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First name: Kent

Last name: Bonar

Organization: Newton County Wildlife Association

Title:

Comments: [TRANSCRIPTION OF HANDWRITTEN LETTER (ATTACHED)]

The following objections are to the 2024 big piney burning and habitat restoration project. The tool of prescribed burning to reduce fuels, improve vegetative conditions, and protect private lands from wildfire implemented periodically as conditions allow (introduction) has already failed to reduce fuels or improve vegetative conditions. Protecting private lands from wildfire hasn't protected them from prescribed fires. Smoke impacts private land adjacent to and far beyond the burns. Shifting winds or uphill slopes can jump bulldozer lines, which themselves impact private lands by changing hydrology, causing ongoing erosion and reaching, as a corridor for invasive species, creating access for ORV's or other access for trespass, and causing disturbance. Aerial disturbance impacts people, domestic animals and wildlife far outside the burn area, while wildlife escaping the fires will deplete foods on private land for livestock and resident wildlife or attack livestock (predators, elk goring or trampling livestock to get their feed, deer same).

Fires create more hazardous fuel than they consume the first time, by killing live regeneration close to the ground. Especially a light burn will scorch bark of bushes (ladder fuel) and low understory killing them but leaving dead fuels standing close to the ground. The Great Lakes fires over a century ago followed white pine liquidation, burnt towns and cities over the region and in many cases the repeat fires were more intense than the original ones.

Fires definitely do not improve vegetative conditions. besides killing or running off the wildlife that would plant quality hardwoods (squirrels, Jays, woodpeckers, etc.) exposed topsoil erodes to subsoil. Pine can survive that but still be worthless except for pulp. Hardwoods won't be high quality for the first generation either but make good firewood when the grid fails. Pine is good for torches (burns bright).

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The scale and intensity of these burns is magnified by the other Ozark-St Francis and Ouachita Ranger districts doing the burns on the same scale. Another behavioral aspect is the impact on birds migrating through the Ozarks as well as on both migratory and nesting resident birds. Site fidelity is a behavioral trait acquired through generations in a place. Some of us have it in family farms or hometowns. Migrating birds follow the same routes each year for centuries - this area is critical for forest habitat for upland species in the Mississippi Flyway (largest in North America). The plan clearly violates the International Migratory Bird Treaty as a taking of critical habitat not only of Canadian migrants but of "our" nesting birds migrating South.

It also violates the Multiple Use Sustained Yield Act. There is nothing sustainable about this project or the plan you keep amending in spite of the fact that the revision is long overdue. It was thrown out of federal court twice, so I had to comment three times. The revision is another law you're ignoring.

Ecological inventory work should be done on each burn by competent current staff and experts outside of the agency. The vegetation management plan should be done before this project. Ignorance is bliss but operating on it is irresponsible. Do better.

This project should be put on hold until the revised plan is in place, or better yet, dropped. There is no urgent reason for any of this and your excuses won't justify the damage you'll cause.

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It definitely does not improve conditions for ginseng or other medicinal plants. Ginseng patches are worth more than lumberyards if you can limit access and resist the urge to manage them. Restraint apparently isn't in your toolbox, but needs to be. I plant it where it will grow right; not to see it wasted.

Intolerant of fire species have more native species diversity, not less. You may have more total diversity if you count invasives into your "restoration" but you're destroying the natural world to do it. The bulldozer lines bring invasives to the private lands they encircle (kudzu, for example, or other gifts from USDA). The shift back to fire-intolerant species is natural habitat restoration, which was here when the Louisiana purchase was made.

Overstocked timber stands are self-limiting through time. Seed crops are planted by wildlife as they happen. Droughts, floods, freezes, ice, snow, wind, tornadoes, reduce seed crops, wildlife move or die back, only to return in a good year. Rhythmic cycles balance over time (sustainability = stability = quality). Doing everything now by contract = irresponsibility or worse!) Hazardous fuels waterlog on ground contact and the next wet spell; everything is hazardous in a drought. As your expert dendrochronologist Guyette said, there are no natural fires of any extent in the Ozarks - they're all made by people. You would prevent fires better by restoring fire towers and manning them with responsible people, if you have to look outside the agency to find them instead of subsidizing the aircraft and biocide industries (as if they needed help). The obvious way to control fires is quit making them, and control access, instead of dozing ORV trails for arsonists, including staff.

