Appendix A. Response to Comments

I. Introduction

We received comments from 11 entities regarding the Draft Environmental Assessment (EA) for the Proposed Translocation of Columbian White-tailed Deer (CWTD) from Puget Island to Ridgefield National Wildlife Refuge (Ridgefield NWR) and Julia Butler Hansen Refuge for the Columbian White-tailed Deer (JBH Refuge) during the 30-day comment period. Comments on the Draft EA were accepted from December 12, 2013 to January 12, 2014.

All written comments (Table 1) were reviewed and analyzed. Changes were also made in the Final EA as appropriate. Section II of this appendix provides a summary and response to all substantive comments that were received in response to the Draft. Section III provides a list of list of people and entities that provided comments on the Draft EA, and Section IV provides a list of references used in the response to comments.

Table 1. Source of Comments

Affiliation/Entities	Number of Commenters December 12, 2013 through January 12, 2014
Tribes	1
State Agencies	2
Elected Officials	1
Interested Parties	7
Total	11

II. Summary of Comments Received

This section provides a summary of the individual comments received on the Draft EA followed by the U.S. Fish and Wildlife Service's (Service or USFWS) responses to those comments. To help analyze the nature and extent of the range of comments received, a number of themes and subthemes were identified within the letters. Most comments have been summarized, but in some cases, we included specific language from a letter that best summarized similarly written comments. The comments are organized into 5 sections: CWTD management, translocation, NEPA process, outreach and other comments.

1. CWTD Management:

Comment: *One comment referred to poor management of the deer, stating that when the Refuge was created, there were over 250 deer and the current population is under 60.*

Service Response: JBH Refuge was established in 1971 to protect the endangered CWTD and its habitat (USFWS 2010). Since establishment of the JBH Refuge, the probability of extinction for the Columbia River Distinct Population Segment of CWTD has been reduced by 10 times. The population has expanded from the area just around Cathlamet and Westport to the Columbia River Valley as far as Ridgefield, WA. This is largely the result of translocation efforts such as the one proposed in this EA.

The first published account estimated CWTD deer populations of what is now the JBH Mainland to be about 150 animals (Sheffer 1940). Initial estimates at establishment of the Refuge put the Mainland population at about 175 animals (160–190 estimate) (USFWS 1972). After establishment of the Refuge, deer populations increased dramatically to levels higher than any seen in the U.S. (up to 500 animals) and the memory of those large deer herds is often used to compare to current levels despite the fact that the area was under Refuge management at the time. The high population levels at JBH Refuge were not sustainable. JBH Mainland is considered overpopulated when the population reaches 160–190 deer (45–54 deer per square mile) (McCullough 1984, Hansen and Beringer 1997, Tymkiw 2010). Overpopulation of deer is not healthy for the population and comes at the expense of vegetation and other wildlife (Decalesta 1994, Augustine and Frelich 1998).

The population goal for the JBH Mainland is 30–35 deer per square mile, or about 120 deer. Population estimates for the last 10 years have run between 70 and 105. The last population estimate done in 2011 was for 83 deer. Subsequent ground-truthing of our methods suggests that this estimate was probably low and is more likely about 95. While this is lower than our goal, it represents a sustainable population. The Refuge has managed for a sustainable population in spite of increasing threats to its habitat, including three flooding events (February 1996, November 2007 and December 2009), increased coyote densities and land subsidence.

The current population on JBH Refuge is estimated to be approximately 60. This is a result of an emergency translocation of thirty-seven CWTD from the JBH Mainland Unit to Ridgefield NWR in 2013. This emergency translocation was undertaken to limit the potential adverse effects that failure of Steamboat Slough Dike would have on the subpopulation (USFWS 2013[1]).

Comment: *The area supported more elk before the area was a Refuge.*

Service Response: According to early Refuge reports, 15–20 elk occurred on the Refuge only for about 4 months in winter. After establishment of the Refuge, the herd grew to over 100 animals that stayed year round. While initial growth was viewed as positive, the herd became overpopulated and has since been reduced to 15–25 animals that occur year-round. This number has been maintained for 10 years and represents an increase in the elk herd since Refuge establishment.

