



ANIMAL WELFARE INSTITUTE

*PO Box 3650 Washington, DC 20027-0150 www.awionline.org
telephone: (703) 836-4300 facsimile: (703) 836-0400*

November 28, 2006

BY TELEFAX AND MAIL

Mr. Marvin E. Moriarty
Regional Director, Region 5
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, MA 01035

Ms. Suzanne C. Baird
Refuge Manager
Great Dismal Swamp NWR
3100 Desert Road
Suffolk, VA 23434

Dear Mr. Moriarty and Ms. Baird:

On behalf of the combined membership of the Animal Welfare Institute, In Defense of Animals, The American Environment Foundation, Ms. Danielle Moore, and Ms. Barbara Sachau, we request that the U.S. Fish and Wildlife Service (FWS) immediately cancel its planned black bear hunt at the Great Dismal Swamp National Wildlife Refuge (GDSNWR). The hunt is scheduled for December 1 and 2 and, therefore, we ask the FWS to inform us of its decision in response to this request by no later than 5:00 PM on November 29, 2006 so that we can determine if additional action is warranted to challenge the hunt.

The hunt must be cancelled because:

- 1) The FWS has never officially or legally opened the GDSNWR to bear hunting;
- 2) The FWS has failed to fully evaluate the environmental impacts of the black bear hunt in a legally sufficient environmental assessment or environmental impact statement prepared pursuant to the National Environmental Policy Act; and,
- 3) The FWS has failed to obtain sufficient scientific evidence to justify the hunt and/or to determine the full range of potential effects of the hunt on the refuge's black bear population in violation of federal law, and its own regulations and policies.

The evidence supporting each of these claims is detailed throughout the remainder of this letter and provides indisputable and compelling proof that the scheduled bear hunt is in blatant violation of federal law.

BACKGROUND

The GDSNWR was established in 1974. The Great Dismal Swamp Act of 1974 directed the FWS to:

Manage the area for the primary purpose of protecting and preserving a unique and outstanding ecosystem, as well as protecting and perpetuating the diversity of animal and plant life therein. Management of the refuge will be directed to stabilize conditions in as wild a character as possible, consistent with achieving the refuge's stated objectives." Public Law 93-402 and Final Comprehensive Conservation Plan (Final CCP) at 33.

The GDSNWR encompasses both pond pine woodlands/pocosin and Atlantic white cedar forest habitat which have been recognized by resource management professionals as globally-rare community types. Final CCP at 80. Due to the unique habitat features found within the GDSNWR, it has been designated as a National Natural Landmark under federal law, a Natural Heritage Area by the North Carolina Natural Heritage Program (North Carolina portion of the GDSNWR only), and as an Important Bird Area by the Virginia Audubon Council. Final CCP at 80.

The GDSNWR is home to a coastal breeding population of black bears. The bear population is estimated to number between 250-350 bears (Final CCP at 53 citing to Hellgren, 1988 and Tredick, 2005) though questions about the methodologies used in both studies along with the validity of extrapolations made raise some question about the accuracy of these estimates.¹ Since a portion of the GDSNWR is in North Carolina, the 250-350 population estimate is for the entire refuge and not just for that portion of the refuge located in the State of Virginia. Geographic isolation of the GDSNWR bear population along with substantial commercial and residential development outside of the refuge threaten the genetics and survival of this bear population (Tredick, 2005).

In his study of black bears primarily on the GDSNWR, Hellgren (1988) identified a number of black bear mortality factors (i.e., hunting, cannibalism, vehicle collision, poaching, damage complaint kills, and handling) with 44 percent of his tagged bears falling victim to depredation permit kills and vehicle collisions. He also found a fairly sizeable male bias in his bear capture efforts eventually concluding that "until a less biased collection technique is developed, the true sex ration of the black bear populations will be virtually impossible to determine." Though Hellgren's GDSNWR bear population estimate was higher than previously believed, he cautioned that "the species remains in precarious status in the Atlantic Coastal Plain due to the fragmented nature of populations." At that time, Hellgren indicated that habitat fragmentation was accelerating largely due to "phosphate or peat mining, forestry, and agriculture...."

¹ It is also unclear if the population estimates provided by Hellgren (1988) and Tredick (2005) are for the refuge or if they include bears that live within the portions of the Great Dismal Swamp outside of the refuge. The GDSNWR encompasses 111,203 acres (Final CCP at 4) or 450 km² while the Great Dismal Swamp is 850 km² in size (Hellgren 1988). Hellgren's study area included 57.5 km² of lands outside the refuge while Tredick's study area seemed to be limited to the refuge itself.

