



# Animal Welfare Institute

900 Pennsylvania Avenue, SE, Washington, DC 20003 • [www.awionline.org](http://www.awionline.org)  
telephone: (202) 337-2332 • facsimile: (202) 446-2131

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**BY ELECTRONIC AND REGULAR MAIL**

Submitted via [regulations@ncwildlife.org](mailto:regulations@ncwildlife.org)

North Carolina Wildlife Resources Commission  
1751 Varsity Drive  
Raleigh, NC 27606

Dear Commissioners:

**RE: Proposed rule to allow coyote hunting at night with artificial lights (15A NCAC 10B.0219) & proposed rule to allow feral swine hunting at night with artificial lights (15A NCAC 10B.0223)**

On behalf of the Animal Welfare Institute (AWI) and Project Coyote (PC), please accept the following comments on the above-referenced North Carolina Wildlife Resources Commission (hereafter NCWRC or the Commission) proposed rules to allow coyote and feral swine hunting at night with artificial lights (15A NCAC 10B.0219 & 15A NCAC 10B.0223). AWI, PC and our collective members and supporters who reside in North Carolina urge you not to adopt these rules. This recommendation is based on legal, practical, and other considerations as summarized below and discussed in greater detail throughout the remainder of this letter. The bulk of this comment letter focuses on the proposed coyote night-hunting rule. Comments on the proposed rule to allow night hunting of feral swine is also included, as indicated in the text.

Increasing indiscriminate killing of coyotes by allowing for 24-hour hunting is not an effective or humane solution to reduce real or perceived conflicts between people, coyotes and domestic animals. Indeed, it is well documented in the scientific literature that the indiscriminate removal of coyotes may result in larger populations and may increase the potential for conflict incidents. Instead, there are many effective non-lethal methods for reducing negative encounters—including education and implementation of coexistence tools.

Coyotes also play an important role in keeping rodent populations in check and ecosystems clean of carrion, as well as help to limit mesocarnivores (e.g., foxes and skunks) which can boost bird populations and diversity.

The proposed rules will also, if adopted, further jeopardize the survival and recovery of the endangered red wolves (*Canis rufus*) because night hunting increases chances for red wolves to be mistaken for coyotes, shot, and killed. The Endangered Species Act (ESA) requires that red wolves be afforded the highest level of protection, and night hunting would undermine such protections.

Night hunting and archery hunting of coyote and feral swine are dangerous for humans and their pets, and are likely to result in increased suffering, since the likelihood of a lethal shot is diminished both by darkness and the by use of archery equipment. Similarly, these rules will increase both the workload and safety concerns for law enforcement personnel while also complicating law enforcement efforts.

Ultimately, providing expanded opportunities for hunters to kill animals – which is one of the alleged justifications for these proposed rules – is not sufficient reason to adopt these rules considering the significant adverse impacts they could have on coyote management, animal suffering, public and law enforcement personnel safety, and endangered species. It is also entirely unnecessary, given the availability of other, non-lethal means to address coyote-human conflicts. Furthermore, these proposed rules are clearly not based on any sound scientific data.

**I. Lethal Management of Coyotes Produces More Coyotes & Livestock Depredation. The Proposed Rules do not Meet Requirements of NC G.S. § 150B-19.1(a)(4) & (5).**

NCWRC has indicated that the rules allowing night hunting are proposed to control a growing problem and to provide an additional opportunity for sportsmen to be in the field. However, the Commission's mandate is to recommend management methods designed to ensure statewide conservation of fox populations while managing adverse effects of coyote populations,<sup>1</sup> as well as to base rules on sound, reasonably available scientific, technical, economic, and other related information.<sup>2</sup> The proposed rules to allow night hunting indicate that the Commission has ignored the overwhelming body of literature that indicates that coyote populations often increase in response to indiscriminate lethal management techniques, thereby ignoring its mandate to utilize reasonably available scientific information.

Research has shown that expanding indiscriminate coyote killing may actually be counterproductive, as coyote populations often rebound very quickly in response to lethal control through a variety of biological mechanisms, including the egress of coyotes from surrounding areas and greater pup survival. As described by Robert L. Crabtree, Chief Scientist for the Yellowstone Ecological Research Center who has done extensive studies on coyote behavior:

Most reduction programs, often referred to as control practices, are indiscriminate in nature, meaning the individuals removed (this usually always means "killed") are probably not the offending individuals... Although removal of offending individuals can temporarily alleviate predation rates on the protected species, the alleviation is usually

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<sup>1</sup> On June 17, 2011, the General Assembly passed a bill (N.C. Session Law 2011-380, House Bill 755) that directed the Wildlife Resources Commission (Commission) to study fox and coyote populations. Signed into law June 27, 2011, the statute called for the Commission to “undertake a study of fox and coyote populations in the State and recommend management methods and controls designed to ensure statewide conservation of fox populations while managing adverse effects of coyote populations.”