Comment: *Comments suggested that farmed lands, such as Puget Island, are better for deer than Refuge lands, and that deer do better on their own without management.*

Service Response: While agricultural/residential land can be compatible with deer management, CWTD densities on these lands in the local area are lower than those found on JBH Refuge. The large number of deer on Puget/Little Islands is due to its size more than deer abundance. Puget Island itself is larger than the JBH Mainland and Tenasillahe Island combined. Deer density on Puget Island is actually lower than that typically found on the JBH Mainland, Tensillahe Island, and the unfarmed areas near Westport, OR—none of which are farmed. This holds true for other agricultural/residential areas along the deer's range—Clatskanie, Dibblee Flats, Willow Grove, and the farmed portion of Westport. Also, when Tenasillahe Island was under a farming regime, it supported only 30–40 deer, while recent population estimates range from 80–140 over the last 10 years. While light residential/agricultural areas can be compatible with deer and produce stable and sustainable populations, they do not represent optimal habitat for diverse wildlife populations, including deer.

Comment: *Approximately 100 deer drowned due to the deer not being able to reach high ground by the cross fencing erected by the Refuge.*

Service Response: The Service is unaware of any event such as this occurring on JBH Refuge. Since the Refuge was established there have been 3 flooding events: February 1996, November 2007 and January 2009. The most severe was in 2006 when the flood occurred in fall and disrupted the breeding season. This caused a severe decline in the population, and the Service believes that the public perception was that many deer drown. Deer leave the Refuge during these events and most of the mortality occurs during that time. Much of the mortality occurs due to deer lingering on the raised roadways and being struck by vehicles. In addition, it is likely that some deer die off Refuge or do not return after leaving. In 2006, disruption of the rut led to an almost complete failure in fawn production the following summer. This, in combination with increased mortality and emigration, led to a sudden drop in deer numbers. The boundary fencing was erected in 1999 and 2000. Deer are able to cross under the fence and gates are open during flood season to facilitate movement on and off the Refuge. After the floods in 2006 and 2009, fence lines and shrub lines were walked or kayaked to establish whether mortalities occurred in these areas. Very few mortalities were found on the Refuge and none occurred at or near fence lines.

Comment: *A large population were killed by the improper administration of inoculations.*

Service Response: The Service is unaware of any inoculation projects or programs. Deer are only given inoculations during translocation efforts and inoculations are given to increase the chance of survival. While rare reactions may occur, we know of no incidences where inoculations given by Refuge staff or under Refuge guidance have resulted in mortalities.

In the mid-1970s, an OSU researcher captured 100 deer and a small number of those deer died unrelated to inoculants. He worked under supervision of one of the top wildlife veterinarians in the country and fully reported his activities to the University and the Service. No improper administration of agents occurred.

Comment: *Comments expressed concern about the Service's CWTD population estimate on Puget Island.*

Service Response: Population estimates of wildlife can be done in many ways and different methods have varying degrees of accuracy. Using the same method over different areas and years results in similar biases, so that changes over time and differences between areas are accurately measured.

Forward-looking Infrared videography (or FLIR for short) works well in the Lower Columbia River Valley, and when used in conjunction with ground truthing, is thought to give the most reliable results for this species in this area. These surveys are conducted the same way on the Refuge as they are on Puget Island. While a certain number of deer are missed using this method, the percentage missed can be estimated and the final number adjusted appropriately. Recent ground-truthing suggests our previous estimate of 170 may be low, and may be closer to 190. This also holds true for estimates on Refuge lands, however, suggesting slightly more deer than previously estimated. Because Puget Island is more open and has more road access, deer are easier to see there, giving the impression of higher density.

Comment: *There are too many deer on Puget Island. They are a safety hazard (vehicle strikes) and cause property damage (gardens and trees).*

Service Response: Removal of deer from the Puget Island will create a temporary reduction in numbers and may alleviate some damage issues on lands where trapping occurs. Landowners are encouraged to contact the JBH Refuge if they wish to have deer removed from their property.

