescribed
Fire,
USFWS

Alternatives to Fire

We sometimes allow farmers to cut hay or graze their livestock on waterfowl production areas. Properly timed haying and grazing can benefit grasslands too. Haying, grazing, and burning are all management tools we use on waterfowl production areas. We sometimes combine techniques to have the desired effect. For example, we may graze a unit for two years, rest it for several years, and then burn it. The grazing and burning have somewhat different ecological effects and work together to mimic the ancient cycles of bison grazing and fire.

Questions

If you have questions about burning in general, or a specific controlled burn, call the closest Wetland Management District. Contact information is on the back of this brochure. Please do not detain fire crews while they are working. They need to keep their attention on the fire. The time for talking about the burn can come later, when the fire is out.

Pasque Flower and Horned Lark Nest,
© J. Brandenburg