<sup>2</sup> G.S. § 150B-19.1(a)(4) & (5).

short-term and likely has long-term side-effects that make control activities ineffective. It cannot be over-emphasized how powerfully coyote populations compensate for population reductions... the basis of this resiliency is embedded in the evolutionary past of the coyote.<sup>3</sup>

Killing coyotes to reduce the local population does not work because populations simply produce more litters and pup survival increases. There is little, if any, scientific basis for control programs that indiscriminately kill coyotes. In fact, the majority of the published literature indicates that widespread control increases immigration, reproduction, and survival of remaining coyotes.<sup>4</sup>

Specifically, data show that coyotes in areas of persecution have higher rates of pup survival, likely due to a greater availability of resources compared to what is available in areas where coyotes are not persecuted. Studies done on coyotes and canid coexistence in order to assess the effects of human exploitation on coyote populations looked at three levels of adult coyote exploitation: Level 1 populations were unexploited to lightly exploited (0-24% annual human-related mortality), Level 2 were moderately exploited populations (25-49%), and Level 3 involved highly exploited populations (50% or greater). Results indicate that Level 1 populations are characterized by stable to fairly stable territories with low pup survival and an average age of adults being three to four years. Conversely, Level 2 and 3 populations with moderate to high levels of exploitation are characterized by unstable social systems, higher pup survival rates<sup>5</sup> and younger adults averaging approximately two years of age. In addition, Level 3 exploitation levels produce more breeding yearling females<sup>6</sup> because of low food competition, thus a higher number of pups and an age structure with more than 50 percent yearlings. As described by Dr. Crabtree:

Reduction (of coyote populations) results in a smaller social group size which increases the food per coyote ratio. This ratio may be even greater because of temporary reductions in overall density. Therefore, this food surplus is biologically transformed into higher litter sizes and higher litter survival rates... the increase in food availability improves the nutritional condition of breeding females which translates in higher pup birth weights and higher pup survival.<sup>7</sup>

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<sup>3</sup> Crabtree, R.L. 1997. Yellowstone Ecosystem Scientific Opinion Letter. Pg. 1; *See also* North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg.15 (April 1, 2012).

<sup>4</sup> *Id.*

<sup>5</sup> Reduction causing higher pup survival is fundamentally a function of the general mammalian reproductive strategy that delays the majority of reproductive energetic investment beyond the gestation period, the post-partum and neonate state ( e.g., young pups). The caloric demand of offspring reaches an apex in May, June, and July when coyote pups grow very fast. *See* Crabtree, R.L. 1997. Yellowstone Ecosystem Scientific Opinion Letter. Pg. 2.

<sup>6</sup> Reductions cause an increase in the percentage of females breeding. Coyote populations are distinctly structured in non-overlapping but contiguous territorial packs. Over 95% of the time only one female (the dominant, or "alpha") breeds. Other females, physiologically capable of breeding, are "behaviorally sterile"... Either a subordinate female pack member, or an outside, lone female can be quickly recruited to become an alpha or breeding female. *See* Crabtree, R.L. 1997. Yellowstone Ecosystem Scientific Opinion Letter. Pg. 2.

<sup>7</sup> *Id.*

The greater pup survival rate alters the normal distribution of individuals across age classes, potentially creating a breeding ground swell.

Indiscriminate lethal removal also fragments coyote family units and can reduce the size of established territories, resulting in a population composed mostly of younger animals with more breeding, smaller pack sizes, and added incentive for remaining adults to kill larger prey (such as sheep or calves instead of rabbits) closer to areas of human activity, where prey is more vulnerable.<sup>8</sup> As explained by Dr. Crabtree:

Coyotes, already a highly social and adaptable species, are held in a younger colonizing state when they are exploited and learned or traditional behaviors may be lost. Individuals are therefore more susceptible to learning novel prey sources or trying out novel habitat types.<sup>9</sup>

Consequently, by disrupting coyote social dynamics and increasing pup production, lethal control can actually increase coyote depredation of other wildlife and pets. Currently, domestic animals are not a major source of food for coyotes in domestic/urban areas.<sup>10</sup> However, as indicated above, this low take of domestic animals is subject to increase as indiscriminate killing of coyotes increases and as coyotes learn to try novel prey sources. Scientists have concluded that social intolerance, mediated by the abundance and availability of food, is the primary determinant of coyote density.<sup>11</sup>

There is also no indication that night hunting teaches coyotes to avoid associating with people and spending time in neighborhoods. Coyotes are naturally wary of people and will avoid areas in which threats are perceived.<sup>12</sup> Nevertheless, by disrupting populations through lethal control, coyotes may be more likely to venture near or use more dense human-occupied landscapes in search of habitat and food. Hence, in this case, since a majority of complaints received about coyotes from the NCWRC are supposedly from urban homeowners residing in areas where firearm use restrictions would not permit hunting, the night hunting proposal will be entirely ineffective at addressing such complaints and, in fact, may exacerbate such urban conflicts.