Comment: *If reducing the Puget population is the goal, rather than move deer, can we just kill them and distribute the meat through a lottery.*

Service Response: As an endangered species, CWTD cannot be killed for consumption or distribution. The purpose of the translocation is not to reduce the Puget Island population and is not in response to homeowner complaints. Removal of deer will create a temporary reduction in numbers, but the Puget Island subpopulation is expected to recover to initial levels in a few years. Capture/relocation programs are seldom a permanent solution to overpopulation. At about 22 deer per square mile, Puget Island is not considered overpopulated with deer. The purpose of this project is to attain population viability for the nascent subpopulation currently on Ridgefield NWR and to return the depleted population on the JBH Mainland Unit to sustainable levels. These actions will bring the population closer to recovery.

Comment: *Puget Island white-tail deer are a different issue than Cathlamet white-tail deer. The two herds just have no way of meeting and breeding.*

Service Response: White-tailed deer can swim and movement between Puget Island, JBH Mainland, and Tenasillahe Island has been documented. Puget Island is a subpopulation of a larger regional population, but a certain amount of mixing occurs with neighboring subpopulations.

Comment: *I wish to see the deer remain protected.*

Service Response: The deer will maintain regulatory protection as long as they remain on the endangered species list. The Service's goal, and the goal of translocation projects such as this, is to recover the species and ultimately remove them from the endangered species list.

2. CWTD Translocation:

Comment: *Comments were received that supported removal of deer from Puget Island to reduce property damage and increase safety from potential vehicle strikes. Comments were also received stating that deer should not be removed from Puget Island because they are valued by the residents.*

Service Response: The Service has received comment letters expressing support for and opposition to the project. Removal of deer from Puget Island is expected to cause only a temporary decrease in the Island's population and may alleviate some damage and safety issues where trapping occurs. The deer population tends to grow to the number the habitat can support. Artificially reducing the number of deer reduces competition for those that are left, and those deer often do better (live longer and produce more young). Deer numbers on Puget Island are at a 10-year high. Deer were removed from the Island in 2013, yet ground counts conducted in 2014 show the highest number of deer since 1999. Deer management is largely the management of habitat, and deer numbers on Puget Island are affected more by the habitat than by a small removal of deer. No habitat will be affected by this project and the Service expects the deer population to return to prior levels in the following few years. Landowners are encouraged to contact the JBH Refuge if they wish to have deer removed from their property.

Comment: *Concern was expressed about the high mortality in prior year's translocation to Ridgefield NWR.*

Service Response: During the past year the Service has been made aware of conflicting perceptions of deer mortality from the prior translocation to Ridgefield NWR. Most often people have assumed a moderately high mortality rate without acknowledging that most of this mortality was natural and not related to the move.

A detailed summary of mortalities is given in the EA on page 22–23. A total of 37 deer were moved from JBH Refuge to Ridgefield NWR in 2013. One of the 37 died directly due to translocation. Two-three additional deer probably died due to unfamiliarity with the new surroundings. While the cause of the 2-3 deer deaths was natural, we believe it was indirectly related to the translocation. Total mortality (direct and indirect) attributed to the capture was 10%.

While we regret all mortalities, this rate of mortality was estimated for translocation efforts in the EA (USFWS 2013[1]). We have taken steps to reduce both direct and indirect mortality for 2014 and 2015 translocations, but we anticipate some mortality may still occur. The benefits to the overall population must be considered against potential losses from individual mortality. In this case, the Service believes creating a stable and secure subpopulation of CWTD at Ridgefield NWR has a greater benefit. This is a recovery action that will help meet recovery goals.

While most people understand that deer die in nature every day, the constant tracking and awareness of individual mortalities gives the impression that more deer are dying than would normally do so. In a study of deer at the JBH Refuge, Gavin (1977) found that annual mortality was 20% for does and 40% for bucks. At this rate of natural mortality, 10–11 of the 37 deer moved were expected to die naturally over the course of the year whether they were translocated or not. Given this, the 14 deer that actually died is not greatly out of proportion from natural mortality.

Comment: The emergency relocation that occurred earlier this year was unnecessary.

Service Response: The Service disagrees. The Service's EA (2013[1]) goes into great detail about the need for the emergency translocation. A geotechnical assessment of Steamboat Slough Dike, which protects the Refuge from flooding by the Columbia River, revealed the dike to be at "imminent risk" of failure. A dike breach at this location would have resulted in the flooding of JBH Mainland Unit at high tides. Twice daily flooding from a breach could substantially reduce or eliminate this secure subpopulation to where it could not recover.