Furthermore, Hellgren (1988) identified the “island nature” of this and other black bear populations in the southeast to be a concern due to the potential loss of genetic variability. Hellgren and Vaughn (1989) calculated an effective population size of 56² which “is only slightly above the recommended size of 50 for short-term population survival and well below the 500 recommended for preservation of genetic variability and long-term population survival (Franklin 1980).” Based on continued habitat destruction and fragmentation and the genetic concerns, Hellgren (1988) and Hellgren and Vaughn (1989) recommended that the GDSNWR bear population continue to be protected from hunting.³

In 1998, the FWS claims to have opened the GDSNWR to bear hunting. See Draft Comprehensive Conservation Plan and Environmental Assessment (Draft CCP/EA) at 115, 119 and 122/Final CCP at 92. As discussed below, due to a blatant violation of the Administrative Procedures Act (APA) and the FWS’s own rules, the GDSNWR has never been legally open to bear hunting. In 1998, the FWS allegedly prepared a compatibility determination on its proposed bear hunt. Draft CCP/EA at 115, 122. There is, however, no evidence that the FWS prepared an environmental assessment (EA) or environmental impact statement (EIS) on the bear hunt at that time or met any of the other requirements imposed in Chapter 8, Section 5 of the FWS Refuge Manual (RM) (8 RM 5) or 605 FW 2.⁴ Though a limited hunt was proposed for late 1998, the hunt was cancelled allegedly due to incomplete paperwork.⁵

In September 2005, Tredick completed her dissertation entitled “Population abundance and genetic structure of black bears in coastal North Carolina and Virginia using noninvasive genetic sampling.” Black bears within the GDSNWR were one of three refuge bear populations studied by Tredick. The purpose of the study was to: 1) estimate the number, density, and sex ratio of black bears on the 3 refuges; 2) assess the genetic relatedness and gene flow among bears at these refuges; and 3) develop, if warranted, an adaptive harvest management strategy for each refuge based on population estimates. Based on hair snare data collected on the GDSNWR in 2002, Tredick, using an average of the results provided by various population models, estimated the number of bears within her study area to be 98 (CI=82-134), with 48 bears (CI=35-93) on the northern

² This effective population estimate was based on a number of assumptions including a 1:1 sex ratio which may not be present in the GDSNWR population. Moreover, the estimate of 56 in Hellgren and Vaughn (1989) is different than the 66 estimated in Hellgren (1988), though, given the age structure of the GDSNWR bear population it is assumed that the estimate of 66 was in error.

³ Hellgren (1988) also recommended that vehicular access to the GDSNWR continue to be restricted.

⁴ In 1998 the FWS was obligated to comply with the terms of 8 RM 5 when opening refuges to hunting. FWS policy 605 FW 2 was promulgated in July 2006 and replaced 8 RM 5. The specific requirements that a refuge must meet to be declared open to hunting are nearly identical in 8 RM 5 and 605 FW 2. Efforts to secure the 1998 hunt package and other documents related to the proposed bear hunt have been stymied by the FWS’s refusal to expedite its response to IDA’s November 6, 2006 Freedom of Information Act request and to deny IDA’s request for a fee waiver. Though this denial will be appealed, the FWS’s unwillingness to provide copies of the relevant public records regarding the hunt may suggest that it does not want certain information about the hunt to be disclosed to the public.

⁵ See Harper, Scott ‘Bear Hunt at Great Dismal Swamp Refuge Cancelled This Year\Animal Rights Group, Incomplete Legal Papers Lead to Manager’s Decision,’ *Virginian-Pilot*, October 2, 1998.

portion of her study area and 46 bears (CI=42-62) on the southern portion.⁶ These models produced density estimates of 0.56 – 0.63 bears/km² which were similar to density estimates found by Hellgren (1988).⁷ Tredick identified the presence of a major highway adjacent to the GDSNWR and increasing urban developments around the GDSNWR as potentially contributing to decreasing habitat and limiting bear densities. From 1990 to 2000, for example, U.S. Census Bureau data cited by Tredick revealed that the cities of Suffolk and Chesapeake located north of the GDSNWR grew 22.1% and 31.1%, respectively.

In regard to her analysis of the genetic variability within the GDSNWR bears, Tredick found genetic variability was clearly lower in the GDSNWR bears compared to other refuge bear populations evaluated in her study. The discovery of 12 unique alleles in the GDSNWR bears provide evidence of restricted gene flow which, as natural geographic barriers (i.e., Albemarle Sound) and development outside of the refuge continues to threaten the availability of corridors to allow bears to move between populations, may contribute to a declining population size and further loss of genetic diversity in the future.

Based on these findings, Tredick provided the following management recommendations for the GDSNWR:

Densities of black bears on GDSNWR appear to have remained stable over the past 20 years, but further study into demographic parameters (reproduction, survival, and population growth rate) must be completed before recommendations can be made regarding harvest of black bears at GDSNWR. This is particularly important given potential genetic concerns for this population. The 12 unique alleles and lower *Nm* (heterozygosity) values found here indicate restricted gene flow to this population, and reducing bear numbers through hunting may exacerbate this issue. (Tredick, 2005 at 108; emphasis added).