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<sup>8</sup> Crabtree R.L, Sheldon J.W. 1999. *Coyotes and Canid Coexistence in Yellowstone National Park*. Chapter 6 in *Carnivores in Ecosystems; The Yellowstone Experience*, T. Clark, P. Curlee, P. Kareiva, and S. Minta, eds., Yale University Press, pg. 143-44; *See also* Crabtree, R.L. 1997. *Yellowstone Ecosystem Scientific Opinion Letter*. Pg. 2; In 2011, the federal agency Wildlife Services had to truncate its coyote-killing operations due to budget cuts and the number of sheep killed by coyotes during that time fell. *See* Cole, Ken, *USDA Wildlife Services Funding Shortfall has Strange Result in Montana*. *The Wildlife News*, <http://www.thewildlifeneeds.com/2012/02/23/usda-wildlife-services-funding-shortfall-has-strange-result-in-montana/> (February 23, 2012).

<sup>9</sup> Crabtree, R.L. 1997. *Yellowstone Ecosystem Scientific Opinion Letter*. Pg. 2.

<sup>10</sup> Interview with National Park Service biologist Seth Riley at <http://malibusurfsidenews.com/stories/201203/201203010005.html> (Feb. 2012).

<sup>11</sup> Crabtree R.L, Sheldon J.W. 1999, at pg. 145.

<sup>12</sup> North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg.15 (April 1, 2012).

Representatives from the NCWRC are well aware that the burden of scientific evidence shows that hunting fails to manage coyote populations.<sup>13</sup> Mr. Perry Sumner of the NCWRC not only confirmed that the state has not conducted surveys to determine how many coyotes are present or how they are distributed, but he also acknowledged that the burden of scientific evidence shows hunting fails to manage coyote populations. In response to a question about the efficacy of lethal control of coyotes, Mr. Sumner said “Historically, that has not worked,” adding “that is why we did not include the word ‘population’ in our rule justification.”<sup>14</sup> In other words, the NCWRC is well aware that this rule change will not diminish coyote populations and that it recognizes that just the opposite affect may be measured.

In addition, despite liberal coyote hunting rules in North Carolina, the NCWRC concedes that the state’s coyote population has increased in the past five to ten years.<sup>15</sup> This indicates that the liberal coyote hunting rules have not been effective or that, as the scientific evidence indicates, efforts to lethally control coyotes have led to larger populations requiring more habitat and more food.<sup>16</sup> Moreover, as the Commission also concedes, despite intensive control efforts in other states that have had high coyote populations, they continue to thrive.<sup>17</sup> Finally, the Commission has noted that bounties, which encourage high levels of indiscriminate removal much like unlimited night hunting, have been an ineffective tool for controlling coyote populations.<sup>18</sup>

Beyond the lack of any evidence to substantiate the alleged need for the proposed coyote night hunting rule, the NCWRC is required by law to consider the cumulative effect of all rules adopted and all rules must be based on sound, reasonably available scientific, technical, economic, and other related information.<sup>19</sup> In regard to its mandate to base its rules on sound science, the NCWRC cannot simply justify its proposed rule based on the alleged need to

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<sup>13</sup> See interview at <http://blogs.scientificamerican.com/guest-blog/2012/03/27/night-hunting-coyotes-in-n-c-risky-for-red-wolves/>; See also North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg. 15 (April 1, 2012).

<sup>14</sup> Though it should be noted that the NCWRC clearly is confused about the alleged purpose of the proposed rule since another official, the Division of Wildlife Management Wildlife Biologist David Cobb, indicated in public hearings that the proposal was intended to provide for population control.

<sup>15</sup> While the Commission indicates that the population has increased, it also concedes that it cannot effectively estimate the total population. See North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg. 15 (April 1, 2012).

<sup>16</sup> “For decades, hounds men have pursued coyotes for sport and in 2003 the General Assembly passed legislation (NCGS § 113 273) allowing controlled fox hunting preserves owners to buy live coyotes and hunt them within the enclosures.” In particular, harvest of coyotes via hunting and trapping has increased in North Carolina since 2005. See North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg. 15-16 (April 1, 2012).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*

<sup>19</sup> G.S. § 150B-19.1(a)(4) & (5).

increase hunting opportunities without demonstrating, using the best available scientific evidence, that the proposed rule will achieve the alleged objectives which, though not clearly articulated, appear to include mitigating human-coyote conflict and achieving coyote population control. Fundamentally, it is biologically reckless to increase hunting opportunities without first gathering information on the estimated number of coyotes in the state, their range, and any trends in the population.<sup>20</sup> Indeed, NCWRC Wildlife Biologist Chris Kreh has indicated that “it’s hard to get a handle on the size of the coyote population,”<sup>21</sup> indicating that the Commission has no idea how many coyotes are present in the state. In addition, the Commission has not based these rules on sound scientific information indicating that it is appropriate and safe to hunt coyotes at night without risking an increase in the population of these species as a result.