The emergency translocation EA (USFWS 2013[1]) also references a similar event that occurred at Karlson Island that extirpated the small population there. Potential habitat loss was a much larger issue than the direct mortality of individual deer. The EA also states that a few deer would have drowned. Many deer would have died from congregating on the raised roadways—an increase in vehicle strikes is common during floods at JBH—and others would have been forced into marginal habitat or into habitat that was already fully occupied. Either case would have led to increased competition, lowered overall health, increased mortality, and decreased fecundity of the surviving deer. In the end, the habitats that deer moved into would eventually return to prior numbers through attrition and the subpopulation that once existed at the JBH Mainland would be lost.

Comment: *Why move deer to the JBH Refuge when you just moved them off last year? Why did you move them from the JBH Refuge and not Puget Island last year?*

Service Response: As stated above, the Service's EA (2013[1]) goes into detail about the need for the emergency translocation. In 2013, the Service and the U.S. Army Corps of Engineers (ACOE) reached an agreement with Wahkiakum County and Wahkiakum County Diking District #4 about the Steamboat Slough Restoration (USACE 2013). Phase 1 of the project was implemented in 2013 and a one-mile long setback dike was constructed on the JBH Mainland Unit. This new setback dike protects both the Mainland Unit of JBH Refuge and its subpopulation of CWTD from the impacts of flooding.

Now that JBH Refuge is once again protected, the Service wishes to return the depleted subpopulation on the JBH Mainland Unit to sustainable levels by translocating deer from Puget Island.

Moving CWTD from Puget Island to Ridgefield NWR is necessary to attain population viability for the nascent subpopulation of deer translocated from JBH Refuge during the emergency translocation in 2013. It is also a recovery action to reestablish a population there after being extirpated from that area many years ago.

Comment: *Translocations in the past have been unsuccessful*

Service Response: The Service disagrees. While prior translocations have had varying degrees of success, overall the translocations efforts have expanded the distribution of this population and established subpopulations in 6 new areas. This strategy has decreased the probability of extinction 10-fold since the deer was put on the endangered species list. By expanding the distribution of deer, the Service is spreading out the risk of extinction by increasing overall survival of the population from localized adverse events (e.g., flood, disease). A new subpopulation has been established through each translocation effort that has been attempted. The translocation program has greatly increased the prospects for recovery of this population.

Comment: *Is there a better way to protect this species than through a translocation?*

Service Response: As an endangered species, this population already receives a maximum amount of protection. The purpose of this project is a recovery action. By expanding the distribution of this population the probability of extinction decreases. If a sustainable population can be established at Ridgefield NWR the likelihood of this species reaching recovery (and delisting the species) is high. The Service believes that translocation to new and secure habitats is the best way to achieve recovery.

Comment: *Deer should be moved from Douglas County, OR instead of Puget Island as it has been done in the past.*

Service Response: A small pilot study was done in 2010 to move 8 deer from Douglas County to the JBH Mainland. This was done to bring a small number of deer for genetic mixing, not as a founder population. This project also required that the deer be quarantined and tested before release. Each family group required a separate several-acre pen and needed to be held for a week. These facilities do not exist at Ridgefield NWR. In addition, while the Refuge was able to move deer, requirements for quarantine severely reduced the number of deer that could be moved, and transport required about 10 hours round trip in addition to loading time. This sort of project is impractical for such a large move and would require a great deal of participation from ODFW. In addition, the current strategy is to establish a lower Columbia subpopulation first, while leaving open the possibility of bringing in a small number of Douglas County deer for genetic mixing after the subpopulation has been established.

Comment: *There should be a review of capture techniques and classification of capture-related mortality with the state agencies.*

Service Response: A discussion with our partners about suggested changes to capture techniques took place in July 2013. Further discussions took place during monthly conference calls. Based on these discussions, the Service revised the 2013 capture plan and shared it with our state and tribal partners in December 2013.

Mortality was calculated by comparing actual annual mortality to expected annual mortality. This method is probably conservative (i.e., too much mortality is probably being assigned as capture related because natural mortality at Ridgefield NWR may be higher than at JBH Refuge). This is done to account for takes that have are not caused by capture methods (e.g., a deer dying from a vehicle strike or predation due to unfamiliarity with the area). Samples from each mortality are sent to a pathology lab to look for cause of death; however there are enough inconclusive results that it was felt the method described above was more accurate. This method has been used for prior translocations.

