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December 16, 2015

Colonel Andrew Hilmes
Garrison Commander
Department of the Army
Headquarters United States Army Infantry Center
Ft. Benning, Georgia 31905-5000

FWS Log #: FF04EG1000-2015-F-0833

Dear Colonel Hilmes:

On November 17, 2015, the U.S. Fish and Wildlife Service's (Service) received your letter requesting that we address the Installations' proposed revisions to the Enhanced Training Biological Opinion (FWS Log – FF04EG1000-2015-F-0833, completed September 12, 2015).

The previously submitted Enhanced Training Biological Opinion (BO) was based on our review of the April 10, 2015, biological assessment (BA) which included, but was not limited to (1) The transition of the 3rd Brigade Combat Division (BCD), (2) The movement of the heavy maneuver portion of the Army Reconnaissance Course (ARC) to the Good Hope Maneuver Training Area (GHMTA) including the development of additional off-road heavy maneuver areas in the GHMTA, (3) Inclusion of the minimization measures described in the BA, and the expected effects on the federally-endangered red-cockaded woodpecker (RCW, *Picoides borealis*) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The substantive revisions proposed by the Installation included; (1) additional cluster summary information (see pages 106-131), (2) a revised summary table reflecting clusters that have changed status as a result of the action and including information on which RCW clusters will retain their incidental take protections, (see page 144, and Appendix A), and (3) a correction in the narrative regarding the proposed action as it relates to track vehicle use by the 3rd Brigade and tracked vehicle use in the Army Reconnaissance Course (see pages vii, and 142). We have also made minor corrections to the statistics in section 6.2 (page 136) which coarsely summarizes the overall RCW habitat conditions on the Installation.

We recommended that the Installation contact the Service's RCW Recovery Coordinator and the Project Director for Georgia's Ecological Services Program to begin discussions regarding the Installation's RCW territory deficiencies (page 136). Finally, we suggest that the Installation contact the 3rd party group(s) that have been engaged in MCoE Consultation so they are properly informed about the modification agreed upon for one of the elements making up the MCoE's Reasonable and Prudent Alternative (i.e., moving tracked vehicle use to the GHMTA).

Sincerely,

Donald Imm

Biological Opinion

Enhanced Training at Fort Benning

FWS Log #: FF04EG1000-2015-F-0833

Prepared by:
U.S. Fish and Wildlife Service
Georgia Ecological Services
Athens, GA

Donald W. Imm, PhD, Project Leader — **Date** 9/10/2015

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Executive Summary

This Endangered Species Act (ESA) Biological Opinion (BO) contains red-cockaded woodpecker (RCW) habitat and population analysis associated with the effects to the RCW resulting from (1) the "resetting" of all material data associated with RCW territory conditions for all of the managed clusters on Fort Benning Army Installation, (2) the Installation's 3rd Brigade shifting from a heavy (armored) brigade to a light infantry brigade, and (3) the movement of the Installation's heavy maneuver component of the Army Reconnaissance Course from the Southern Maneuver Training Area to the Good Hope Maneuver Training Area.

The updated RCW foraging habitat analysis or resetting of territory datasets was deemed necessary by the Installation since much of the action projected in the 2009 Maneuver Center of Excellence consultation did not occur, and was less adverse to RCWs than was proposed by the Army at that time. The results of reassessing the territories, using the most up-to-date habitat information, has led the Army to request reinstatement for 30 of 96 previously "taken" (Non-lethal) RCW clusters - that once again - could count toward the Installation's population recovery objective. The reassessment of RCW territories is proposed to have no net adverse effects to federally endangered species on the Installation.

The 3rd Brigade's shift from "heavy" to "light" is in response to a directive from the Army's 2014 Quadrennial Defense Review. As such, the Army intends to reduce its wartime high of 570,000 active-duty Soldiers to 440,000-450,000. Strategies to achieve this reduction include the deactivation of 8 Brigade Combat Teams and realignment of others. The result of this intention to reduce forces has led Fort Benning to convert the 3rd Infantry Divisions 3rd Brigade from an Armored Brigade Combat Team to an Infantry Brigade Combat Team. While this conversion will not drastically change the number of Soldiers in the 3rd Brigade, it will substantially change the unit's training and its impact on the Fort Benning environment. The most significant of these differences, as it effects federally-listed species on the Installation, will be that of the Infantry Brigade Combat Team. Most significantly, the Infantry Brigade Combat Team will no longer use tracked vehicles (examples include, but are not limited to: tanks, Bradley Fighting Vehicles and Paladins). This training change is proposed to have no net adverse effects to federally endangered species on the Installation.

The relocation of the Installation's heavy maneuver component of the Army Reconnaissance Course from the Southern Maneuver Training Area to the Good Hope Maneuver Training Area is responsive to the action proposed in the 2009 Maneuver Center of Excellence consultation in which the Service determined the Installation's action would jeopardize the continued existence of the federally endangered RCW. One component of the Reasonable and Prudent Alternative in the Service's Jeopardy Biological Opinion, required the Army to move the heavy maneuver training portion of an US Army Armor School training course off the Installation to an area where RCWs do not occur. This non-discretionary requirement was to occur no later than October 2016. As a result of reasons described herein, including proposed improvements, Fort Benning proposes to conduct this training on the Installation in the Good Hope Maneuver Training Area without impacting federally-listed species. In order to accommodate this training, improvements to infrastructure and erosion control measures in the area will be necessary and

are included as part of the action. This training change is also proposed to have no net adverse effects to federally endangered species on the Installation.

For projects impacting RCWs, the Action Area must include the RCW "neighborhood," which is defined by a buffer extending beyond the directly impacted area(s) equal to the average dispersal distance of RCWs within that RCW population or subpopulation. Dispersal is defined as the movement of individuals from their natal cluster to their first breeding location, or between consecutive breeding locations. Fort Benning RCW dispersal data collected from 1994 to 2014 was analyzed by the Installation and revealed an average dispersal distance of 2.20 miles. This buffer is applied to all active RCW clusters impacted by the proposed action. The combination of the Installation and all adjacent areas within the Action Area is 216,748 acres.

Status of the RCW

The RCW was one of the first listed species, added as endangered in 1970 in accord with the 1969 Endangered Species Conservation Act. These factors included loss of forest habitat by commercial forest management practices, with cutting cavity trees, loss of mature pine by short rotation forest silviculture, a reduction in historic range and abundance, and agriculture and urbanization. Although a few large populations exist on individual properties, most property populations are small. In spite of the relatively small size of most populations, the status of RCWs has been consistently improving since the early 1990s. This steady increase can be attributed to various factors, including aggressive prescribed burning programs, artificial cavity provisioning and regional translocation cooperatives and strategies. Implementation of these habitat and population management tools and techniques has successfully reversed the regional declines of the previous decades.

Environmental Baseline

RCW population demographics have been intensively studied on the Installation since 1994, resulting in an extensive population database. Of the 374 (number includes 5 splits that are yet to have territories delineated) clusters Fort Benning managed in 2014, 358 were active and not captured by another RCW group. The managed clusters include all clusters on the Installation with the exception of inaccessible and unmonitored clusters in dudded impact areas (managed clusters within impact areas are included in the 374 total). This total includes clusters permitted with mostly non-lethal incidental take (96) and unmanaged clusters in the A20 Dudded Impact Area. Counting only clusters ***not*** permitted for incidental take and managed clusters in the A20 Impact Area, there were 266 managed clusters in 2014, 256 of which were active and not captured.

Ninety-six clusters (96) are currently covered under in incidental take permit, but are still managed according to the Army RCW Guidelines, and 90 of these were active and not captured in 2014. In 2014, Fort Benning documented 342 potential breeding groups, of which 249 were in managed clusters and were not covered in the incidental take permit. The Installation will meet its RCW recovery population objective when 351 (managed) potential breeding groups are on the landscape and are not part of an incidental take permit.

Although the current RCW population dynamics on Fort Benning are more than promising, the acres needed to support and sustain "long-term" good quality foraging habitat is disconcerting.

Fort Benning's Enhanced Training Biological Assessment discloses the following:

- Pre-Enhanced Training, 96 managed clusters on the landscape had incidental take protections for project related actions (excludes 12 "unprotected clusters" and all unmanaged clusters). The Post-Enhanced Training landscape (which requests 30 taken clusters to be returned to the Installations population tally); leaves 69% (66 of 96) of those taken clusters on the landscape and therefore, still vulnerable to adverse effects.
- Post-Enhanced training, 18% of all currently managed territories remain taken (54 of 369).
- 29% of the 66 remaining taken clusters cannot meet the recovery standard for acres required per territory (i.e., 2 cannot meet Managed Stability Standard and 17 cannot meet the RS or 19 of 66).
- 17% of the 30 clusters submitted for reinstatement to the population recovery objective, do not currently meet the managed stability standard for acres required per territory (5 of 30).
- 39% of all managed territories (144 of 369) on the Installation cannot meet the recovery standard for acres required per territory.
- 14% of all of managed territories (52 of 369) cannot meet the managed stability standard for acres required per territory.
- 18% of the territories (65 of 369) categorized as "can meet the managed stability standard, but may not be able to meet the recovery standard," would be considered vulnerable due to acreage deficiencies, and finally,
- Only 43% of all managed territories (160 of 369) are able to meet both the managed stability and the recovery standard for acres required.

Effects of the Action

The realignment of the 3rd Brigade as an Infantry Brigade Combat Team and the movement of the heavy maneuver portion of the Army Reconnaissance Course to the Good Hope Maneuver Training Area, as proposed, will reduce the RCW foraging habitat and harassment impacts evaluated in the MCoE and subsequent consultations. The proposed improvements to the Good Hope Maneuver Training Area will not affect any known federally-listed species. The Army's proposed action of solely deactivating the 3rd Brigade is stated in the BA to have a net beneficial effect to the RCW as well, and would have no effect on other federally-listed species. As a result of the proposed action, 30 (18 indirect, 12 direct) clusters previously included in an incidental take statement will no longer require "take" and can therefore contribute toward the Installation's population recovery goal.

Cumulative Effects

We are unaware of interrelated and interdependent actions to the proposed Action that are not included in the proposed Action.

Conclusion

The proposed Enhanced Training action should not adversely affect RCWs at Fort Benning because RCW nesting and foraging habitat formerly planned for removal will be retained. The proposed action will result in the elimination of all tracked vehicle training by the 3rd Brigade and all tracked vehicle training conducted by the Army Reconnaissance Course which will be moved to the Good Hope Maneuver Training Area.

Due to RCW territory acreage deficiencies, the Reasonable and Prudent Alternative (reinitiated and reanalyzed) agreed upon by the Service and the Army during the Maneuver Center of Excellence consultation will remain in effect, with the exception of moving the heavy mechanized training component of Army Reconnaissance Course off the Installation. The Service agrees that the "heavy mechanized training component" planned for the Southern Maneuver Training Area (as well as any other like it proposed in these areas) can be moved to the Good Hope Training Area, and in so doing, satisfies the intent of that component of the MCoE Reasonable and Prudent Alternative (i.e., *"Migrate the field training aspects of the Scout Leaders Course (Army Reconnaissance Course), a MCoE-related heavy mechanized training course, from the Southern Maneuver Training Area to training areas located off the FY09 Ft. Benning installation boundary within five years from the training start date of the Scout Leaders Course"*.). No critical habitat has been designated for this species, therefore, none will be affected.

After reviewing the current status of the red-cockaded woodpecker, the environmental baseline for the action area, the effects of the Enhanced Training proposal, and the cumulative effects, the Service concludes the effects of Enhanced Training, as proposed, is not likely to appreciably reduce the survival and recovery of the red-cockaded woodpecker. No critical habitat has been designated for this species, therefore, none will be affected.

Incidental Take Statement

Section 9 of the Act and Federal regulation pursuant to section 4 (d) of the Act prohibit the take of endangered and threatened species without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Ft. Benning for the exemption in section 7(o)(2) to apply. Ft. Benning has a continuing duty to regulate the activity covered by this incidental take statement. If Ft. Benning fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to

monitor the impact of incidental take, Ft. Benning must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(I)(3)]

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction of possession of federally-listed endangered plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of State criminal trespass law.

If Ft. Benning (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permits or grant documents, the protective coverage of section 7(o)(2) may lapse.

In order to monitor the impact of incidental take, Ft. Benning must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(1)(3)]

Consultation History

February 2015

- The Service received the draft "Enhanced Training Proposal" from Fort Benning for early review.

March 2015

- The Service provided Fort Benning with comments regarding the Draft Enhanced Training Proposal. The discretionary review comments focused primarily on two topics. First, 51 RCW territories were reported as never being able to meet the Managed Stability Standard and 86 territories were reported as being unable to meet the Recovery Standard. As such, 137 territories (51 + 86) are unable to attain the recovery standards acreage requirement. Second, the Installation proposed an increase in small arms range use, however, no description or analysis was provided.

April 2015

- Service personnel attended a Fort Benning sponsored meeting on the status of the Enhanced Training Biological Assessment.

May 2015

- Fort Benning responded to the Services' questions that were submitted for the Draft Biological Assessment.

- The Service agreed to Fort Benning's request to enter into formal consultation, and reported to the Installation that the Biological Opinion would be delivered no later than September 12, 2015.

July 2015

- During an informal meeting, Installation staff reported Fort Benning will be reducing Soldier training throughputs by ± 3,800 by the year 2019. The information was proposed as a question to see if this information would better support the open ended statement in the Army's BA that merely suggested an "increase in small arms range use" will result from the action. To date, no supporting information has been provided to the Service.

August 2015

- The Installation provided the Service with a letter proposing to remove the incidental take status from RCW cluster D15-01, and subsequently allowing for it to be added back to the Installation's population recovery objective.

- Fort Benning supplied the Service with a draft letter formalizing a change to the proposed action regarding the 3rd Armored Brigade Combat Team (ABCT). In the Enhanced Training proposal, the 3rd ABCT was to transition to an Infantry Brigade Combat Team (IBCT), but now the ABCT will be deactivated. As such, troop strength will be reduced from 4,452 down to 1,050. The Installation suggests this conversion "has no more and probably less threatened and endangered species potential impacts than the conversion of the ABCT to the IBCT."

September 2015

- Fort Benning provided the Service with a final letter, which follows up on the draft letter submitted in August, confirming the ABCT will be inactivated and another unit will be established (i.e., an Infantry Battalion Task Force). The Installation also confirms this conversion "has no more and probably less threatened and endangered species potential impacts than the conversion of the ABCT to the IBCT," and further states "Fort Benning estimates that small arms firing will not increase."

A complete administrative record of this consultation is the on file at the Service's West Georgia Sub Office in Fort Benning, Georgia.

BIOLOGICAL OPINION

1 PROPOSED ACTION

1.1 Background

The Fort Benning Military Installation (Installation or Fort Benning), located in Chattahoochee and Muscogee Counties, Georgia (GA) and Russell County, Alabama (AL), is currently undergoing major changes due to Army-wide realignment and force reductions. In addition, impacts to Federally-listed species expected from training and construction associated with 2009 Transformation/Base Realignment and Closure (BRAC) and Maneuver Center of Excellence (MCoE) consultation *has not* been fully carry out due to changes and reductions in training loads, which now, potentially allows the Army greater flexibility and more avoidance and minimization options that previously could not have been considered during consultation. Therefore, an updated assessment of the impacts of BRAC and MCoE actions, as implemented, on the RCW is necessary in order to evaluate the effects of the actions proposed herein (i.e., The Enhanced Training Proposal).

1.2 Action Area

For projects impacting RCWs, the Action Area must include the RCW "neighborhood," which is defined by a buffer extending beyond the directly impacted area(s) equal to the average dispersal distance of RCWs within that RCW population or subpopulation (USFWS 2005). Dispersal is defined as the movement of individuals from their natal cluster to their first breeding location, or between consecutive breeding locations (USFWS 2003a).

Dispersal distance is defined as the average distance RCWs have traveled from their natal cluster to find an available niche, or between consecutive breeding locations. This includes birds that were part of a breeding pair, helpers to an unrelated breeding pair and solitary birds defending a vacant territory. Fort Benning RCW dispersal data collected from 1994 to 2014 was analyzed by the Installation's Conservation Branch (CB) and revealed an average dispersal distance of 2.20 mi. (J. Neufeldt, Fort Benning, pers. comm.). This buffer is applied to all active RCW clusters impacted by the proposed action. The combination of the Installation and all adjacent areas within the Action Area is 216,748 acres.

The portion of the Action Area outside of the Installation boundary, but within the RCW neighborhood, includes portions of Chattahoochee, Marion, Muscogee and Talbot Counties, GA. Chattahoochee County, GA includes lands on and southeast of Fort Benning. The Installation encompasses roughly 80% of Chattahoochee County. The majority of the land use in the county and on most lands adjacent to Fort Benning are characterized as agriculture or forestry.

Approximately 12% of the county land use is low-density residential and rural residential and occurs primarily within the City of Cusseta and along State Route 26 and US Highway (Hwy.) 27-280. Single-family detached housing is the predominant residential land use.

Public/institutional land uses account for approximately 2% and are located in close proximity to the center of Cusseta (US Geological Survey (USGS) 2001). Areas south of the Installation within the Action Area contain a portion of the Chattahoochee River and deciduous forest. Areas

southeast of the Installation within the Action Area contain hardwood-dominated forests along the floodplains of Hichitee Creek, Halloca Creek, Ochillee Creek, Stevens Branch and Spring Branch; young (<30 years old) pine plantations; US Hwy. 27/280, GA Hwy. 55 and GA Hwy. 26; low-density residential areas; agricultural fields and recreational fields. A portion of the young pine stands between the Installation and Hwy. 27 were recently sold, but will, at least temporarily, remain in timberlands (The Nature Conservancy (TNC) 2006). There are a few areas visible on the 2014 aerial photography that appear to be pine stands ≥60 years old within the Action Area; however, these are separated from the Installation boundary by >200 ft. of non-habitat. No Federally listed species are known to occur within the Action Area off-Post in Chattahoochee County.

Marion County, GA is located on the eastern boundary of Fort Benning. No major communities are located in this county adjacent to the Installation (USGS 2001). The land immediately adjacent to the Installation consists mainly of agricultural areas and pine plantations <30 years old and also contains hardwood- pine stands; floodplains of Pine Knot Creek, Little Juniper Creek and unnamed tributaries; and low density residential development, primarily along GA Hwy. 355 and county roads. Portions of the Action Area are under fee by timber companies, and other portions were recently sold. Through the Army Compatible Use Buffer (ACUB) program, TNC purchased an approximately 280-ac. property in Marion County 0.8 mi. east of Fort Benning in 2008. This property was previously owned by a timber company and is forested in young pine. TNC has also purchased an approximately 310 ac. property adjacent to the eastern boundary that is forested in young pine and a group of 3 properties adjacent to the Installation's eastern boundary that total approximately 873 ac. No Federally-listed species are known to occur off-Post within the Action Area in Marion County, although at least one of the properties acquired by TNC is within 0.5 mi. of an active RCW cluster on Fort Benning (USACE 2008).

Talbot County, GA is located on the northeastern boundary of Fort Benning and does not include any major communities within the Action Area. The land uses adjacent to the Installation are described as rural agricultural areas (USGS 2001). Deciduous and pine forests make up the predominant land use within this portion of the Action Area outside of Fort Benning. Approximately 25% of the off-Post area within Talbot County and within the Action Area consists of the forested hardwood floodplains of Baker and Upatoi Creeks, which form the boundary of the Installation before joining and flowing onto the Installation. An approximately 1,100-ac. property at the confluence of Upatoi and Baker Creeks has been placed under a conservation easement with TNC. There is a substantial population of relict trillium on the TNC property; no other Federally-listed species are known to occur off-Post within the Action Area in Talbot County (USACE 2008).

Muscogee County, GA is located on the northwestern boundary of Fort Benning. Columbus is currently the second largest city in Georgia and has dramatically increased in size within the last 50 years. Land uses within the Action Area include residential and commercial developments, City municipal buildings including a prison and an animal control center, a landfill, a golf course, pastures and large, fragmented tracts of pine and deciduous forests. Cox, Randall, Dozier, Bull, Opossum, Tiger and Kendall Creeks and the Tar River run through Muscogee County and occur within the Action Area. A portion of the 1,100-ac. property at the confluence of Upatoi and Baker Creeks described above in Talbot County is in Muscogee County. This

property has been placed under a conservation easement with TNC and contains a relict trillium population (USACE 2008).