Overstocking used to be called advanced regeneration. Wordsmithing is the art of doublespeak. Works on ignorant public and staff.

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Saying there are little to no herbaceous species in the understory resulting in a lack of species diversity and a deficiency of habitat for pollinators is a deliberate lie for hardwood stands. It is true for many over managed pine stands where chemicals with various names are effective biocides. The increase in insect and pathogen outbreaks (such as the red-oak borer "crisis" caused by overharvesting red oak and leaving tops, slash and culls for habitat for borers - and pollinators like Carpenter bees). More on that later.

I've identified more species in the understory of more stands than anybody currently on your staff. (63 years in Arkansas - Ozarks and Ouachitas) and illustrated more "species of concern" than most of you can identify, and done so by walking, climbing and wading.

Oak decline is due to a lack or reduction of symbiotic partners. Oak dies slowly; from root compaction from people walking in high-use areas for decades in parks, from loss of soil moisture and soil mycorrhizal transport resulting from loss of leaf litter, from weather event stress when supporting canopy is thinned. Isolating oaks dooms mast.

Increasing early seral stages works against oaks, hickories, and mast forest trees. Squirrels plant oaks; rabbits girdle them, along with cherries, plums and fruit trees. There are too many early-successional = seral stages on private lands surrounding the Ozark National Forest already and on inholdings. Mature forests and old-growth is what is increasingly rare, and can only be increased through time. You should go back to Teddy Roosevelt to find out why the Forest Service was created in the first place, and read Fernald's History of Forestry to find out why it's doomed. Then read the letter of Secretary of Agriculture James Wilson to first Chief Forester Gifford Pinchot on transfer of forest reserves from Interior to Agriculture. How soon we forget. (in For the Trees S. Bass)

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The impacts on plant species of concern are trivialized, and show a profound lack of concern. Alabama Snow

Wreath is colonial and clonal. As a disjunct clone which can only propagate vegetatively and only disperse with human help, it is likely that there's an archaeological site near them; at least a permanent hunting camp. Look for other plants cultivated by early Americans: Chickasaw and Wild Goose Plums, Toothache Tree or prickly ash, Maygrass (*Phalaris*) Maple-leaved Goosefoot (*Chenopodium simplex*) haws. The Koen one on the river is probably lost by now, but the Big Creek campsite might be found. Since it's clonal, *Neviusia* shouldn't be burned. If the roots die, the colony is gone.

The dismissal of bluff-based plants as safe is wrong. As the catchfly site I also found the state record Umbrella Magnolia measured and confirmed by the Arkansas Forestry Commission. The record lasted several years; until a big beech fell off the bluff above and crushed it. The beech then became a bear's shelter. A fire above the bluff could send several burning trees down. A fire below the bluff would travel uphill. Heat above flame tips will scorch with the wind directing it, and it creates its own as it moves uphill. Resulting erosion off the bluff could bury the catchflies Shooting Stars, both endemic Alumroots, and other listed state species. (Three-bird orchids.) Bluffs across the river have yellow mandarins growing above them.

The chinquapins I showed to the NEPA coordinator and staff and the leatherwoods by the chinquapin logs were in Dismal Hollow RNA but their location on a ridge top near a road with leatherwoods, pine and cedar is the sort of place where they would be overlooked and burnt. Having briefly worked on the Ozark NF rare plant inventory I know how much isn't known.

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Pollinators

Your concern for bees and other pollinators is valid, but burning eliminates most or all bees pollinating forest and orchard trees. or edges. Bumblebees nest in tall grass, usually in abandoned rodent nests (rodent turnover is high) especially in hay fields. I worked on custom-baling crews and for smaller farmers since junior-high and have seen several bumble nests come up in bales, which occasioned extended breaks. My dad saw a team of mules killed in their traces in Nebraska when they plowed into a bumblebee nest and the plowman ran without pulling up the plow and throwing it on its side so they could run. They do most of their pollinating on hay or nearby crop fields. Bumblebees (*Apinae-Bombus*, *Megabombus*) are easily identified by a wide, hairy yellow stripe on their abdomen.

But they closely resemble Large Carpenter Bees (*Xylocopinae - Xylocopa*). Large Carpenter Bees have a bare, shiny black abdomen. They nest in cavities excavated in wood, (usually standing dead or dry brush piles - I found one nest in a board pile in a barn loft). They are far more common than bumblebees and pollinate anywhere near timber, edges, yards, gardens, etc.