Comment: *The EA should expressly exclude helicopter capture due to the known high mortality associated with that technique.*

Service Response: The EA effectively excludes this technique by not including it as a capture option.

Comment: *The deer on JBH Mainland appeared to have a high twinning rate and initial estimates put the population at 65. It is suggested to not move deer to JBH this year. Further analysis of the population could be conducted in the following year, and a decision on JBH could be made then in consultation with its partners.*

Service Response: While twins were seen on the Refuge, the fawn:doe ratio at JBH (38 fawns per doe) was lower than that seen the prior year and just under the 5-year average of 39 fawns per 100 does. In addition, it was lower than that seen in the surrounding subpopulations.

The priority of the project remains on Ridgefield NWR. Moving deer to the JBH Mainland was included in the EA to provide flexibility in the event that the JBH Mainland population appeared to have been significantly reduced. The Service has an obligation to ensure that the JBH Mainland subpopulation remains viable and secure, as defined by recovery criteria. Dropping below this mark affects overall recovery of the population.

The following change will be made in the Final EA. As planned, no deer will be moved to JBH Mainland until a proper estimate of the Mainland population can be established. This is expected to occur the second week in February, 2014. The decision to move deer to JBH Refuge will be based on the number of deer present. If deer numbers are below 65, the Service, in consultation with our State and Tribal partners, will determine whether deer should be moved in 2014, 2015, or not at all.

Comment: *Given the 46% retention rate of deer moved to Ridgefield NWR, it will require 43 deer, not 20 to stabilize the subpopulation.*

Service Response: A total of 35 deer will be translocated in 2014. A minimum of 20 will go to Ridgefield in 2014. Another 15 will go to Ridgefield and JBH in some combination depending on the number of deer estimated at JBH during winter population surveys. It is possible that all 35 will go to Ridgefield in 2014. In addition, the EA covers an additional move of 10–20 animals in 2015. This range is given so that the Service can remain flexible to the number of deer actually needed. In addition, we expect the retention rate to be higher. Steps have been taken to reduce the coyote population at Ridgefield, and because deer are already present, we expect a social facilitation effect that may reduce the number of deer that leave.

Comment: *Why implement this project at all instead of letting nature take care of itself?*

Service Response: Columbian white-tailed deer once ranged from lower Puget Sound to Douglas County, OR, and from the Dalles to nearly the Pacific coast. Unfortunately the prior lack of management for this species resulted in this widespread species being reduced to the two remaining remnant populations and their subsequent endangered species status. The ultimate goal is to recover the population so that it can be removed from the endangered species list. The EA goes into great detail about the costs and benefits of either a) doing nothing (i.e., letting nature take its course), or b) translocating the deer. We expect that doing nothing would cause the Ridgefield NWR subpopulation to decline and not be sustainable and would delay eventual recovery of the overall population.

3. NEPA Process:

Comment: *Public meetings were held in Ridgefield last year. A public meeting is requested in Cathlamet, WA.*

Service Response: No formal public meetings were held for either EA. Informal meetings were held in Ridgefield and Sauvie Island, an area where CWTD have not occurred for over 70 years, to increase the awareness about CWTD and the translocation. These outreach meetings were held after the Final EA was released last year.

Service personnel were invited to attend a workshop with Wahkiakum County commissioners in Cathlamet on December 31, 2013. Members of the public were allowed to comment and ask questions. During this meeting, the Service committed to providing additional outreach to the local community about both CWTD and JBH Refuge.

Comment: *Concern was expressed about the timing of the EA.*

Service Response: The EA process takes many months to complete. The Service had hoped to complete the EA earlier, but the government shutdown and other factors delayed its release. A 30-day comment period for an EA is typical throughout the country.

Timing of the move is determined by deer biology. As stated on page 14 of the EA …"This timeframe is post breeding season and ensures that most does will be pregnant, thereby increasing the effective translocated population size. This also eliminates chance hybridizations that could occur if deer were moved in estrus into an area that is insufficiently populated with CWTD bucks. In addition, deer moved at this time of year tend to disperse less than those moved in fall..." This is a standard time of year for translocation and nearly all translocations done in this area have occurred during this timeframe. The window for capture is December 15–April 15.