The Muscogee Technology Park is also within the Action Area and is mostly undeveloped; however, clearing of pine habitat began in 2005 (JCA 2004) and has continued in subsequent years as parcels have been developed (JCA 2014). This property will be used primarily as an industrial park, with some land preserved for wetland mitigation. Construction has been completed of the northern half of a 4-lane road through the center of the property (the Eastern Connector), a cul-de-sac and building south of Chattsworth Road (Rd.), buildings on 2 parcels on Chattsworth Rd., one building on the Eastern Connector and a recycling facility. Construction of the southern portion of the Eastern Connector is in progress (JCA 2014). Fort Benning has an obligation to provide habitat for 2 RCW clusters (N07-A and N07-B) that have foraging partitions that overlap onto the City of Columbus property. Neither cluster is anticipated to be impacted by the proposed Enhanced Training action. The "taken" cluster, Cluster N02-01, was inhabited by a solitary RCW in 2014 (JCA, unpub. data). No other Federally-listed species are known to occur within the Action Area off-Post in Muscogee County.

1.3 Project Description

Responding to a directive from the 2014 Quadrennial Defense Review (QDR), the Army intends to reduce its wartime high of 570,000 active-duty Soldiers to 440,000-450,000 (United States (US) Army Environmental Command (USAEC) 2014). Strategies to achieve this reduction include the deactivation of 8 Brigade Combat Teams (BCTs) and realignment of others. The result of this intention to reduce forces has led Fort Benning to the conversion of the 3rd Infantry Division 3rd Brigade (BDE) from an Armored BCT (ABCT) to an Infantry BCT (IBCT).

While this conversion will not drastically change the number of Soldiers in the 3rd BDE, it will substantially change the unit's training conducted at Fort Benning and its impact on the environment. The most significant of these differences, as it effects Federally-listed species on the Installation, will be that of the IBCT. As such, the IBCT will no longer use tracked vehicles (examples include, but are not limited to: tanks, Bradley Fighting Vehicles (BFVs) and Paladins).

The action proposed in the MCoE BA (US Army Corps of Engineers (USACE) 2008) and Addenda (USACE 2009a, 2009b) was determined by the Service to jeopardize the continued existence of the Federally Endangered RCW. One component of the Reasonable and Prudent Alternative (RPA) in the Service's Jeopardy Biological Opinion (JBO) (USFWS 2009a), required the Army to move the heavy maneuver training portion of an US Army Armor School (USAARMS) training course (the Army Reconnaissance Course (ARC)) off the Installation to an area where RCWs do not occur. This non-discretionary requirement was to occur no later than October 2016. As a result of reasons described herein, including proposed improvements, Fort Benning proposes to conduct this training on the Installation in the Good Hope Maneuver Training Area (GHMTA) without impacting Federally-listed species. In order to accommodate this training, improvements to infrastructure and erosion control measures in the GHMTA will be necessary.

The proposed Enhanced Training action, therefore, includes the transition of the 3rd BDE to an IBCT, the movement of the heavy maneuver portion of the ARC to the GHMTA and development of additional off-road heavy maneuver areas in the GHMTA. The proposed action also includes the minimization measures described in this Opinion. These actions are collectively referred to as Enhanced Training actions.

This BO is being prepared in accordance with the Endangered Species Act (ESA) Section 7(a)(2), as implemented by 50 Code of Federal Regulations (CFR) Part 402 (ESA 1973). One purpose of this BO is to evaluate the potential effects of the proposed action on Federally-listed species within the Action Area and, if such effects are likely to be adverse. An additional purpose of this consultation is to reexamine MCoE as construction projects and training impacts have changed to an extent that they meet the conditions described in the "Reinitiation Notice" section of the MCoE JBO (USFWS 2009a). In particular, analyses in this document will determine whether proposed changes to training exercises addressed in the MCoE consultation have changed to an extent that one component of the RPA requirement of moving ARC heavy maneuver training off-Post can be revised to locate that training on-Post in the GHMTA.

1.4 Purpose and Initiatives Influencing the Project

The following section describes the purposes and initiatives influencing (1) the proposed Enhanced Training realignment, (2) personnel reductions, and (3) changes to training and maneuver area development. The proposed action includes all actions and minimization measures as described.

In accordance with 40 CFR, Section 1502.4 of the NEPA implementing regulation, and the Army NEPA Regulation (32 CFR 651, also known as AR 200-2), the Army determined that the actions listed below are all activities closely related to each other both in location and time on Fort Benning and, therefore, their potential environmental effects are being evaluated together in this Consultation. As stated in the previous section, the purposes of the proposed action are to (1) meet the force reductions and realignments dictated in the QDR, (2) to meet the intent of the training migration requirement of the MCoE BO RPA, and (3) to ensure sustainable training space in the GHMTA for the proposed increased off-road heavy maneuver training.

The realignment of the 3rd BDE has been determined by the Army to be necessary in order to meet Army-wide force reductions. In order to help achieve mandated spending reductions, the Army reports it is decreasing the current total number of Soldiers and Army civilians, while reorganizing the current force structure. The Army completed a Programmatic Environmental Assessment (PEA) in 2013 (USAEC 2013) and a Supplemental PEA in 2014 (USAEC 2014) to study options for implementing the mandated force realignment and reductions. The PEA studied reductions in active duty personnel from the FY12 end-strength of 562 thousand (K) to 490K ((USAEC 2013). The SPEA studied further reductions from 490K to 420K, per the 2014 QDR (USAEC 2014). Force reductions and restructuring will involve a reduction of at least 8 BCTs from the current total of 45 BCTs.

The conversion of the 3rd BDE to an IBCT was not part of the PEA or SPEA. Restructuring the 3rd BDE at Fort Benning to a standard ABCT was not considered since that would require the addition of an additional maneuver battalion and this increase could not be accommodated on

site. On June 25, 2013, the Army announced that the 3rd BDE would remain at Fort Benning. On October 15, 2014, the Army approved the realignment of the 3rd BDE to an IBCT.

Personnel and structure: The Army reports that the realignment of the 3rd BDE from an ABCT to an IBCT will result in substantial differences in equipment and training missions and their impacts on the environment. The Enhanced Training BA reports that an IBCT does not use any tracked vehicles, such as M1A2 tanks, M2/M3 BFVs, or Paladins for off-road heavy maneuvers. The Army states a typical IBCT consists of approximately 750 light and medium wheeled vehicles (e.g., High Mobility Multipurpose Wheeled Vehicle (HMMWVs) and cargo trucks) that are used primarily on roads for command and control or logistical purposes. The Army suggests, as an IBCT, the 3rd BDE will conduct dismounted training instead of tracked vehicle training as the main part of their mission.

Additionally, the BA states the 11th Engineer Battalion will be restructured in order to accommodate a change of the 3rd BDE's Brigade Special Troops Bn (BSTB) from its current structure to the Army's new Brigade Engineer Battalion (BEB) structure. The 11th Engineer Battalion will inactivate its Bridge, Concrete, Vertical and Horizontal Companies as part of this transition. The BSTB transition to a BEB in the IBCT will mean the loss of 31 tracked engineer vehicles (e.g., armored vehicle launched bridges and bulldozers); approximately 6 tracked engineer vehicles will be retained to support the 3rd BDE.

With the realignment, the 3rd BDE may gain one maneuver battalion from Fort Riley, Kansas, resulting in a small personnel increase of approximately 100 Soldiers. As of 2014, there were approximately 4,708 total personnel in the 3rd BDE. The slight personnel increase from realignment to an IBCT will be offset by reductions of BCT support personnel so that Fort Benning expects virtually no net change in personnel numbers due to the 3rd BDE action. Existing facilities will support the realignment, so no new construction is proposed. Prior to the September 2015 letter, the Installation anticipated an increase in small arms (0.50 caliber or less) range use and a decrease in large arms range (≥0.50 caliber) use were expected.

Vehicles: With the transition, the 3rd BDE will lose all 301 of its armored tracked vehicles and its 3 Strykers and will gain 3 ASV Knights. Heavy wheeled vehicles will be reduced from 153 (with 119 trailers) to 97 (91 trailers). Medium or light wheeled vehicles will increase from 570 (367 trailers) to 731 (465 trailers) (Fort Benning 2014d).

Training - Baseline: In general, the schedule for BCTs includes training for proficiency at the individual, squad, platoon, company and battalion levels, with an annual culminating event involving the entire brigade. With the adoption of the Army Force Generation (ARFORGEN) model, BCTs are now on a 24-month cycle comprised of down time, light training and incorporating new personnel followed by a period of more intensive, targeted training, then deployment (or availability for deployment) for the second year.

Based on Fort Benning's "in-house NEPA like" approval document (Form 144-R) the 3rd BDE conducted field training from 2011-2014, using training compartments throughout the Installation, with portions of the BB, D, F and T compartments being used for the most events. The training areas designated for each training event were recorded in GIS attribute data; this

process generated the number of unique training events planned for each training area from 2011-2014. *Note*: These numbers do not necessarily reflect frequency of use, since many FB Form 144-Rs approve training for many months to a year.

Most events involving off-road heavy maneuver occurred in and around the SMTA in training Compartments D1-3, D5-18, F1-10 and T8-9. Scheduling conflicts with the ARC in the SMTA have not been as much of an issue as once projected by the Installation, due, in part, to the 2011 reduction in ARC training loads and changes to ARC training areas (Fort Benning 2011b). Therefore, based on FB Form 144-Rs submitted for review, off-road heavy maneuver training has not been displaced to areas outside of the SMTA as evaluated by the Installation and then subsequently presented in the Services MCoE BO and RPA (USFWS 2009a).

Training – "Proposed": As an IBCT, the Installation suggests the 3rd BDE will follow the same general schedule of an ABCT of training for proficiency at the individual, squad, platoon, company and battalion levels, with an annual culminating event involving the entire brigade.

As an ABCT, it is reported that the primary training land use has been within designated heavy maneuver lands. Infantry units are reported to not be restricted to heavy maneuver lands and will be able to use compartments not generally utilized by the 3rd BDE. Depending on the type of battalion (e.g., cavalry, engineer or artillery), units are required to complete annual or biannual weapons, live fire, mortar, artillery and other qualifications progressing from the individual level up to a culminating brigade-level event.

1.5 Changes and Description of ARC Training Migration

Location of the ARC heavy maneuver training within the GHMTA is being proposed in order to meet the objective of the MCoE RPA without the need to acquire additional training land. Due to budget constraints and reduction of forces since the MCoE BO (USFWS 2009a), acquisition of land (Fort Benning's preferred option) was put on hold in 2012 until alternative approaches could be examined using updated information (Fort Benning 2012).

Fort Benning proposes to modify the MCoE RPA (USFWS 2009a) requirement of moving the heavy maneuver training component of the ARC from the SMTA to a location off of the FY09 Installation boundary with no RCWs. The Services' intent of the requirement to migrate training off-post was to remove indirect harassment impacts to several RCW clusters in the SMTA and NMTA resulting from the net increase in use of both areas for off-road heavy maneuver training by the ARC and the 3rd BDE. Due to reduced overall training loads on the Installation and the 2011 changes in the implementation of the ARC POI, training land availability (particularly for off-road heavy maneuver training) has not been the limiting factor that was anticipated by the Army in the MCoE consultation. The Installation reports, the 3rd BDE has been able to schedule the SMTA as needed; therefore, extensive use of the NMTA has not been necessary. Furthermore, when the Army proposed conversion of the 3rd BDE to an IBCT their effects analysis – specific to heavy maneuver training in the NMTA – showed there will no longer be results anticipated to adversely affect RCWs from this type of training activity.

As described in the Army's ARC Biological Evaluation, tracked vehicles have not been used to date for the ARC at Fort Benning; therefore, they suggests there has been no need for the indirect harassment "take" issued for this projected impact in the SMTA. However, they state that the use of BFVs remains an option in the POI and could be added at a later date (assumes actions stay within Army Policy Guidelines). For this reason, instead of eliminating the option of tracked vehicles entirely, Fort Benning proposes in the case that future leadership chooses to employ the use of tracked vehicles, they will be used in the GHMTA instead of the SMTA or off-post. The Service agrees that since the GHMTA does not contain RCW cavity trees, is not being managed as RCW habitat and is not considered to be necessary for recovery now or in the future (Fort Benning 2015), locating ARC off-road maneuver training in the GHMTA could be understood as equivalent to moving this training off-Post.

Operation Blackjack is currently a 4-day training exercise that begins with dismounted reconnaissance in Alabama, transitions to route reconnaissance along improved roads over to the SMTA region, and ends with mounted and dismounted reconnaissance (one platoon at a time) through the SMTA region.

The proposed change to the Blackjack phase includes the operation ending in the GHMTA instead of the SMTA region. The number of vehicles will change from 3 platoons of either 6 HMMWVs or 4 Strykers each to one platoon of 6 BFVs (only up to 4 BFVs would be used at any one time). Personnel involved will be reduced from approximately 100 (60-65 students and 35-40 cadre) to 60 (24-36 students and 15-24 cadre). The duration of the operation will be reduced from 4 days per iteration and 10 iterations per year to 2 days per iteration and up to 8 iterations per year.

1.6 Good Hope Maneuver Training Area Improvements

The Installation reports that the BRAC 2005 Military Construction (MILCON) program funding for GHMTA fell short of fully supporting all infrastructure and erosion control measures needed to maximize off-road heavy maneuver training. The 11,152 acre (ac.) GHMTA currently includes 5 disconnected maneuver boxes totaling approximately 2,920 ac. (Fort Benning 2014d). The USAARMS and other users are limited to moving wheeled and tracked vehicles on tank and maneuver trails outside established maneuver boxes. The proposed infrastructure and erosion control measures (e.g., tank trails, low water crossings, turn pads) will allow Fort Benning units enhanced off-road heavy maneuver capabilities to support training and would allow for multiple units to train simultaneously.

Fort Benning proposes to make the necessary improvements to increase the available off-road maneuver space in the GHMTA by 4,667 ac. to total approximately 7,597 acres. Necessary improvements in order to achieve this increase include tank trails, low water crossings, turn pads and erosion control measures (Fort Benning 2014d). Approximately 37 miles of maneuver trails are proposed.

Fort Benning planners positioned the proposed maneuver areas and trails in order to maximize training capabilities while avoiding or minimizing environmental impacts. In so doing, there are an additional 4,667 acres that are expected to be used for planning purposes. This boundary and

acreage may be adjusted to further minimize environmental impacts and maximize training benefits during implementation. If the environmental impacts of any adjusted area are materially different than assessed in this document, Fort Benning will conduct the appropriate level of environmental review.

1.7 Ongoing and Future Activities to Conserve Listed Species

Fort Benning proposes the minimization measures put in place in the ARC BE (Fort Benning 2011b), to keep students and cadre out of Uchee Creek, will remain in effect in order to prevent impacts to shinyrayed pocketbook habitat. Additionally, the signed buffers around relict trillium and Georgia rockcress populations will continue to minimize impacts to these populations by dismounted or wheeled traffic associated with the 3rd BDE and the ARC. Per the ARC Biological Evaluation, Fort Benning personnel will maintain signs along many roads within the ARC training areas to prevent students from traveling into or through RCW clusters.

Based on the vehicle tracking data provided by Construction Engineering Research Lab (CERL), the Installation reports the time spent within 200 feet of RCW clusters - that are not blocked - is negligible. The signs used to block trails have also required more maintenance than expected; therefore, Fort Benning proposes to discontinue maintenance of signs on the currently blocked roads. The Installation also proposes to discontinue the other RCW impact minimization measures described in the 2011 ARC BE (Fort Benning 2011b) and Section 2.1.4, with the exception that GPS tracking of most vehicles will continue through at least the 2015 nesting season and until the proposed heavy maneuver training is approved to be conducted in the GHMTA. Most minimization measures in the 2011 BE (Fort Benning 2011b) were included in order to minimize habitat damage from off road heavy maneuver training. Since that training has not occurred, and is not proposed to occur, outside of the GHMTA, the Installation suggests extensive monitoring is no longer considered to be necessary. The Service agrees with this reasoning.

1.8 Ongoing and Future Monitoring Activities

Monitoring and banding at RCW clusters will continue; if Fort Benning biologists notice a trend of nest failure or abnormally high adult turnover, banding at additional clusters may be added after consulting with the Service. As with all training on the Installation, students in the ARC will adhere to the 2007 Army Guidelines (DA 2007). No changes are proposed to the minimization measures in place for the Georgia rockcress populations (Section 5.2.3 of the BA) and shinyrayed pocketbook Critical Habitat (Section 5.4.3 of the BA). The use of erosion control best management practices during construction of GHMTA improvements will also help prevent erosion and sedimentation loading (Section 6.8.3 of the BA). Additional minimization measures described in the relevant ESMCs (Fort Benning 2015) should be followed.

2 STATUS OF THE SPECIES

2.1 Federally Protected Species

This BO evaluates the potential impacts of the proposed Enhanced Training actions on species listed as Federally Threatened or Endangered, designated Critical Habitat and species proposed for listing, by the Service pursuant to Section 7 of the ESA (as amended). The subject species are relict trillium (E), Georgia rockcress (T), purple bankclimber (*Elliptoideus sloatianus*) (T), shinyrayed pocketbook (E), gulf moccasinshell (*Medionidus penicillatus*) (E), oval pigtoe (*Pleurobema pyriforme*) (E), wood stork (T) and the RCW (E) (USFWS 2014c). Additionally, Critical Habitat has been designated for the shinyrayed pocketbook on Fort Benning along Uchee Creek in Russell County, Alabama (*Federal Register*, 15 November 2007, 50 CFR Part 17).

The Federally Endangered harperella (*Ptilimnium nodosum*), Michaux's sumac (*Rhus michauxii*) and fringed campion (*Silene polypetala*) and federally Threatened little amphianthus (*Amphianthus pusillus*) could potentially occur in the Action Area (USFWS 2014c); however, these species are not known to occur on Fort Benning and were not considered for further analysis.

The American alligator is designated as Federally Threatened due to Similarity of Appearance throughout its entire range under provisions of the ESA, as amended (USFWS 1987), due to its similarity to listed species of crocodiles and caimans. Service regulates the legal trade of skins, or products made from them, in the commercial trade (Fort Benning 2015). Because the alligator is listed in order to regulate trade to prevent illegal "take" of other listed crocodilians, the species is biologically recovered and there is no import/export aspect to the proposed action, potential project impacts to the alligator were not assessed (*Federal Register*, June 4, 1987, 50 CFR Part 17). Bald eagles are no longer protected under the ESA; however, they are still protected under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668-668d) and the Migratory Bird Treaty Act (16 U.S.C. 703-712). Impacts to eagles were also not assessed for the proposed action.

The Installation reports that Federal Candidate species, species of concern and State-listed species, including the gopher tortoise, will be addressed in their Environmental Assessment prepared for this project. In determining the overall effect of the proposed action to federally listed species, the Installation considered direct, indirect and cumulative effects. The Services' Consultation Handbook (USFWS and NMFS 1998) defines direct effects as "the direct or immediate effects of the project on the species or its habitat" (e.g., removal of a RCW cavity tree or foraging habitat). Indirect effects are "caused by or result from the proposed action, are later in time, and are reasonably certain to occur" (e.g., delayed mortality of RCW foraging habitat resulting from soil disturbance) (USFWS and NMFS 1998). Updated direct or indirect effects of BRAC and MCoE actions are described below for species other than the RCW. Effects of the proposed action are described for all species. Cumulative effects were not considered for the updated effects analyses but are assessed for the proposed action.

The 2014 INRMP (Fort Benning 2015) included ESMCs for the RCW, American alligator, bald eagle, wood stork, relict trillium, Georgia rockcress and shinyrayed pocketbook.

2.1.1 Red-cockaded Woodpecker

The RCW is a small, non-migratory woodpecker endemic to mature, fire-maintained pine forests in the southeastern US, where it was historically common. RCWs measure 7 to 8.5 in. long, have a black cap and nape, prominent white cheeks and a black-and-white, horizontally barred back. Adult males have red markings (cockades) behind the ear, but the cockades are difficult to see (USFWS 2003a).

RCWs are found in all southern and southeastern Coastal States from eastern Texas into southern Virginia, with small interior populations in southeastern Oklahoma, southern Arkansas (USFWS 2003a) and, until 2004, south-central Kentucky (Mills et al. 2004). The largest populations are in the Coastal Plain forests of the Carolinas, Florida, Georgia, eastern Texas, central Louisiana and in the Sandhills forests of the Carolinas (USFWS 2003a).

Ideal nesting habitat for RCWs includes open, mature southern pine forests dominated by longleaf pine, loblolly pine, pond pine (*P. serotina*), slash pine or other southern pine species greater than 90 years of age with an open midstory/ understory that is maintained by frequent fire. Potential foraging habitat is defined as open pine or pine/ hardwood stands 30 years of age or older (USFWS 2003a).

Nest/roost cavities are excavated into the heartwood of living pine trees that are typically over 60 years old. Older pines are necessary because they have sufficient heartwood to contain a cavity and because they are more likely to be infected with red-heart fungus (*Phellinus pini*), which substantially reduces the time required to construct a cavity (USFWS 2003a). The RCW excavates resin wells into the cambium above and below the cavity entrance, resulting in a resinous coating around the cavity. Cavity stages of completion are defined as starts (entrance tunnel constructed) or complete cavities: both are protected. Activity status can be defined as active (currently being maintained and/or used by a RCW), inactive (not used or maintained recently, but still suitable) or relic (start or cavity not maintained for >5 years, and/or unlikely to be utilized or reactivated by a RCW due to modification by other species).