Small Carpenter Bees (*Xylocopinae-Ceratina*) are dark bluish-green and nest in galleries in pith of bushes like elder. Digger bees (*Anthophorinae*) are stout, hairy brownish and nest in the ground or in natural cavities (also *Colletidae*). Leafcutting bees (*Megachilidae*) nest in the ground or in natural cavities. Honeybees (*Apis mellifera*) from domestic hives frequently swarm and go wild, where they usually nest in hollow trees well off the ground. Burning eliminates all of them and their food supplies. Andrenid or Halictid (sweat bees) bees are in branch tunnels off a deep vertical tunnel in the ground and might survive a light burn, or not.

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Burns produce more flies (*Diptera*) proportional to other insects. Most pollinators are out in daylight. Horseflies and Deerflies work in the open sunlight; Sending deer and livestock to shade, if there is any.

Lepidoptera aren't mentioned as pollinators or bat food. On a world scale, North America has less butterfly

species than any continent except Antarctica but more moth species than any other continent. Hawkmoths are out in the day but the rest work at night. I've given you comments on several bat projects as to food for various bats - Ozark big-eared - Saturnid moths; Indiana and eastern small-footed - Noctuid moths; Northern long-eared - hard shelled beetles; Gray - aquatics in spring & fall, soft-bodied beetles (fireflies) in summer and the trees and shrubs moths feed on to feed bats. Caterpillars, pupae and most forest insects except borers overwinter in leaf litter or topsoil below leaf litter. Burning top or all leaf litter exposes what's left to sun and wind desiccation, cutting rain strike freezing and frost heave; killing mycorrhiza and most other soil biota.

Spring burns followed by agricultural chemicals kill freshly-hatched insects needed as food for freshly-hatched quail chicks. Even if they survived the fire, they starve. Reducing or eliminating understory and shrubs pushes the winter browse line above reach for most or all of herds of deer or even elk the winter yards, forcing them to move to marginal habitats or starve. Then predators are forced to follow them into human contact, where livestock, pets or people are the dominant potential food source.

Overpopulated already in many agricultural and some urban areas, even more deer in those areas will cause even more damage to crops, orchards and urban landscaping and increase road kills, with resulting human injuries and wrecks. Deer leaving a burn area bring their predators behind them, to keep both moving.

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The scale of the project itself demands an EIS. The acreage involved exceeds that of most, if not all Corps of Engineer lakes EIS I had to review for Arkansas State parks in the 70s, or those we had parks on already. The 31 maps would have been 50 or more if you would have scaled the Buffalo RD maps 1:100,000 to the Bayou RD maps 1:55,000. Deliberately omitting topographical contours within the burn areas and blurring them elsewhere makes it hard to understand impact potential unless you're familiar with the area. I have topographic contour maps - USGS - but you should use them on your projects like your districts used to do, and post them on your website for everybody else. The helipad itself demands an EA for the amount of disturbance it will create, how it is accessed, elevation, and proximal landscape.

The phone calls to alert of a burn are frequently garbled, cut mid-sentence, started halfway or almost through, but the number to call to get removed from the call list always manages to come through. Timing is bad; by 9:00 I'm outside feeding dogs or into the woods. Since the message is ambiguous (we will be - if conditions permit) you should call the night before - before 10:00 PM. This has gotten worse since comments were due but I was told you changed contracts. Botching calls is another preventable risk to the public. It is understood that if conditions don't permit, you will cancel or postpone it and call again, when they do, if ever.

For people who don't get calls, the fire can be a trap. For domestic animals, they won't respond to broadcast warnings. For long-range hikers or hunters who might sleep on the trail, warnings probably won't be heard.

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Ethology - Behavior

[Panthers are] "well able to attack men, yet the instances of it having done so are exceedingly rare. But it is foolish to deny that such attacks on human beings never occur[hellip] it cannot be too often repeated that we must never lose sight of the individual variation in character and conduct among wild beasts" - Theodore Roosevelt 1901 With the cougar hounds

There are many reports of panthers attacking people, but most are dismissed as undocumented and thus unreliable. Young and Goldman (44) reported some of the early records. Philip Tanner was 58 years old when he was killed 1/2 mile from the Lewisville, Pennsylvania cemetery. A picture of a Panther is cut into his tombstone

May 6, 1751.

