# Wildlife, Recreation and Trapping in Missoula County, Montana

# Conflicts and Recommendations

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Fight for wildlife. End trapping.

This report was produced under contract with Footloose Montana by independent consultant Mike Bader with Ecological Research Services in Missoula, Montana (mbader7@charter.net). Any mistakes in assumptions or interpretations are the author's alone.

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## Introduction

Missoula County in western Montana, USA has a diverse community of wildlife that is nearly complete compared to what was here at the time of the Lewis and Clark Expedition (U.S. Forest Service 2006). A significant amount of the Lolo National Forest is within Missoula County and its location plays a major regional role in connecting wildlife habitat found in the major wildland ecosystems of the Northern Rockies as well as recovery of species listed as threatened and endangered under the Endangered Species Act (ESA) and species proposed for listing. For example, according to the Lolo National Forest (2006):

*"Large, wild areas and a full suite of native species on the forest are nationally important and even merit global importance. As the population of western Montana continues to grow, there is increasing pressure on the remaining open space and on the quality and diversity of native habitat. The Lolo National Forest is situated within some of the wildest areas in the United States, enhancing its importance as a potential connector of remote habitat needed by some wildlife."*

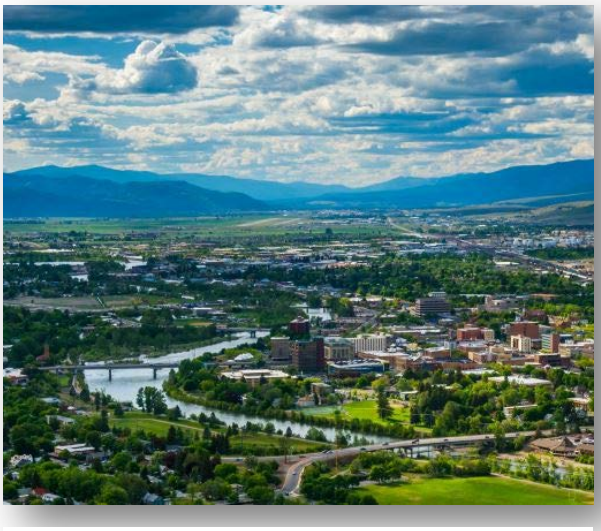

*Figure 1. The City of Missoula is surrounded by public lands and is a major recreation hub. City of Missoula photo.*

Missoula County and the City of Missoula are also a major regional tourism and recreation hub surrounded by recreational trails and public access points. For example, the Rattlesnake National Recreation Area is the highest use area in Region 1 of the U.S. Forest Service. It is also home to the University of Montana which has several outdoor related degree programs. There are approximately 120,000 residents in Missoula County (U.S. Census Bureau 2022) and this number is expected to grow and recreation use to grow with it.

Trapping for furbearers is a historical use with support from state wildlife management agencies who believe it aids in tracking wildlife populations and it has support from several fish and wildlife organizations (Montana Fish, Wildlife & Parks 2010) and is touted as part of the North American Model of Wildlife Conservation originally articulated by Geist et al. (2001).

In recent years changes in societal attitudes have eroded overall public support for trapping with some feeling that trapping is not fair-chase, is indiscriminate and even cruel. Ten states including several western states with large amounts of public land have established rules that either prohibit or restrict trapping on public lands. Increasing concern for all wildlife species including predators and non-game species and conflicts with recreation and non-target wildlife and pets have been the source of new regulations.

A new political administration in Montana has generated significant controversy over its approaches to fish and wildlife management and particularly predators that has gathered national media coverage. The Montana Fish and Wildlife Commission enacted anti-wolf (*Canis lupus*) regulations that allow year-round trapping on private lands, hunting at night, spotlighting, trapping with baits and snares and even cancelling all setbacks from public trails and campgrounds in two counties. These policies have been called draconian, unsporting and a violation of fair chase principles by wildlife biologists and groups. The prospect of similar State wildlife management of grizzly bears (*Ursus arctos*) has moved the scales against removing Endangered Species Act protection for grizzly bears (Servheen et al. 2022).

This report summarizes the wildlife resources of Missoula County including designated habitat for threatened species, high use recreation areas including parks, designated recreation areas, camping and picnic areas, fishing access sites and trails. It also reviews the conflict with these uses represented by trapping of wildlife. Based on information from scientific reports and agency documents this report identifies areas that have conflicts between trapping, recreational use and habitat for threatened and sensitive species. A set of recommendations for how best to prevent conflicts is presented and address the what, where, when and how current trapping regulations need to be changed.

The review and discussion of wildlife is mostly limited to species that are the most vulnerable to trapping through bycatch of non-target species.

## Wildlife Resources in Missoula County

Missoula County includes diverse and productive habitats that support a wide array of wildlife. For example, the Lolo National Forest which is mostly within Missoula County has over 1,500 species of wild plants and nearly all the wildlife species present at the time of the Lewis & Clark Expedition (Lolo National Forest 2006). The species that inhabit Glacier National Park and the Bob Marshall Wilderness Complex are also present in Missoula County, although generally at lower numbers and densities. Species known to be present within Missoula County that are particularly vulnerable to trapping and their status are summarized in Table 1.

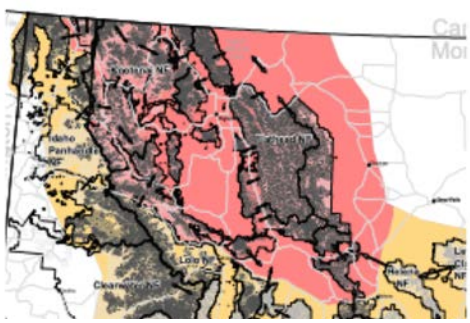

*Figure 2. Most of Missoula County is core lynx habitat (red) and occupied habitat (dark) and has several linkage areas for lynx. Source: U.S. Forest Service.*

Grizzly bear and lynx (*Lynx canadensis*) are two terrestrial species listed as threatened under the Endangered Species Act that occupy wide areas of Missoula County. The wolverine (*Gulo gulo*) by Federal court order is eligible for listing by the U.S. Fish & Wildlife Service (*Center for Biological Diversity et al., WildEarth Guardians et sl. V. Haaland et al. Case 9:20-cv-00181-DWM* 5/26/22). Wolves were listed as threatened until they were legislatively delisted by Congress but have been petitioned for relisting and the U.S. Fish & Wildlife Service is conducting a status review (U.S. Fish & Wildlife Service 2021).