An aggregate of cavity trees is called a cluster and may include 1 to 20+ cavity trees. A cluster is occupied by a group of RCWs; a group can be a solitary male or a non-breeding pair, but typically consists of a breeding male and female and often one or more helpers (typically male offspring from previous years). Helpers assist with cavity excavation and maintenance, incubation, feeding young and defending the group's territory. Nesting generally occurs from April through June, with some re-nesting attempts observed as late as July (Walters 1990, Jackson 1994). Development of a dense understory may result in abandonment of cavity trees/clusters. Fire exclusion, conversion of forest lands to agricultural and other uses and logging have destroyed most of this species' habitat rangewide (USFWS 2003a).

The RCW Recovery Plan (USFWS 2003a) designated 13 Primary Core Recovery Populations, 12 of which will be inhabited by at least 350 PBGs at recovery and one of which will have ≥1,000 PBGs. Populations of this size should be able to withstand 4 of 5 general threats to RCW population viability: demographic stochasticity, environmental stochasticity, genetic drift and inbreeding. The fifth threat to population viability emphasized in the Recovery Plan is catastrophes such as hurricanes or southern pine beetle outbreaks (USFWS 2003a).

Primary Core and Secondary Core Recovery Populations were selected, in part, to eliminate the risk of extinction of the species due to hurricanes, by ensuring that recovery populations are distributed throughout the RCW's range (USFWS 2003a). It has been estimated that at any given time, 1 or 2 recovery populations and a number of support populations will be recovering from hurricanes (Hooper and McAdie 1995).

3 ENVIRONMENTAL BASELINE

The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process (50 CFR § 402.02).

Background

July 1998

A land exchange between Fort Benning and the City of Columbus (City) was finalized in 2001 (Land Exchange). Development of the City property, the Muscogee Technology Park (MTP), would result in the "take" of RCW Cluster N02-01. Successful RCW occupation of 1 of 4 recruitment sites that were created on Fort Benning was required in the Services' BO for the Land Exchange in order to compensate for this "take" (USFWS 1998); however, 2 were occupied (Clusters E05-B and O03-B) in March 1999 (Dr. J.H. Carter III and Associates, Inc. (JCA) 2000). The remaining 2 recruitment clusters (S02-A and O09-04) also became active in later years, but were subsequently impacted by Transformation projects and were included in the ITS for that project (USFWS 2007a). Cluster O03-B was included in the ITS for the MCoE Supplemental BA (USFWS 2011a); however, impacts to O03-B and S02-A will be reanalyzed for the proposed action. Clusters E05-B, O03-B and S02-A contained PBGs in 2014; all cavity trees associated with Cluster O09-04 were cut in 2008 for a BRAC project.

Fort Benning's environmental obligations resulting from the Land Exchange included the management of foraging habitat for RCW Clusters N07-A and N07-B, near the northwestern boundary of the Installation (USFWS 1998). Because foraging habitat was insufficient on Fort Benning alone to support these clusters after the Land Exchange, the City designated enough area on the MTP as "protected areas" to provide the necessary habitat. The Memorandum of Agreement (MOA) and the restrictive covenants for the MTP (US Army and the Consolidated Government of Columbus 1999), as well as a RPM in the Land Exchange BO, state that Fort Benning will provide and manage foraging habitat for these 2 clusters so there will ultimately be sufficient foraging habitat on the Installation. Once foraging habitat is sufficient on Fort Benning alone, the City will be able to clear and develop the protected areas. Until that time, any clearing or development of land within the Protected Areas cannot bring foraging habitat below the current applicable RCW guidelines (US and Consolidated Government of Columbus 1999). Neither the BRAC/MCoE actions reanalyzed nor the proposed action will affect Clusters N07-A or N07-B. As an additional minimization effort, Fort Benning also increased its installation RCW population goal from 350 to 351 PBGs.

September 1994

The Service issued a BO to Ft. Benning (USFWS 1994). The BO concluded that ongoing military training and related activities at Ft. Benning jeopardized the continued existence of the Installation's RCW population. The reasonable and prudent alternative included increasing the number of RCW personnel, now 38, and improving management activities.

September 2002

The Service issued a BO based on the review of the Installation's RCW Endangered Species Management Plan (ESMP) (Ft. Benning 2002, USFWS 2002). The 2002 BO required ongoing management activities that were non-discretionary, including burning 90,000 acres of current and potential RCW habitat on a return interval of three years; repairing and preventing soil erosion in clusters; coordinating a training area inspection process incorporating natural resources personnel; and reducing fuel around cavity trees. Additionally, the 2002 BO on the ESMP considered training activities and its approval as the catalyst that allowed the Installation to adopt the Army's 1996 Management Guidelines for the RCW (USDOA 1996) and gave the Installation incidental take coverage for 41 known clusters in the A20 Impact Area.

July 2004

The Service issued a BO to the Installation for the construction, operation and maintenance of a Digital Multi-Purpose Range Complex (USFWS 2004). The project removed approximately 1,500 acres of upland pine habitat and wetlands. The BO concluded that jeopardy was not likely and seven PBGs were included in the incidental take statement. The ITS required activities to manage and monitor the seven PBGs that would be impacted as a result of the action, monitor RCW habitat that may degrade as training activities are implemented, and continue to protect cavity trees in all seven clusters during all stages of the project. Shortly after completion of the consultation, an inactive cluster became active and was included in the ITS so that a total of eight PBGs were expected to be incidentally taken by the action (USFWS 2006b).

August 2007

The Service issued a BO for the construction, operation and maintenance of Transformation actions, to include Base Realignment and Closure, Global Defense Posturing and Realignment, Army Modular Force and other stationing actions. Pre-project, the Installation managed roughly 86,000 acres of pine habitat for RCWs. Post-project, the remaining acreage roughly totaled 74,700 acres, of which 21,400 acres were in loblolly or shortleaf pine stands that were determined to be in high risk for pine decline syndrome. The BO concluded 32 PBGs would be included in the ITS, and that the project would not jeopardize continued existence of the species. Within weeks of completion of the consultation, the Army notified the Service that the BRAC project was being modified and would be mostly realigned into the MCOE. All the components and the expected incidental take were reassessed. Many of the components were deleted. Once the original BRAC project was re-configured, only eight PBGs were included in the original ITS.

May 2009

Sixteen of the projects assessed in the BRAC BO (USFWS 2007a) changed to such a degree that reanalysis of project impacts was warranted (Figure 2-1). New projects to support the MCoE were also proposed. A Biological Assessment and 2 Addenda (USACE 2008, 2009a and 2009b) were finalized for reanalyzed BRAC projects and for new MCoE projects. These documents

assessed cantonment projects, ranges, infrastructure and road construction projects, and heavy maneuver training areas. A USFWS JBO was issued on 29 May 2009 (USFWS 2009a) for the actions proposed in the MCoE Biological Assessment (USACE 2008) and Addenda (USACE 2009a, 2009b). The USFWS concluded that the proposed action was likely to "jeopardize the continued existence" of the RCW, but would not jeopardize the existence of relict trillium. A RPA was provided that would remove the likelihood of jeopardy to the RCW. This RPA was developed by the USFWS and the Army and altered the proposed action by: 1) canceling the proposed multi-purpose machine gun range (Project Number (PN) 65070), 2) managing 36 active RCW clusters in the A20 Dudded Impact Area that were not previously counted toward recovery, 3) migrating the heavy mechanized field components of the ARC off the Fiscal Year (FY) 09 installation boundary within 5 years of the training start date, and 4) rescoping 5 projects to minimize foraging habitat and cavity tree impacts.

The RPA was incorporated into the preferred alternative of the Final EIS for MCoE (USACE 2009c). The ROD to implement the preferred alternative, including the RPA and other terms of the BO, was signed by the executive director of the Army Installation Management Command on 4 August 2009 (USACE 2009d). In order to minimize the extent of "take," the RPA in the MCoE BO included RPMs that required: 1) shifting cluster centers away from project-related impacts to minimize cavity tree and harassment impacts and 2) development of a monitoring plan for RCWs affected by maneuver training. Additional Terms and Conditions of these RPMs included: 1) completion of a plan for shifting clusters by October 2009, 2) specific data to be collected for the heavy maneuver impact monitoring, 3) increased involvement of USFWS in the Fort Benning NEPA process, 4) expansion of the environmental awareness program to include all entities working on Fort Benning, including contractors, 5) specifications about reporting stand improvements necessary to avoid "take", 6) completion of a Habitat Impact Assessment Plan, 7) notification of training restriction violations to USFWS within 24 hours, 8) reports on the effectiveness of berms on small arms ranges in protecting RCW habitat, 9) development of a plan for responding to wildfires in the A20 Dudded Impact Area that could potentially affect clusters counting toward recovery and 10) monthly briefings to the USFWS on MCoE project and management status.

At the request of Service (USFWS 2009b and 2009c) in September and November 2009, Fort Benning personnel updated the FHAs in Addendum 2 of the MCoE Biological Assessment in order to subtract permanently non-forested habitat such as roads and wildlife food plots (Fort Benning 2009b). Subtraction of these areas did not change the number of clusters requiring "take" due to MCoE impacts; however, 2 clusters did change from one "take" classification to another (e.g., from group density to foraging habitat loss) in the process of replicating the analyses by strictly using the USFWS RCW Matrix (Fort Benning 2009b).

A Supplemental Biological Assessment (SBA) for MCoE was submitted to the Service in September 2010 in order to reinitiate formal consultation for MCoE project impacts to 2 new RCW clusters discovered after the completion of the MCoE BO (JCA 2010). Both new clusters were found to require "take," and the "take" classification changed for a few adjacent clusters. The USFWS BO for the SBA was completed on 22 February 2011 (USFWS 2011a).

The MCoE BO also determined that 2 projects would impact approximately 9.3% of the Randall Creek North relict trillium population (USFWS 2009a). Plants that would be impacted were transplanted to cooperating organizations (The Nature Conservancy (TNC) 2010a, 2010b) (see Section 5.1 for more information).

September 2010

A Biological Evaluation (BE) was also prepared by Fort Benning in September 2010 regarding design changes for the MCoE Multi-Purpose Training Range (MPTR) to be constructed at Hastings Range (Fort Benning 2010). No additional RCW "take" was necessary for this change.

June 2011

An Environmental Assessment was completed in 2011 (USACE 2011) for changes to a Heavy Brigade Combat Team complex evaluated in the MCoE BO (USFWS 2009a) and associated tank trail upgrades. The complex was previously evaluated in the Harmony Church area, but Fort Benning determined that Kelley Hill was a more appropriate location. No additional RCW "take" was determined to be necessary.

October 2011

The RPA in the MCoE JBO required the movement of the heavy maneuver component of the ARC off the FY 09 Installation boundary within 5 years of the training start date (USFWS 2009a). Since the ARC was first conducted in October 2011, land acquisition and any necessary construction would have to be completed and the land ready for use in October 2016.

The Training Land Expansion Program (TLEP) was developed in order to conduct the environmental analyses and real estate assessment required for Department of Defense (DoD) land acquisition. A Draft EIS was published in May 2011 that examined the environmental effects of 5 action alternatives, each of which met the program objectives of providing roughly 82,800 ac. of training land near the Installation (Fort Benning 2011a). In October 2011, Fort Benning announced that the program would be put on hold due to Army force structure and budget uncertainty (Fort Benning 2012).

October 2011

Another BE was completed by the Installation for changes in the implementation of the ARC Program of Instruction (POI) in October 2011, which did not necessitate any additional "take" for RCW impacts (Fort Benning 2011b). The POI did not change, but changes to how the course would be conducted at Fort Benning included the elimination of tracked vehicles from all phases of the course, reduction of the overall number of wheeled vehicles from 46 to 16-18 wheeled vehicles (Strykers and High Mobility Multi-purpose Wheeled Vehicles (HMMWVs), decrease in the overall number of days in the field per year from 110 to 40, and an increase in the overall area to be used for various portions of the course. The increased traffic on training area roads and trails could affect up to 29 RCW groups, 15 of which had not previously been analyzed for MCoE impacts. Fourteen of the 29 clusters were included in the ITS for MCoE; 6 of these 14 were not expected to receive additional impacts and 8 could receive additional impacts (Fort Benning 2011b).

Minimization measures proposed in the BE for the RCW included:

- Placement of fluorescent orange signs on trails that lead only to RCW clusters to inform Soldiers that they are off-limits.
- Monitoring RCW clusters within the Action Area in accordance with USFWS traffic disturbance guidance (USFWS 2006b).
- Use of GPS tracking devices on all or most tactical vehicles for the entire duration of at least the first iteration of the field exercises with increased vehicular traffic (Goldeneye and Blackjack operations). This monitoring would be conducted by USACE Engineer Research Development Center (ERDC) Construction Engineering Research Laboratory (CERL) personnel.
- Use of video and trail camera systems by CERL at up to 4 RCW clusters to monitor RCW response to traffic for the duration of at least the first Goldeneye and Blackjack operations.

With the minimization proposed, Fort Benning determined that the changes proposed may affect, but were not likely to adversely affect the RCW. No additional "take" was determined to be necessary.

With additional minimization measures proposed to prevent impacts to Georgia rockcress and Uchee Creek (Critical Habitat for the shinyrayed pocketbook mussel (*Hamiota subangulata*), no effect was expected for any additional Federally-listed species. The Service concurred with Fort Benning's findings in November 2011 (USFWS 2011b).

August 2013

Formal consultation began in 2013 for a Biological Assessment of potential impacts to RCW clusters within Training Area M06 from training being conducted at the Malone Small Arms Range Complex. One recently "budded" RCW cluster, M06-G, was determined to require "take" due to the number of bullet strikes occurring within the cluster area and foraging partition. Minimization measures taken included removal of steel skid plates at select ranges, elevating firing positions, lowering targets and construction of berms and barrier walls (JCA 2012). The USFWS BO was completed for this action 29 August 2013 (USFWS 2013a). None of the clusters addressed in the Malone Complex Biological Assessment are directly affected by the proposed action, but they are within the Action Area.

November 2013

A Biological Assessment was completed in November 2013 for potential ordnance impacts to up to 8 RCW clusters from small arms ranges on Dixie Road (JCA 2013). This assessment concluded that efforts made by the Army to minimize impacts to the RCW (including, but not limited to, raising firing points and improvements to berms on Farnsworth Range) were sufficient and no "take" was expected to be necessary. The USFWS BO was completed 27 June 2014 and no "take" was issued (USFWS 2014b).

The clusters affected by the Dixie Road Biological Assessment are within the Action Area for the proposed action herein, and Cluster A02-A was impacted by MCoE projects and was reanalyzed for the baseline.

3.1 Red-Cockaded Woodpecker within the Action Area

Fort Benning's RCW population is dispersed over most of the Installation, with the exception that there are no clusters located in the Alabama training compartments, the GHMTA or on Main Post.

3.1.1 Cluster Inspections and Management. RCW population demographics have been intensively studied on the Installation since 1994, resulting in an extensive population database. Of the 374 (number includes 5 splits that are yet to have territories delineated) clusters Fort Benning managed in 2014, 358 were active and not captured by another RCW group. The managed clusters include all clusters on the Installation with the exception of inaccessible and unmonitored clusters in dudded impact areas (managed clusters within impact areas are included in the 374 total). This total includes clusters addressed in a Service ITS and unmanaged clusters in the A20 Dudded Impact Area. Counting only clusters *not* in an ITS (except for UCs) and managed clusters in the A20 Impact Area, there were 266 managed clusters in 2014, 256 of which were active and not captured. Ninety-six clusters (96) are currently covered in an ITS, but are still managed according to the Army RCW Guidelines (DA 2007), and 90 of these were active and not captured in 2014 (Fort Benning, unpub. data). (Note: "take" has also been issued for 15 UCs, but since these clusters can count toward recovery goals, they are not included with other "taken" clusters in these calculations). Enough demographic data is collected at each managed cluster to determine the presence or absence of a PBG; all managed clusters inhabited by a PBG can be counted toward the Installation's RCW population goal (DA 2007) that are not included in a current ITS (J. Doresky, USFWS, pers. comm.). In 2014, Fort Benning documented 342 PBGs, of which 249 were in managed clusters and were not in an ITS (Fort Benning, unpub. data).

All managed clusters are inspected every spring (March-May) and recruitment clusters are inspected again in the fall (September-October). During cluster inspections, RCW biologists and technicians record comprehensive data about the cavity trees, habitat within the cluster area and overall management concerns. Data collected includes the activity status and suitability of all cavities, damage to cavity trees or surrounding habitat (including military training impacts), any cavity maintenance or provisioning needs, erosion issues and habitat management needs within the cluster area (i.e., midstory control, invasive exotic species or timber prescription recommendations). Any new cavity or start trees found are marked and entered into the RCW database (Fort Benning 2015, DA 2007).

Cavities are maintained or installed as needed in order to provide each managed cluster with at least 4 suitable cavities, per the Army Guidelines (DA 2007). Cluster areas are managed mechanically and/ or chemically as needed to keep the cluster free of midstory (hardwood or pine) (Fort Benning 2015). Habitat problems outside of the cluster area, training impacts and/or erosion problems are communicated to the appropriate entity for resolution.

3.1.2 Demographic Monitoring. Activities at clusters where color-banding (banding) occurs include banding all nestlings and adults, identifying previously banded adults, determining fledgling success and determining the sex of fledglings (Fort Benning 2015, DA 2007). Fort Benning monitors and bands RCWs in at least 25% of all active clusters on the Installation (64

clusters, 40 of which are not "taken"). As the population increases, more clusters are added to maintain a 25% sample (Fort Benning 2015, DA 2007). The Army Guidelines (DA 2007) also require monitoring recruitment clusters for 5 years after becoming active, however, Fort Benning currently monitors RCWs at 113 recruitment clusters (76 not "taken") on the Installation, regardless of how long they have been active. RCWs at an additional 90 clusters (55 not "taken") are monitored as a minimization effort for the DMPRC, BRAC and MCoE impacts. Therefore, a total of 71.4% (267) of the 374 managed clusters were monitored for potential banding in 2014, of which 171 were not in a current ITS. As mentioned above, 96 of the monitored clusters are in an ITS (Fort Benning, unpub. data).

3.1.3 Recruitment Clusters. According to the Army Guidelines (DA 2007), installations must add recruitment sites, within the limitations of available habitat, in order to achieve at least the optimum rate of population growth so as to meet their individual population goals. Recruitment clusters created for this purpose, previously termed PRCs, are now called Protected Clusters (PCs) and are subject to the same training restrictions and protection as natural/ preexisting RCW clusters (DA 2007). In 2014, Fort Benning had 98 clusters designated as PCs and 92 were active (Fort Benning, unpub. data). This total includes all protected clusters created for the purposes of attracting RCWs, although technically only those installed since the approval of the 1996 Guidelines on Fort Benning in 2002 are defined as "PRCs" or "PCs."

Additionally, UCs (previously termed SRCs), must be created, as available habitat allows, above and beyond the required number of PCs. UCs/SRCs are not subject to any training restrictions and are "invisible to training" (trees are painted less conspicuously than PCs), therefore they require coverage in an ITS. All SRCs were covered in an ITS after approval of the ESMC (up to 15 groups) (USFWS 2014a). This "take" applies only to training impacts; no construction activities can be undertaken in these areas without additional consultation with the Service. In 2014, Fort Benning had 15 clusters designated as UCs, all of which were active. Of these 15, Clusters L02-02R (now L06-A) and O03-07 (now O26-B) are also included in the MCoE ITS due to group density reduction and temporary indirect harassment, respectively (USFWS 2009a). When RCWs create a new natural cluster through budding/splitting or pioneering, the new cluster is designated as either a PC or UC depending on the military use of the area ("Installations may elect to count as either supplemental recruitment clusters (now UCs) or primary recruitment clusters (now PCs), those clusters where RCWs voluntarily move into a stand which has not been designated previously as a recruitment cluster") (DA 2007).

The Recovery Plan and 2007 Guidelines recommend a 5% average annual population growth in all RCW populations, to be achieved by providing a number of unoccupied recruitment clusters equal to 10% of the total number of active clusters (USFWS 2003a, DA 2007). In 2014, Fort Benning had 5 unoccupied recruitment clusters with 4 suitable cavities each that were not "taken," which is 2.0% of the number of active clusters on the Installation not captured or in an ITS (256) (Fort Benning, unpub. data). Due to a variety of management challenges including poor habitat conditions, recently restored stands and large-scale development for BRAC and MCoE projects, Fort Benning is limited in the areas that are suitable for new recruitment clusters.