Comment: *It is my understanding of the NEPA process that a FONSI be issued prior to implementation of a proposed action and that it is normal practice to allow up to 30 days after publication for public comment before implementation.*

Service Response: The EA was published on December 12, 2013 and was open for public comment for 30 days. Following the comment period, a final EA was prepared. Comments were incorporated into the final document, as appropriate, and all substantive comments were responded to in Appendix A. Based on the analysis documented in the Final EA, the Service's Regional Chief of the National Refuge System, Pacific Region, determined that a Finding of No Significant Impact was appropriate. No waiting period is required following the notice that the completed EA and FONSI are available before the proposal can be implemented.

Comment: *I would urge a more slow-paced approach, with opportunity for more public input, since there is no longer any emergency.*

Service Response: While the emergency of the JBH Mainland levee has been resolved, there is urgency to support the nascent subpopulation at Ridgefield NWR. As stated in the EA, without

further translocation efforts, this subpopulation is likely to decline and may not sustain itself. It is common in translocation efforts to conduct multiple translocations to create a sustainable subpopulation. In addition, there is urgency in the timing of the project. If work is not completed by April 15, the project must be postponed an entire year.

4. Outreach:

Comment: *How will the public be informed about the presence of white-tailed deer?*

Service Response: Numerous outreach methods have been utilized by the Service since 2013 to notify the public about the presence of CWTD. There has been ongoing media coverage about the translocation efforts by both local and regional newspapers, television and radio as well as by social media (Facebook, Twitter, etc). Informal public meetings were held at Ridgefield and Sauvie Island in 2013. Information and letters were also sent to interested parties in these areas. The Service created and posted outreach posters/flyers in the area surrounding both Ridgefield NWR and Cottonwood Island to alert the public that CWTD may be present in the area and who to call for more information. These posters are also posted on JBH Refuge and Ridgefield NWR's websites and were distributed by Safari Club International and Oregon Hunters Association to their members via email. The Service also provided presentations to both Safari Club International and Oregon Hunters Association in 2013. Language noting the presence and restrictions on CWTD has also been added to both Washington and Oregon hunting regulations. The Service plans to continue outreach efforts during the upcoming translocations.

5. Other Comments:

Comment: *I will not allow USFWS personnel on my property to trap deer.*

Service Response: As stated in the EA, the Service will obtain landowner permission before trapping on private lands.

Comment: *What is the commitment to fund and address agricultural damage? Coordination with USDA-APHIS should be initiated before translocation begins.*

Service Response: The EA discusses animal damage management and commits the Service to fund and implement the CWTD Animal Damage Management Plan developed with our partners' input last year. Funding is currently in place to implement this plan and coordination with USDA-APHIS has already been initiated.

Comment: How will incidental take be addressed?

Service Response: Accidental and incidental take will be addressed as described in emergency translocation EA (USFWS 2013[1]). The Service's Office of Law Enforcement (OLE) will evaluate cases where CWTD are accidentally killed or injured during otherwise lawful activities on a case by case base. The OLE will exercise investigative discretion and not make any prosecutorial referrals for the taking unless circumstances documented during an investigation substantiate evidence that would support such a referral. The Service's OLE is guided by the Department of Justice (DOJ) Policy known as the McKittrick Policy. The Policy places a requirement on the Service to show (prove) a person knew the identity of the animal (in this case a CWTD) at the time the animal was killed in order to pursue a criminal prosecution under the ESA.

Comment: *Why is this project more urgent than other priorities listed in the 5-year Recovery Plan Review; particularly with respect to Population Viability Analysis?*

Service Response: The 5-year Review (USFWS 2013[2]) listed 19 priorities, with an additional 32 subcategories. These were not prioritized but are recommended for action before the next review. Many of these are being worked on simultaneously, including the PVA analysis. The Service has scheduled a meeting with its partners to discuss this analysis later this month. The urgency surrounding the translocation is described in both of the translocation EAs (USFWS 2013 and 2014). This translocation is necessary to attain population viability for the nascent subpopulation currently on Ridgefield NWR and to return the depleted population on the JBH Mainland Unit to sustainable levels. Additional time is available to finish the PVA analysis.