**Table 1. Status of Wildlife Species in Missoula County That Are Vulnerable to Trapping**

| Species | State Status | Federal Status | Notes |
|---|---|---|---|
| | | | |
| Grizzly Bear (*Ursus arctos*) | S2, S3 | Threatened | Distribution Throughout Missoula County; Recovery Area, Demographic Connectivity Area |
| Canada Lynx (*Lynx canadensis*) | S3 | Threatened | Critical Habitat Designated in Missoula County; No Trapping Season |
| Gray Wolf (*Canis lupus*) | S4 | Sensitive, Eligible for ESA Relisting | Formerly Threatened, Legislatively Delisted; Overharvest |
| Fisher (*Pekania pennanti*) | S3, Potentially at Risk | Sensitive | Previously Petitioned for ESA Listing |
| Wolverine (*Gulo gulo*) | S3, Potentially at Risk | Sensitive/Warranted for ESA listing | No Trapping Season |
| Northern Bog Lemming (*Synaptomys borealis*) | S2, At Risk | Sensitive | Small and Isolated Populations |
| Porcupine (*Erethizon dorsatum*) | S3, S4, Potentially at Risk | Species of Concern | Catastrophic Declines in Conifer Forests of Western Montana |
| Marten (*Martes americana*) | S4, Possibly Declining | | Previously Petitioned for ESA Listing |
| Mink (*Neovison vison*) | S5, Common | | |
| Bobcat (*Lynx rufus*) | S5, Common | | Can Be Both Trapped and Hunted |
| Beaver (*Castor canadensis*) | S5, Common | | |
| Mountain Lion (*Puma concolor*) | S4 | | The Species That Has Suffered the Most Trap Bycatch |
| Coyote (*Canis latrans*) | S5, Common | | Can Be Trapped and Hunted Without a License |
| Black Bear (*Ursus americanus*) | S5, Common | | |

A large area in eastern Missoula County is designated as critical habitat and recovery area for lynx and the rest of the County has large areas of suitable habitat for lynx. Much of the northern and eastern areas of the County are within the Primary Conservation Area (Recovery Area) for grizzly bears in the Northern Continental Divide Ecosystem (NCDE) and all of the County is within the distribution and may be present area for grizzly bear (see Figure 3).

The Ninemile area on the Lolo National Forest was designated as a Demographic Connectivity Area in the Conservation Strategy for Grizzly Bears in the NCDE (U.S. Fish & Wildlife Service 2018) to provide habitat for female grizzly bears and their cubs. It is designed to provide genetic connectivity between the NCDE, Bitterroot and Cabinet-Yaak Grizzly Bear Recovery Areas and plays a significant role in regional recovery planning. This linkage is also important to other species. The Ninemile is one of the few areas in Montana outside the NCDE to have suitable habitat for grizzly bear, lynx, fisher (*Pekania pennanti*) and wolverine (Carroll et al. 2001).

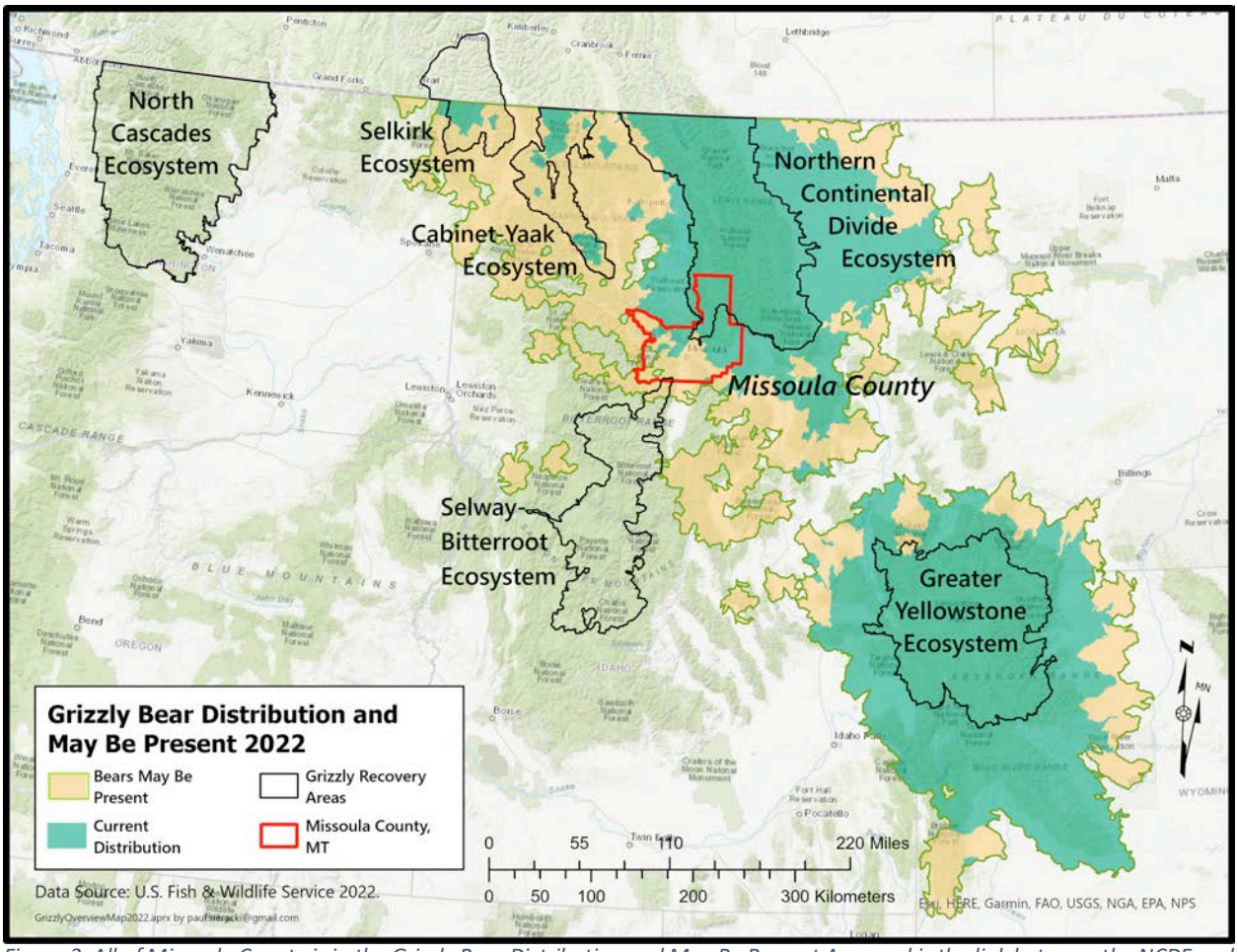


*Figure 3. All of Missoula County is in the Grizzly Bear Distribution and May Be Present Area and is the link between the NCDE and Bitterroot Grizzly Bear Recovery Areas. Map by Paul Sieracki, Grizzly Bear Data Source: U.S. Fish & Wildlife Service 2022.*

## Recreation Resources in Missoula County

Missoula County is a regional hub for tourism and recreation. The County contains all or parts of four federally designated Wilderness areas, six state parks, five dedicated Recreation Areas, a National Recreation Trail, a National Scenic Trail, a National Historic Landmark, hundreds of miles of recreational trails and a downhill ski area. Public lands surround urban areas and provide extensive opportunities for outdoor recreation. Missoula is home to the University of Montana which offers several outdoors related majors.