In March of 2006, the GDSNWR published its Draft CCP/EA. The Draft CCP was prepared to comply with the requirements of the National Wildlife Refuge System Improvement Act (NWRISA) that was passed by Congress in 1997 and which amended the 1966 National Wildlife Refuge System Administration Act (NWRISA). The NWRISA as amended by the NWRISA (16 U.S.C. §668dd et seq.) set forth the mission for the National Wildlife Refuge System,⁸ identified compatible wildlife-dependent recreation (i.e. hunting, fishing, wildlife observation, photography, environmental education, interpretation) as a legitimate and appropriate use of refuges, and required the biological integrity, diversity, and environmental health of refuges be maintained for

⁶ Like Hellgren (1988), Tredick also documented a male-bias in her hair snare sampling results.

⁷ A notable difference in the studies by Hellgren and Tredick is that Hellgren claims that “maple-dominated stands, which cover approximately 60% of the study area, are generally avoided by bears,” while Tredick claims that “the majority of GDSNWR is composed of prime bear habitat, including maple-gum forest (62%).” It is unclear if Hellgren and Tredick are referring to the same areas but differ in their assessment of the value of these areas for bears or if they are referring to different forest stands.

⁸ The mission was “to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitat within the United States for the benefit of present and future generations of Americans.” 16 U.S.C. §668dd(a)(2).

present and future generations of Americans. It also mandated the preparation of Comprehensive Conservation Plans for each refuge and set forth additional standards for the preparation of compatibility determinations to ensure that refuge uses, existing and new, are compatible with refuge purposes. The FWS subsequently promulgated various policies to provide additional guidance in complying with its legal mandates. See, e.g., 602 FW 3 (CCP policy); 603 FW 2 (compatibility determination policy); and 605 FW 2 (hunting policy).

In order to permit hunting on a refuge, the FWS must assemble a package of documents including, but not limited to, a hunting chapter of the refuge-specific visitor services plan, compatibility determination, NEPA documentation, NEPA decision document, Endangered Species Act section 7 evaluation, and draft refuge-specific regulations. 605 FW 2.9A1-9. In addition, FWS regulations only allow public hunting when the FWS determines that a wildlife species is “surplus to a balanced conservation program on any wildlife refuge area...” 50 CFR §31.2. Determining if a “surplus” exists of a species must be done through population census, habitat evaluation, and other means of ecological study. Id. at §31.1.

The Draft CCP set forth a proposed long-term management plan for the GDSNWR. The Draft CCP was subject to environmental impact analysis in an EA in order to ostensibly comply both with NEPA (42 U.S.C. §4371 et seq.) and with the FWS regulations and rules requiring NEPA compliance. The Council on Environmental Quality has promulgated regulations implementing NEPA (40 CFR §1500 et seq.) to which all federal agencies must comply. According to the CEQ’s regulations, NEPA is the “basic national charter for the protection of the environment.” 40 CFR §1500.1(a). It requires federal agencies to “insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” Id. at §1500.1(b). Except when actions can be categorically excluded from substantive NEPA review, the information is to be disclosed in an EA or EIS. Id. at §1501.4 et seq. Such information must be of “high quality,” the analyses of the information must be scientifically accurate, and public scrutiny of the information is essential to implementing NEPA. Id. Ultimately, NEPA is “intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment.” Id. at §1500.1(c).

The Draft CCP/EA identified three alternatives. Alternative B, the FWS’s proposed action, included a proposal to establish a bear hunt on the GDSNWR. The Draft CCP/EA claims that 250-350 bears live within the Great Dismal Swamp within which the GDSNWR is located. Draft CCP/EA at 51. Though the population estimates by Hellgren (1988) and Tredick (2005) along with hunter kill rates outside of the refuge do not indicate an increasing bear population, the Draft CCP/EA claims that nuisance bear data, observational data, and age structure indices “provide evidence of an increasing black bear population.” Draft CCP/EA at 51 citing VDGIF, 2002). The Draft CCP/EA states that the existing and ongoing commercial and residential development, including the existence of major highways, surrounding the refuge has decreased the amount of bear habitat outside of the refuge, may eliminate natural corridors which bears use to

traverse to other areas of habitat within the refuge watershed, and may eventually result in a genetically isolated black bear population. Draft CCP/EA at 114,115. These changes, in turn, allegedly create nuisance bear issues including bear-vehicle collisions, bears visiting residential areas, and an increase in crop depredation attributable to bears. In response to these concerns and primarily to provide a wildlife-dependent recreational opportunity, the FWS has planned a two day bear hunt for December 1 and 2. The kill limit will be approximately 20 bears though the hunt could be closed after a single day if 10 or more bears are killed. Draft CCP/EA at 122/Final CCP at 99.