3.1.4 Population Growth. The first comprehensive cluster inspections were completed between 1990 and 1992, although cavity trees have been marked with white paint since 1980 and have had metal numeric tags since 1982. The extent of information gathered was extremely limited by today's standards, but the 1990-1992 data revealed 171 active and 57 inactive clusters. When more formal monitoring began in 1994, there were 174 active clusters (Doresky et al. 2004). In 2014, the number of managed clusters (not in an ITS) had increased to 266, 256 of which were active and not captured and 249 of which contained PBGs (Fort Benning, unpub. data).

3.1.5 Surveys. Surveys for new RCW cavity trees on Fort Benning are scheduled so that 100% of potential RCW habitat on the Installation is surveyed every 10 years or 10% of the Installation is surveyed each year (Fort Benning 2015). Additionally, prior to any timber harvest or significant land-disturbing activity, the project site and a 0.5 mile radius around it are surveyed for new cavity trees. As new cavity trees are marked, cluster buffers are adjusted according to their level of protection (PC or UC) (DA 2007).

3.1.6 Role of Fort Benning in RCW Recovery. Fort Benning's RCW population is designated as one of 13 Primary Core Recovery Populations by the USFWS (2003). Primary Core Populations by definition will contain at least 350 PBGs at recovery (USFWS 2003a). However, as part of the minimization for the Land Exchange, the Army committed to supporting one additional PBG at Fort Benning for recovery. The Fort Benning RCW population is part of the Sandhills Recovery Unit (SHRU), which is a narrow band stretching from Fort Benning northeast to just north of the Fort Bragg Military Reservation in North Carolina. Recovery Units are distinguished by, and named for, the ecoregions in which they fall. Ecoregions are classified by physiographic characteristics such as land formation, climate, air and sea currents and distribution of species. Since these factors are believed to have influenced genetic adaptations over time, it is thought that by preserving species such as the RCW in each of its natural ecoregions, most of its genetic variation will be preserved. Maintaining populations in all ecoregions is crucial for the long-term viability of the species (USFWS 2003a).

While some core populations are comprised of RCW groups on multiple ownerships and locations within a geographic area, the nearest off-property RCW recovery population to Fort Benning is approximately 78 miles east-northeast of Columbus at the Piedmont National Wildlife Refuge/ Oconee National Forest (Secondary Core) (USFWS 2003a). The nearest RCW population to Fort Benning is on Enon and Sehoy Plantations (20-30 mi. west of Fort Benning); however, these properties do not have a recovery role defined in the Recovery Plan and will therefore not contribute to the species' delisting (USFWS 2003a). Portions of these properties will be protected in perpetuity and are enrolled in the Alabama RCW Safe Harbor Program. In 2014, there were 29 active RCW clusters in the Enon-Sehoy RCW population, each of which was inhabited by a PBG (E. Spadgenske, USFWS, pers. comm.).

In the 21 years of monitoring at Fort Benning, only 4 dispersals have been documented from off-Post: one from the Piedmont National Wildlife Refuge/ Oconee National Forest population, one from Fort Gordon (approximately 170 mi.) and, in 2008, 2 from the Silver Lake Tract, which was acquired by the GADNR as part of Southlands Forest (approximately 100 mi.) (M. Barron, Fort Benning, pers. comm.). In addition, one RCW that was banded on Fort Benning was observed in the Enon-Sehoy RCW population in 2008.

In order to be considered a genetically connected population, 1-10 immigrants are needed per generation (approximately 4 years for RCWs) (Reed et al. 1988), each way, in order to prevent loss of genetic polymorphism and heterozygosity within subpopulations (Mills and Allendorf 1996, Walters et al. 2004). Birds that have moved must survive to breed successfully. Due to the lack of significant exchange of genetic material between Fort Benning RCWs and clusters off the Installation, Fort Benning is the sole landowner contributing to the aptly named Fort Benning Primary Core Population.

3.1.7 <u>Manageable acreage/ ability to meet recovery guidelines in the future</u>. Using 2014 GIS and tabular data provided by Fort Benning, there were 369 managed and 8 unmanaged RCW clusters/groups with foraging habitat allocated in foraging habitat partitions. Five clusters contained 2 nesting groups of RCWs in 2014 ("split"); however, foraging partitions are typically not allocated until a newly established group has bred for 2 consecutive years. Of the 377 clusters with foraging partitions, not including permanently noncontiguous habitat and accounting for the "baseline" delayed training impacts of BRAC and MCoE, 153 partitions currently contain 150 or more ac. of contiguous, manageable habitat and can meet recovery guidelines, 70 have 120-150 ac. and may be able to meet recovery and 154 have < 120 ac and will not be able to meet recovery or Army guideline criteria

Based on current Fort Benning data and data from populations in the region with large populations that are close to, or have met, their population goals, Fort Benning estimated that 382 total managed clusters would be needed in order to yield 351 PBGs (Fort Benning 2015). Using current stand data and removing habitat that was projected to be lost over time due to training impacts in the MCoE and subsequent consultations ("baseline conditions"), Fort Benning biologists assembled 410 theoretical future foraging partitions on the Fort Benning landscape (Fort Benning 2015).

3.1.8 <u>Translocation</u>. Fort Benning is a valued participant in the Service's RCW Southern Range Translocation Cooperative (SRTC) and has donated a total of 205 juvenile RCWs to supplement other RCW populations since 1996. Since 1999, the Installation has donated an average of 12 juvenile RCWs per year. In 2014, Fort Benning donated 3 pairs of hatching-year RCWs to the Shoal Creek Ranger District, Talladega National Forest, Alabama and 3 pairs to Conecuh National Forest, Alabama. Prior to the establishment of the SRTC, Fort Benning also donated one bird to the Daniel Boone National Forest, Kentucky (Fort Benning, unpub. data).

3.1.9 <u>Intra-translocation</u>. In 1998, the Installation translocated two juvenile female RCWs within the Fort Benning population. Beginning in 2007 (post-MCoE), there were five intra translocations conducted, and in in 2013 there were nine (Fort Benning, unpub. Data).

3.2 Status Off-Post

The only known occurrence of an active RCW cluster within the off-Post Action Area is on the MTP, adjacent to the northwestern corner of the Installation. Although the majority of its foraging habitat was removed by winter 2005, this "taken" cluster contained a PBG in 2014 (JCA, unpub. data).

4 EFFECTS OF THE ACTION

4.1 Factors Considered for Effects Analysis

This section includes an analysis of the direct and indirect effects of the proposed action, including any interrelated or interdependent activities, on the listed species exposed to those effects. As stated previously, the analysis assumes that all "Conservation Measures" described as part of the proposed action will be implemented as described in the Enhanced Training BA. When the Service determines the effect of an action on a listed species, the following factors are considered (USFWS and NMFS 1998):

1. Proximity of the action to the species location or habitat. This factor is considered in the effects analyses for each rare species and particularly for the RCW in the harassment discussions.

2. Distribution of how and where the disturbance will occur. This factor is considered in all effects analyses

3. Timing of the action in relationship to the species' lifecycle. This is particularly relevant to RCW harassment analyses.

4. Nature of the effect: the effects of the action on elements of a species' life cycle, population size or distribution. This is captured in all analyses.

5. Duration of an action's effects: whether the effect will be short-term and will relax almost immediately (pulse effect), a sustained, long-term or chronic effect that will not be relaxed or a permanent effect that sets a new threshold for some feature of a species' environment (threshold effect). This factor is considered in the RCW harassment analyses as well, particularly in addressing the "temporary indirect harassment" impacts included in the MCoE RPA.

6. Disturbance frequency: the frequency of disturbance as it relates to the amount of time needed for affected species to recover from it. This factor is addressed by considering the training information provided for the baseline and for the proposed action.

7. Disturbance intensity: the effect of the disturbance as it affects the population or critical habitat as a whole, such as the percentage of a population that will be affected. This factor is considered for the RCW in the Population-Level analyses for the proposed action. Population-level analyses were not conducted for the revised BRAC/ MCoE baseline.

8. Disturbance severity: the effect of a disturbance on a population or species as a function of recovery rate (how long it will take for the species or habitat to recover from the effect). This is addressed by considering not only the immediate effects of

RCW foraging habitat loss, but also how the BRAC, MCoE and proposed actions will affect future RCW habitat.

4.2 Determination of Analysis

The Service and the Army agree, that since there have been changes to construction and training impacts evaluated in the MCoE BO (USFWS 2009a) that have been approved via the Installation's NEPA process and, when necessary, consultation with the Service, the post-project conditions presented in the MCoE BO and subsequent consultations no longer represent an accurate "starting point" for analyses of the proposed Enhanced Training action. Instead, the "post-MCoE" conditions described in this document reflect all construction and training impacts that have occurred to date and those additional training impacts that *would* occur in the future under the MCoE BO without implementation of the proposed action. Likewise, starting point personnel numbers reflect the current situation at Fort Benning, without accounting for the proposed transition of the 3rd BDE to an IBCT.

"Starting Point" for BRAC and MCOE (Habitat Impacts)

4.3 Construction Projects

Fort Benning's GIS stand data is updated after each timber prescription and all construction for BRAC and MCoE is considered to be complete. Therefore, the current forest stand data (September 2014) reflects all clearing that has been completed for BRAC and MCoE construction to date. For this reason, RCW foraging stands within "approved" (USFWS 2009a) MCoE limits of construction that were still in the GIS forest stand data were counted as viable RCW foraging habitat. No additional foraging habitat was removed from the stand data for MCoE construction.

4.4 Training Impacts

4.4.1 Range beaten areas. The only impacts outside of range limits of construction, but within the SDZs, are the beaten areas, described below.

Fort Benning reports that while most of the environmental impacts from ranges are within the range footprints, for some ranges, a substantial amount of ordnance impact commonly occur outside of the footprint, but within the SDZ. Those areas that are likely to receive enough impacts from live fire to result in tree mortality were identified by Fort Benning Range Division (RD) as "beaten areas" to be analyzed in the BRAC and MCoE documents. For analyses in the BRAC analyses (USACE 2007a), subsequent consultations (USACE 2008, 2009a and 2009b; JCA 2010, 2012 and 2013) and herein, beaten areas were analyzed as experiencing 100% loss of Threatened or Endangered species habitat over time from live fire impacts, although these areas will not be deliberately cleared of vegetation. The Installation reports that habitat loss could be overestimated or underestimated depending on actual ordnance impacts.

For the Installations MCoE analyses, the methodology used to create the beaten areas was revised from that used for BRAC; a full explanation of this methodology can be found in the MCoE Biological Assessment (USACE 2009). "Beaten areas" were delineated using line-of-sight analyses, which incorporated firing point locations, types of ordnance used (e.g., how far bullets are likely to travel with no backstop) and topography.

Beginning in 2012, CERL and Fort Benning biologists detected bullets (both via acoustical monitoring and visual observations of bullet strikes) outside of the projected beaten areas of a few western Oscar Range Complex ranges. In order to verify that the projected beaten areas were adequately capturing impacts to potential RCW foraging habitat, Fort Benning biologists conducted bullet strike surveys in April and May 2014 downrange of each Oscar range. Parallel line transects were walked by 2 teams and bullet impacts to vegetation were identified. The boundary between areas showing multiple visibly obvious wounds and consistent impacts to woody vegetation and areas without visibly obvious impacts where random, inconsistent impacts to woody vegetation resulting from ricochets could still be found upon close inspection was delineated. These delineations were compared against the projected MCoE and BRAC beaten areas by Fort Benning biologists. Based on their survey findings and communication with Range Division personnel, biologists then adjusted the polygons previously encompassing the projected beaten areas to include the areas delineated during the field surveys. Habitat "removals" were analyzed in the revised baseline based on these extensions of the beaten areas and were considered to have 100% habitat loss over time.

4.4.2 <u>Off-road heavy maneuver</u>. All areas where off-road heavy maneuver training would occur were considered to have 100% loss of RCW foraging habitat over time in the MCoE BO (USFWS 2009a). During the preparation of the MCoE Biological Assessment, USAARMS trainers determined that tracked vehicles would stay either $\geq$ 50 ft. or $\geq$ 200 ft. away from cavity trees in off-road heavy maneuver areas, depending on the area (see USACE 2008 for explanation). Keeping vehicles 50 ft. from tree trunks, or optimally from the edges of the crowns, minimizes root damage and greatly increases the chances of tree survival, especially in light of forest decline (L. Eckhardt, Auburn University, pers. comm.). For MCoE and the revised baseline analyses in this document, either a 50 ft. or 200 ft. buffer was delineated around all cavity trees within the off-road heavy maneuver portion of the SMTA, and these buffer areas were assessed as being used for dismounted maneuver only. No cavity tree or foraging habitat impacts were assessed for cavity trees within these buffers (USACE 2008, 2009b).

Since impacts from maneuver training would occur over time, most, if not all, of the Installation's predicted habitat loss has not yet occurred; therefore, this loss is <u>not</u> reflected in the current stand data. Although the removal of tanks and the reduction in the number of iterations of the ARC per year were proposed and approved by the Service in 2011, the anticipated "take" associated with the loss of foraging habitat in the off-road heavy maneuver areas did not change. For this reason, the off-road heavy maneuver areas removed for MCoE analyses were also removed from the current forest stand data for the revised baseline analyses.

For the proposed Enhanced Training action analyses, the Installation's analysis for all off-road heavy maneuver training in the SMTA is returned to pre-MCoE levels, if not lower. Unlike the

indirect harassment “takes” that would no longer be necessary after heavy maneuver training migrated off-Post, the anticipated level of “take” issued because of foraging habitat loss over time is not expected to change until many years of training and monitoring (mortality resulting from maneuver training would have been gradual). However, none of the off-road heavy maneuver training associated with the ARC has occurred in the SMTA as it was proposed and assessed in the MCoE consultation (USFWS 2009a).

Additionally, any heavy maneuver training the 3rd BDE might conduct in the SMTA (a) would have been considered as part of the environmental baseline for MCoE analyses and (b) will be eliminated with their proposed transition to an IBCT. For these reasons, the habitat within the MCoE off-road heavy maneuver areas is considered to be as stable as it had been prior to MCoE actions; therefore, it was not removed from the existing forest stand layer for the “post-Action” cluster level analyses.

4.5 Red-Cockaded Woodpecker (Cluster Level Analysis)

4.5.1 Data Sources

The most current forest stand data, RCW cluster activity and group status and 0.5 mi. radius foraging habitat partition (September 2014) data available were used for the cluster-level analyses (Fort Benning, unpub. data)

4.5.2 Classification of Habitat

Pine stands that met the Standard for Managed Stability or Recovery Standard guidelines were considered "suitable" foraging habitat. Stands meeting the MSS overstory requirements and with a sparse hardwood midstory, a moderately dense hardwood midstory that was low in height or a dense hardwood midstory that was low in height were also considered to be "suitable." "Potentially suitable habitat" was described as stands that met the minimum requirements, but exceeded maximum limits of pines in certain diameter at breast height (dbh) classes, hardwood midstory density or height and overstory hardwood density. These stands have the necessary pine basal area (BA) and would meet the revised MSS or RS with midstory removal, prescribed burning and/ or thinning. Stands with suitable overstory characteristics containing a moderately dense or dense midstory that was moderate or tall in height were in this potentially suitable category. Stands meeting all RS criteria except the herbaceous groundcover standard were classified as "potentially suitable" instead of "future potential." As Fort Benning continues to improve and manage pine habitat, these values are expected to naturally improve.

All manageable, pine-dominated stands that did not fall into the suitable or potentially suitable pine categories are classified as "future potential habitat." These stands will require time to meet the revised MSS or RS pine density (BA), size (dbh) and/ or age requirements.

Stands within dudded impact areas were inaccessible and were delineated by Fort Benning using aerial photography. The age of these stands was approximated by Fort Benning using historical stand data; however, no pine stem or BA data were available. Since this habitat makes up a considerable portion of foraging partitions within and adjacent to the A20 Dudded Impact Area, this habitat was included in foraging analyses as "minimally managed, pine-forested acres."

Areas that will not be suitable habitat for many years, if ever, and stands that are not managed by Fort Benning were classified as "non-foraging" habitat. This designation included hardwood drainages that would not typically support a pine dominated overstory regardless of management, cleared areas that have not been replanted in pines, upland hardwood stands that are not planned for conversion to pine, paved areas and open water.

4.5.3 Foraging Habitat Guidelines

Foraging habitat is assessed using both the MSS and the RS described in the Recovery

Plan (USFWS 2003a). The MSS is typically the threshold used for "take"; therefore, all projects impacting RCWs must be measured against the MSS criteria (USFWS 2006e). Since Fort Benning is a RCW Primary Core Recovery Population (USFWS 2003a), foraging partitions must also be analyzed using the RS in order to show that each cluster has the potential to meet the RS now or in the future (R. Costa, USFWS, August 2006)

The criteria used by the Matrix to determine the suitability of each stand using the MSS and RS were used for the FHAs in this document (USFWS 2006e). However, there are several parameters, either specific to Fort Benning or otherwise, that are necessary for evaluation of the stands and are not generated by the Matrix (Intergraph 2010). For this reason, the summary tables generated by the Matrix were not used, but instead attributes from the forest stand GIS data were used to create equivalent summary tables for each cluster in Microsoft® Excel™ (see the Enhanced Training Biological Assessment for tables).

The MSS requires a minimum of 3,000 square ft. (ft^2) of pine BA in stems > 10 inches (in.) dbh on at least 75 ac. of good quality foraging habitat contiguous to the cluster as defined below (USFWS 2003a):

a. Pine stands must be at least 30 years of age or older.

b. Average BA of pines ≥ 10 in. dbh must be between 40 and 70 ft^2/ac.

c. Average BA of pines < 10 in. dbh must be less than 20 ft^2/ac.

d. If a hardwood midstory is present, it must be sparse and less than 7 ft. in height.

e. Total stand BA, including overstory hardwoods, must be less than 80 ft^2/ac.

In addition to low and sparse hardwood midstories being suitable (criteria d. above), sparse-medium and sparse-tall midstories were also considered to be suitable in this assessment. This modification is acceptable as long as there is data to support stability and breeding success of the resident RCW groups (R. Costa, USFWS, pers. comm.).

Non-foraging habitat is not defined for the MSS in the Recovery Plan, however, the definition in the RS is: (1) any predominantly hardwood forest, (2) pine stands <30 years old, (3) cleared land such as agricultural lands or recent clearcuts, (4) paved roadways, (5) utility rights-of way and (6) bodies of water (USFWS 2003a).

During informal consultation with the Service, a Fort Benning-specific definition of noncontiguous habitat was determined based on movement data provided by Fort Benning (unpub. data).

The noncontiguous habitat thresholds used herein are defined as:

Foraging habitat separated by ≥ 200 feet (ft.) of permanently non-forested areas (i.e., bodies of water, roads, agricultural fields, drop zones, ranges, rights-of-way).

Foraging habitat separated by ≥ 300 ft. of forested non-foraging habitat ≥ 30 years old (hardwood, hardwood-pine stands).

Foraging habitat separated by ≥ 200 ft. of forested non-foraging habitat < 30 years old (hardwood; hardwood-pine stands).

Foraging habitat separated by ≥ 200 ft. of pine plantation/ regeneration < 15 years old.

Foraging habitat separated by ≥ 300 ft. of pine plantation/ regeneration ≥ 15 years old.

Pine-dominated stands ≥ 30 years old with a pine BA ≥ 20 ft^2 in stems ≥ 10 in. dbh are not considered to be contiguity barriers regardless of width, as defined in the MCoE Supplemental BA Methodology section (JCA 2010). Pine stands ≥ 30 years old with a pine BA< 20 ft^2 in stems ≥ 10 in. dbh are subject to the 300 ft. contiguity threshold. Service guidance since the Recovery Plan has established the following clarifications of the total stand BA requirement:

Overstory hardwood BA must be ≤ 10 ft^2/ac. This requirement was introduced via the parameters set up in the Matrix. Subsequent versions of the Matrix toolbar (Intergraph 2010), however, base the maximum hardwood BA on the current stand type, as described in the Recovery Plan (USFWS 2003a): ≤ 10 ft^2/ac. for longleaf pine dominated stands and ≤ 30 ft^2 for loblolly pine-dominated stands. According to Fort Benning's INRMP (Fort Benning 2015) and Service direction (R. Costa, USFWS, pers. comm.), Fort Benning is to be managed as a longleaf-based system and must therefore adhere to the 10 ft^2/ac. standard, regardless of the current dominant overstory species. Therefore, stands with an overstory hardwood BA > 10 ft^2/ac. that might be scored as "suitable" by the Matrix were considered to be "potentially suitable" in the analyses herein.

Total stand BA can exceed 80 ft^2/ac. if the maximum limits for overstory hardwood and pines < 10 inches dbh are not exceeded, and the BA in pines 10-14 inches dbh is 40-70 ft^2/ac. (in other words, the excess BA is comprised of pines ≥ 14 inches dbh) (USFWS 2011; W. McDearman, USFWS, pers. comm.; Intergraph 2010).