### High Use Trails

The U.S. Forest Service and Missoula County do not have data on use levels and have not identified high use trails. The Bureau of Land Management has no trails inventory. As a proxy, high use trails outside of trapping closure areas were identified from hiking web sites (alltrails.com, trailink.com, destinationmissoula.org, missoulian.com) that list the most popular trails, from trailhead infrastructure such as paved or unpaved parking lots and from personal experience. The following were identified as high use trails on lands managed by the U.S. Forest Service that are

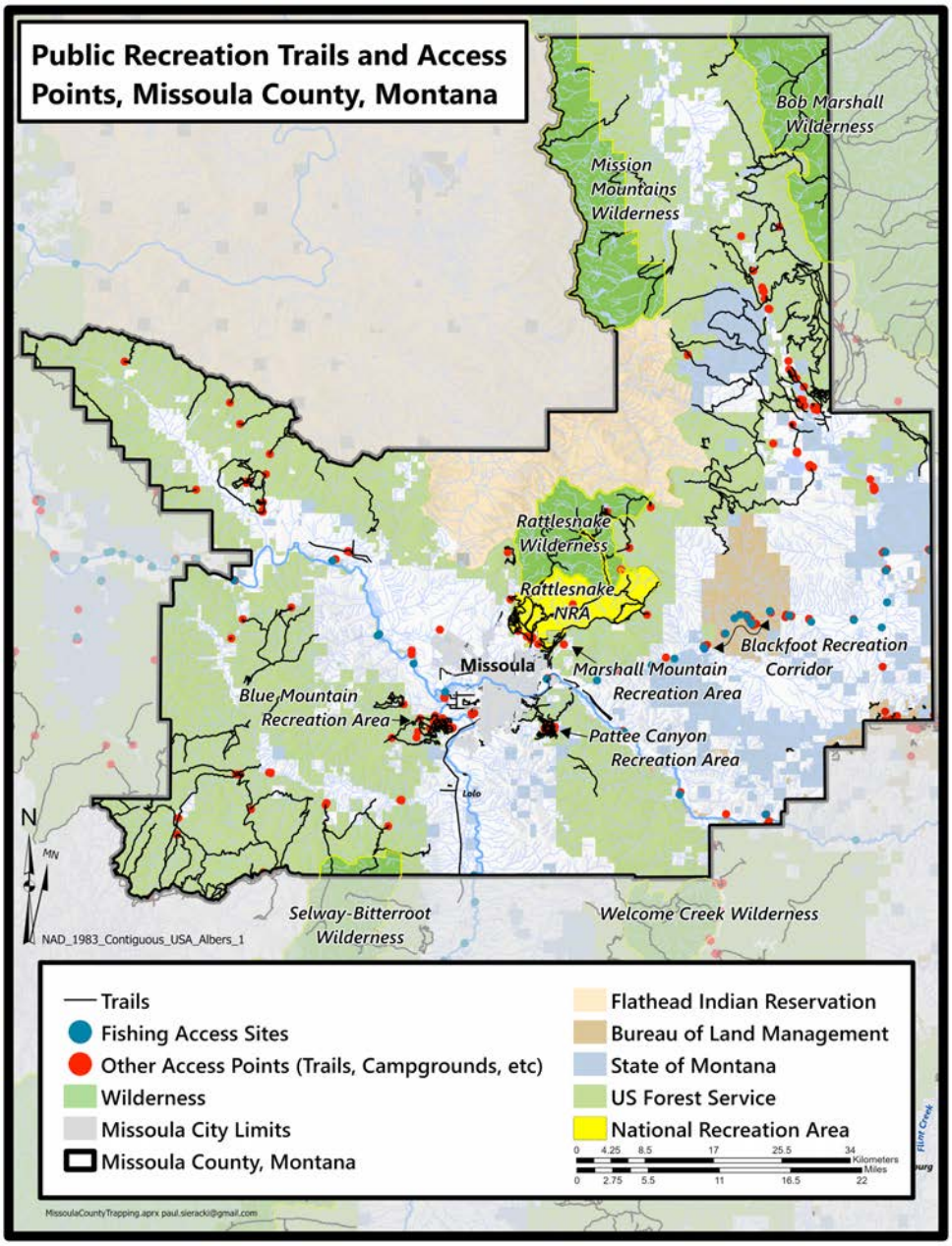


*Figure 4. Recreation Areas and other designated areas in Missoula County. Trails within the City of Missoula are not shown. Map by Paul Sieracki.*

outside of areas currently closed to trapping: Mt. Sentinel Trail #11; Maclay Flats Interpretive Trail #14; Lolo Pass Trails #289 and #295; Rattlesnake Trail #515 within the Rattlesnake Wilderness; Lee Creek Interpretive Trail #23. Holland Lake and Holland Falls National Scenic Trails #415 and #35.

Other high use trails on lands owned by the City of Missoula include The Kim Williams Trail, a very popular trail along the Clark Fork River through Hellgate Canyon from Missoula to East Missoula which also passes by the University of Montana campus and the North Hills Trails and

the Waterworks Hill Trailhead and the newly created Mount Dean Stone Preserve near the Pattee Canyon Recreation Area. Nordic ski trails and snowmobile trails are also included.

## Current Limits on Trapping in Missoula County

The Montana Fish and Wildlife Commission has, by rule, closed all lands on the Flathead Indian Reservation to the hunting and trapping of furbearers with the use of state licenses. Trapping is prohibited within the city limits of the City of Missoula and within the Rattlesnake National Recreation Area and the Pattee Canyon and Blue Mountain Recreation Areas on lands managed by the Forest Service. Wolf trapping using snares has been prohibited within Critical Habitat Areas for Lynx.

According to Montana Fish, Wildlife & Parks, trapping using ground sets, defined as any trap set in or on the ground including traps elevated up to 48" above the ground or snow level, is prohibited within the rights of way of county roads, state and federal highways. Along county roads with no defined right of way these ground sets are unlawful within 50 feet from the edge of the road.

Setbacks for ground sets for furbearers including snares from public land trails are just 50 feet. In fact, trapping just 50 feet from public trails is allowed for all species except wolf, which requires a 150-foot setback. Roads closed year-round to motor vehicles and Off Highway Vehicles are exempted from setbacks. Ground sets including snares are prohibited within 300 feet of public land trailheads except for wolf trapping which requires a 1000-foot setback for foothold traps. Lethal ground sets and snares are prohibited within 1000 feet of a designated, signed trailhead accessible by highway vehicles.