In its analysis of the environmental consequences of Alternative B, the FWS indicated that it conducted “an in-depth evaluation of the potential long-term impacts of the bear hunt.” Since the Draft CCP/EA did not include any such in-depth evaluation, the FWS is presumably referring to the studies by Hellgren (1988) and Tredick (2005). In regard to Tredick’s study, the FWS claimed that it engaged in “an additional evaluation” of Tredick’s finding that “genetic statistics at GDSNWR indicate that this population is isolated to some degree by geography (i.e., the Albemarle Sound) and encroaching urban development (i.e., the towns of Suffolk and Chesapeake).” Draft CCP/EA at 188. The additional evaluation simply confirmed the isolation of the GDSNWR bear population. In addition, the FWS, citing to “personal communication,” reported that both Tredick and Dr. Michael Vaughn of the Virginia Polytechnic Institute and State University have indicated that “the hunt would not be detrimental to the bear population when held within the described parameters.” Draft CCP/EA at 188.

Remarkably, except for reference to the population estimates made by Hellgren (1988) and Tredick (2005) and the passing reference to the genetic concerns raised by Tredick, the Draft CCP/EA did not disclose any additional information from either the Hellgren or Tredick studies. Based on its extremely limited analysis, the FWS concluded that because of stability of the refuge bear population, the limited number of bears to be killed (20), the limited number of hunters, and the estimated hunter success rate, the impacts of the proposed bear hunt “to the Great Dismal Swamp NWR bear population would be minimal.” Draft CCP at 188.

In its Final CCP published in July 2006, the FWS decided to implement its proposed action, Alternative B, which included a bear hunt.⁹ In Appendix G of the Final CCP, the FWS included a compatibility determination for its proposed black bear hunt claiming, using the same arguments that it relied on in determining that the hunt would have a minimal impact on the refuge bear population in its Draft CCP/EA, that the bear hunt “will not materially interfere with or detract from the mission of the national Wildlife Refuge System or the purposes for which the Refuge was established.” Final CCP at 231.¹⁰

⁹ A Finding of No Significant Impact (FONSI) was signed on July 26, 2006. A Final EA was not published because after considering all public comments, Marvin Moriarity, Regional Director of the FWS’s Northeast Region, determined that the Draft EA was sufficient to support the findings in the FONSI.

¹⁰ The total one-time costs of implementing Alternative B was estimated to be \$17.1 million dollars with the implementation of the bear hunt estimated to cost \$15,000. Final CCP at 230. The Final CCP indicates that successful implementation of the CCP, which includes a number of

ANALYSIS:

Based on the foregoing evidence, the proposed black bear hunt on the GDSNWR violates a number of federal laws, regulations, and FWS policies.

1. The FWS has failed to legally open the GDSNWR to bear hunting.

The APA requires that federal agencies provide the public an opportunity to participate in the rule making process. See 5 U.S.C. §§552 and 553 et seq. NEPA also requires that the public have an opportunity to participate in an agency's decision-making process. Furthermore, the FWS's own policies specify that one of the nine documents required to open a refuge to hunting is a draft of refuge-specific regulations. The FWS has never complied with any of these requirements in regard to authorizing a bear hunt at the GDSNWR.

As an initial matter, there is no evidence that the FWS complied with NEPA prior to opening the GDSNWR to bear hunting in 1998. There is no evidence of an EA or EIS being prepared at that time and, consequently, the public was never provided an opportunity to either analyze the potential impacts of a bear hunt on the GDSNWR or to participate in the FWS's decision-making process prior to the decision to open the GDSNWR to bear hunting.

The FWS claims that bear hunting was first authorized on the GDSNWR in 1998. In its final refuge-specific hunting rule published on September 3, 1998, the FWS includes bear hunt as an authorized hunt on the GDSNWR (63 FR 46910;46922 and 50 CFR §32.66).¹¹ However, in its proposed rule from the same year, the FWS proposed to open or expand hunting opportunities on the Canaan Valley, Key Cave, and Trustom Pond National Wildlife Refuges. 63 FR 40080;40082. The proposed rule does not contain any reference to the GDSNWR or bear hunting on the refuge. See 63 FR 40091. While this may have been an oversight, by not including the proposed GDSNWR bear hunt in the 1998-99 proposed rule the public was not aware of the proposed establishment of a bear hunt and, therefore, were prevented from participating in the rulemaking process. An examination of the final rule found no evidence of the FWS admitting to an administrative or clerical error in omitting reference to the bear hunt from the proposed

proposed habitat, public use, education, and interpretation enhancement projects, depends on the ability to secure the needed funds. While funds for the implementation of the bear hunt have apparently been secured, the Final CCP, presumably in response to the recommendations included in Tredick (2005) identifies strategies to partner with states and non-governmental organizations to identify funds to conduct studies on the demography of black bears, their genetics, population size, growth and dispersal patterns (Final CCP at 92). These are some of the very studies that Tredick indicated "must be completed" before a bear hunt should be recommended for the GDSNWR. Despite the clear need for additional scientific information about the refuge's bear population, in this case the FWS has elected to spend what limited resources it does have on conducting a hunt instead of applying that money to the acquisition of up-to-date data on the demographics of the bear population.