In the 1820s, two hunters, each with a dog, were in the Catskill mountains on the road to Albany from N.Y.C. They split up that day to hunt, with the agreement that whoever shot first could expect the other to come help skin, butcher, track, or whatever. Before long, one shot. The other hunter went to the sound, only to find the first hunter's dog dead and torn up. He then looked up when he heard a low growl and saw a big panther, which had killed the first hunter and carried him up a tree. The second hunter shot the panther and knocked him out of the tree, but the second dog attacked the panther on the ground and was immediately killed. The hunter wisely reloaded and went for help. The skin of the dead panther was preserved by a museum in New York.

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On December 17, 1924, a 13 year old boy in Brewster, Washington state was sent on a trail to a neighboring ranch after a light snow. He was tracked by a 3-year old female panther until he saw her and ran. She chased, killed, and partly ate him. She was caught in a coyote trap January 20th, 1925. In her stomach were his head hair, denim scraps and pocket contents.

My own grandmother was a schoolteacher in Tango, Montana (north of Opheim, on the Canadian border) in 1920s. At recess she'd leave an older student in charge of the playground and go sit by the creek in the shade to read. One day she looked up from reading to see a black ball slowly arching back and forth above the brush pile across the creek. Puzzled at first, she soon realized it was the tip of a tail.

She closed the book and stood up, then slowly walked back up, rang the school bell and got everybody inside. Grandpa found panther tracks behind the brush pile. If it had been a small child getting water just then, the outcome could have been worse.

Turnbo's White River Chronicles Man and Wildlife on the Ozarks Frontier 1998 U of Arkansas Press has photographs of hunting camps with bear, panthers, deer, turkeys, and hunters with their dogs from 1890s to 1925 (Mt. Ida panther). This since photographers could get to remote hunting camps. Narratives by pioneers go back to 1820s and for the most part are factual. The stretches and exaggerations are easy enough to recognize but even then the basic event was true.

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The Turnbo account of Doris Ross is especially believable. Children (she was 9) guarding sheep invites predators. After a cat-and-mouse game with her, and ignoring the younger children, the panther killed a lamb and left. This was in the 1850s - long after pioneer settlement.

Running invites attack from most predators, as does the smell of fear. Mech (1966), in his study of The Wolves of Isle Royale, found that moose which stood their ground against a pack of wolves for 5 minutes were usually abandoned. Those which ran were charged and often killed.

Panthers use the running response to kill deer and other prey by jumping on their shoulder, getting a grip, then reaching around their face with one paw to grip the other side and twist their head so that they can't see where they're going, stumble, fall and break their own neck, or killed by the panther on the ground.

Panthers aren't the only predators to worry about. Bears and wolves (red) have survived as remnants and been re-introduced (bears by game & fish, wolves by feral gray & canid mix). The last canid with red wolf genetics was trapped at Campton in '60s, but I've known several people in the Ozarks, especially in Newton County, who had pet wolves. Canids trade genetics easily. I've seen packs of wolves from Deer to the Kapark road, and heard howls my hounds respond to in places where people aren't living. The problems with

unpredictable mixes are both physical and behavioral.

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One of the main reasons for the Second Amendment right of the citizenry to keep and bear arms and the French Revolution was the beasts (canids) of Grevaulden (sic). The village was in southeastern France in low mountainous terrain. Endless wars had stripped rural France of able-bodied men, leaving mostly women to do the farming, with limited help from crippled soldiers, old folks and children. Humans and domestic livestock were the only large animals in the area, but wars had left human bodies unburied throughout Europe.

In the 1700s a pack of large "wolves" appeared around the village. The average European gray wolf was about the same size as a North American Red Wolf (80 lb. male max). These "wolves" averaged 180 lbs. nearly twice the size of Pyranees or Mastiffs. They ate dogs, livestock and people - thousands of them. Women carrying pitchforks between buildings in the village were caught and eaten. They broke into houses. Citizens couldn't legally keep and bear arms.

Finally the French army was sent to exterminate them. Most were killed; The rest disappeared. But the necessity of self-defense in rural landscapes was reinforced world-wide.

Pioneers in Arkansas were all armed and with dogs (usually packs), horses or mules, and pine-knot torches. Even so, some hunters were killed (Gerstalker's friend Erskine, killed trying to save his hounds with a knife after both muzzleloader shots failed to stop a bear) or mangled (Sam Hudson in Newton County was mangled by a panther while chopping a bee tree).