*Figure 5. Wolverine are eligible for protection under the Endangered Species Act. U.S. Fish & Wildlife Service photo.*

Ground sets including snares are prohibited within 1000 feet of any public land campground accessible by highway vehicles. Setbacks include at least 1000 feet from any picnic area or fishing access site. However, traps set in water or up to the high-water mark are not prohibited. Ground sets including snares are prohibited within 1000 feet of any occupied dwelling without written notification of the occupant.

Some information from Montana Fish, Wildlife & Parks is conflicting or outdated. The status of trapping within Montana State Parks is unclear. The 2021 regulations state that written authorization is required from the area manager. The 2022 regulations do not include that language, stating that access for hunting and trapping depends on the area and its management plan.

## Trapping and Recreation Use

In Montana furbearing animals are legally defined as beaver (*Castor canadensis*), otter (*Lontra canadensis*), muskrat (*Ondatra zibethicus*), mink (*Neovison vison*), marten (*Martes americana*), fisher, wolverine, bobcat (*Lynx rufus*), swift fox (*Vulpes velox*), and lynx. There is currently no season for lynx or for wolverine (MCA 87-6-101).

Trapping is primarily a recreational activity and trappers are lucky if they break even after expenses. The North American Model for Wildlife Conservation states: *"Commerce in dead wildlife is eliminated"* (fishwildlife.org) and *"Prohibition on Commerce of Dead Wildlife: Commercial hunting and the sale of wildlife is prohibited to ensure the sustainability of wildlife populations."* (Lawrence 2022; U.S. Fish & Wildlife Service). Interestingly, this article on the U.S. Fish & Wildlife Service website does not name trapping as part of the Model nor do others including the Boone and Crockett Club website.

There are many potential conflicts that arise from trapping activity near areas of high human use. These include the unintended trapping of pets and risk of serious injury to children and adults. Between 2012-2022 there were at least 266 reports of domestic dogs caught in traps (Montana Department of Fish, Wildlife & Parks 2018, 2022). Not all captures of domestic dogs are reported, particularly on private lands.

*Figure 6. Pets are vulnerable to trap bycatch. Lolo National Forest photo.*

A fifty-foot setback from public hiking trails leaves people and pets vulnerable while engaged in activities which include some use off trail and in off-leash areas for dogs including bird hunting areas. To the extent that trappers use the public transportation system of roads and recreational trails to access their trap lines, including by snowmobile means that there are traps in close proximity to people and pets.

Conflicts are not limited to hiking trails. Roads that are closed year-round to motorized use get heavy foot traffic but are exempted from setbacks. Large numbers of people float the rivers with their dogs and fly fishers are also frequently accompanied by their dogs. Water sets are often allowed in river and stream areas.

Winter recreation use is rapidly increasingly on forest trails. For example, as of 2015 on the Lolo National Forest there were nearly 700,000 annual visits by people using cross-country skis and snowshoes (Eisen 2015). There were conflicts between trapping and cross-country skiers at the Lake Como Recreation Area on the Bitterroot National Forest where several dogs were caught in traps. This resulted in the area being closed to trapping by regulation.

The impacts go beyond the actual number of pets trapped and include the fear and anxiety pet owners have when using public trails, rivers or bird hunting areas where trapping is allowed. This may result in people not using these areas intended for recreational use.

## The War on Wolves

*Figure 7. Wolves play an indispensable role in maintaining ecosystem structure and balance.*

Perhaps no native species in the Northern Rockies has been so unfairly maligned as the wolf despite the fact that their presence brings enjoyment to Americans nationwide. Anti-predator hysteria and inaccurate claims that wolves have reduced elk herds and devastated the livestock industry led the Montana Fish and Wildlife Commission to enact sweeping anti-wolf regulations. These allow violation of fair chase and wildlife ethics by including year-round trapping on private lands, hunting at night, spotlighting, trapping with baits and snares and even cancelling all setbacks from public trails and campgrounds in two northwest Montana counties. These regulations have been roundly criticized by 35 wildlife professionals (Servheen et al. 2022) and by wildlife organizations and led to a petition for relisting wolves pursuant to the Endangered Species Act that initiated a new status review (U.S. Fish & Wildlife Service 2021).

As a top-level predator the wolf fills an important niche in natural ecosystems and wolves maintain the predator-prey relationships that still exist in the Northern Rockies. Through their position at the top of trophic cascades wolves maintain ecosystem structure and integrity. Wolf packs keep ungulates on the move (Dellinger et al. 2019) and the risk of predation helps prevent erosion and overgrazing caused by extended and concentrated presence of ungulates, particularly in riparian areas (Ripple and Beschta 2004). For example, Ripple and Beschta present the benefits of trophic cascades with wolves at the top which include: elk foraging and movement patterns adjust to predation risk; there is increased recruitment of woody browse species; there is recovery of riparian functions, recolonization of beaver and recovery of the food web support for aquatic, avian and other fauna; channels stabilize and there is recovery of wetlands and hydrologic connectivity. Many species benefit from wolf kills helping them endure hard winters. Grizzly bears appropriate wolf kills providing a much-needed source of protein that was previously unavailable.

According to Dr. Gary Wolfe, former member of the Montana Fish and Game Commission, predators such as wolves help control the spread of diseases (Wilkinson 2017). They also increase the health of ungulate herds by removing the weak and the sick from the breeding pool.

Indiscriminate and excessive trapping and shooting of wolves is highly controversial and has the potential for overharvest which may upset the predator-prey relationships leading to overpopulation of ungulates and the spread of diseases like Chronic Wasting Disease. A highly social pack animal, removing members destabilizes pack structure and populations.

Montana quit doing actual ground surveys of wolves and switched to the Integrated Population Occupancy Model (iPOM) to estimate wolf populations based on sightings from hunters and biologists. Creel (2022) found this method unreliable for several reasons including that the Montana iPOM is alone in claiming that population size can be reliably estimated without demographic data and/or population counts. Population estimates based on observations from the general public are known to be unreliable and lead to unrealistically high population estimates due to observer error and the potential for double-counting. Hunters can have trouble with proper identification. For example, in Fall 2022 a woman in northwest Montana shot and skinned a Husky dog she thought was a wolf.

Widely maligned as a livestock killer, the three-year average wolf kill is actually just 0.00428% of the sheep and cattle in Idaho or just 113 out of 2.73 million sheep and cattle compared to the 40,000 cattle that are lost each year to weather and disease. In Montana, the three-year wolf kill was just 0.00415%, just 110 out of 2.65 million sheep and cattle (Servheen 2021). Ranchers are compensated for these minimal losses. Nor is there any evidence that wolves have reduced elk populations in Montana, which are at a modern high and 47% over objectives (Servheen 2021).