¹¹ Similarly, a review of the 1996, 1997, and 1998 editions of the Code of Federal Regulations did not reveal any reference to bear hunting being permitted on the GDSNWR (50 CFR §32.66) until 1998.

rule.¹² Similarly, an examination of the proposal and final refuge-specific hunt rules published in 1997 (62 FR 38959 and 62 FR 47372) failed to reveal and reference to the proposed GDSNWR bear hunt. As a result, the FWS ignored its duties under the APA, and its own policies, to provide for public notice and comment on any proposal to open a refuge to hunting and to include a draft refuge-specific rule as part of its hunt package.

A further review of all proposed and final refuge-specific rules published in 1999 (64 FR 43834; 65 FR 30772), 2000 (65 FR 42318; 65 FR 56396), 2001 (66 FR 35193), 2002 (67 FR 41920; 67 FR 58936), and 2003 (68 FR 48583) failed to identify any reference to bear hunting on the GDSNWR or any explanation by the FWS as to why it had failed to include the GDSNWR bear hunt in the 1998-99 proposed rule. In its 2004-2005 proposed refuge specific hunting rule, bear and deer hunting on the GDSNWR were referenced under 50 CFR §32.66 in the proposed rule section of the notice apparently due to changes in certain provisions related to deer/bear hunting on the refuge. 69 FR 39673. In the preamble to that proposed rule, the FWS proposed to open or expand hunting or fishing opportunities on 17 refuges. 69 FR 39553. This list of refuges did not include the GDSNWR and there was no explanation in the preamble of the proposed or final rule (69 FR 54350) for 2004-2005 of the FWS's omission of the GDSNWR in the 1998-99 proposed rule. Similarly, the 2005-2006 proposed and final refuge-specific rules (70 FR 40108; 70 FR 54186) and the 2006-2007 proposed refuge-specific rule (71 FR 41864) neither attempted to correct the FWS mistake in regard to the GDSNWR bear hunt made in 1998 nor provided any explanation for its actions.

Until and unless the FWS complies with the APA and its own policies and publishes a rule explicitly proposing to open the GDSNWR to bear hunting and soliciting public comment on its proposal, the FWS cannot proceed with any bear hunt on the GDSNWR.

2. The FWS has failed to subject the proposed bear hunt to adequate environmental impact analysis as required by NEPA:

NEPA requires federal agencies to evaluate the direct, indirect, and cumulative impacts of its proposed actions. Effects or impacts include "ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health..." 40 CFR §1508.8. Direct effects or impacts "are caused by the action and occur at the same time and place." *Id.* at §1508.8(a). Indirect impacts "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id.* at §1508.8(b). A cumulative impact "results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." *Id.* at §1508.7. NEPA also requires agencies to "identify and assess ... reasonable alternatives

¹² Further evidence of this omission is the submission, on September 3, 1998, of comments by the Animal Protection Institute expressing its opposition to the bear hunt. The comments were submitted on the same date that the final rule was published and presumably were in response to the reference to bear hunting in the final rule. Had the FWS included a bear hunt at the GDSNWR in its proposed rule, the Animal Protection Institute and presumably other organizations would have commented on the hunt at that time.

to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” *Id.* at §1500.2(e). Furthermore, as previously indicated, the information used in a NEPA document must be of high quality, must be subject to accurate scientific analysis, and must be complete since the overall purpose of the NEPA process is help public officials make decisions that are based on an understanding of the environmental consequences of its proposed action.

The FWS has simply failed to fully evaluate the environmental impacts of the bear hunt in the Draft CCP/EA. Examples of deficiencies in its analysis include:

A. A failure to fully disclose all relevant information. The FWS claims that it conducted an in-depth evaluation of the potential long-term impacts of the bear hunt. Draft CCP/EA at 187. Whether that evaluation refers to the studies by Hellgren and Tredick or if there was some additional evaluation, the FWS failed to disclose the results of this so-called in-depth evaluation. Indeed, in regard to the studies conducted by Hellgren (1988) and Tredick (2005) all that the FWS disclosed was that both studies estimated similar GDSNWR black bear density and that Tredick identified concerns that the GDSNWR bears may be genetically isolated by geography and encroaching urban development.