Comment: *Sharing of planned recovery actions at the monthly CWTD coordination call should be improved.*

Service Response: Comment noted. Monthly conference calls were initiated to share information about CWTD with our recovery partners and the Service is committed to improving communication.

Comment: *We are unaware of request for state scientific collection permit and letter of authorization for the transboundary movement of wildlife into Washington State.*

Service Response: A WDFW scientific collecting permit was applied for on December 24, 2013. No deer will cross state boundaries; therefore a letter of authorization is not necessary.

Comment: *What are the long-term plans for the Julia Butler Hansen Refuge?*

Service Response: JBH Refuge was established to protect the endangered CWTD and its habitats (pastures, Sitka spruce swamps, brushy woodlots, marshes, and sloughs, in both Washington and Oregon. The Refuge's Comprehensive Conservation Plan (USFWS 2010) is a

planning document that describes the vision, goals, and objectives for managing the Refuge for the next 15 years.

III. List of People and Entities That Provided Comments

1 Tribes

W. Iyall, Cowlitz Indian Tribe

2 State Agencies

N. Pamplin, Washington Department of Fish and Wildlife
D. VandeBergh, Oregon Department of Fish and Wildlife

3 Elected Officials

Board of Wahkiakum County Commissioners

4 Interested Parties

B. Cornett
C. Carber and G. Exum
E. Freed
L. Gibbons
P. and G. Carlson
R. Simpson
S. Garn

IV. References

Augustine, D.J. and L.E. Frelich. 1998. Effects of white-tailed deer on populations of an understory forb in fragmented deciduous forest. Cons. Biol. 12:995–1004.

deCalesta, D.S. and S.L. Stout. 1997. Relative deer density and sustainability: a conceptual framework for integrating deer management with ecosystem management. Wildl. Soc. Bull. 25(2):252-258.

Gavin, T.A., L.H. Suring, P.A. Vohs, Jr., and E.C. Meslow. 1984. Population characteristics, spatial organization, and natural mortality in the Columbian white-tailed deer. Wildlife Monographs 19, 3-41.

Hansen, L. and J. Beringer. 1997. Managed hunts to control white-tailed deer populations on urban public areas in Missouri. Wildl. Soc. Bull. 25:484–487.

McCullough, D.R. 1984. Lessons from the George Reserve, Michigan. Chapter 10 in: L.K. Halls, ed. White-tailed deer: ecology and management. Stackpole Books. Harrisburg, PA.

Sheffer, V.B. 1940. A newly located herd of Pacific white-tailed deer. American Soc. Mammal. 21:271–282.

Tymkiw, E.L. 2010. The effect of white-tailed deer density on breeding songbirds in Delaware. MS thesis, University of Delaware.

USACE. 2013. Julia Butler Hansen Refuge for the Columbian White- Tailed Deer Steamboat Slough Restoration Environmental Assessment. Portland, OR. 77pp.

USFWS. 1972. Columbian White-tailed Deer National Wildlife Refuge narrative report. Julia Butler Hansen National Wildlife Refuge, Cathlamet, WA. 17pp.

USFWS. 2010. Lewis and Clark National Wildlife Refuge and Julia Butler Hansen Refuge for the Columbian White-tailed Deer Comprehensive Conservation Plan and Environmental Impact Statement. U.S. Fish and Wildlife Service, Willapa National Wildlife Refuge Complex, Ilwaco, WA. 505 pp.

USFWS. 2013[1]. Columbian White-Tailed Deer Translocation Final Environmental Assessment: Proposed Translocation of Deer from the Julia Butler Hansen Refuge for the Columbian White-tailed Deer and Puget Island to Ridgefield National Wildlife Refuge and Cottonwood Island. Willapa National Wildlife Refuge Complex, Ilwaco, WA. 37pp.

USFWS. 2013[2]. Columbia River Distinct Population Segment of the Columbian White-tailed Deer (*Odocoileus virginianus leucurus*) 5-Year Review: Summary and Evaluation Columbian White-Tailed Deer. Washington Fish and Wildlife Office. Lacey, Washington. November 2013.