Wolves exist in a pack structure and programs to reduce wolf populations to protect livestock loss do not work and actually increase predation (Wielgus and Peebles 2014) unless wolf mortality is > 25%, which is unsustainable and unreasonable. While wolves naturally have a high reproductive rate, this cannot overcome the excessive harvests promoted by some Montana lawmakers.

## Trapping and Non-Target Wildlife

*Figure 8. Mountain lions are the most frequent victim of trap bycatch of any wildlife species in Montana. U.S. Forest Service photo.*

Trapping for non-game and predatory wildlife species does not require a license for Montana residents and includes badger (*Meles meles*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), coyote (*Canis latrans*), weasel (*Mustela nivalis*), striped skunk (*Mephitis mephitis*) civet cat (spotted skunk) (*Spilogale putorius*), hares (*Lepus*), rabbits (*Oryctolagus cuniculus*), ground squirrels (*Marmotini*), marmots (*Marmota flaviventris*), tree squirrels (*Sciurus*) and porcupines (*Erethizon dorsatum*). Wolf are classified as a "species in need of special management" and wolverine and lynx are furbearers for which there is no season. Capture of non-game species do not have to be reported. Even when required, many non-target kills go unreported. As with just about all managed wildlife, some amount of trapping mortality is from illegal poaching which goes unreported.

Trap bycatch or the catching of non-targeted species is common and can result in severe injuries and death. Nearly all wildlife are vulnerable to traps and snares set for fur-bearers and particularly leg-hold traps. The species caught in Montana as bycatch (Montana Fish, Wildlife &

Parks 2018, 2022) include grizzly bear, lynx, wolverine, black bear (*Ursus americanus*), whitetail deer (*Odocoileus virginianus*), mule deer (*Odocoileus hemionus)*, fisher, gray wolf, mountain lion (*Puma concolor*), otter (*Lontra canadensis*), swift fox (*Vulpes velox*), pronghorn antelope (*Antilocapra americana*), moose (*Alces alces*), elk (*Cervus canadensis*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), great horned owl (*Bubo virginianus*), rough legged hawk (*Buteo lagopus*), Canada goose (*Branta canadensis*), heron (*Ardeidae*) and an unidentified raptor.

*Figure 9. Fisher are a Sensitive Species and have been previously proposed for listing under the Endangered Species Act. U.S. Forest Service photo.*

At least 14 deer have died after being caught in traps and three bald eagles have been killed by traps set for coyote. A total of 45% of non-target species died as a result of capture. Foothold snares for wolves killed 27%. Of the bycatch released alive, 33% had an injury. Of those caught in sets for coyote, 50% of bycatch died. Coyote snares resulted in the death of the animal 73% of the time (Montana Fish, Wildlife & Parks 2018).

Mountain lion make up the largest proportion of incidental capture. Between 2012-2022 at least 179 mountain lions were trapped and many died. Over this same time period at least 10 wolverines were trapped and one died. The bobcat is the only species in Montana which can be both trapped and shot by hunters and at least 23 died after being caught in traps set for other species.

Low-density, wide-ranging species are particularly affected by bycatch as the loss of any individuals can jeopardize the population and genetic interchange. Trapping is a direct threat to species listed under the ESA including grizzly bear and lynx and wolverine which are proposed for listing.

Taking of species listed under the ESA is illegal. The definition of “take” is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Incidental take is an unintentional, but not unexpected taking which is also illegal. For example, in cooperation with the U.S. Fish & Wildlife Service, National Forests must prepare an Incidental Take Statement which estimates the amount of allowable incidental take resulting from activities authorized by their Forest Plans. This baseline is not to be exceeded. Trap bycatch of grizzly bears resulting in wounds and potential death is an increasingly new source of additional prohibited take under the precluded actions of “harm, wound, trap, capture, kill” that must be accounted for and actions taken to prevent it.

Many furbearers are trapped using body-gripping traps designed to kill quickly and humanely—*for the target species*. Body-gripping traps, especially those set for marten and weasel, are a

threat to grizzly bears causing serious injury including amputation of feet and toes, bone loss and death. A study in British Columbia (Lamb et al. 2022) found that ≈ 7% of all grizzlies in their study sample had missing toes on front paws.

*Figure 10. Many grizzly bears have lost claws and toes after feet were caught in traps set for marten. Arnie Shovlain, Montana Natural History Program photo.*

A major cause was bears sticking their feet into baited body-grabbing traps for marten. This is not a rare or isolated occurrence. They found the same pattern in a review of other studies including 5% of grizzly bears surveyed in the Purcell Mountains in British Columbia and several grizzly bears observed walking around with traps still attached to one of their front feet. These include a photograph from Wyoming and a grizzly killed by a hunter in British Columbia with traps on their feet. Lamb et al.'s photographs of bears with amputated feet/toes suggested that traps had been on their feet for weeks or months. The lack of circulation caused necrosis and the injured portion of the foot eventually sloughed off.

The International Standards Technical Committee rated amputation of three or more digits and any amputation above the digits as Severe Trauma (cited in Lossa et al. 2007). A grizzly bear who has lost claws, toes or a front foot will have reduced capability of digging for food and for excavating a viable winter den. This can reduce health and survival.

Montana Fish, Wildlife & Parks (2022) recommends: "use baits and lures that attract target species but not other animals." However, Lamb et al. found that baited traps definitely attracted grizzly bears with younger bears more vulnerable.

To prevent bears from having their feet caught in traps set for marten, Lamb et al. recommend that the elevated cubby boxes have openings large enough to pass a marten but too small for a bear to fit a whole foot through. By regulation, in southeast British Columbia this dimension is no larger than 3.5 inches (8.9cm). In Montana, there are no regulations or recommendations specific to preventing bycatch of grizzly bears. There is a non-binding recommendation that cubby boxes have a closed front with an opening of 2.5 x 2.5 inches to prevent bycatch of fisher but the regulations for ground sets allow openings up to 52 square inches which is many times the recommended opening.


*Figure 11. Left: Photos show grizzly bears with missing claws and toes discovered through research. Right: Photos show mutilation of grizzly bear feet due to being caught in a trap. Source: Lamb et al. (2022). Full citation in Literature Cited.*

Along with body-gripping traps, snares and foot and leg-hold traps for wolves, coyotes and other canids are a direct threat to grizzly bears. Snares, whether restraining or killing types, were found to be inhumane and their use never justified (Rochlitz 2010). Ten states have banned or restricted their use on public lands including the western states of Colorado, Arizona, New Mexico, Washington and California.