Other than age, the only minimum criteria for stand suitability (listed above) in the MSS is the BA in pines ≥10 in. dbh; all other criteria are maximum values that could be improved with management. Therefore, in most cases, if a stand meets the BA in pines ≥10 in. dbh criteria, it will be classified as either "suitable" or "potentially suitable" habitat.

During informal consultation with Service for the BRAC Biological Assessment, a revised MSS was authorized based on 10 years of demographic data provided by Fort Benning as described above. As of the 2014 ESMC BO (USFWS 2014a), Fort Benning can apply this revised standard to all RCW partitions, instead of only those affected by BRAC or MCoE. Using this revised standard, all MSS criteria as listed in the Recovery Plan (USFWS 2003a) and above must be met, except that the acceptable BA range for pines ≥ 10 in. dbh is expanded to include stands with an average BA of ≥ 30 ft^2/ac. The minimum acreage required is directly correlated to the average BA of stands within the foraging partition. Foraging partitions containing stands with a pine BA of 40 ft^2/ ac. would still require a minimum of 75 ac. of such stands; however, partitions with stands averaging 30 ft^2/ ac. BA would require 100 ac. of such stands to meet the minimum of 3,000 ft^2 total BA.

While "take" is not issued until habitat is brought below the MSS, recovery populations have a responsibility to manage toward the RS, and must ultimately meet the RS in order to meet one of the recovery criteria. Because Fort Benning is a Primary Core Recovery Population, foraging habitat impacts were also assessed using the RS, both for current suitability and the ability of each cluster to reach the RS in the future. The RS is commonly referred to as a "desired future condition" of habitat for all increasing RCW populations (USFWS 2005).

The RS requires a minimum of either 120 ac. or 200-300 ac. of good quality foraging habitat (as defined below) depending on the site indices of soils and dominant pine species within the foraging partition. For systems of high productivity (site index of 60 or more for the dominant pine species), the RCW Recovery Plan (USFWS 2003a) requires that a minimum of

120 ac. of good quality foraging habitat be provided for each group of RCWs. For sites with low productivity (site index below 60 for the dominant pine species), 200-300 ac. of good quality foraging habitat are required for each RCW group. The majority of soils on the Installation have a site index ≥ 60 (Fort Benning 2015), therefore 120 ac. was used to determine whether clusters currently meet the RS.

For assessing the ability of clusters to meet the RS in the future, clusters were categorized as having < 120 ac., 120-150 ac. or >150 ac. of contiguous pine habitat. In order to meet the RS with 120 ac., each acre must meet the RS, which can only be accomplished using single-tree selection forestry (USFWS 2003a). For group selection, which more closely describes Fort

Benning's timber management strategy, the Recovery Plan (USFWS 2003a) suggests allocating and managing at least 150 acres per cluster. For future planning purposes, Fort Benning has generally used 150 ac. per cluster as a goal in order to allow for flexibility with timber harvests, construction, training impacts, natural disasters and other future events.

Good quality foraging habitat according to the RS is defined as follows (USFWS 2003a):

1. There must be a minimum of 18 pine stems ≥ 14 in. dbh per ac. that are ≥ 60 years old. The minimum BA for these pines is 20 ft^2/ ac.

2. The BA for pines from 10-14 in. dbh must be from 0-40 ft^2/ ac.

3. The BA of pines <10 in. dbh must be <10 ft^2/ ac. and <20 stems/ ac.

4. The minimum combined BA for categories 1 and 2 above is 40 ft^2/ ac.

5. Native herbaceous species must cover at least 40% or more of the ground.

6. No hardwood midstory exists, or if present, is sparse and less than 7 ft. in height.

7. Canopy hardwoods are absent or less than 10% of the number of canopy trees in longleaf forests and less than 30% of the number of canopy trees in loblolly, short leaf and other pine forests.

8. All habitat must be within 0.5 mi. of the center of the cluster.

9. Foraging habitat must not be separated by more than 200 ft. of non-foraging habitat, as defined above with the MSS criteria.

The RS guidelines follow the same modified, Fort Benning-specific definitions of noncontiguous habitat as defined in the MSS section above.

4.5.4 Cavity Tree Impacts

The cavity stage, shape and activity for all RCW cavities were provided by Fort Benning.

RCW cavity trees that could not be protected within the maneuver heavy use areas and trees within range beaten areas will not necessarily be cut, but were analyzed as "removed" because of the likelihood of tree mortality resulting from construction and training impacts.

4.5.5 Harassment

Chances of RCW nest failure as a result of harassment increase relative to the distance of the nest tree from a proposed project type and activity level, nest stage (incubating eggs vs. nestlings), activity, historic level of disturbance compared to increased level, the type of vehicles/ equipment used and the number of years the cavity tree has been the nest tree (USFWS

2006b (as pertaining to traffic disturbance)). In order to assess harassment impacts from training, RCW GIS data and 2014 aerial photography (Fort Benning unpub. data) were used to determine the number of cavity trees containing complete, suitable cavities within 50 ft. and 200 ft. of existing tank trails and/or the SMTA; location of nest tree; number of suitable cavities

> 200 ft. from existing tank trails and/or the SMTA; and recent reproductive success. Cavity trees within 50 ft. of completed BRAC and MCoE projects were also analyzed. No harassment impacts were analyzed for dismounted or wheeled traffic, based on findings from CERL's vehicle tracking data and associated RCW reproductive data (CERL 2013, 2014a, 2014b).

4.6 Cluster Level Analysis

Cavity trees. As stated above, clusters were considered to be "taken" by cavity tree loss if cavity trees were removed, less than 4 suitable cavities remained and there was an insufficient number of suitable trees for artificial cavities to replace the lost cavities. Additionally, clusters were expected to be "taken" if 4 suitable cavities remained, but were separated from each other by the proposed action to an extent that they were not likely to be used by resident RCWs.

Foraging habitat. Foraging habitat was totaled as described above and was assessed according to the MSS as defined in the Recovery Plan (USFWS 2003a) and the modified, Fort Benning population-specific MSS developed with the Service. The MSS "take" standard requires a minimum of 3,000 ft^2 of pine BA in stems > 10 in. dbh on at least 75 ac. of good quality foraging habitat that is contiguous to the cluster. The modified MSS differs only by the inclusion of stands with a minimum of 30 ft^2/ ac. in pines ≥ 10 in. dbh. The minimum acreage necessary to meet 3,000 ft^2 of pine BA in stems > 10 in. dbh varied depending on the BA of stands within each partition, but was between 75 and 100 acres. Clusters that did not meet the modified MSS criteria post-action were expected to require "take."

As stated above, pine stem and BA data for clusters within and adjacent to the A20

Dudded Impact Area was unavailable. If the impacted partition was not below the minimum acreage standard (75 ac.) when forested acres were considered, it was not considered to require "take." Clusters were analyzed in the MCoE BA and addenda (USACE 2008, 2009a and 2009b) for foraging habitat impacts when pine decline was considered (refer to these documents for descriptions and results). Analyzed clusters in the MCoE ITS (USFWS 2009a) for pine decline were reassessed to determine if the amount of pine BA > 10 in. dbh had increased over time.

Clusters with over 20% increase in pine BA, not attributed to a significant increase in foraging partition size, were considered not "taken" in this document (most likely the result of faulty data sets from previous tallies).

Harassment. Clusters were expected to require "take" due to harassment impacts if, because of the proposed action, there would be < 4 cavity trees that are not within 50 ft. (direct harassment) or 200 ft. (indirect harassment) of tank trails. Additionally, harassment "take" was expected in clusters where ≥ 4 cavity trees remained, but cavity trees were isolated from one another as a result of proposed actions.

4.7 Group Level Analysis

Any of the impacts listed may result in Incidental Take of a RCW group. Such "take" can, in turn, indirectly affect surrounding RCW groups. The distribution and density of RCW clusters on the landscape is a key factor in the overall stability and health of a RCW population. Reducing cluster density causes populations to be more vulnerable to demographic stochasticity

(Crowder et al. 1998, Walters et al. 2002b). This potential impact is captured under the group and neighborhood level analyses as "takes" under the definition of harm.

Retaining sufficient foraging habitat alone does not ensure the persistence of a RCW group. The continued occupation of a cluster not only depends on the amount of foraging habitat available, but also depends on the density of active clusters around it (Hooper and Lennartz 1995). Research has shown that the more aggregated RCW clusters are, the higher the probability of persistence, even with substantial foraging habitat loss (Crowder et al. 1998, Letcher et al. 1998). RCW groups in moderately dense to dense populations have been shown to be less sensitive (i.e., in group size and productivity) to drastic loss in habitat than in sparser populations with seemingly more available foraging habitat (Hooper and Lennartz 1995).

Therefore, when active RCW clusters are to be "taken" for a project, it is necessary to assess the impact of that loss on the demographic stability of neighboring RCW groups. This is done by examining the density of active RCW clusters on the landscape.

For the group density analyses, clusters having $\geq$ 4.7 active clusters within 1.25 mi. were considered healthy and were given a "dense" designation. Clusters with 2.6 to 4.6 active clusters within 1.25 mi. were considered to have "moderate" density. Clusters with $\leq$ 2.5 active clusters within 1.25 mi. were considered "sparse" and therefore more vulnerable to abandonment because of lack of emigration/ immigration (Conner and Rudolph 1991a).

For each cluster analyzed, the number of active clusters within 1.25 mi. of its cluster center was calculated. All clusters with a cluster area (minimum convex polygon of all cavity trees and a 200 ft. buffer around them) within 1.25 mi. of the target cluster's center were included in the cluster density totals.

A 1.25 mi. radius buffer was drawn around the center of every active cluster for which post-Action density totals could change with the updated baseline cluster-level analyses. For each cluster analyzed, the number of active clusters within 1.25 mi. of its cluster center was calculated, revised baseline- and post-Action. All clusters with a cluster area (minimum convex polygon of all cavity trees and a 200 ft. buffer around them) within 1.25 mi. of the target cluster's center were included in the cluster density totals. For 2014 baseline and post-Action totals, an active cluster was *not* counted if it was expected to be "taken" due to cavity tree loss, foraging habitat impacts (including pine decline) or direct harassment; clusters "taken" due to indirect harassment, group density reduction or neighborhood-level impacts were included in the totals at this level of analysis.

Clusters with ≥ 4.7 active groups within 1.25 mi. post-project were considered to be unaffected by MCoE and BRAC, as updated. Clusters whose densities were reduced from "dense" or "moderate" to "sparse" were considered to be affected and therefore vulnerable to abandonment as a result of BRAC and MCoE, as updated. Clusters that were "sparse" pre- BRAC/ MCoE were considered to be "taken" due to group density if project-related habitat removals caused the subject cluster to become more isolated and thus more vulnerable to abandonment.

4.8 Neighborhood Level Analysis

Guidance set forth by the Service (USFWS and NMFS 1998) states that "when determining an action area, it must include the project site and all the areas surrounding the activity up to where the effects will no longer be felt by the listed species." The intent of the "neighborhood analysis" is to account for the potential negative impacts of a project on RCW demography through habitat loss or fragmentation at the neighborhood level.

A 2.20 mi. buffer was drawn around every impacted active RCW cluster. This distance is the average successful dispersal distance based on 19 years of demographic monitoring (1994-2013) by Fort Benning biologists (J. Neufeldt, Fort Benning, pers. comm.). The neighborhood analysis first looked at the density of RCW groups within a 1.25 mi. radius of clusters that were not directly affected by projects, but were adjacent to clusters that were impacted. If the post project analysis showed less than 2.5 RCW groups within a 1.25 mi. radius of the subject cluster, it was considered "taken". **Note**: only "takes" resulting from cavity tree impacts, foraging habitat loss, direct harassment and group density reduction were considered during the neighborhood analyses. Clusters "taken" due to indirect effects, including indirect harassment and foraging habitat loss combined with pine decline, were counted as still on the landscape for the revised baseline and post-Action (not directly "taken") for the neighborhood analysis.

4.9 Population Level Analysis

Per Service guidance (USFWS 2006e), all projects are to be analyzed at the population level, regardless of whether or not there is "take" at the partition level. One of the purposes of the analyses at the group and neighborhood levels is to assess how the proposed action will indirectly affect the demographic health of the Fort Benning RCW population. Loss, degradation or fragmentation of RCW foraging habitat can result in smaller clutch sizes, reduced fledging success and reduced group size as habitat becomes insufficient (Conner and Rudolph 1991a). The population level analysis considers the ability of the Fort Benning RCW population to survive and grow to meet its population goal (351 PBGs, 382 total managed clusters). Clusters affected by the proposed action were assessed to determine if they would have sufficient contiguous pine habitat to eventually meet the RS.

4.10 Recovery Unit Level Analysis (Jeopardy Threshold)

The jeopardy analysis occurs at the Recovery Unit level (USFWS 2003a, USFWS 2006e).

According to the 1998 USFWS Consultation Handbook (USFWS and NMFS 1998), when determining jeopardy, the Service is to analyze the impact of the action in question on the species as a whole. To facilitate this analysis, Recovery Units can be identified in a species Recovery Plan that will provide a smaller-scale definition of Jeopardy. According to the 2003 Recovery Plan (USFWS 2003a):

"Given that actions that appreciably impair or preclude the capability of such a recovery unit from providing the survival and recovery functions identified for it in a recovery plan may therefore represent jeopardy to the species, the Consultation Handbook indicates the jeopardy standard may be applied to individual recovery units identified as necessary for survival and recovery of the species in an approved final recovery plan."

For the Sandhills Recovery Unit, the Recovery Plan (USFWS 2003a) lists 2 Primary Core Populations (Fort Benning and NC Sandhills East), 1 Secondary Core Population (SC Sandhills) and 1 Essential Support Population (NC Sandhills West). The Recovery Unit Level Analysis focuses on the ability of Fort Benning to retain its function as one of the Primary Core Populations in the Sandhills Recovery Unit.

4.11 EFFECTS ANALYSIS - RESULTS

Reanalyzed Effects Analysis from BRAC/ MCOE Actions

General types of direct or indirect effects that were considered for the BRAC or MCoE analyses are discussed and updated below. The type of potential effect and, where applicable, "take," is indicated. Projected "take" of RCWs resulting from BRAC or MCoE actions may be under the definition of harass, harm, kill, wound or combinations thereof. Impacts of baseline BRAC and MCoE actions to specific RCW clusters are described in their respective BO's.

4.11.1 Loss of RCW Cavity Trees

Clearing and project construction (direct or indirect - harm). RCW cavity trees were removed within several clusters for construction of cantonment projects, roads or ranges, but only Clusters O09-04 and O09-05 had *all* cavity trees removed and the resident RCWs translocated (although not effective). All other clusters with cavity tree impacts are still managed (Fort Benning, unpub. data). Construction of all BRAC and MCoE projects are now complete, so no additional loss of trees is expected from construction. There was also potential for cavity tree mortality due to impacts from soil erosion and/or compaction from timber operations or construction; however, this effect has not been observed and appears to have been avoided with minimization measures. Impacts to cavity trees were reduced from those predicted in some cases by avoiding cavity trees during design. An example of this is Cluster S02-A, which was assessed as having 7 of its 9 cavity trees removed for a BRAC project (USACE 2008), but all cavity trees were avoided during design.

Operation and maintenance (direct or indirect - harm). Prior BRAC and MCoE documents also assessed potential cavity tree mortality after project construction due to training impacts from live fire (accounted for in range "beaten areas"), accidental damage to tree boles from vehicles, soil compaction (root damage) or sedimentation from maneuver training exercises.

Cavity trees were previously considered lost where impact avoidance and/or adherence to Army RCW Guidelines (DA 2007) were deemed infeasible. At this time, O19-A is the only cluster with cavity trees within a projected beaten area of a BRAC or MCoE range; all of its cavity trees are within the Ware Range beaten area. Two cavity trees have been found in the off-road heavy maneuver area of the SMTA since the MCoE BO (USFWS 2009a), so they do not have the 50 or 200 ft. buffers. An assumption was made for analyses that these cavity trees would be avoided like the other cavity trees in these clusters; therefore, no cavity tree impacts were considered for off-road heavy maneuver areas.

4.11.2 Loss of RCW Foraging Habitat

Clearing and project construction (direct - harm). Construction of BRAC and MCoE projects and potential mortality related to construction staging areas and/or timber operations were expected to have a detrimental effect on certain RCW groups by reducing the amount of foraging habitat available within their foraging habitat partitions. Loss of foraging habitat is accounted for in the updated FHAs below. Since all BRAC and MCoE construction is complete (excluding two "wish-list" projects that may occur later in time (2020)), all habitat cleared for construction has been removed from the forest stand GIS data; therefore, no additional removals were considered for construction. Operation and maintenance (indirect - harm). As with cavity trees, foraging habitat within range beaten areas and off-road heavy maneuver areas was analyzed to experience 100% loss over time. Foraging habitat within these areas was subtracted from the affected clusters' baseline foraging habitat totals.

4.11.3 Noise and Harassment

The use of heavy equipment, increased vehicular traffic on infrequently used roads, live fire, maneuvering, other training exercises and increased pedestrian traffic can have a "harassment" impact on resident RCW groups (Delaney et al. 2002, 2004; Hayden et al. 2002; Walters et al. 2005; Perkins 2006). This is of particular concern if the activity occurs within 200 ft. of active RCW cavity trees, especially during the nesting season. Disturbance around cavity trees can cause RCWs to flush from their cavities and, if the disturbance continues or there is insufficient daylight, to open-roost. This leaves RCWs unprotected from environmental hazards such as inclement weather and predators. Disturbance can also cause more frequent flushing while incubating eggs and/or reduced brooding and feeding of nestlings, which can cause a reduction in the number of young fledged or nest failure (Delaney et al. 2004, 2011; USFWS 2003a, 2006b; J. Walters, NC State University, unpub. report).

4.11.3.1 Ranges: Over the past 30 years, several research projects have assessed the potential effects of military noise, primarily from large-caliber ranges and artillery simulators, on certain elements of RCW fitness (Jackson and Parris 1995, Doresky et al. 2001, Pater et al. 1999, Delaney et al. 2002, Hayden et al. 2002, J. Walters, NC State University, unpub. report).

Generally, the results of these works have demonstrated that noise events (particularly those that are historic and relatively constant) from military activities have little to no effect on RCW reproductive success. Delaney et al. (2011) found that in clusters normally exposed to moderate to high levels of military training, RCWs did not flush as a result of M16 rifle (5.56 mm) live fire from 22,960 ft. down to 656 ft. from the nest tree. In the same study, they also introduced artillery simulator and blank 0.50 cal. machine gun fire to RCW groups that were only habituated to low or moderate levels of military activity. RCWs did not flush from their nests or alter their nestling feeding schedules when either weapon was fired >500 ft. away. At 400 ft., RCWs flushed in response to 16.7% of the 0.50 cal. blank fire events and this frequency increased as the distance from the nest tree decreased. On average, RCWs returned to their nests within 6.3 minutes after 0.50 cal. firing tests, with a maximum of 26.8 minutes. Even with the disturbances, reproductive success of experimental groups was not statistically different in number of eggs, fledglings, failed nests or other metrics.

Of the 2 large caliber ranges analyzed for BRAC and MCoE (Ware and Brooks Ranges), there are no cavity trees within 500 ft. of firing points.

4.11.3.2 Training: Past research has suggested that other military training (e.g., heavy maneuver training or light infantry) and/or civilian activity in the vicinity of RCW nest trees can also cause more frequent flushing and affect incubation, brooding and/or feeding of nestlings. In the populations studied, however, such disturbances did not conclusively have a detrimental effect on overall population health or demography (Hayden et. al. 2002; Delaney et al. 2004, 2002; 2011; Perkins 2006). In one study (Hayden et al. 2002), only a very small proportion of the clusters studied (3 of 51) was found to have a high risk of exposure to military training. This sample, however small, revealed lower nesting and fledging success than clusters studied with less frequent activity. A model used in this study suggested that the population's probability of extinction would increase if a larger proportion of the Installation were subject to "high" military/civilian activity (Hayden et al. 2002).

Delaney et al. (2011) observed 81 vehicle (military and civilian) passes in close proximity to RCW nest trees and observed 2 flushing events: one from a convoy of BFVs within 98 ft. and the other from a civilian vehicle within 49 ft. In general, RCWs did not flush from nests when vehicle traffic was >164 ft. away (Delaney et al. 2011).

Almost all training restrictions established in the 1996 Army RCW Guidelines were retained in the 2007 Guidelines, largely with the justification that training impact studies to date have not shown a negative impact from training on overall population health or stability. Activities that adhere to these guidelines do not appear to cause long-term adverse effects on RCW demography (USFWS 2007b, Hayden et. al. 2002, Perkins 2006, Beaty et. al. 2004). In the BRAC and MCoE documents and herein, direct harassment impacts were predicted to occur in areas where training or construction could not adhere to the Guidelines.