Both studies, however, provided far more information about the biology and ecology of the GDSNWR black bear population that should have, but was not, disclosed in the Draft CCP/EA. Such information includes sex ratio data, age structure data, mortality causes and rates, age-specific survivorship data, denning ecology, home range sizes and structure, fecundity data, genetic variability, and habitat use patterns. This is specifically the type of data or information that must be disclosed in a NEPA document so that the public can analyze the accuracy of the data, determine the validity of conclusions made based on the data, and to assess the impact of the proposed hunt on the GDSNWR and off-refuge bear populations. Instead of disclosing this information – information that the FWS had in its possession – the FWS provided virtually no biological or ecological information about the GDSNWR bears hoping that the public would trust its assessment that the proposed bear hunt would have minimal impact on the refuge bear population. Remarkably, and perhaps intentionally, the FWS failed to disclose the recommendation made by Tredick (2005) in regard to the management of bears within the GDSNWR. Specifically, she stated that additional black bear demographic studies (reproduction, survival, and population growth rate) “must be completed” before hunt recommendations can be made. She goes on to explicitly caution that, given the low heterozygosity and restricted gene flow already evident in this population, a bear hunt could exacerbate these concerns. Failing to disclose this information so that the public could fully understand the data and concerns identified by Tredick is a significant flaw in the Draft CCP/EA. In this case, given the importance of the studies by Hellgren and Tredick to the analysis of the impacts of the bear hunt, it is simply not enough to cite to these studies.

Similarly, though the FWS claims that, because of the continued loss of habitat and corridors outside the refuge, there “may eventually (be a) need to maintain or reduce the black bear population to levels that can be safely supported solely by the refuge.” Draft

CCP/EA at 115. The FWS has failed to disclose any evidence in the Draft CCP/EA to document the rate of habitat loss outside of the refuge, where such loss is occurring, whether the habitat being lost is prime black bear habitat, where past and existing black bear corridors are located, and the severity of development impacts to the quality of such corridors to facilitate black bear movements. Moreover, the FWS disclosed no evidence to prove that the refuge black bear population is too large nor did it provide any analysis of the biological or social carrying capacity of the refuge and/or surrounding areas for bears. Despite evidence suggesting that the bear population is stable, the FWS claims, based on increased bear observations, increased nuisance complaints, and increased incidents of depredation, that the bear population is increasing in size. The only evidence it offers in support of this claim is a reference to VDGIF 2002. Not only did the FWS fail to disclose any of state's data in its Draft CCP/EA but it failed to subject the state's data to analysis. Had it done so or even if it had just disclosed the data, it would have been revealed that such increases are entirely predictable based on the increased density of humans living around the refuge and the ongoing loss of bear habitat and that, therefore, such data do not provide any evidence of a bear population.

B. The FWS failed to consider a reasonable range of alternatives:

In regard to its proposal to establish a bear hunt, the FWS effectively considered only two alternatives in its Draft CCP/EA. One alternative, Alternative B, proposed a bear hunt while the remaining Alternatives (A and C) did not propose a bear hunt. Considering that the FWS attempts to justify the bear hunt by claiming a need to meet the biological and social carrying capacity of the area, it completely fails to consider alternative strategies to achieve whatever population reduction it believes is necessary. While the FWS provides no evidence to justify its claim that the bear population may need to be reduced in size, there are alternative means of achieving that objective. For example, the FWS should have considered the possibility of trapping and relocating bears to address alleged population concerns. Alternatively, the FWS should have considered the potential use of immunocontraceptive technologies to reduce bear productivity to gradually reduce the size of the refuge bear population. The failure of the FWS to, at a minimum, consider alternatives to a bear hunt to achieve its management goals for the refuge bear population is a blatant violation of NEPA.

C. The FWS has failed to adequately and accurately disclose and evaluate the environmental consequences of the proposed bear hunt:

The Draft CCP/EA contains no meaningful analysis of the environmental consequences of the proposed bear hunt. Indeed, the FWS ignores a number of potential environmental consequences by simply claiming that the proposed structure of the hunt will remove so few bears that the impact of the hunt on the bear population is "minimal." Draft CCP/EA at 188. NEPA requires an agency to provide a far more in depth analysis of the potential direct, indirect, and cumulative impacts of its actions and mandates that any such analysis be scientifically accurate.