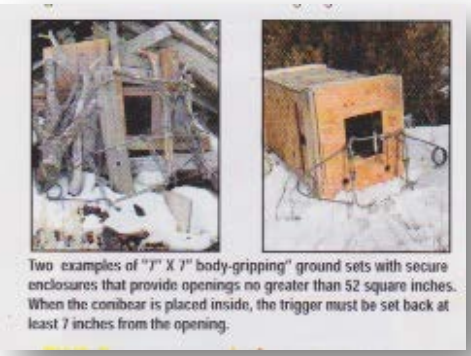


*Figure 12. Montana Fish, Wildlife & Parks brochure shows regulations allow openings that are too large to prevent bycatch of grizzly bears and other species.*

Dr. Christopher Servheen and 34 other wildlife professionals (2022) say it is a certainty that grizzly bears in Montana will be maimed and killed by traps set for wolves. At least 5 grizzly bears in southeast British Columbia are known to have been caught in foothold traps set for wolves and several more in adjacent study areas and a grizzly bear in Wyoming was caught in a snare set for wolves (Lamb et al. 2022). McLellan et al. (2018) report one grizzly bear killed after being caught in a snare. Moreover, the Montana Department of Fish, Wildlife & Parks reported that between 2012-2022 six grizzly bears were non-target captures of traps including one grizzly caught in a leg-hold trap set for wolves and at least two grizzly bears suffered foot injuries prior to release. Other incidents in Montana include the Rogers Pass area where traps set for coyotes and baited with dead foxes caught 2 grizzly bears including a grizzly bear cub which was released. The other grizzly was seen running off with a trap on its foot. In the upper Blackfoot Valley a leghold trap set for bobcat was found with grizzly bear toes and claws in it (pers. comm. with J Jonkel, Montana Fish, Wildlife & Parks Region 2 bear manager). A black bear was found piled on a trapper's boneyard with a neck snare still on it. Other black bears have been killed by neck snares.

Cattet et al. (2008) reported that one grizzly died of capture myopathy which is a physical reaction to the stress and trauma associated with snaring—approximately 10 days after being captured by a leghold snare. The U.S. Fish & Wildlife Service (2021) reported the death of a subadult male grizzly from exertional myopathy after being trapped in 2019.

These are just the mortalities detected. Cattet et al. cited explanations for why mortalities may not be detected including scavengers or predators consume carcasses, animals die in concealed places, carcasses decompose quickly, radio transmitters malfunction, or animals fitted with radio transmitters emigrate from the study area. They also found that 70% of grizzly bears captured by leg-hold snares had elevated levels of serum indicating some level of trauma and muscle injury with mobility reduced for up to a month or more. Multiple captures have an effect on body condition with reduced potential for growth, reproduction and survival.

In Montana, snares for most species are required to break loose with more than 350 pounds (approx.159kg) of dead pull strength) while for wolves this requirement is 1,000 pounds (Montana Department of Fish, Wildlife & Parks 2022). However, Lamb, et al. (2022) found that on average an adult grizzly bear has about 342 pounds (155kg) of dead pull strength, not enough to break free. Cubs and sub-adults with less pull strength are particularly vulnerable. While bears

can generate more pull strength with a running start up to 20 feet, this is not recommended due to the elevated risk of severe injury and damage to or loss of traps. Lamb et al. also tested traps and could only free trapped adult grizzly bear feet about 20% of the time.

*Figure 13. Grizzly bear cubs are inquisitive and vulnerable to trap bycatch and have been killed while their mothers are caught in traps. U.S. Forest Service photo.*

In addition to physical injury, trapped grizzly bears are also vulnerable to being killed by other grizzly bears and Lamb et al. report one cub was killed while its mother was trapped.

Lynx have also been caught in traps set for wolf and other species. Between 2012-2017 Montana Department of Fish, Wildlife & Parks (2018) report at least three lynx caught in traps which were not monitored after release. Within lynx critical habitat or protection zones, use of fresh meat for bait is not allowed but tainted bait meat defined as being exposed to temperatures above freezing for 24 hours is allowed. Depending on ambient temperatures, in some cases such baits are effectively fresh meat and in others rotting and even more pungent thus attracting non-target species including grizzly bears and lynx.

Conibear "body-gripping" traps are allowed in grizzly bear and lynx habitat if they have a jaw spread less than or equal to 5" and can be elevated at least 48" above the surface. These are well within the reach of even a subadult grizzly bear and wide enough to catch a front foot.

Another issue is trap-checking requirements. To prevent serious injury or death to a grizzly bear, it must be released within 24 hours (Cattett et al. 2008). Wolf traps are required to be checked every 48 hours but for all other species Montana Fish, Wildlife & Parks only recommends checking traps at least once every 48 hours but does not require it. Many traplines are only checked once a week meaning grizzly bear, lynx and wolverine bycatch could go undetected for days.

## Recommendations

The recommendations are based upon areas with specific designations including recreation areas, trails and parks, Grizzly Bear Recovery Area, Lynx Critical Habitat, Demographic Connectivity Area, Research Natural Areas and other special management designations. The area recommendations are shown in Figure 16. Proposed trapping regulations do not apply to

legitimate scientific wildlife research and management actions deemed necessary for public safety.

Areas with high potential for conflict between trapping and other resources and values require separation. An important concept in conservation biology is protecting core areas of habitat which serve as a refuge and source of reproduction (DellaSala et al. 1996). For example, it is believed that grizzly bears survived in the NCDE and Yellowstone areas only because there were large core areas of National Parks, where hunting, trapping and resource extraction are prohibited (Mattson and Merrill 2002). Likewise, Squires et al. (2007) found that wolverines inside Glacier National Park had positive population growth and provided immigrants to surrounding areas while areas that had trapping experienced a 30% population decline.

Reducing conflict is good for both sides of the issue. The following recommendations are intended to reduce conflicts while promoting wildlife conservation and the recovery of threatened and sensitive species.

### Setbacks

Setbacks from most hiking trails should be increased to 250 feet on either side of the trail. High use trails should have setbacks of at least 1000 feet on either side of the trail. The setback from trailheads should be increased to 1000 feet. On public lands, roads closed year-round to motorized use but open to non-motorized use including cross-country skiing should have setbacks 250 feet from either side of the road.

## Recommended Restrictions Areas

### NCDE Grizzly Bear Recovery Area

The portion of the NCDE Grizzly Bear Recovery Area within Missoula County is on the southwestern periphery of the Recovery Area and is critical to providing emigrants and demographic connectivity. It also includes areas linking the grizzly bears in the Bob Marshall Wilderness and Mission Mountains.

*Figure 14. Missoula County has vital connectivity habitat for grizzly bears. U.S. Forest Service photo.*

A federal court found that Grizzly Bear Recovery Areas are functionally equivalent to critical habitat designation (*Fund for Animals v. Babbitt* 903 F.Supp. at 117). Under federal law, management conflicts within designated Recovery Areas or Critical Habitat are to be resolved in favor of the listed species.

The State of Montana (Montana Fish, Wildlife & Parks 2022) has banned trapping for wolves with snares within lynx Critical Habitat. But this will not prevent lynx or grizzly bears from

being caught in snares set for coyotes. Grizzly bears remain vulnerable to foot injury and amputation from body-grabbing traps and have been caught in traps set for coyotes.