It was noted in the MCoE B A and BO (USACE 2009b and USFWS 2009a) that the studies cited above were conducted on installations with "average" training loads. Large-scale, intense maneuver training such as that projected and analyzed for the MCoE was not considered in the development of the Army Guidelines because no such training existed on installations with RCWs at that time (T. Hayden, CERL, pers. comm.). As described, most training courses within the MTAs were expected to be repeated between 11 and 23 times a year, with up to 40% of the training conducted at night. This disturbance would be neither historic nor constant. Although RCWs may have become acclimated over time, the increased training could have initially caused nest failures or cause RCWs to open-roost. For this reason, the Army and the Service determined that adherence to the Guidelines may not be sufficient to prevent adverse harassment impacts to 24 clusters where cavity trees would be within 200 ft. of tank trails and off-road heavy maneuver areas. These clusters were included in the MCoE ITS for indirect harassment (USFWS 2009a) (17 temporary, 7 permanent, as described below).

USAARMS training actions in the SMTA was previously projected to initially expose up to 8 clusters to indirect harassment that would not otherwise require "take" for MCoE actions. Conducting the ARC in the SMTA were also projected to displace the training previously conducted by the 3rd BDE, which would then become concentrated in the northern portion of the NMTA (USACE 2009b). This displaced training was projected cause up to 6 additional clusters in the NMTA to require "take" due to indirect harassment, along with 4 clusters along tank trails outside of MCoE construction projects. With the migration of the ARC off-Post, the SMTA would again be available for use by the 3rd BDE, although the NMTA would still be used to a lesser extent. Training levels in both the SMTA and NMTA are assumed to return to pre-MCoE levels; therefore, the 14 clusters being affected by indirect harassment in these areas, as well as one cluster being impacted by increased traffic between Harmony Church and the SMTA and 2 clusters between the SMTA and Hastings Range, would no longer require "take" (USACE 2009b).

4.11.3.3 <u>ARC 2011</u>: Changes to the implementation of the POI for the ARC were assessed in 2011, which included expansion of the areas used for training, a decrease in the number of iterations per year and a decrease in the number and type (wheeled only) of vehicles used (Fort Benning 2011b). A total of 43 RCW clusters were assessed for potential harassment impacts, 20 of which were already included in an ITS. Of the 43 clusters assessed, 17 clusters (16 active, 1 inactive) had roads within 200 ft. of RCW cavity trees that could not be avoided during training exercises (other roads within cluster areas would be marked as off-limits to vehicles); 4 of these 17 clusters were already under an ITS for another action. An additional 7 of the 43 clusters assessed clusters were included in the ITS for MCoE actions and were not assessed further. Therefore, up to 23 active clusters (16 + 7) were determined to have potential for harassment impacts from the ARC, 11 of which were already included in an ITS (Fort Benning 2011). As a result of these projections, a "may affect, not likely to adversely affect" determination was reached and no additional "take" was found to be necessary by the Service (USFWS 2011b).

As a minimization measure for the ARC changes, Fort Benning arranged for CERL to track vehicle movement in order to determine the amount of time spent within 100 or 200 ft. of RCW cavity trees. All High Mobility Multipurpose Wheeled Vehicle's and Strykers (no tracked vehicles have been used for the ARC at Fort Benning to date outside of the GHMTA) were equipped with GPS vehicle tracking units during the 2 phases of the ARC that included mounted exercises (Goldeneye and Blackjack phases).

Seven iterations of the ARC were conducted in FY12, all of which were monitored using vehicle tracking units (CERL 2013). In FY13 and FY14, only the events occurring within the RCW nesting season (March-July) were monitored; this included 3 events in 2013 and 2 in 2014 (CERL 2014a, b).

For all monitored events during the 2012, 2013 and 2014 nesting seasons, an average of 3.58 hours was spent per event moving within 200 ft. of any documented RCW cavity tree.

Movement within 200 ft. of active cavity trees averaged 2.93 hours per event and movement within 200 ft. of nest trees averaged 1.10 hours per event (CERL 2013, 2014a and 2014b).

According to the Army Guidelines (DA 2007), wheeled traffic is allowed within any distance of cavity trees when on existing roads, trails and firebreaks and ≥50 ft. when off-road. A caveat with the CERL study is that the vehicle tracking devices only record movement; the units turn off when they are stationary. Therefore, an important assumption when considering the tracking data is that additional time was not spent stationary within the 200 ft. buffers; per the Guidelines, the only non-transient vehicle activity allowed within clusters is vehicle maintenance (up to 2 hours) (DA 2007).

As previously mentioned, "take" was issued for 8 clusters in the SMTA because, although the Army Guidelines would be followed, training within cluster areas would occur at such a frequency and intensity that the Guidelines may not have been sufficient to prevent adverse impacts from indirect harassment (USFWS 2009a). With the 2011 reduction in the number of vehicles and number of iterations per year and the expansion of the training compartments used (Fort Benning 2011b), wheeled vehicle traffic within cluster areas has not occurred at the frequency evaluated for in the MCoE consultation. However, the training described in the ARC BE was still an increase from pre-MCoE levels; also, no change in "take" status was requested in the ARC BE. For these reasons, "take" previously issued for indirect harassment impacts was considered to still be necessary in the revised Enhanced Training baseline analyses unless clusters had been shifted away from the disturbance since the MCoE BO (USFWS 2009a).

These "takes" will be considered further in the analyses of the proposed action.

4.12 Reduction of RCW Cluster Density

Any of the impacts listed above may result in "take" of a RCW group. Such "take" can, in turn, indirectly affect surrounding RCW groups. The distribution and density of RCW clusters on the landscape is a key factor in the overall stability and health of a RCW population. Reducing cluster density causes populations to be more vulnerable to demographic stochasticity (Crowder et. al. 1998, Walters et. al. 2002b). This potential impact is captured under the group and neighborhood level analyses as "takes" by the definition of harm.

4.13 RCW Habitat Fragmentation

Also related to the density and distribution of RCW clusters is habitat contiguity (Conner and Rudolph 1991a, Ferral 1998, Jackson and Parris 1995, Conner and Rudloph 1994, USFWS 2003a), which is important at the foraging partition-level as well as at the landscape-level. Large clear-cuts ($\geq$ 25 acres) in particular are known to negatively affect RCW fitness, dispersal and foraging behavior either through direct habitat loss or habitat fragmentation (Conner and Rudolph 1991a, Ferral 1998, Jackson and Parris 1995, Conner and Rudolph 1994, USFWS 2003a, Kappes and Walters, pers. comm.). Areas of unsuitable RCW habitat can inhibit an individual group's ability to utilize foraging habitat within its partition and may inhibit the ability of RCWs to disperse from their natal territory to vacant breeding niches. Territory isolation by habitat fragmentation decreases the likelihood of clusters being inhabited by PBGs because dispersing females often fail to locate solitary males or find the territories substandard. This problem is a function of the number and spatial arrangement of active clusters. Home range follows and radio telemetry work conducted via Virginia Polytechnic Institute (VA Tech) have indicated that female RCWs of any age are reluctant to cross openings between 492 and 2,132 ft., and will not cross openings of > 2,132 ft. Male RCWs are not as affected by forest gaps (J. Walters, VA Tech, pers. comm.).

Large introduced forest gaps can also cause surrounding stands to become susceptible to wind damage. The largest sites cleared for BRAC and MCoE projects were Ware and Brooks stationary tank ranges. The potential fragmentation impacts of these and other proposed actions on RCW dispersal are considered in the group, neighborhood and/or population-level analyses depending on whether the affected clusters are directly impacted by projects.

4.14 Edge Effect

A related fragmentation issue is a condition termed "edge effect." As forested land is cleared, areas that were once forest interior become the edges of openings. In general, vegetation on the edge of clearings is considerably denser than vegetation in the adjacent forest interior.

The increased sunlight and increased probability of disturbed soils cause stand edges to be more susceptible to encroachment from exotic species such as kudzu, Japanese honeysuckle and

Chinese privet (*Ligustrum sinense*), as well as aggressive native early-successional plants. Such species typically do not carry fire well, and when burned, the edge is often burned less severely, resulting in limited woody plant mortality. This problem is exacerbated when the edge is a road, building or other urban development where use of prescribed fire is difficult or prohibited. The edge effect poses a problem to RCW management by increasing midstory density in foraging and nesting habitat.

An additional problem associated with forest edges or developed areas is increased cavity competition with kleptoparasites such as southern flying squirrels (*Glaucomys volans*), European starlings (*Sturnus vulgaris*), eastern bluebirds (*Sialia sialis*), red-headed woodpeckers (*Melanerpes erythrocephalus*) and red-bellied woodpeckers (*Melanerpes carolinus*). Large gaps and forest edges and have been noted to cause local increases in the number of avian predators (Jackson and Parris 1995) and could lead to increased predation of birds crossing gaps or foraging near edges.

Although rare, window strikes have been documented in the North Carolina Sandhills in areas where RCWs inhabit developed areas (pers. comm., J. Carter, JCA). Impacts of this nature are indirect and are captured in the Population Level Analyses with fragmentation issues.

4.15 Reduction of Habitat Quality/ Population Health

One of the purposes of the analyses at the group and neighborhood levels is to assess how the proposed action could indirectly affect the demographic health of the Fort Benning RCW population. Loss, degradation or fragmentation of foraging habitat can result in smaller clutch sizes, reduced fledging success and reduced group size as habitat becomes insufficient (Conner and Rudolph 1991a).

RCW demographic monitoring was increased as a minimization effort for the BRAC and MCoE actions, in part, so that issues such as this would be detected.

4.16 Disturbance and Removal of Groundcover

Herbaceous groundcover has been found to have a strong relationship with RCW fitness, as it contributes to healthy arthropod abundance (McKellar et al. 2014). In areas with substantial ground disturbance, which can be off-road heavy maneuver, wheeled traffic or even pedestrian traffic, there may be too little groundcover and pine straw to carry fire. The absence of fire and severely reduced groundcover can affect arthropod abundance and, in turn, RCW forage availability. While hardwood midstory encroachment should not be a problem in heavy traffic areas, it may be in the "islands" of habitat that remain within the maneuver trail networks. This indirect effect was captured in MCoE analyses and in the baseline analyses by considering foraging habitat within the off-road heavy maneuver areas to be 100% lost over time. Although increased foot traffic can have a substantial impact to groundcover as well, dismounted training associated with baseline BRAC and MCoE actions was not considered to have a quantifiable impact.

4.17 Elimination of Existing and Planned RCW Recruitment Sites

The loss of cavity trees at existing recruitment and/or inactive clusters could cause Fort Benning to have fewer than the recommended number of available unoccupied clusters (10% of the number of active clusters) needed to achieve the desired 5% annual population growth (DA 2007, USFWS 2003a). Although "take" is not issued for inactive clusters, cavity tree and foraging habitat losses within existing inactive cluster partitions are described in the Cluster Level Analyses.

Regardless of whether or not a project is within a current RCW foraging partition, any removal of pine habitat could restrict or prohibit Fort Benning's ability to meet the population goals established in the ESMC for each Habitat Management Unit, thereby inhibiting the Installation's ability to meet recovery. Since Fort Benning's INRMP and ESMC (Fort Benning 2015) were updated after BRAC and MCoE actions had been completed, biologists were able to incorporate those actions into their plan for RCW recovery. This potential indirect effect is discussed further in the Population Level Analyses.

4.18 Live-Fire through Foraging Areas

Trees downrange of firing points and outside of range footprints were left in their then current structure and density to act as a buffer for the surrounding area. Over time, however, these trees were expected to, and have, incurred some degree of stress and mortality from fired munitions hitting or shearing trees, either directly or from ricochet. As trees die there will be less of a buffer, potentially allowing ordnance to travel further and thereby expanding the areas of impact.

For the purposes of quantifying this potential tree mortality, the areas that Fort Benning Range Division personnel expected to experience the most damage were delineated as "beaten areas" for each range (USACE 2008). Foraging habitat within the projected beaten areas was assessed as experiencing 100% loss of habitat over time. As with foraging habitat loss due to construction, this impact could result in "take" by harm. Although unlikely, "take" of RCWs in the form of wound or kill could also result from live fire through foraging areas. Berms constructed for ranges in the Oscar Range Complex have reduced this impact and have helped retain potential foraging habitat that would otherwise not be available to existing and future RCW groups.

4.19 Access for Timber Management, RCW Management, Prescribed Fire and Wildfire Control

The arrival of the USAARMS resulted in a substantial increase in the number of field training exercises and ranges being active on any given day. With existing ranges being used more often, new ranges becoming operational and increased activity and/ or concentration of Armor, Cavalry and Infantry units conducting FTXs, access too many areas by Fort Benning natural resource managers has become more limited and requires close coordination with Fort Benning Range Division. Fort Benning has been able to manage and monitor RCW clusters and habitat to the extent required by the USFWS through the completion and implementation of the BRAC Access Plan (Fort Benning 2008c).

4.20 Impact to Minimization Efforts from Past Section 7 Consultations

BRAC and MCoE actions had the potential to interfere with minimization for past projects such as the DMPRC by "taking" clusters monitored as minimization. Where applicable, this potential indirect effect is assessed in the individual cluster discussions.

4.21 Fort Benning as a RCW Donor Population

Fort Benning has participated in the USFWS RCW Southern Range Translocation Cooperative (SRTC) as a donor population since 1998. Prior to the establishment of the MCoE, Fort Benning typically supplied 10-16 RCWs to the SRTC annually. The MCoE action was expected to reduce the number of RCWs Fort Benning was able to donate annually; this deficit, if not covered by other RCW donor populations, could indirectly impede the growth of other populations in the SRTC. Since participation in the SRTC is a discretionary conservation action, the Installation cannot be "penalized" for reducing its contributions as a result of MCoE. The impact of BRAC and MCoE, however, on those RCW populations that would otherwise be supplemented with Fort Benning RCWs was acknowledged and considered by the Service (USFWS 2009a). The primary recipient populations in recent years have been the Shoal Creek and Talladega Ranger Districts, Talladega National Forest in AL; the DeSoto and Chickasawhay Ranger Districts, DeSoto National Forest in Mississippi and Enon Plantation, AL. To date, the BRAC and MCoE actions have not caused a reduction in the number of RCWs Fort Benning has been able to contribute to the SRTC.

4.22 Cluster Level Analysis (*Post-Baseline*)

Loss of RCW Foraging Habitat analyzed

FHAs and analyses of cavity tree impacts were conducted for 117 clusters with impacts within their 0.5 mile radius foraging habitat partitions.

Cluster A02-A (A04-01): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was expected to be minimally impacted by a MCoE project, however it was not analyzed and the project was not constructed. No cavity trees were taken or impacted by

BRAC or MCoE projects (USACE 2008, 2009a and 2009b). There was no Incidental Take associated with this project.

The 2014 MSS baseline foraging habitat totals were 2,807.66 ft^2 of pine BA on 60.49 acres of suitable habitat, 299.05 ft^2 of pine BA on 9.23 acres of potentially suitable habitat and 482.74 ft^2 of pine BA on 38.43 acres of future potential habitat. There were 3,484.16 ft^2 of pine BA on 77.66 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster A02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat. The 2014 RS baseline foraging habitat totals were 7,073.61 ft^2 of pine BA on 185.81 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster A02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future. The 2014 Incidental Take status (none) was unchanged.

Cluster A10-D: This cluster had a PBG from 2011 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

Cluster A10-D was directly impacted by MCoE projects, however it was not analyzed because it was formed in 2011. Adjacent Cluster A10-A originally had "take" for pine decline, but when A10-D formed in 2011, the project impacts fell within the new Cluster A10-D partition. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). This cluster was reanalyzed due to partition changes. The 2014 MSS baseline foraging habitat totals were 3,391.47 ft^2 of pine BA on 71.34 acres of suitable habitat and 353.21 ft^2 of pine BA on 13.25 acres of future potential habitat. There was no potentially suitable habitat. Cluster A10-D does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 3,147.44 ft^2 of pine BA on 64.78 acres of potentially suitable habitat and 597.24 ft^2 of pine BA on 19.81 acres of future potential habitat. There was no suitable habitat. Cluster A10-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

The 2014 Baseline Incidental Take status (none) was changed to take by pine decline. This cluster was formed post-construction. However, the majority of foraging habitat associated with Cluster A10-A now within the A10-D foraging partition. The take formerly associated with A10-A was transferred to this cluster.

Cluster A11-A (A08-01): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,186.12 ft^2 of pine BA on 104.01 acres of suitable habitat and 0.00 ft^2 of pine BA on 13.05 acres of future potential habitat. There was no potentially suitable habitat. Cluster A11-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 4,186.12 ft^2 of pine BA on 117.06 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster A11-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially The 2014 Incidental Take status (none) was unchanged.

Cluster A11-B (A08-03): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,897.25 ft^2 of pine BA on 121.10 acres of suitable habitat and an unknown amount of pine BA on 17.33 acres of minimally managed pine habitat. There was no potentially suitable or future potential habitat. Cluster

A11-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 4,897.25 ft^2 of pine BA on 121.10 acres of future potential habitat and an unknown amount of pine BA on 17.33 acres of minimally managed pine habitat. There was no suitable or potentially suitable habitat. Cluster A11-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster A11-C (A08-04): This cluster had a PBG from 2010-2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,401.38 ft^2 of pine BA on 34.18 acres of suitable habitat and an unknown amount of pine BA on 82.42 acres of minimally-managed pine habitat. There was no potentially suitable or future potential habitat. Cluster A11-C meets the modified MSS requirements if minimally-managed pine acreage is included.

The 2014 RS baseline foraging habitat totals were 1,401.38 ft^2 of pine BA on 34.18 acres of future potential habitat and an unknown amount of pine BA on 82.42 acres of minimally managed pine habitat. There was no suitable or potentially suitable habitat. Cluster A11-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient acreage of manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster A13-A (A09-04R): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

Cluster A13-A was not directly or indirectly impacted by BRAC or MCoE projects due to minimization efforts. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Therefore, no Incidental Take was necessary (USFWS 2009a).

The 2014 MSS baseline foraging habitat totals were 2,180.12 ft^2 of pine BA on 61.87 acres of suitable habitat, 1,065.58 ft^2 of pine BA on 28.91 acres of potentially suitable habitat and 616.39 ft^2 of pine BA on 44.49 acres of future potential habitat.

Cluster A13-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 3,862.09 ft^2 of pine BA on 135.27 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster A13-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future. The 2014 Incidental Take status (none) was unchanged.

Cluster A13-B (A09-05): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary (USFWS 2009a).

No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,435.06 ft^2 of pine BA on 118.48 acres of suitable habitat and 59.75 ft^2 of pine BA on 4.25 acres of future potential habitat. There was no potentially suitable habitat. Cluster A13-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 4,494.81 ft^2 of pine BA on 122.73 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster A13-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster A14-B (A09-03R): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

The cluster split during the 2014 breeding season into 2 groups (A14-B and A14Bb) and both groups successfully nested within 815 ft. of one another (tag #s 6951 and 6636). Cluster A14-B fledged 2 of 2 nestlings and Cluster A14-Bb fledged 2 of 3 nestlings in 2014.

Construction of the Good Hope MTA Range Access Road (PN 69358) resulted in impacts within 50 ft. of one cavity tree and 50 to 200 ft. of a second cavity tree (USACE 2009a). The cluster was considered a "take" by indirect harassment. The cavity tree within 50 ft. of the impact has been deleted from the current Fort Benning database. Currently 2 active cavity trees (tag #6636 (Cluster A14-Bb nest tree) and #5875) are within 50-200 ft. of tank trails. There are 5 trees (tag #s 2563A, 2564A, 4854, 5875 and 6951 (2014 nest tree)) with suitable active cavities > 200 ft. from roads.

The 2014 MSS baseline foraging habitat totals were 4,100.81 ft^2 of pine BA on 111.63 acres of suitable habitat, 375.84 ft^2 of pine BA on 8.68 acres of potentially suitable habitat, 0.00 ft^2 of pine BA on 8.53 acres of future potential habitat and 6.09 acres of pine habitat not managed for RCWs. Cluster A14-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 351.33 ft^2 of pine BA on 5.75 acres of potentially suitable habitat, 4,125.32 ft^2 of pine BA on 123.09 acres of future potential habitat and 6.09 acres of pine habitat not managed for RCWs. There was no suitable habitat. Cluster A13-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (take- indirect harassment) was unchanged. There were not enough suitable cavities (≥ 4 suitable cavities) > 200 ft. from tank trails for either cluster. If Cluster A14-Bb has a PBG during the 2015 breeding season it will need to be reanalyzed.