In regard to its mandate to evaluate the cumulative impacts of its proposed rules, the record indicates that the NCWRC has not considered the cumulative effects of these night hunting rules (for coyotes and feral swine) in relationship to other past, present, and reasonable foreseeable future actions that may affect endangered red wolves, wolf habitat, other wildlife, and the ecosystem processes that influence and affect wildlife, including red wolves, in North Carolina. A cumulative effects analysis should include actions not only taken by the Commission but also those of other agencies, local municipalities, and private citizens. This analysis should, to be complete, consider a full range of cumulative impacts from a best case scenario to a worst case scenario in order to provide the agency decision-makers and the public with an understanding of what can be expected in the future and how actions taken in the past, today, and those reasonably foreseeable in the future will impact red wolves, red wolf habitat, and other wildlife species, including coyotes, and their habitats in NC.

Not only has the Commission failed to gather information about population dynamics of coyotes in North Carolina, they have not collaborated with the U.S. Fish and Wildlife Service (USFWS) to assess the environmental impacts of the proposed rules on the endangered red wolf. In sum,

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<sup>20</sup> AWI and PC are aware of the April 1, 2012 Fox and Coyote Populations Study Final Report which apparently was posted to the NCWRC website on April 3, 2012. This report does not provide credible data on population abundance estimates or trends as is required to responsibly manage coyote and fox populations. The information included in the report, which includes data on the range of both species, is largely based on hunting and trapping statistics (which may or may not be accurate) and, consequently, which can hardly be considered accurate for the purpose of estimating population size or trends since other variables (i.e., economic value of live fox/coyotes or the market value for their pelts) can substantially influence hunter/trapper effort. What is interesting in regard to this report is that the pending publication of the report was not referenced at any of the public meetings held on the night hunting rules despite its relevance to the coyote night hunting rule and even though the NCWRC officials clearly must have known that it would be published during the public comment period. This begs the question of why the report was not referenced at the public meetings, why the rulemaking process was not delayed until after the report had been issued, or why, upon issuance of the report, the NCWRC did not unilaterally extend the comment period on the rules so that the report could be adequately considered. Though it appears the report was posted to the website on April 3, AWI, for example, did not discover it until last week when accessing the NCWRC website to conduct separate research for this letter.

<sup>21</sup> Hearings set on hunting hogs, coyotes at night, *see* [http://www.journalpatriot.com/news/article\\_bc2d0434-6c70-11e1-9837-001a4bcf6878.html](http://www.journalpatriot.com/news/article_bc2d0434-6c70-11e1-9837-001a4bcf6878.html) (Mar. 12, 2012).

the proposed rules are woefully inadequate and missing any kind of data, analysis, and other critical information reasonably necessary to assess the impacts they will have.

For feral swine, the NCWRC has also failed to provide information on the status of the species in the state, assessed how additional hunting may or may not achieve management objectives, whether altering the rules will potentially increase feral swine numbers, range, or impacts (as is the case for coyotes), or considered the cumulative impacts of allowing night hunting of feral swine on other wildlife species, including protected species, or the public including homeowners, campers, hikers, and others who may choose to recreate outdoors at night. Though AWI concedes that feral swine are a non-native species, the increase in the range of feral swine, feral hogs, or wild boars in this country is, in part, due to natural range expansion but has also been facilitated by the purposeful release of these animals for hunting. Like most animals including coyotes, when subject to lethal control, the age structure, productivity, and behavior of feral swine is altered to compensate for removals and the availability of open habitat. Consequently, while expanding hunting opportunities to include night hunting may provide NC hunters with the chance to slay swine at night, it likely will do nothing to accomplish population control. What it will do, however, is increase the potential for hunters to be exposed to disease, including *Brucella suis*, when butchering potentially exposed or infected animals in the field. The NCWRC, however, failed to consider the potential for disease transmission and its impact to hunters when preparing the proposed feral swine night hunting rule.<sup>22</sup>

## **II. Proposed Rules Place Endangered Red Wolves & Other Species in Jeopardy. The NCWRC is Violating State ESA.**

North Carolina is unique in that it harbors the only wild population of federally-listed red wolves. As a federally protected threatened species,<sup>23</sup> the ESA requires that red wolves be afforded the highest of priorities and that their protection and recovery be paramount for all with management responsibility. The protections afforded to species under the ESA are mandatory and not subject to agency discretion, concern about convenience or inconvenience to user groups, or to inherent biases in support of or opposition to coyote hunting and trapping. Yet the proposed night hunting rules lack critical information addressing how these rules will impact this vulnerable population of wolves.