The NCDE Grizzly Bear Recovery Area significantly overlaps with designated Critical Habitat for lynx, in which trapping for wolves with snares has been prohibited. It is recommended that areas in Missoula County within the NCDE Grizzly Bear Recovery Area (excluding lands on the Flathead Indian Reservation) be closed to trapping with snares for wolf and coyote. Additionally, areas within the current distribution and may be present, using the Distribution and May Be Present maps produced annually by the U.S. Fish and Wildlife Service should be closed to trapping using snares.

**Ninemile Demographic Connectivity Area**

The Ninemile area on lands managed by the U.S. Forest Service has been designated as a Demographic Connectivity Area for female grizzly bears and their cubs (U.S. Fish & Wildlife Service 2018). Bader and Sieracki (2022) found sufficient denning habitat to support a small resident population.

This area is uniquely valuable to wildlife. The first wolves to naturally recolonize the region settled in the Ninemile to raise pups. This is also one of the few areas in the Northern Rockies to contain suitable habitat for grizzly bear, wolverine, fisher and lynx (Carroll et al. 2001).

As mentioned above, this area was designated to provide habitat for female grizzly bears and their cubs to provide genetic connectivity between the NCDE, Bitterroot and Cabinet-Yaak Grizzly Bear Recovery Areas and it plays a central role in regional recovery planning. Reproductive females are the most vulnerable part of grizzly bear populations and sustainable female grizzly mortality for this area is zero. The Lolo National Forest has also identified extensive areas as lynx habitat and the U.S. Forest Service (2007) identified it as core area and also linkage connectivity habitat for lynx.

Due to the regional significance this area has for wildlife recovery and genetic connectivity and the threat of non-target captures of grizzly bear, lynx, wolverine and fisher it is recommended that all trapping for wolf, coyote, marten and fisher be ended within the Ninemile DCA.

## Closure Areas

The review identified areas specifically designated for recreation and special management where trapping is a conflict with the purposes of the areas and their intended use.

**The Blackfoot Recreation Corridor**
This is a very heavily used area. From the beginning of the Johnsrud Road to the end of the Ninemile Prairie Road including water sets, to at least 1320 feet from either bank of the river which is equal to what the Recreation Corridor includes on Bureau of Land Management lands within the Corridor.

**The Rock Creek Recreation Corridor**
This is a very popular and heavily used area attracting visitors from across the country. From the Beaverhead-Deerlodge/Lolo National Forest boundary downstream to the Lolo National Forest boundary including water sets and at least 1320 feet from either bank of the river.

**Maclay Flat Interpretive Area**
This is a very heavily used area across the road from the Blue Mountain Recreation Area and bordering the Bitterroot River. It is threaded with public trails and there is much off trail use.

**Kelly Island Wildlife Management Area**
This is a high use area and fishing access site. While it is not within the Missoula city limits it is surrounded by the Missoula urban area and all access to the area runs through residential neighborhoods.

**The Snowbowl Ski Area**
Defined by the permit boundary. This is a four-season recreation area. A detached grizzly bear front foot and leg was found in this area in 2022 with the cause undetermined.

**Marshall Mountain Recreation Area**
One hundred sixty acres on lands leased by the City of Missoula are scheduled for development as a high use high density recreation area adjacent to the Rattlesnake National Recreation Area. An additional 320 acres may be added to this area in the future.

**Clearwater Chain of Lakes and Canoe Trail**
This is a very heavily used recreation area. From 1320 feet on either side of the lakes and river.

*Figure 15. Hikers on the Lewis & Clark National Historic Trail. Lolo National Forest photo.*

**Lolo Trail National Historic Site**
This trail attracts Lewis and Clark history buffs from around the country who hike the Trail located between Traveler's Rest and Lolo Pass.

**Research Natural Areas and Botanical Areas**
There are six Research Natural Areas and two Botanical Areas on U.S. Forest Service managed lands in Missoula County. These were designated to study the health and trends of the areas in their natural state. Logging and roadbuilding are prohibited. Furbearer and wolf trapping is inconsistent and incompatible with these designations. It is recommended that trapping be prohibited within the Carlton Ridge, Petty Creek, Plant Creek, Sheep Mountain Bog, Council Grove and Condon Creek Research Natural Areas and within the Mary's Frog Pond and Elk Meadows Botanical Areas.