In this case, for example, the FWS fails to provide any analysis of how the proposed hunt will impact the age structure, sex ratio, survivorship or mortality rates, productivity, size, behavior, and genetics of the refuge bear population. As an initial matter, use of the 250-350 bear population estimate to calculate a kill rate for the proposed refuge hunt which will take place entirely on refuge lands within the State of Virginia fails to take into account that a portion of the GDSNWR is located in North Carolina. Moreover, in calculating the kill target of 20 bears, for example, the FWS assumes a 1:1 or 50:50 male:female sex ratio. Yet, both Hellgren (1988) and Tredick (2005) found a male bias in their capture data. While that bias may be a product of male bear behavior, the FWS was required to disclose and evaluate such data which could affect the validity of its kill rate and, in turn, the potential impact of the hunt on the female bear segment of the population. Instead, the FWS assumed an equal sex ratio with no discussion of the validity of that assumption. This is particularly important considering the sensitivity of a bear population to the excessive kill of females and the time required for these populations to recover from such impacts. Tredick (2005), recognizing the importance of additional population demographic studies particularly given the length of time since Hellgren (1988) obtained some initial data, explicitly recommended that such studies be completed before a hunt is initiated.

The FWS also offers no population modeling results or other prediction of how the hunt would impact the bear population over the short-term and long-term (if the hunt were to be continued in future years). If hunter-killed bears are additive to the total number of bears killed by all causes, the overall productivity of the remaining bears may increase as the population expands to fill all available niches. If hunters mainly kill older-aged bears, the population's age structure may change with an increase in the proportion of younger, more productive bears. Considering the apparent stability in the current bear population, such changes may increase refuge bear productivity resulting in a larger proportion of juvenile bears. Since juvenile bears tend to be more likely to be involved in so-called nuisance incidents, the increase in the proportion of juvenile bears in the population as well as the potential overall increase in bear numbers, may increase bear nuisance complaints, including bear-vehicle collisions and crop depredation incidents. Since the FWS attempts to justify the bear hunt, in part, on the claim that the bear population needs to be reduced to address an alleged increase in nuisance complaints, the FWS was required to analyze how its proposed hunt would impact black bear population dynamics and, in turn, the frequency of bear-human conflicts. The FWS ignored this requirement.

Other than conceding that the GDSNWR bear population is genetically isolated due to geographic barriers and development, the FWS provides no analysis of how the proposed hunt may impact the genetics of this population. There is no evidence, for example, that the FWS has prepared a population viability analysis to assess the long-term genetic health of the GDSNWR bear population or otherwise considered the impacts of the hunt on the genetic health of the bear population. Considering that Tredick (2005) revealed that evidence exists that this population has already been genetically compromised because of its isolation and that a hunt may exacerbate such impacts, the FWS's failure to disclose the data, acknowledge the potential impacts, and to analyze the short and long-

term consequences of the hunt to the genetic viability of the GDSNWR bear population is both alarming and illegal.

The FWS failed to provide any analysis of nuisance bear complaints and the relationship between the frequency and severity of bear-human conflict incidents, bear observations, or crop depredation claims and the increase in the human population and development beyond the boundaries of the refuge. The FWS cannot claim that a hunt is, at least in part, necessary to address a real or perceived increase in bear-human conflicts without disclosing and analyzing such data. Again, NEPA requires an agency to disclose and evaluate such data.

Beyond the potential impact of the hunt on the GDSNWR bears, the FWS completely failed to disclose or analyze the potential impacts of the hunt on other refuge wildlife species and other refuge users. Allowing 100 additional hunters into the refuge, increases the potential for disturbance and harassment of other refuge species. Moreover, the hunt will inevitably impact other users of the refuge either directly, due to any area closures that may be implemented to facilitate the hunt, or indirectly if the ability of refuge visitors to enjoy their refuge experience is compromised as a result of their learning about the hunt, seeing a dead or wounded refuge bear, or even knowing that the hunt has been approved. The FWS failed to address such impacts in its Draft CCP/EA.

Finally, the FWS failed to include any analysis of how the implementation of the other components of Alternative B (i.e., establishing Research Natural Areas, establishing or expanding Public Use Natural Areas, permitting logging and herbicide use to alter natural succession in its Atlantic white cedar forest stands, restore hydrologic conditions, habitat restoration to facilitate red-cockaded woodpecker reintroductions) impact, beneficially or adversely, the refuge bear population and short and long-term bear management goals. Though the Draft CCP/EA evaluated a number of issues which are independent of the proposed bear hunt, the FWS cannot pick and choose what issues it elects to evaluate and what issues it chooses to ignore. NEPA requires an agency to evaluate all impacts which, in this case, the FWS has simply failed to do.

The FWS was advised of many of these deficiencies by a W. Michael Lane in his April 24, 2006 comments on the Draft CCP/EA. Among other concerns, Mr. Lane indicated that additional research into black bear dispersal patterns and rates, the population dynamics of "resident" bears outside of the refuge, the dynamics of the larger meta-population of bears, and bear travel routes. Though Mr. Lane is not opposed to a properly regulated bear hunt, he explicitly indicated that "it is critically important to collect sufficient baseline information on dispersal patterns, numbers, demographics, and habitat parameters before (potentially significant) additional levels of bear harvest are introduced in the heart of the 'bear factory'." In its response to substantive public comments (see Appendix C of the Final CCP) the FWS acknowledged but largely ignored Mr. Lane's substantive comments by simply restating its arguments in support of the hunt and the alleged minimal impact the hunt will have on the refuge bear population.