Cluster BB01-A (BB05-01R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by BRAC, MCoE and ARC projects, but no Incidental

Take was necessary (USFWS 2009, 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,050.59 ft^2 of pine BA on 114.88 acres of suitable habitat, 1.668.01 ft^2 of pine BA on 32.23 acres of potentially suitable habitat and 39.01 ft^2 of pine BA on 2.54 acres of future potential habitat. Cluster BB01-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 560.74 ft^2 of pine BA on 12.98 acres of potentially suitable habitat and 5,196.87 ft^2 of pine BA on 136.67 acres of future potential habitat. There was no suitable habitat. Cluster BB01-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster BB01-B: This cluster was discovered in June 2012 and had a PBG from 2013 to 2014.

It contained 6 cavity trees in various stages of completion and suitability. This cluster did not exist when BRAC/MCoE projects were being analyzed and project construction was completed before the cluster was formed (Fort Benning, unpub. data).

This cluster was analyzed because it is located in the BRAC/MCoE Action Area.

The 2014 MSS baseline foraging habitat totals were 5,886.12 ft^2 of pine BA on 141.57 acres of suitable habitat, 368.63 ft^2 of pine BA on 9.79 acres of potentially suitable habitat and

677.95 ft^2 of pine BA on 32.53 acres of future potential habitat. Cluster BB01-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 6,932.70 ft^2 of pine BA on 183.89 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster BB01-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future. The 2014 Incidental Take status (none) was unchanged.

Cluster BB08-A (BB03-01R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster had incidental take for construction actions in the BRAC BO and insufficient suitable and potentially suitable foraging habitat totals pre-project (USFWS 2009a). Cluster BB08-A also had possible harassment impacts due to a low level of traffic increase as stated in the ARC BE (Fort Benning 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,330.90 ft^2 of pine BA on 40.90 acres of suitable habitat, 1,055.62 ft^2 of pine BA on 23.90 acres of potentially suitable habitat and

1654.58 ft^2 of pine BA on 111.20 acres of future potential habitat. There were 349.90 ft^2 of pine BA on 8.90 acres of suitable and potentially suitable, but temporarily non-contiguous habitat. Cluster BB08-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 838.62 ft^2 of pine BA on 17.70 acres of potentially suitable habitat and 3,552.38 ft^2 of pine BA on 167.20 acres of future potential habitat. There was no suitable habitat. Cluster BB08-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster C01-B (C01-03): This cluster had a PBG from 2010 to 2012 and was captured in

2013 and 2014 by C01-A. It had 5 cavity trees in various stages of completion and suitability.

Cluster CO1-B was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The Repair of Existing Area Training Roads (Phase

I) had impacts within 51 to 200 feet of 1 cavity tree that has since been removed from the Fort Benning CB database. There are currently 4 trees with suitable cavities > 200 ft. from roads.

The 2014 MSS baseline foraging habitat totals were 592.27 ft^2 of pine BA on 16.07 acres of suitable habitat and 543.03 ft^2 of pine BA on 79.94 acres of future potential habitat. There was no potentially suitable habitat. Cluster C01-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 149.20 ft^2 of pine BA on 3.73 acres of suitable habitat and 986.10 ft^2 of pine BA on 92.28 acres of future potential habitat. There was no potentially suitable habitat. Cluster C01-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster C02-A (C01-05): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was not impacted by MCoE or BRAC projects at the time of the MCoE

BA/BO and therefore was not analyzed. However this partition was shifted to the left in 2014 and was minimally impacted by a MCoE project. No pine-forested habitat was removed. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,223.36 ft^2 of pine BA on 52.65 acres of suitable habitat and 0.00 ft^2 of pine BA on 0.20 acre of future potential habitat. There was no potentially suitable habitat. Cluster C02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,222.74 ft^2 of pine BA on 52.63 acres of potentially suitable habitat and 0.62 ft^2 of pine BA on 0.22 acre of future potential habitat.

There was no suitable habitat. Cluster C02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

Because the partition shifted post-BRAC/MCoE construction, the 2014 Incidental Take status (none) was unchanged.

Cluster C02-B (C01-06): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects

(USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,127.01 ft^2 of pine BA on 87.79 acres of suitable habitat and 108.45 ft^2 of pine BA on 35.37 acres of future potential habitat. There was no potentially suitable habitat. Cluster C02-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 137.91 ft^2 of pine BA on 3.19 acres of potentially suitable habitat and 3,097.55 ft^2 of pine BA on 119.97 acres of future potential habitat. There was no suitable habitat. Cluster C02-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster D03-A (D15-01): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster successfully fledged 2 of 2 nestlings in 2010, 3 of 3 nestlings in 2011, 2 of 2 nestlings in 2012, 4 of 4 nestlings in 2013 and 3 of 3 nestlings in 2014. "Take" was issued for D03-A for harassment impacts from the DMPRC (USFWS 2004).

This cluster was analyzed for BRAC impacts and did not require "take" from direct or indirect BRAC impacts (USACE 2007). This cluster was near one small trail that was not used by the ARC; therefore, no "take" was issued in the ARC BE (USFWS 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently, all cavity trees are > 200 ft. from tank trails and the SMTA.

The 2014 MSS baseline foraging habitat totals were 7,131.75 ft^2 of pine BA on 164.11 acres of suitable habitat, 1,102.36 ft^2 of pine BA on 60.97 acres of future potential habitat and an unknown amount of pine BA on 6.65 acres of minimally-managed pine habitat. There was no potentially suitable habitat. Cluster D03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 552.28 ft^2 of pine BA on 8.33 acres of potentially suitable habitat, 7,681.83 ft^2 of pine BA on 216.75 acres of future potential habitat and an unknown amount of pine BA on 6.65 acres of minimally-managed pine habitat. There was no suitable habitat. Cluster D03-A currently does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status for BRAC or MCoE actions (none) is unchanged. This cluster still has "take" for DMPRC impacts (USFWS 2004); however, its cluster center has moved since the DMPRC BO (USFWS 2004) and is currently 0.61 mile from the DMPRC clearing limits. It has also successfully bred for the last 5 years.

Cluster D06-B (D05-04R): This cluster had a PBG from 2010 to 2012, was inactive in

2013 and had a PBG in 2014. Cluster D06-B contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). This cluster is near one small trail that was not used by the ARC; therefore, no "take" was issued in the ARC BO (USFWS 2011b). Currently one inactive, unsuitable cavity tree (tag #6619) occurs within the SMTA. Four suitable cavity trees (tag #s 5408A, 5410A, 5411A and 7445) are > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 3,969.12 ft^2 of pine BA on 95.22 acres of suitable habitat, 348.54 ft^2 of pine BA on 9.42 acres of potentially suitable habitat and 171.21 ft^2 of pine BA on 20.61 acres of future potential habitat.

Cluster D06-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,868.61 ft^2 of pine BA on 42.57 acres of potentially suitable habitat and 2,620.26 ft^2 of pine BA on 82.68 acres of future potential habitat. There was no suitable habitat. Cluster D06-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster D07-A (D05-02R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability. This cluster successfully fledged 2 of 3 nestlings in 2010, 1 of 3 nestlings in 2011, 2 of 2 nestlings in 2012, 3 of 3 nestlings in 2013 and 3 of 3 nestlings in 2014.

This cluster was impacted by MCoE projects and required "take" due to "Indirect Harassment" impacts (USFWS 2009a). D07-A was also potentially impacted by harassment from ARC training, but no "take" was issued in the ARC BO (USFWS 2011b). Currently 5 active cavity trees (tag #s 4645A, 4646A, 5270A (2014 nest tree), 5657 and 7443) are within 50-200 ft. of the SMTA. One tree (#4648A) with an active, suitable cavity is > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 3,309.11 ft^2 of pine BA on 88.02 acres of suitable habitat and 258.38 ft^2 of pine BA on 11.82 acres of future potential habitat. There was no potentially suitable habitat. Cluster D07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 389.86 ft^2 of pine BA on 7.57 acres of potentially suitable habitat and 3,177.63 ft^2 of pine BA on 92.27 acres of future potential habitat.

There was no suitable habitat. Cluster D07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take- indirect harassment) was unchanged.

Cluster D09-A (D17-02): This cluster was captured by D09-B in 2008, had a PBG from 2009 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

Cluster D09-A was impacted by BRAC and MCoE projects, but the cluster was inactive, so the partition was deleted prior to analyses (USACE 2008). This cluster was directly impacted by a MCoE road widening project for Plymouth and Underwood Roads (PN 69743) and construction was completed between February 2011 and December 2012. This cluster was potentially impacted by harassment from ARC training, but no "take" was issued in the ARC BO (USFWS 2011b). Currently all cavity trees are > 200 ft. from tank trails and the SMTA.

The 2014 MSS baseline foraging habitat totals were 2,505.56 ft^2 of pine BA on 68.77 acres of suitable habitat, 212.39 ft^2 of pine BA on 6.34 acres of potentially suitable habitat and

1,058.28 ft^2 of pine BA on 100.31 acres of future potential habitat. There were 359.82 ft^2 of pine BA on 10.97 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster D09-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 462.33 ft^2 of pine BA on 10.86 acres of potentially suitable habitat and 3,674.72 ft^2 of pine BA on 175.53 acres of future potential habitat. There was no suitable habitat. Cluster D09-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly no take) was changed to foraging habitat take. Plymouth Rd. and Underwood Rd., which traverse the partition, were widened for the SMTA. Because the cluster was inactive in 2008, habitat within the partition was reallocated to Cluster D09-B in the MCoE BA (USACE 2008), allowing D09-B to meet the MSS guidelines. When D09-A was reactivated in 2009 it became subject to Incidental Take due to pre-project habitat deficiencies. Project construction was not completed until 2012.

Cluster D09-B (D17-03): This cluster had a PBG in 2008, was captured by D09-C in 2009, was captured by D09-A in 2010 and had a PBG from 2011 to 2014. The cluster contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). This cluster is near one small trail that is not used by the ARC in the SMTA; therefore, no "take" was issued for the ARC BE (USFWS 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,226.60 ft^2 of pine BA on 50.53 acres of suitable habitat, 12.40 ft^2 of pine BA on 0.37 acre of potentially suitable habitat and 601.48 ft^2 of pine BA on 30.17 acres of future potential habitat. Cluster D09-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,044.93 ft^2 of pine BA on 45.37 acres of potentially suitable habitat and 795.55 ft^2 of pine BA on 35.70 acres of future potential habitat. There was no suitable habitat. Cluster D09-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly no take) was changed to foraging habitat take. In 2008, Cluster D09-A (D17-02) was captured by D09-B and foraging habitat for D09-A was reallocated to adjacent clusters. Cluster D09-A was reactivated in 2009 and has remained active since then.

Cluster D09-C (D17-04R): This cluster had a PBG in 2010 and 2012, was inactive in

2011 and 2013 and captured in 2014 by D09-B. It contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). This cluster is near one small trail that was not used by the ARC in the SMTA; therefore, no "take" was issued for the ARC BE (USFWS 2011b). The construction of the Southern Training Area Infrastructure had impacts within 50 ft. of one active cavity and 50 to 200 ft. of 3 inactive cavity trees (USACE 2008). Currently one inactive cavity tree (tag #5273) is within the SMTA and has a 50 ft. buffer, and 4 cavity trees (tag #s 2637A, 2676A, 4942A, 5012) are within 50-200 ft. of the SMTA. One cavity tree (tag #2638A) with an active, suitable cavity is > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 2,474.04 ft^2 of pine BA on 58.24 acres of suitable habitat, 177.55 ft^2 of pine BA on 5.30 acres of potentially suitable habitat and 529.26 ft^2 of pine BA on 48.03 acres of future potential habitat. Cluster D09-C does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,905.12 ft^2 of pine BA on 43.85 acres of potentially suitable habitat and 1,275.73 ft^2 of pine BA on 67.72 acres of future potential habitat. There was no suitable habitat. Cluster D09-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future. The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster D11-A (D11-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster impacted by MCoE projects and required temporary "take" due to indirect harassment until the ARC moved off-post (USFWS 2009a). The construction of the Southern

Training Area Infrastructure and Upgraded Tank Trails had impacts within 50 to 200 ft. of all the cavity trees (8 total) in the cluster (USACE 2008). No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 4,305.35 ft^2 of pine BA on 91.57 acres of suitable habitat, 68.11 ft^2 of pine BA on 2.19 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 46.09 acres of future potential habitat. Cluster D11-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 3,189.59 ft^2 of pine BA on 58.30 acres of potentially suitable habitat and 1,183.87 ft^2 of pine BA on 81.55 acres of future potential habitat. There was no suitable habitat. Cluster D11-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster D11-B (D11-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the ARC moved off-post (USFWS 2009a). The construction of the Southern Training Area Infrastructure had impacts within 50 to 200 ft. of 2 cavity trees (USACE 2009b). There is currently one cavity tree with 2 active cavities (tag #6947) within 50 ft. and 2 inactive cavity trees (tag #s 5655 and 4240A) within 50-200 ft. of tank trails. There are 3 cavity trees (tag #s 3852A, 5697 and 6948) with suitable cavities > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,953.81 ft^2 of pine BA on 111.19 acres of suitable habitat, 3.11 ft^2 of pine BA on 0.10 acre of potentially suitable habitat and 292.25 ft^2 of pine BA on 14.59 acres of future potential habitat.

Cluster D11-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,364.16 ft^2 of pine BA on 42.25 acres of potentially suitable habitat and 2,885.01 ft^2 of pine BA on 83.63 acres of future potential habitat. There was no suitable habitat. Cluster D11-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster D12-A (D10-01): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The construction of the Southern Training Area Infrastructure and Upgraded Tank Trails had impacts within 50 to 200 ft. of 2 cavity trees (USACE

2008). There are currently 2 inactive cavity trees (tag #s 2823 and 5461A) and one active cavity tree (tag #5762A) within 50-200 ft. of tank trails. There are 4 cavity trees (tag #s 4004, 5716A, 7283 and 7362) with suitable cavities that are > 200 ft. from trails.

The 2014 MSS baseline foraging habitat totals were 22.80 ft^2 of pine BA on 0.74 acre of suitable habitat, 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,482.60 ft^2 of pine BA on 87.94 acres of future potential habitat. Cluster D12-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,505.40 ft^2 of pine BA on 88.68 acres of future potential habitat.

There was no suitable habitat. Cluster D12-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster D13-A (D17-01): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to group density reduction. Cluster D13-A was near one small trail that was not used by the ARC; therefore, no "take" was issued in the ARC BO (USFWS 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,116.09 ft^2 of pine BA on 127.31 acres of suitable habitat, 458.53 ft^2 of pine BA on 10.84 acres of potentially suitable habitat and 1,577.66 ft^2 of pine BA on 141.88 acres of future potential habitat. Cluster D13-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 458.53 ft^2 of pine BA on 10.84 acres of potentially suitable habitat and 5,693.75 ft^2 of pine BA on 269.19 acres of future potential habitat. There was no suitable habitat.

Cluster D13-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (taken at group level) was unchanged. The cluster currently has no active, untaken clusters within 1.25 miles of its cluster center.

Cluster D14-A (D16-01): This cluster had a PBG from 2010 to 2014 and had 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). Cluster D14-A is near one small trail that is not used by the ARC; therefore, no "take" was issued in the ARC BO (USFWS 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,857.00 ft^2 of pine BA on 49.41 acres of suitable habitat, 2,508.32 ft^2 of pine BA on 56.65 acres of potentially suitable habitat and 1,188.95 ft^2 of pine BA on 115.91 acres of future potential habitat. Cluster D14-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,453.92 ft^2 of pine BA on 30.29 acres of potentially suitable habitat and 4,100.35 ft^2 of pine BA on 191.68 acres of future potential habitat. There was no suitable habitat. Cluster D14-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was changed to group level take. It has one untaken cluster (at the cluster level) within 1.25 miles of its cluster center.

Cluster D14-B (D16-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The construction of the Southern Training Area Infrastructure had impacts within 50 to 200 ft. of one cavity tree (USACE 2008). Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 2,844.95 ft^2 of pine BA on 181.33 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,844.95 ft^2 of pine BA on 181.33 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster D15-A (D06-01R): This cluster had a PBG from 2010 to 2014 and had 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects

(USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,179.37 ft^2 of pine BA on 35.09 acres of suitable habitat, 772.61 ft^2 of pine BA on 15.93 acres of potentially suitable habitat and 990.79 of pine BA on 62.33 acres of future potential habitat. Cluster D15-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,942.77 ft^2 of pine BA on 113.35 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D15-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster D19-A (D08-01R): This cluster had a PBG from 2010 to 2012 and a solitary male in 2013 and 2014 (Table 7-3). There were 5 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,321.29 ft^2 of pine BA on 38.82 acres of suitable habitat, 342.63 ft^2 of pine BA on 7.29 acres of potentially suitable habitat and 167.88 ft^2 of pine BA on 52.83 acres of future potential habitat. Cluster D19-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 20.78 ft^2 of pine BA on 0.48 acre of potentially suitable habitat and 1,811.02 ft^2 of pine BA on 98.46 acres of future potential habitat.

There was no suitable habitat. Cluster D19-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster E06-A (E04-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the ARC moved off-post (USFWS 2009a). The construction of the

Southern Training Area Infrastructure and Upgraded Tank Trails had impacts to all of the cavity trees in the cluster (within 50 to 200 ft. of 3 cavity trees, within 50 ft. of 2 cavity trees and 3 inactive cavity trees were removed).

Currently, tank trails occur within 200 ft. of all cavity trees within the cluster. Two active cavity trees (tag #5109 and 6826) and one inactive cavity tree (tag #5185) are within 0 to 50 ft. and 6 cavity trees (3 active (tag #2804, 6150, 6945(2014 nest tree)) and 3 inactive (tag #180, 3957 and 5108)) are within 50 to 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 4,151.92 ft^2 of pine BA on 101.58 acres of suitable habitat, 224.77 ft^2 of pine BA on 4.55 acres of potentially suitable habitat and 860.76 ft^2 of pine BA on 50.54 acres of future potential habitat. Cluster E06-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,474.97 ft^2 of pine BA on 26.73 acres of potentially suitable habitat and 3,762.48 ft^2 of pine BA on 129.94 acres of future potential habitat. There was no suitable habitat. Cluster E06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster E07-B (E03-02): This cluster had a PBG from 2013 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a).

No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,401.65 ft^2 of pine BA on 135.74 acres of suitable habitat, 1,023.72 ft^2 of pine BA on 30.06 acres of potentially suitable habitat and 1,223.52 ft^2 of pine BA on 111.37 acres of future potential habitat. Cluster E07-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 7,648.89 ft^2 of pine BA on 277.17 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster E07-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster F02-A (F01-02): This is a recruitment cluster that was inactive from 2004 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but was not analyzed due to inactivity (USFWS 2009a). This cluster was also not assessed for the ARC BE due to inactivity (Fort Benning 2011b).

The 2014 MSS baseline foraging habitat totals were 330.01 ft^2 of pine BA on 8.56 acres of suitable habitat, 521.95 ft^2 of pine BA on 12.48 acres of potentially suitable habitat and 148.80 ft^2 of pine BA on 37.99 acres of future potential habitat. Cluster F02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 232.09 ft^2 of pine BA on 5.36 acres of potentially suitable habitat and 768.67 ft^2 of pine BA on 53.67 acres of future potential habitat.

There was no suitable habitat. Cluster F02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

This cluster has been inactive since 2004 and therefore there is no take status.

Cluster F05-A (F02-01R): This cluster had a PBG from 2010 to 2014 and had 6 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently, all of the cavity trees are within the SMTA and have a 50 ft. buffer.

The 2014 MSS baseline foraging habitat totals were 311.43 ft^2 of pine BA on 6.89 acres of suitable habitat, 35.81 ft^2 of pine BA on 0.77 acre of potentially suitable habitat and 991.68 ft^2 of pine BA on 80.74 acres of future potential habitat. Cluster F05-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 366.35 ft^2 of pine BA on 8.08 acres of potentially suitable habitat and 972.57 ft^2 of pine BA on 80.32 acres of future potential habitat.

There was no suitable habitat. Cluster F05-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster HCC-A: This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster did not exist when BRAC and MCoE projects were being analyzed (Fort Benning, unpub. data). Proposed Harmony Church intersection improvements, the

Good Hope MTA Range Access Road, and the infrastructure support project would have transected the partition; however they were not constructed. This cluster was analyzed because it is located in the BRAC and MCoE Action Area. All cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 6,068.57 ft^2 of pine BA on 153.39 acres of suitable habitat, 1,447.81 ft^2 of pine BA on 33.67 acres of potentially suitable habitat and 317.74 ft^2 of pine BA on 39.60 acres of future potential habitat. Cluster HCC-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,447.81 ft^2 of pine BA on 33.67 acres of potentially suitable habitat and 6,386.31 ft^2 of pine BA on 192.99 acres of future potential habitat. There was no suitable habitat. Cluster HCC-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged. This cluster is, however, an UC and is included in the ESMC ITS (USFWS 2014a).