For endangered red wolves (*Canis rufus*), which may number between 90 -110 total in the entire state, shooting is the number one cause of deaths. According to the USFWS, an average of 7% of the red wolves in the state are killed annually during North Carolina's hunting seasons.<sup>24</sup> Furthermore, given the pervasiveness of the "shoot, shovel, and shut up" mentality among some

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<sup>22</sup> See Science Daily, *Feral pigs can carry nasty bacteria that can be transmitted to people*, April 11, 2012 (available at: <http://www.sciencedaily.com/releases/2012/04/120411131913.htm>).

<sup>23</sup> While red wolves are otherwise endangered for the purpose of the federal ESA, §10(j) provides that a reintroduced population be treated as threatened.

<sup>24</sup> On average, 6 to 8 red wolves are killed each year in cases where the shooter believed they were taking a coyote but instead shot a red wolf. See *Interview with David Rabon* at <http://blogs.scientificamerican.com/guest-blog/2012/03/27/night-hunting-coyotes-in-n-c-risky-for-red-wolves/> (Mar. 27, 2012).

hunters and trappers, it is likely that red wolves are taken in even higher numbers. In some cases, such take may be intentional but in many cases it may be unintentional due to the similarity in appearance between red wolves and coyotes. Indeed, even for an expert, it is difficult to distinguish red wolves from coyotes in daylight.<sup>25</sup> At night, it would be impossible for anyone, experts or non-experts, to distinguish a coyote from a red wolf.<sup>26</sup> Consequently, the proposed coyote night hunting rule could have devastating impacts on the vulnerable red wolf population, as it is inevitable that more wolves will be killed by hunters who mistake them for coyotes.

15A NCAC 10B.0219 & 15A NCAC 10B.0223, as proposed, will also interfere with the coyote management program that the Fish and Wildlife Service Red Wolf Program has in place for the wolves. Hybridization between red wolves and coyotes has occurred repeatedly and can hamper or complicate expensive reintroduction efforts.<sup>27</sup> To reduce hybridization, the FWS has sterilized coyotes in the five-county recovery area since about 2000. Both these sterilized coyotes and red wolves are fitted with radio collars.

By increasing hunter opportunities to kill coyotes that include those who have been sterilized and prevented from hybridizing with red wolves, the Commission is increasing the chance that that habitat will thus be occupied by an intact coyote which can then hybridize with red wolves.<sup>28</sup> Sterilized coyotes hold and defend a territory, which prevents fertile coyotes from moving in to that area and lowers the probability of hybridization. However, as gunshot mortalities of wild canids in the red wolf recovery area have increased over the past few years, the program has lost coyotes that were of management value to the program. This, in turn, has allowed fertile coyotes to access the red wolf areas because any reduction in the number of coyotes is compensated by immediate immigration into the reduction area by lone animals or shifts in range use by surrounding social groups.<sup>29</sup> If the number of gunshot mortalities of both coyotes and red wolves could be reduced, there would be a reduction in hybridization events and an increase in the red wolf population. The proposed rule is antithetical to achieving a reduction in hybridization events and, if anything, will increase hybridization incidents thereby jeopardizing recovery of the endangered red wolf.

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<sup>25</sup> North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg. 14 (April 1, 2012).

<sup>26</sup> Red wolves range in weight from 55 to 75 pounds, with some reaching up to 85, while coyotes are slighter and smaller at 35 to 40 pounds. They both have a tawny and brown pelage speckled with light and dark guard hairs. Juvenile red wolves are most at risk for being mistaken for a coyote, between their first fall and second year when they are still immature and have not reached their full body size. Although they are occasionally spotted during the day, red wolves are most active at night.

<sup>27</sup> Crabtree R.L, Sheldon J.W. 1999. At pg. 156.

<sup>28</sup> David Rabon of the U.S. Fish & Wildlife Red Wolf Recovery Program has reported that “We saw our wolf population grow considerably when we first started using sterilization techniques on coyotes... But now, with the increased number of animals we’ve lost to gunshot mortality, both wolves and sterile coyotes being shot, we’ve actually seen an increase in the number of intact [fertile] coyotes moving in.” See interview at <http://blogs.scientificamerican.com/guest-blog/2012/03/27/night-hunting-coyotes-in-n-c-risky-for-red-wolves/>

<sup>29</sup> Crabtree, R.L. 1997. Yellowstone Ecosystem Scientific Opinion Letter. Pg. 1.