D. The FWS has failed to evaluate the cumulative impacts of its proposed action:

Though often overlooked or ignored by federal agencies, the cumulative impact analysis requirement is a critical component of NEPA as it requires the agency to evaluate the impact of its proposed action in relationship to other past, present, and reasonably foreseeable future actions regardless of what agency, federal or non-federal, has jurisdiction over such actions. Other than claiming that its proposed action may benefit local school systems and provide a benefit to the local economy, Draft CCP/EA at 197, the FWS failed to evaluate any other cumulative impacts. This is particularly troubling considering that the Draft CCP/EA claims that ongoing commercial and residential development outside of the refuge is threatening the refuge bear population and other refuge resources. The FWS was required to disclose and analyze information about ongoing and reasonably foreseeable development projects, including road building projects, outside of the refuge in its cumulative impact analysis.

In regard to the bear hunt specifically, the FWS was required to consider the impacts of its proposed bear hunt in relationship to other bear hunts both on other National Wildlife Refuges in the area and on non-refuge lands to assess how the cumulative impacts of the hunts would impact the region's bear population and the ability of people to observe and enjoy bears in their natural habitat. See *The Fund for Animals v. Hall*, F. Supp. 2d, 2006 WL 2512872 (D.D.C, August 31, 2006).

3. The lack of scientific evidence to justify the implementation of a bear hunt and to assess its impacts prevents the FWS from making the findings required by law:

Based on limited information contained in the Draft CCP/EA, the foregoing analysis, and the recommendation made by Tredick (2005) that additional black bear demographic studies must be completed before hunt recommendations can be developed, the FWS does not have sufficient scientific information to demonstrate that "surplus" bears exist on the GDSNWR or that the hunt is compatible with the mission of the National Wildlife Refuge System or the purposes of the GDSNWR.

Under FWS regulations, a determination of "surplus" animals is a prerequisite to establishing a hunt. 50 CFR §31.2. The FWS has provided no evidence to demonstrate that there is a "surplus" of black bears in the GDSNWR. Without such evidence the FWS cannot proceed with the proposed black bear hunt.

Similarly, without additional data to assess the short and long-term impact of the bear hunt on the GDSNWR bear population, the FWS's existing compatibility determination is based on insufficient information and inadequate analysis and, therefore, is illegal. Without additional evidence and analysis, the FWS cannot conclude that its proposed black bear hunt "will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established." Indeed, since the purpose of the GDSNWR is to protect and perpetuate the diversity of animal life on the refuge, given the genetic and other threats to this population and the fact, as reported by Tredick (2005) that hunting may exacerbate the genetic threats to the

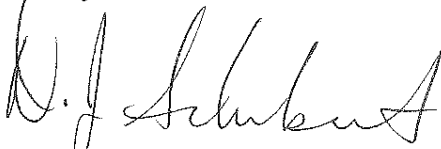
population, the FWS has not proven that the bear hunt will not adversely impact the diversity of animal life on the refuge.

CONCLUSION:

Based on the foregoing analysis, the proposed bear hunt on the GDSNWR is, at this time, illegal and must be cancelled pending FWS compliance with all relevant federal laws. In particular, the FWS must officially open the GDSNWR to bear hunting by complying with the notice and comment rulemaking requirements of the APA. It also must prepare a new EA or an EIS to fully disclose all relevant information and to evaluate the direct, indirect, and cumulative impacts of the proposed bear hunt. Finally, it must conduct additional scientific studies to obtain new and updated information about the demographics and genetics of the GDSNWR bear population in order to make all relevant finding and/or determinations as required by federal law.

Thank you in advance for considering these concerns. Please notify me, preferably in writing, of your decision in regard to the black bear hunt by no later than 5:00 PM on November 29, 2006 either by e-mail (dj@awionline.org), telefax (703-997-1134), or, if you elect to respond verbally, by phone (609-334-1378).

Sincerely,



D.J. Schubert
Wildlife Biologist

On behalf of:

Dr. Elliot Katz, DVM, President, In Defense of Animals
Mr. James D. Parker, President, The American Environment Foundation
Ms. Barbara Sachau
Ms. Danielle Moore

cc: The Honorable Mr. Tim Kaine, Governor of the State of Virginia
Mr. H. Dale Hall, Director, U.S. Fish and Wildlife Service
Mr. Geoffrey L. Haskett, Assistant Director, National Wildlife Refuge System,
U.S. Fish and Wildlife Service
Mr. Anthony D. Leger, Northeast Regional Chief, National Wildlife Refuge
System