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Circus animal trainers said that cats give warnings (growls, tail-lashing, twitches) if they're considering an attack, but bears will act friendly until they have an advantage, then attack without warning. These are captive animals, with individual backgrounds but a similar response to imposed stress.

Native tribes varied in their attitudes toward wildlife, but all had dogs and hunted. I grew up near an Osage village (Black Dog's, on Walnut Creek). In 1818 the Osage went to Oklahoma, and settlement began in 1820. Deer and bear were abundant (North 1881) and Nick Haux, a German tanner turned pioneer, killed 9 adult panthers in a week the first winter. He made a suit out of the hides - moccasins, pants, shirt, vest, coat, cap and gloves. He had a tail hanging off the cap. 4 more off the shoulders of the coat and the other 4 off the coattails. A photograph of his grandson, the county judge, wearing it hung in the Johnson County, Missouri courthouse in the 1950s and 60s.

Turnbo quotes Gid Brown (1809) through his wife's account of his story of seeing 9 panthers (3 adults, 6 mostly grown) playing like house cats on a White River gravel bar before returning to the canebrake. Apparently family groups like these were common when deer were abundant.

The Osage hunted throughout the Ozarks, western Ouachitas, and unglaciated tall-grass prairie, but left nearby wildlife alone (for training young hunters and for emergencies?). The wildlife in turn posed no threat to the village or they wouldn't be so abundant as the first settlers describe.

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The Osage had guns and dogs, but didn't waste ammunition or wildlife. Exploitation by the French started early (1600s) but was confined to fur-trading and limited hemp growing around Arkansas Post. In Missouri, the intense labor and support needed for lead mining lead to clear cutting oak forests. A couple of decades at the most of

steadily declining farming until soil was wore out and eroding, and the farms were abandoned in the late 1600s to form the "virgin" prime timber of the 1800s. Saltpeter for gunpowder, the other major St. Louis export, required locating bat caves along rivers and boiling down bat guano. The Osage drew the line at the Lamine river.

In Arkansas, Oil Trough (Independence co.) was named for sycamore dugout troughs full of bear oil waiting to be downloaded into barrels on White River steamboats. Bear oil doesn't go rancid like hog lard and was cheaper than Whale oil, so it lit a good part of Europe while it lasted.

This wasn't long, but bears learned a hard lesson. First, avoid the sight, sound, or smell of humans or dogs. Dogs barking at night means they have humans backing them. Dogs on your trail barking means head for the bluffs. Don't trap yourself in a cave, but get your back to a wall or log or tree. Keep out of sight in daylight and forage at night. Hide your tracks. So bears and panthers disappeared. A few were trapped, but seeing other animals in traps makes the rest trap-proof. Poison got a few more, but now panthers and some bears and wolves won't eat meat they didn't kill. Panthers won't eat meat they killed and covered if the brush covering it was tampered with.

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I've seen local game-camera pictures of panthers, so technology makes it harder to stay hid. But where the landscape is full of vertical challenges, cats have the clear advantage. Drones can change that, as can mass-scale burning or defoliating, even-age cuts causing deforestation or conversion.

Predators, deer, elk and other game survive by having core habitats where people don't go, or if so on loud ORVs, with the wind at their backs (blowing snow ahead, so guarantees no mammals will be seen). Although mammals don't see color, birds do, and mammals pay attention to warnings or alarms.

Despite technology (or because of it) we're wimps and simples out in the woods compared to depression-age hunters, let alone pioneers or mountain men, so we usually avoid remote core habitats. A few trackers still exist, but timing limits their effectiveness. Behavioral adaptations (avoid humans, hunt at night, avoid livestock, dogs, and lights at night, listen before crossing roads, keep cubs near escape cover from bears or canids until they can travel and climb, etc.) are an ongoing result of technological advances. (repeating guns, electricity, lakes flooding river valleys, industrial & agricultural advances, even-aged "forestry" chainsaws, road construction, ORVs, game cameras, drones, etc.) The key to their survival is that enough core habitat remains with or proximal to stable deer populations. Boom and bust dynamics forces predators to find other prey, move away from safe core habitats into an urbanized or high-tech agricultural landscapes, and leads to confrontations with people. Feedlots become bait stations; so could playgrounds. Overextended pastures crowded beyond carrying capacity make remote weakened prey out of livestock.