There are several other endangered and threatened species of North Carolina that could also potentially be impacted by the proposed night hunting rules, including the Carolina Northern Flying Squirrel, the Gray Bat, the Indiana Bat, and the Virginia Big-eared Bat, amongst others. The threat to these species is not so much in regard to incidental shooting but, rather, would be caused by the harassment associated with night hunting – the precise time when many of these species are most active. The NCWRC simply has not gathered any data on the impacts of the proposed rules to adequately assess the direct, indirect, or cumulative impacts of the proposed rules on endangered and threatened species in general.<sup>30</sup> The impact of 24-hour, year round hunting on non-target species can be significant in terms of both numbers of non-target animals killed, the pain and suffering that target and non-target animals will experience if shot, and in regard to the number of animals impacted through harassment or increase in stress attributable to night-hunting.

Furthermore, the lack of any mechanism to collect data on the incidental take of red wolves and other species is also disconcerting as it demonstrates not only a lack of concern by NCWRC as to how hunting may be affecting these species but also a failure to apply its mandate of conservation and protection of North Carolina's wildlife resources – given to it by the North Carolina legislature on behalf of the citizens of the state. If anything, this attitude of non-concern and nonchalance is entirely antithetical to the public trust doctrine that the NCWRC should embrace which entrusts it with the proper and responsible management of all wildlife in the state in consideration of the interests of the public (both in North Carolina and nationwide).

Finally, it must be noted that the state of North Carolina is violating state and federal laws for not designating red wolves as protected under its state ESA law and prohibiting canid hunting in areas occupied by red wolves. Specifically, NC General Statutes, Article 35 113-334 provide that:

- (a) All native or resident wild animals which are on the federal lists of endangered or threatened species pursuant to the Endangered Species Act have the same status on the North Carolina protected animals lists.

The state of NC is clearly violating its own law by not listing red wolves as, at a minimum, threatened under the state ESA, regardless of its designation as an experimental non-essential population, since the species is listed under the federal ESA and native to North Carolina.<sup>31</sup>

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<sup>30</sup> §9 of the Endangered Species Act prohibits unauthorized taking, possession, sale and transport of endangered and threatened species. In addition, N.C. G.S. § 150B-19.1(a)(4) & (5) mandates that agencies must base rules on sound, reasonably available scientific, technical, economic, and other related information and consider the cumulative effect of all rules adopted.

<sup>31</sup> §10(j) status as a non-essential experimental population does affect state status, but does not dictate total exclusion from the list. Over 100 red wolves roam their native habitats in five northeastern North Carolina counties and approximately 200 comprise the Species Survival Plan captive breeding program in sites across the United States, still an essential element of red wolf recovery. *See* <http://www.fws.gov/redwolf/>.

While red wolves are otherwise endangered for the purpose of the federal ESA,<sup>32</sup> Section 10(j) provides that a reintroduced population be treated as threatened. NC law provides that wildlife receive the same status under state law that they have under federal law. Any modification to the listing status of a population reintroduced under Section 10(j) is irrelevant for purpose of NC's law – wolves in NC should be designated as threatened under state law. Furthermore, the NCWRC has an obligation – which it has not met -- to exclude the five county recovery areas from coyote hunting or to seek an incident take permit as required by the ESA. It's refusal to take either action opens the state up to litigation based on its current policies and practices which will only be exacerbated by allowing night hunting which will likely increase the number of red wolves killed and expand the potential for coyote-red wolf hybridization incidents.

### **III. Proposed Rules are a Public Safety Hazard for Humans, Pets and Wildlife.**

The proposed rules (both for coyotes and feral swine) pose public safety concerns and will make it more difficult and dangerous for law enforcement to identify poachers and to enforce relevant North Carolina game, gun, and other public safety laws. Beyond the likely increase in unintentional killing of red wolves (due to difficulties of distinguishing them from coyotes at any time but particularly at night), other wildlife species, domestic animals (i.e., dogs), and farm animals may also become victims of this rule given the challenge of positively identifying animals under the cover of darkness or due to potential challenges for individual hunters (i.e., fatigue, intoxication at night). Furthermore, people including homeowners, campers, hikers, bicyclists, motorists and others who may be active at night could also become the unintended victim of an errant shot or of mistaken identity as it would be impossible for hunters to be certain as to what or who may be beyond the area illuminated by an artificial light source in use.

