

Prescribed Burn Position Statement

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Buckeye Forest Council - Executive Summary

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The Buckeye Forest Council (BFC) is a membership-based, grassroots organization dedicated to protecting Ohio's native forests and their inhabitants. The BFC opposes the use of prescribed burns in Ohio's public forests.

- Fire is not a common natural occurrence here, and particularly on the large scale—covering lowlands as well as ridgetops—of recent prescribed burns.
- Fire is harmful to many species, to the forest as a whole, to Ohioans' health, and to the global environment.
- The stated rationales for the practice are either unnecessary and inappropriate (fuel reduction, biodiversity enhancement) or supported by insufficient scientific evidence to justify the large-scale burns that are being conducted (promotion of oak regeneration).
- Conducting prescribed burns in the second half of April, after the herb layer has emerged and grouse and turkeys are nesting, is a particular concern and should be stopped immediately.

If prescribed burning projects on public land continue, they should be required to undergo environmental impact studies, and there should be an opportunity for meaningful public input.

The Buckeye Forest Council (BFC) opposes the use of prescribed burns in public forests, except to maintain the small, natural prairie openings (e.g., Buffalo Beats Prairie) that occur in widely scattered localities. This document focuses on the Ohio DNR Division of Forestry (DOF) because of its extensive use of this management practice, but BFC opposes its use in the Wayne National Forest as well. Although proponents of prescribed burns claim that there is scientific support for this practice, it remains controversial among forest ecologists, and the few published studies are insufficient to justify the large-scale burns that are currently being conducted.

With insufficient and inappropriate justifications, DOF is burning vast areas of public woodland in a part of the country where fire is unnecessary, is not a common natural occurrence, and is harmful to many species, to the forest as a whole, to Ohioans' health, and to the global environment. DOF should be preserving forests as carbon sinks instead of releasing greenhouse gases that contribute to global climate change.

DOF's own documents support the BFC position. To quote from DOF's current (1999-2009) Shawnee Wilderness Area Management Plan, "Forest fires in this region of Ohio are not a naturally occurring phenomena [sic]. Virtually all wildfires in Ohio are man-caused, in contrast to the western United States where dry lightning is a significant cause of fire...[D]iscussion of the "natural role of fire," which is so important to western forest and wilderness fire plans, simply cannot be applied to a wilderness in an Appalachian hardwood forest...Fires may be a significant contributor to non-point source pollution in Ohio's hill country, as the fires remove the soil's protective cover. Large trees are at least scarred by these ground fires, and sometimes, killed."

Unlike western forests, our forests are moist: wood rots rapidly, so little of it accumulates as fuel. The same 1999 DOF document states, "the forest ecology is much different in eastern Appalachian hardwoods such as Shawnee State Forest versus the western forests. In the west, fuels will indeed accumulate and frequent fire will prevent the serious damage of an occasional, large, crown fire. In Ohio, potential fuels decompose with sufficient speed to prevent dangerous fuel buildup levels...Planned prescribed burns or "let burn fires" are not necessary for fuel reduction."

Although there are still "fuels" from the exceptional 2003 ice storm, prescribed burning is not an appropriate way to deal with them. A fire hot enough to destroy them also severely damages living trees. A cooler burn just armors the downed wood with charcoal, sealing out moisture and rot, thereby making it more persistent and flammable fuel for subsequent fire. "Ladder fuels" likewise cannot be addressed by fire because burn intensity cannot be controlled in vertical fires and living trees get cooked in the process.

According to the same 1999 DOF document quoted above, "Prescribed burns during an off season can cause as much tree mortality as fast-burning fires during peak fire season." Fire harms our native forest species, which are not adapted to fire because they have not evolved with frequent fire, and encourages invasive plant species, a growing threat to our native forests. Other documented negative effects include (but are not limited to) increased air pollution and subsequent threats to human health and well being, reduced carbon storage, increased soil pH, increased soil temperature, loss of nutrients, increased sediment loads in streams, increased water temperature and pH, and reduced populations of non-target species.

Burning is of special concern in areas that fail to meet clean air standards for particulate matter, which include most SE Ohio counties. Permission granted by OEPA needs to consider the contribution of these DOF forest fires on regional air quality. Ohio has a State Implementation Plan (SIP) for Particulate Matter (PM), which finds that much of rural southeast Ohio exceeds "acceptable" pollution levels, even while lamenting inadequate monitoring. The added pollution burden from DOF forest fires is poorly monitored and

represents an unacceptable as well as unnecessary addition to regional air pollution.