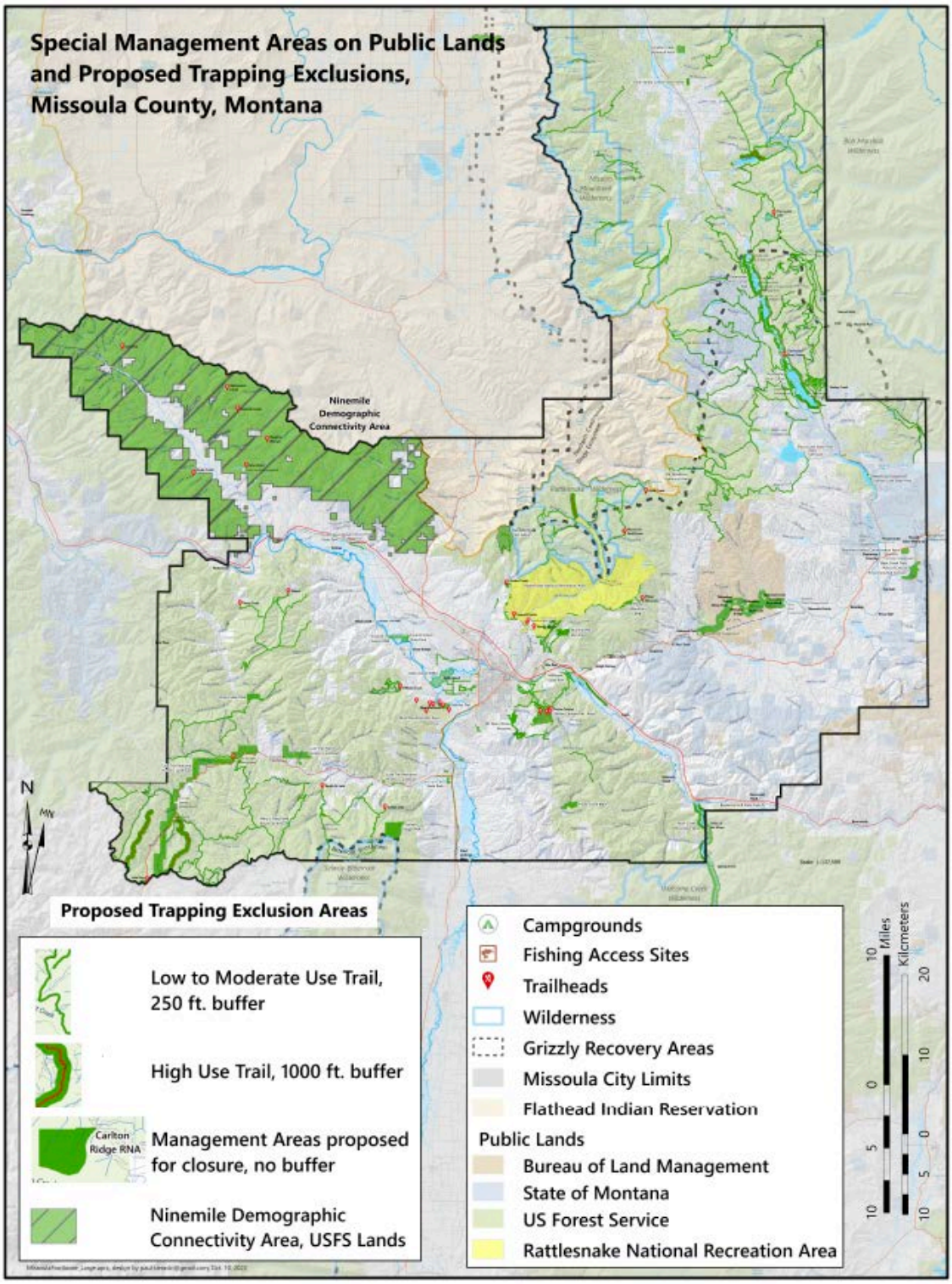


*Figure 16. Proposed closures and restricted areas in Missoula County. Map by Paul Sieracki. A zoomable high resolution version of this map can be viewed at: footloosemontana.org*

**Other Special Management Areas**
Swan Valley Conservation Area, U.S. Fish & Wildlife Service; Bear Creek Flats Area of Critical Environmental Concern, Bureau of Land Management; Blackfoot Valley Conservation Area, U.S. Fish & Wildlife Service; Lolo Pass Information Site Recreation Area, Lolo Trail National Historic Landmark, Lolo National Forest.

**Montana State Parks**
It is recommended that trapping be explicitly prohibited within Montana State Parks in Missoula County. These parks have campgrounds and/or interpretive centers and heavy public use. These are Salmon Lake State Park, Placid Lake State Park, Beavertail Hill State Park, Council Grove State Park, Frenchtown Pond State Park and Travelers Rest State Park.

*Figure 17. Porcupine populations have experienced a catastrophic decline in the conifer forests of western Montana. Montana Natural History Program photo.*

## Adjustments for Seasons and Species

The unsporting, unscientific wolf hunting and trapping regulations promulgated by the Montana Fish and Wildlife Commission should be revoked and a new process with full public involvement begun to establish management regulations that will conserve wolves. Additionally, Montana Fish, Wildlife & Parks must abandon the iPOM method of estimating the wolf population.

Trapping for porcupine should be prohibited. According to the Montana Natural Heritage Program porcupine have suffered "catastrophic declines in conifer forests of western Montana." A map of observation grids within Missoula County had either no observations or in the single digits (Montana Natural Heritage Program 2022).

The Montana Fish and Wildlife Commission must choose either a trapping or hunting season for bobcat but not both. The current situation represents double jeopardy that is unfair to the species and likely to lead to overharvest.

As recommended by Lamb et al. (2022) the opening of trapping seasons for furbearers should be delayed to avoid trapping grizzly bears as they prepare to den. The pre-denning period is known as hyperphagia when bears eat voluminous amounts of food and are attracted to scented and baited traps. With climate change, it is predicted that grizzly bears will enter the den later and emerge earlier (Pigeon et al. 2016). Mace and Waller (1997) found that not all grizzly bears had denned until December 16. Kasworm et al. (2021) found that 5% of grizzly bears had still not denned as of the third week of December. The highest proportion of grizzly bears did not enter the den until the first week of December. Trapping for marten begins on December 1. This should be pushed forward to at least December 15 after most grizzly bears have entered their dens and closely monitored thereafter for bear activity.

In Missoula County, trapping seasons for otter, muskrat and mink currently run from November 1-April 15. To avoid attracting pre and post denning grizzly bears, these seasons should be adjusted to December 15-March 15.

## Adjustments to Methods and Traps

All traps set for marten and other furbearers should be required to have a closed front and an opening no larger than 2.5 x 2.5 inches.

Regulations in Montana state: "Use secure methods of attaching traps - tailor methods to hold the largest species occurring in the area in case of an incidental capture." This encourages people to use the largest and most secured traps regardless of target species. To prevent bycatch, injury and death, trap size and strength must be tailored to the target species and have no more hold strength than necessary for the target species. The largest body-gripping traps should be required to break free with no more than 308 pounds (140kgs) of dead pull strength to prevent holding grizzly bears.

The use of fresh and tainted meat as baits should be prohibited within grizzly bear and lynx habitats.

The data show that snares account for a large amount of bycatch with lethal consequences. The use of snares should be prohibited on public lands.

## Trap Checking Requirements

It is recommended that all traps be checked every 24 hours but in all circumstances for all species it should be required that traps be checked at least once every 48 hours.

*Figure 16. Inadequate trap check rules cause serious injury or death to Threatened Species including Lynx. Footloose Montana photo.*

## Reporting Requirements

Reporting requirements must be expanded to include all non-target captures of any species regardless of classification. This would include predators and non-game species.

## Regulations Booklet

The Montana trapping regulations can be better organized to make them less confusing. There needs to be a page dedicated to all changes in the regulations, wording and definitions.

## Interagency Recreation Database

Despite being a major regional recreation hub, there is no comprehensive inventory or maps of recreation sites, trails and other facilities in Missoula County and there is not any available use data. A multi-partner effort including Missoula County, the City of Missoula, U.S. Forest Service, Bureau of Land Management, State of Montana and the University of Montana should be formed to accurately inventory and map via GIS all recreation resources and gather data on recreation use levels and trends and make this information readily available to the public and decision-makers.

## Conclusion

Both trapping and recreation are consumptive uses of public lands. In the case of recreation, limits have been established including advance reservations, ticketed entry, lotteries and even seasonal closures such as on the Flathead Indian Reservation to protect grizzly bears. Trapping should be no different. When resource damage and conflicts with other uses occur, limits are appropriate.

As human population and recreation use increase in Missoula County, so will conflicts between recreation and wolf/furbearer trapping unless actions are taken. Prohibiting trapping within designated recreation areas, parks and interpretive areas and increasing setbacks around trails, trailheads and high-use trails will reduce the potential for conflicts.

Failure to resolve these conflicts will result in more bycatch of pets, sensitive, threatened and endangered wildlife species leading to further loss of support for trapping on public lands and an increase in the number of states that ban or restrict this activity.

*istock photo*

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