There is no indication in the proposed rules that public safety can be guaranteed if night hunting were allowed in the state. Such concerns are not merely theoretical as there are examples of individuals being killed as a result of night hunting. For example, on March 5, 2010, a USDA Forest Service Law Enforcement Officer was fatally shot at the Ocmulgee Bluff Equestrian Recreation Area on the Oconee Ranger District of the Chattahoochee-Oconee National Forest in Jasper County, Georgia as a result of night hunting. The officer, Christopher Arby Upton, was on routine patrol in the area around 11 p.m. when two individuals were hunting coyote with a high-powered rifle equipped with night vision and apparently mistook the officer for game. Similarly, fourteen-year-old Garret Griffin accidentally shot and killed himself in 2010 in Indiana while hunting coyotes at night. These are just two incidents that were discovered without considerable effort during the preparation of this letter. Had a more detailed and exhaustive search been undertaken, undoubtedly more incidents, including additional mortalities and incidents involving injury, of people due to night hunting would have been found.

Beyond the potential risk to those who may choose to recreate at night in the outdoors, the proposed rules will substantially impact North Carolina's law enforcement personnel including

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<sup>32</sup> Even though it is an experimental, non-essential population, the red wolf is still listed as endangered under the federal ESA. See <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=A00F>.

local police, state police, and game wardens. For local and state police, they will likely be the first to respond to emergency calls from homeowners, campers, hikers or others who become alarmed at the sound of gunshots in their vicinity at night. It is dangerous enough for law enforcement to approach armed suspects during the day but, at night, that danger is escalated significantly since the officers may have no idea how many armed hunters are in the areas or where they are given the darkness. For game wardens – who already perform one of the more dangerous jobs in the country in combating wildlife crime – their safety will also be compromised by the rule change and, in addition, their workload will inevitably increase in order to ensure that those hunting at night are complying with all relevant rules. It is inevitable that some hunters will take advantage of night hunting (if permitted for coyotes and feral swine) to illegally take other species (i.e., deer) thereby requiring that game wardens be in the field at night to try to catch those violating state or federal wildlife laws.

There is no evidence the NCWRC has considered the potential public and law enforcement safety issues inherent to these proposed rule. Furthermore, it is unconscionable that the NCWRC would ever consider any rule change that would increase the risk to either public or law enforcement officer safety unless the need for the change outweighed the increase in risk. In this case, providing new hunter opportunities does not justify potentially jeopardizing anyone's safety (hunter, non-hunter, homeowner, hiker, camper, motorist, bicyclist, or law enforcement official) or their lives.

Furthermore, night hunting of coyotes and feral pigs is also more likely to cause intense suffering since quick kills are less likely at night due to the difficulty in ensuring a quick kill shot while hunting at night. The proposal to expand opportunities for archery hunting will only exacerbate such impacts given the documented inefficiency inherent to bowhunting with some studies documenting that for every animal struck and killed with an arrow another is wounded, is not recovered, and may die from his/her wounds potentially after a prolonged period of suffering.

#### **IV. Coyotes Provide Important Ecological Benefits, including Feral Pig Predation.**

The NCWRC has failed to consider the positive impact and role that coyotes play in an ecosystem as part of its rule-making process; a significant oversight. As evidenced in the scientific literature, coyotes play an important ecological role in controlling rodent populations and cleaning ecosystems of carrion. Coyote presence has been shown to reduce the presence of some animals humans dislike, including rodents (e.g. rats, mice, voles, gophers, groundhogs, nutria, muskrat), while increasing the presence of other animals perceived to be valuable such as songbirds and some types of waterfowl. Such effects are, in part, linked to coyotes limiting mesocarnivores (e.g. foxes, raccoons) species known to prey on birds thereby boosting bird populations and diversity because they are a generalist consumer.<sup>33</sup> Coyotes can also limit feral swine, providing a form of natural control to a species that is of concern to some.

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<sup>33</sup> North Carolina Wildlife Resources Commission Fox and Coyote Populations Study Final Report at [http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox\\_CoyotePopulationsReport.pdf](http://www.ncwildlife.org/Portals/0/Learning/documents/Species/Fox_CoyotePopulationsReport.pdf), pg.15 (April 1, 2012).

The lack of any analysis in the proposed rule of the positive role that coyotes play in any ecosystem is indicative of a bias inherent to the NCWRC which is pro-hunter and seeks to develop new opportunities for hunters to kill sentient animals while being anti-predator. While the science and the law provide compelling evidence to justify the immediate termination of the proposed rules, at a minimum the NCWRC must suspend consideration of the rules pending reanalysis including an assessment of the positive values of coyotes ecologically, biologically, culturally, and aesthetically.