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Panthers eat mostly deer when they're available, but otherwise take whatever is. I've found 11¹² cat droppings full of elk hair (Dry Creek - Camp Orr, BNR). Below Case cemetery, I found pony bones covered with brush. Florida panthers in that state survived on feral hogs until deer were re-introduced.

They may avoid bucks in rut (plenty of half-grown fawns then) but when antlers are in velvet and sensitive, bucks move slow and are easy prey.

Two and three-year-old male bears often spend May hunting and eating deer fawns. Afterbirths bait them to then trailing does and fawns. Red wolves hunted deer historically in river bottoms and canebrakes but adapted to unguarded or feral livestock (panthers prefer horses or mules to cattle, bear prefer hogs). All will eat sheep or goats.

The modern threat to panthers is roadkills. In rural areas, traffic during the week is on a predictable schedule. Late-night drunks and poachers can be heard coming. But gambling never sleeps and a quiet car got a 160 lb+ male panther last fall near Hot Springs. I recall in 1975 a deer hunter in Magazine RD shot one and naively had a picture of it in the local paper. Game and Fish were in denial that they existed because of the scale of habitat they need and their reluctance to protect it. So they had the Forest Service threaten criminal charges prison time, etc. Nothing more was reported until the Hot Springs roadkill. (In Missouri, one was hit and killed by a late-night driver on Interstate in the Missouri River bottoms in North Kansas City.)

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The Chernobyl nuclear disaster cleared the surrounding area of people, creating a de facto wildlife refuge for Eurasian animals and showing how fast animals can adapt to novel situations. Behavioral adjustments to imposed changes in habitat, food supply, population dynamics, symbiotic breakdown, or weather events will be made by individuals, as Teddy Roosevelt said, based on previous experience and current mood or attitude.

Stress imposed by the undeclared war on the landscape and its natural biota reaches beyond the fire. Smoke usually settles far from the fire. The same health risks that people have from smoke apply to animals even more. Hounds and dogs of all breeds use their noses to hunt. So do predators in the wild. The chemicals used in fires to start and put out the fire make the smoke even more toxic. I've trained bloodhounds for search and rescue (certified by Missouri K9 Search and Rescue Kansas City unit) and I'm working on training more. Fires can wreck a dog's nose for life - like blinding people. A wild predator that can't smell can't hunt and has to take whatever it blunders into (livestock, pets, people...)

The bulldozer fire lines around private land warn of impending doom and makes escape their small animals harder (hot dry air will desiccate amphibians, turtles, etc. exposed to it). I've heard bulldozers on ridges many miles away. In some places where no private land is involved and burns are planned on both sides, the dozer line could be the first phase of road construction (unauthorized) as incremental implementation to defy the NEPA process. In many burn areas, an initial burn will be followed shortly by a second adjacent fire, so that wildlife that survived the first fire might be caught in the second one. Any that survived both fires will likely move far, but to where?

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The logical first place is similar habitats outside of the Forest Service burns, which are mostly recreation areas (including wilderness and special interest areas) in national forests, national and state parks, wildlife management areas and refuges - USFWS, Ark. Game & Fish. Many of these, even some natural heritage sites, are caught up in the pyromaniac scramble for funding and staff training (management for its own sake and to support inappropriate high-tech, high-dollar industries instead of hiring permanent staff - labor is contracted now to use deportable crews - disposable when inconvenient).

If appropriate habitats are in these places, there will be wildlife there already, which have had time to adjust their behavior to avoid conflict or contact with people. The overload of refugees means some residents will be displaced, taking their acquired appropriate behavior with them. Replacements will be faced with novel (to them) situations which require quick responses.

People in recreation areas, except during hunting seasons if allowed, are unarmed. Many have health problems, are family groups or school field trips, scouts or church groups. Children playing games are running screaming, hiding, chasing, and exploring. At night, people are sleeping in flimsy tents or sleeping bags in the open, and beside long trails. Hikers and mountain bikers going up long uphill stretches of trail will be hot, sweaty, worn out, and moving slow. Pets can be bait or add to the confusion.

Farms frequently have patches of inoperable ground, steep, rocky, wet, or riparian, windbreaks, hedges, woodlots, etc. to provide temporary cover for animals on the move - with nearby livestock in case chronic wasting depletes deer and elk populations.

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