Unlike historic fires of earlier centuries, which would have been small and confined to ridgetops, DOF conducts high intensity burns from ridgetops to cove bottoms over many hundreds of acres at a time. In contrast, the average wildfire in Ohio is only 5-6 acres, and wildfires are usually restricted to dry ridges and south or west-facing slopes. Fire is likely to have less negative impact on ridgetop and dry slope habitats, where oaks are often dominant in the canopy. In coves, bottomlands, and on north- and east-facing slopes, the moister conditions support a more diverse forest inhabited by species that rarely encounter natural fire and are not adapted to survive it.

Timing is also critical. Some of the DOF burns are conducted in late April, when most of the forest herb layer has emerged, many species are in bloom, and some birds are already nesting. Forest herbs use much of the stored food in their roots and rhizomes to send up shoots in March and April. They depend on photosynthesis during the growing season to replenish their stored food. The most important part of the growing season for these species is the early spring, before the trees leaf out and reduce the sunlight reaching the herb layer. Moreover, many forest herbs (so-called "spring ephemerals" such as dutchman's-breeches, toothwort, and mayapple) have a short growing season, the above-ground shoots dying back in May or June. If forest herbs lose their above-ground parts to fire at the peak of their growing season, they have much less stored food to re-emerge the following spring, which will weaken them, making them more vulnerable to natural stresses such as insects and disease.

Late-April burns are also destructive to some birds, particularly those that nest on the ground or the shrub layer. For example, turkeys and grouse already have nests and eggs by late April in southern Ohio. It can reasonably be assumed that many turkey and grouse nests are destroyed by prescribed burns. Moreover, the loss of leaf litter and deadening of the shrub layer that results from burning reduces the abundance of some neotropical migrants such as Ovenbirds that nest on or near the ground, even though they begin nesting later in the spring. Reptiles, including box turtles and the endangered timber rattlesnake, are also active in April and cannot move fast enough to escape the flames. Although some snakes may escape into safe sites such as rock crevices, it is likely that many other snakes and turtles are injured or killed by the flames. One can only guess at the impact that prescribed burns have on insects and other invertebrates, which may play important and poorly understood roles in the ecosystem.

There is no scientific support for the kind (not confined to ridges), scale or timing of the burning being conducted by DOF. Studies that DOF cites as supposedly supporting its program have at least three serious deficiencies: they do not examine the long term impact on the flora and fauna, the effect on rare species

is not measured or monitored, and they consider only "dormant season" burns, not those done in late April. DOF is, in effect, conducting a huge, uncontrolled experiment by introducing on a vast scale a destructive force that does not occur naturally, without having investigated the potential ecological impact in small, controlled experiments. And it is doing this in forest that we—Ohio's citizens—own and at taxpayers' expense.

The use of prescribed fire in eastern public forests has increased in the last decade. Agency projections indicate further increase in the practice in the next decade. This increase appears to be driven by the availability of public funds appropriated by Congress, primarily in response to widespread fires in high-risk areas of the west that resulted in major loss of property and life. Some of these funds are being used on public lands in eastern forests, even though these lands do not pose the same level of risk to rural communities. Furthermore, the best way to protect homes is to protect the structures themselves and the immediate area around them. Burning Ohio forests does not protect homes. Instead, DOF fires actually produce vast amounts of dead wood and chars the exterior of both standing and felled wood with an armor that becomes impervious to rot, creating rather than eliminating wildfire risk.

Other stated justifications for prescribed burning in Ohio include enhancing biodiversity and promoting oak regeneration. Fire is a legitimate tool to enhance biodiversity in prairies and other ecosystems in which fire is a common natural occurrence, but this is not the case in Ohio forests. The causes of oak decline in the eastern U.S. are controversial, and fire suppression has been suggested as one contributing factor, but experimental studies conducted in Ohio have yielded no convincing evidence that prescribed burns of the sort carried out by DOF promote oak regeneration. The best way to protect the oaks in our public forests is to leave them standing rather than burning or cutting them.

State law does not require DOF to perform environmental impact studies with public involvement prior to implementing burns. We believe that prescribed burning projects on public land should be required to undergo environmental impact studies, and there should be a process for public input that is taken seriously by the agency—perhaps comparable to the NEPA (EA or EIS) process that is used on federal lands. OEPA's granting of permission is not based on forest ecology or need and is therefore inherently unfounded and inappropriate.