## **V. Suggestions**

In addition to considerations regarding important scientific principles of coyote population dynamics and biological responses to lethal control and impacts of the proposed rules on endangered red wolves in the state, AWI recommends the following for the NCWRC:

- The Commission should look into more effective methods of reducing conflicts between coyotes, people, and their domestic animals. Humane coexistence programs and nonlethal methods to protect sheep and other livestock from predators, such as guard dogs, electrified fencing, changes to feeding schedules and other animal husbandry techniques are also more effective than indiscriminate killing. The use of coyote “roll guards,” which fit on top of chain link or other fencing material, is a humane option that can help homeowners keep several species of wildlife – including coyotes -- out of their yards thereby protecting domestic animals. Motion-activated sprinklers can also act as a deterrent. Hazing or fear conditioning using various methods and materials (commonly found around the home) to reinstate the natural fear coyotes have around people is also more effective than lethal control.
- Improve enforcement of and increase penalties for the importation of coyotes and feral hogs for private hunting clubs and penning facilities in violation of state wildlife, animal health, or public health laws.
- Encourage control of human food sources as a priority, including household trash, bird feeders that attract rodents, pet food and water bowls left outside and free-roaming pets.<sup>34</sup> Sprinkling cayenne pepper or ammonia on trash may also help discourage coyotes.
- Engage a more diverse set of stakeholders with vested interests in long-term outcomes of activities that impact fox and coyote populations which include non-governmental organizations that focus on wildlife conservation and human-wildlife conflict mitigation and biologists with knowledge of coyote biology and population dynamics.

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<sup>34</sup> *Id.* at 27.

Those stakeholders involved in the population study released on April 1, 2012 - N.C. Trappers Association, fox hunters, controlled fox hunting preserve operators, Quality Deer Management Association, Quail Unlimited, N.C. Cattlemen's Association, N.C. League of Municipalities, N.C. Farm Bureau, N.C. County Commissioners Association, Association of Local Health Directors, N.C. State Health Director, N.C. Department of Agriculture and Consumer Services, N.C. Cattlemen's Beef Council, Wilkes County Animal Control, N.C. Division of Public Health, N.C. Alliance of Public Health Agencies, Orange County Animal Services, N.C. Department of Agriculture and Consumer Services, Veterinary Services Division and the Forest Service<sup>35</sup> – all arguably have a vested interest in lethal removal of coyotes without any particular knowledge or specialization of coyote biology or population dynamics. Furthermore, that list does not include any reference to conservationists/animal protection advocates or others who also have a significant interest in the subject and who represent large constituencies of North Carolina residents.

The NCWRC has a duty to ensure wildlife management is science-based, transparent, and to consider the interests of all of the state's citizens when making wildlife management decisions. This involves seeking broader input into studies and other documents prepared to inform management and in consulting with biologists who specialize in coyote population dynamics. If the goal is to address coyote-human conflicts, it is imperative that experts be consulted.

## **Conclusion**

For the detailed reasons articulated above, it is imperative that the proposed night hunting rules be rejected. Not only have the rules been proposed in violation of state law (i.e., without adequate consideration of the scientific evidence or any consideration of their cumulative impacts) but the rules also create a clear management conflict for the red wolf and could, in violation of federal law, jeopardize the species survival and recovery. Considering that there may be no more than 110 endangered red wolves in the entire state, that shooting by hunters is the number one cause of deaths, and that distinguishing between a coyote and a red wolf even in daylight is difficult even for an expert, this proposal could have devastating impacts on the vulnerable red wolf population. If the coyote night hunting rule is adopted, it is inevitable that many more wolves will be killed by hunters who mistake them for coyotes, which could trigger litigation at the state and federal levels to protect the wolves resulting in unknown but potentially significant impacts on coyote and potentially other trapping/hunting activities in North Carolina.

AWI and PC are also concerned about what effect this could have on public safety, on the safety and duties of law enforcement officers, and on other animals. Night hunting is dangerous to hikers, campers, and others, as well as companion animals who may be outdoors and mistaken for the target species. For law enforcement officers, confronting armed individuals during the day is dangerous; doing so at night and in potentially remote areas is even more dangerous. There is no indication in the proposed rules that public and law enforcement officer safety issues

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<sup>35</sup> *Id.* at 6.

were even considered during development of the proposed rule or that their safety can be guaranteed if night hunting were allowed in the state.

Thank you in advance for providing this opportunity to comment on these proposed rules and for considering these comments. Please send any future correspondence or information about these proposed rules to: Tara Zuardo, Wildlife Associate, Animal Welfare Institute, 900 Pennsylvania Ave., SE, Washington, DC 20003.

Sincerely,



Tara Zuardo  
Wildlife Associate

And on behalf of:

*Camilla H. Fox*, Executive Director, Project Coyote  
Wildlife Consultant, Animal Welfare Institute

**Resources (Attached)**

Crabtree R.L, Sheldon J.W. 1999. *Coyotes and Canid Coexistence in Yellowstone National Park*. Chapter 6 in *Carnivores in Ecosystems; The Yellowstone Experience*, T. Clark, P. Curlee, P. Kareiva, and S. Minta, eds., Yale University Press.

Crabtree, R.L. 1997. *Yellowstone Ecosystem Scientific Opinion Letter*.