Cluster HCC-B (HCC-08R): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 1,637.80 ft^2 of pine BA on 47.76 acres of suitable habitat, 1,284.48 ft^2 of pine BA on 35.85 acres of potentially suitable habitat and 1,614.64 ft^2 of pine BA on 98.99 acres of future potential habitat. Cluster HCC-B does not currently meet the modified MSS requirements due to insufficient pine acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 170.28 ft^2 of pine BA on 3.96 acres of potentially suitable habitat and 4,366.64 ft^2 of pine BA on 178.64 acres of future potential habitat. There was no suitable habitat. Cluster HCC-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster HCC-C (HCC-10R): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). Construction of the Good Hope Range Access Road had impacts within 50 ft. of 2 cavity trees, 50 to 200 ft. of 5 cavity trees and removed one active cavity tree and one active start tree (USACE 2009a).

Currently 4 inactive, suitable cavity trees (tag #s 4431A, 6100A, 6101A and 6102A) occur within 50 ft. of the 2009 Infrastructure Support- Utilities Project (PN 67457) and the Good Hope Range Access Road. There are 3 suitable cavity trees (tag #s 6679, 6894 and 7338) > 50 ft. from constructed MCoE projects.

The 2014 MSS baseline foraging habitat totals were 2,699.51 ft^2 of pine BA on 62.87 acres of suitable habitat and 1,133.27 ft^2 of pine BA on 85.39 acres of future potential habitat. There 70.52 ft^2 of pine BA on 1.72 acres of suitable and potentially suitable habitat, temporarily noncontiguous habitat. Cluster HCC-C does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,030.04 ft^2 of pine BA on 43.68 acres of potentially suitable habitat and 1,873.26 ft^2 of pine BA on 106.30 acres of future potential habitat. There was no suitable habitat. Cluster HCC-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster HCC-D (HCC-11R): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by BRAC projects and required "take" due to foraging habitat impacts

(USFWS 2009a). The Repair of Existing Training Roads (Phase I) had impacts within 50 to 200 ft. of one cavity tree (USACE 2008). Currently all cavity trees are > 50 ft. from constructed BRAC projects.

The 2014 MSS baseline foraging habitat totals were 894.41 ft^2 of pine BA on 24.58 acres of suitable habitat, 25.95 ft^2 of pine BA on 0.41 acre of potentially suitable habitat and 2,504.42 ft^2 of pine BA on 151.17 acres of future potential habitat. Cluster HCC-D does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 3,439.18 ft^2 of pine BA on 176.48 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster HCC-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster J03-A (J01-02R): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability. This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,784.34 ft^2 of pine BA on 75.02 acres of suitable habitat and 0.00 ft^2 of pine BA on 143.57 acres of future potential habitat. There was no potentially suitable habitat. Cluster J03-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,089.82 ft^2 of pine BA on 23.44 acres of potentially suitable habitat and 1,910.47 ft^2 of pine BA on 198.17 acres of future potential habitat. There was no suitable habitat. Cluster J03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster J04-B (J03-02): This cluster was inactive in 2009 and 2010, had a PBG in 2011, was inactive in 2012 and 3013 and had a PBG in 2014. It contained 8 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but was not analyzed due to inactivity (USFWS 2009a). Training Area roads were constructed within the partition and were scheduled to begin in 2009 (USACE 2009a). All cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 2,332.59 ft^2 of pine BA on 63.53 acres of suitable habitat, 2.24 ft^2 of pine BA on 0.05 acre of potentially suitable habitat and 197.42 ft^2 of pine BA on 83.89 acres of future potential habitat. Cluster J04-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,532.25 ft^2 of pine BA on 147.47 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster J04-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged. The cluster became active after projects were completed.

Cluster K04-A (O12-02): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to group density reduction (USACE 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects

(USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,457.37 ft^2 of pine BA on 92.18 acres of suitable habitat, 31.27 ft^2 of pine BA on 0.47 acre of potentially suitable habitat and 128.77 ft^2 of pine BA on 4.81 acres of future potential habitat. Cluster K04-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,859.75 ft^2 of pine BA on 32.26 acres of potentially suitable habitat and 2,757.66 ft^2 of pine BA on 65.20 acres of future potential habitat. There was no suitable habitat. Cluster K04-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (group level take) was changed to none. There are currently 3 active, untaken clusters within 1.25 miles of the K04-A cluster center.

Cluster K06-A (K03-01): This cluster was inactive from 2011 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,444.35 ft^2 of pine BA on 131.29 acres of suitable habitat, 2,239.79 ft^2 of pine BA on 59.62 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 0.04 acre of future potential habitat. Cluster K06-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 320.65 ft^2 of pine BA on 6.05 acres of potentially suitable habitat and 7,363.49 ft^2 of pine BA on 184.90 acres of future potential habitat. There was no suitable habitat. Cluster K06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster K07-A (K05-01): This cluster was inactive from 2009 to 2013 but had a PBG in

2014 and contained 4 cavity trees in various stages of completion and suitability.

This cluster was inactive when the MCoE and BRAC projects were being analyzed and the foraging habitat was reallocated to adjacent active clusters. This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 6,141.25 ft^2 of pine BA on 136.41 acres of suitable habitat, 3,981.10 ft^2 of pine BA on 100.74 acres of potentially suitable habitat and 573.04 ft^2 of pine BA on 56.31 acres of future potential habitat. Cluster K07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 10,695.39 ft^2 of pine BA on 293.46 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster K07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was changed to group level take. It has one untaken cluster within 1.25 miles of its cluster center.

Cluster K14-B (K08-02): This cluster had a PBG in 2010, a solitary male in 2011 and a

PBG from 2012 to 2014 (Table 7-3). Cluster K14-B contained 11 cavity trees in various stages of completion and suitability.

This cluster was not expected to be directly impacted by BRAC or MCoE projects and no

Incidental Take was necessary (USFWS 2009a). However, it was reanalyzed due to partition changes. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,959.41 ft^2 of pine BA on 130.47 acres of suitable habitat. There was no potentially suitable habitat or future potential habitat. Cluster K14-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,459.06 ft^2 of pine BA on 57.86 acres of suitable habitat 3,440.35 ft^2 of pine BA on 71.01 acres of potentially suitable habitat and 60.00 ft^2 of pine BA on 1.60 acres of future potential habitat. Cluster K14-B may meet the RS requirements due to sufficient acreage of suitable and potentially suitable habitat, and may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster K16-A (K08-03): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to indirect harassment impacts (USFWS 2009a). Construction of Paved Training Area Roads had impacts within 50 to 200 ft. of one cavity tree (USACE 2009a). No cavity trees are currently within 200 ft. of tank trails. The project training area road transects the cluster core; however, Fort Benning biologists provisioned cavity trees east of, and > 200 ft. from, the project road and all active cavity trees are currently east of the road.

The 2014 MSS baseline foraging habitat totals were 1,770.03 ft^2 of pine BA on 41.60 acres of suitable habitat, 1,317.23 ft^2 of pine BA on 40.53 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 54.58 acres of future potential habitat. Cluster K16-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,748.88 ft^2 of pine BA on 41.15 acres of suitable habitat 21.15 ft^2 of pine BA on 0.45 acre of potentially suitable habitat and 1,317.23 ft^2 of pine BA on 95.11 acres of future potential habitat). Cluster K16-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (taken by indirect harassment) was changed to none. All active cavity trees are currently > 200 ft. and east of the project road and the RCW group fledged 2 of 2 nestlings in 2014.

Cluster K16-B (K08-04): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability. This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,854.69 ft^2 of pine BA on 92.97 acres of suitable habitat, 494.33 ft^2 of pine BA on 15.21 acres of potentially suitable habitat and 150.16 ft^2 of pine BA on 69.50 acres of future potential habitat. Cluster K16-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,540.66 ft^2 of pine BA on 59.78 acres of suitable habitat and 1,958.52 ft^2 of pine BA on 117.90 acres of future potential habitat. There was no potentially suitable habitat. Cluster K16-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster K20-C (K09-03R): This cluster had a PBG from 2010 to 2013 and a solitary male in 2014. The cluster contained 7 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,622.50 ft^2 of pine BA on 116.97 acres of suitable habitat, 855.81 ft^2 of pine BA on 23.13 acres of potentially suitable habitat and 277.01 ft^2 of pine BA on 88.82 acres of future potential habitat.

There were 5,478.31 ft^2 of pine BA on 140.10 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster K20-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,214.64 ft^2 of pine BA on 47.12 acres of potentially suitable habitat and 3,685.96 ft^2 of pine BA on 186.22 acres of future potential habitat. There was no suitable habitat. Cluster K20-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster K21-A (K11-05): This cluster was discovered in October 2008 and had a PBG from 2009 to 2014. It contained 7 cavity trees in various stages of completion and suitability.

This cluster was discovered during preparation of the final MCoE BA (USACE 2008) and it was too late for inclusion in the MCoE USFWS consultation. Training area roads were constructed and transected the partition. Currently one active cavity tree (tag #5900) is within 50 ft. of tank trails and one inactive cavity tree (tag #6082A) is within 50-200 ft. of tank trails. There are 3 cavity trees (tag #s 6078A, 6081A and 7243) with suitable cavities that are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 2,906.99 ft^2 of pine BA on 83.85 acres of suitable habitat and 1,162.76 ft^2 of pine BA on 150.56 acres of future potential habitat. There was no potentially suitable habitat. Cluster K21-A does not currently meet the modified MSS requirements due to insufficient pine BA of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 4,069.75 ft^2 of pine BA on 234.41 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster K21-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly none) was changed to foraging habitat take. This cluster is also an UC and is included in the ESMC ITS (USFWS 2014a).

Cluster K35-C (K21-02R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 6,401.36 ft^2 of pine BA on 146.50 acres of suitable habitat and 641.55 ft^2 of pine BA on 27.30 acres of future potential habitat. There was no potentially suitable habitat. Cluster K35-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,753.71 ft^2 of pine BA on 53.47 acres of potentially suitable habitat and 4,289.20 ft^2 of pine BA on 120.33 acres of future potential habitat. There was no suitable habitat. Cluster K35-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster (K21-05R): This cluster had a PBG from 2010 to 2014 and had 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,221.08 ft^2 of pine BA on 122.28 acres of suitable habitat and 0.00 ft^2 of pine BA on 2.44 acres of future potential habitat. There was no potentially suitable habitat. Cluster K35-D meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,785.48 ft^2 of pine BA on 61.39 acres of potentially suitable habitat and 2,435.60 ft^2 of pine BA on 63.33 acres of future potential habitat. There was no suitable habitat. Cluster K35-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future

The 2014 Incidental Take status (none) was unchanged. This cluster is, however, an UC and is included in the ESMC ITS (USFWS 2014a).

Cluster L06-A (L02-02R): This cluster had a PBG from 2010 to 2014 and had 9 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and was taken at the group level (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 768.38 ft^2 of pine BA on 20.70 acres of suitable habitat, 1,575.50 ft^2 of pine BA on 29.56 acres of potentially suitable habitat and

2,199.42 ft^2 of pine BA on 111.12 acres of future potential habitat. Cluster L06-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,575.50 ft^2 of pine BA on 29.56 acres of potentially suitable habitat and 2,967.80 ft^2 of pine BA on 131.82 acres of future potential habitat. There was no suitable habitat. Cluster L06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly a group level take) was changed to foraging habitat take. Hardwood-pine stands (Stand #s L0614 and L0616) within the partition were incorrectly labeled as pine stands in the MCoE BA (USACE 2008) and were corrected by Fort Benning staff (C. Garrett, Fort Benning, pers. comm.). With these stand classification corrections the partition does not meet the MSS requirements.

Cluster L07-A (L03-01): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The construction of tank trails had impacts within 50 to 200 ft. of 2 cavity trees (USACE 2009a). Currently, tank trails occur within 50 ft. of one active cavity tree (tag #2319) and 50-200 ft. of one active cavity tree (tag #6917) and 2 inactive cavity trees (tag #s 6250 and 5249). There are no suitable cavity trees > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 1,923.10 ft^2 of pine BA on 40.40 acres of suitable habitat, 419.21 ft^2 of pine BA on 9.22 acres of potentially suitable habitat and 1,405.35 ft^2 of pine BA on 67.22 acres of future potential habitat. Cluster L07-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,658.31 ft^2 of pine BA on 30.44 acres of potentially suitable habitat and 2,089.35 ft^2 of pine BA on 86.40 acres of future potential habitat. There was no suitable habitat. Cluster L07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster M01-A (M01-01): This cluster had a PBG from 2010 to 2014 and contained 13 cavity trees in various stages of completion and suitability.

This cluster was not directly impacted by MCoE projects and no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). This cluster was analyzed because it is located in the BRAC/MCoE Action Area.

The 2014 MSS baseline foraging habitat totals were 1,992.60 ft^2 of pine BA on 44.28 acres of suitable habitat, 26.85 ft^2 of pine BA on 0.59 acre of potentially suitable habitat and 917.54 ft^2 of pine BA on 51.08 acres of future potential habitat. Cluster M01-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,992.60 ft^2 of pine BA on 44.28 acres of potentially suitable habitat and 944.39 ft^2 of pine BA on 51.67 acres of future potential habitat. There was no suitable habitat. Cluster M01-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged because there were no impacts.

Cluster M02-A (M02-01): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,293.16 ft^2 of pine BA on 131.30 acres of suitable habitat, 1,382.02 ft^2 of pine BA on 32.14 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 18.54 acres of future potential habitat. Cluster M02-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,382.02 ft^2 of pine BA on 32.14 acres of potentially suitable habitat and 5,293.16 ft^2 of pine BA on 149.84 acres of future potential habitat. There was no suitable habitat. Cluster M02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster M06-C (M06-03): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability. This cluster was not impacted by BRAC or MCoE projects. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). This cluster was analyzed because it is located in the BRAC/MCoE Action Area.

The 2014 MSS baseline foraging habitat totals were 1,578.65 ft^2 of pine BA on 37.79 acres of suitable habitat, 279.93 ft^2 of pine BA on 6.51 acres of potentially suitable habitat and 651.67 ft^2 of pine BA on 53.53 acres of future potential habitat. There were 1,858.58 ft^2 of pine BA on 44.30 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster M06-C does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,141.47 ft^2 of pine BA on 23.58 acres of potentially suitable habitat and 1,559.28 ft^2 of pine BA on 75.19 acres of future potential habitat. There was no suitable habitat. Cluster M06-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged because there were no impacts.

Cluster N03-A (M08-04R): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts when pine decline was considered (USFWS 2011a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,129.58 ft^2 of pine BA on 78.06 acres of suitable habitat, 408.09 ft^2 of pine BA on 9.85 acres of potentially suitable habitat and 2,042.38 ft^2 of pine BA on 111.37 acres of future potential habitat. Cluster N03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,555.75 ft^2 of pine BA on 59.34 acres of potentially suitable habitat and 3,024.30 ft^2 of pine BA on 139.94 acres of future potential habitat. There was no suitable habitat. Cluster N03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take due to pine decline) was unchanged.

Cluster N04-B (M08-02a): This cluster had a PBG from 2010 to 2014 and contained 13 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary

(USFWS 2009a). The Repair of Existing Training Roads (Phase I) had impacts within 50 to 200 feet of one cavity tree (USACE 2008). Currently all cavity trees are > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 4,908.05 ft^2 of pine BA on 105.29 acres of suitable habitat, 1,622.16 ft^2 of pine BA on 33.76 acres of potentially suitable habitat and 246.09 ft^2 of pine BA on 17.63 acres of future potential habitat. Cluster N04-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,455.18 ft^2 of pine BA on 22.87 acres of potentially suitable habitat and 5,321.12 ft^2 of pine BA on 133.81 acres of future potential habitat. There was no suitable habitat. Cluster N04-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster N04-C (M08-02b): This cluster had a PBG from 2010 to 2014 and had 10 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to direct harassment impacts. The Repair of Existing Training Roads (Phase I) Project had impacts within 50 ft. of the 2008 nest tree and 50 to 200 ft. of 4 cavity trees (USACE 2009a). Currently one inactive, unsuitable cavity tree (tag #5469) occurs within 50 ft. of tank trails, 2 active cavity trees (tag #s 5873 (2014 nest tree) and 6904) and 2 inactive cavity trees (tag #s 5395 and 5634) occur within 50-200 ft. of tank trails. There are 4 cavity trees (tag #s 5395, 5478, 6517 and 7113 (2014 nest tree) with suitable cavities > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 3,222.76 ft^2 of pine BA on 76.37 acres of suitable habitat, 1,218.62 ft^2 of pine BA on 30.78 acres of potentially suitable habitat, 281.58 ft^2 of pine BA on 10.13 acres of future potential habitat and an unknown amount of pine BA on 1.02 acres of minimally-managed pine-dominated habitat. Cluster N04-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,115.67 ft^2 of pine BA on 23.07 acres of potentially suitable habitat and 3,607.29 ft^2 of pine BA on 94.21 acres of future potential habitat and an unknown amount of pine BA on 1.02 acres of minimally-managed pine-dominated habitat. There was no suitable habitat. Cluster N04-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to direct harassment) was changed to indirect harassment. There are > 4 suitable cavities > 200 ft. from tank trails. However, the RCW group had 3 failed nest attempts in 2 cavity trees in 2014, fledged 2 of 3 nestlings in 2013, failed in 2012, had a non-breeding pair in 2011 and fledged 2 of 2 nestlings in 2010.

Cluster N04-D (M08-05R): This cluster had a solitary male in 2007, a PBG in 2008 and was inactive from 2009 to 2014. It contained 7 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,337.22 ft^2 of pine BA on 72.77 acres of suitable habitat, 6,862.26 ft^2 of pine BA on 151.07 acres of potentially suitable habitat and

132.73 ft^2 of pine BA on 21.67 acres of future potential habitat. There were 54.05 ft^2 of pine BA on 1.22 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster N04-D meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 3,038.65 ft^2 of pine BA on 55.69 acres of potentially suitable habitat and 7,347.61 ft^2 of pine BA on 191.04 acres of future potential habitat. There was no suitable habitat. Cluster N04-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster N05-A (O02-01R): This cluster had a PBG from 2010 to 2014 and had 8 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 6,508.94 ft^2 of pine BA on 177.79 acres of suitable habitat, 482.53 ft^2 of pine BA on 10.92 acres of potentially suitable habitat and 465.08 ft^2 of pine BA on 55.73 acres of future potential habitat.

Cluster N05-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 3,175.62 ft^2 of pine BA on 74.46 acres of potentially suitable habitat and 4,280.93 ft^2 of pine BA on 169.98 acres of future potential habitat. There was no suitable habitat. Cluster N05-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster O01-A (O12-04): This cluster was inactive in 2008 and 2009, had a PBG from

2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was impacted by BRAC and MCoE projects, but the cluster was inactive, so the partition was deleted prior to analyses (USACE 2008). The proposed Tactical Training Base would have removed 9.88 acres within the partition; however, the limits of disturbance were much smaller than projected and no foraging habitat was impacted. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). This cluster was reanalyzed due to its becoming active and partition changes.

The 2014 MSS baseline foraging habitat totals were 2,009.64 ft^2 of pine BA on 47.14 acres of suitable habitat, 547.48 ft^2 of pine BA on 8.44 acres of potentially suitable habitat and

2,434.33 ft^2 of pine BA on 128.02 acres of future potential habitat. Cluster O01-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 696.54 ft^2 of pine BA on 11.17 acres of potentially suitable habitat and 4,294.91 ft^2 of pine BA on 172.43 acres of future potential habitat. There was no suitable habitat. Cluster O01-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

Even though this partition was pre-project deficient in suitable and potentially suitable habitat, the 2014 Incidental Take status (none) was unchanged because no habitat was impacted within the partition.

Cluster O03-A (O14-02): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2011a). Construction of the Training Area Infrastructure (19D/K OSUT) impacted one cavity tree within 50 to 200 ft. (USACE 2008). Currently one active, suitable cavity tree (tag #6952) occurs within 0 to 50 ft. and one unsuitable cavity tree (tag #6874) occurs within 50 to 200 feet of tank trails. There are 3 cavity trees (tag #s 3703 (2014 nest tree), 3446A and 7102) with 4 suitable cavities > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 1,690.02 ft^2 of pine BA on 32.69 acres of suitable habitat, 127.05 ft^2 of pine BA on 3.63 acres of potentially suitable habitat and

1,878.66 ft^2 of pine BA on 86.57 acres of future potential habitat. Cluster O03-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,639.56 ft^2 of pine BA on 31.53 acres of potentially suitable habitat and 2,056.17 ft^2 of pine BA on 91.36 acres of future potential habitat. There was no suitable habitat. Cluster O03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O03-B (O14-03R): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was created on Fort Benning as compensation for the Incidental Take of Cluster N02-01 during the land exchange (JCA 2000). The cluster's group fledged 2 of 2 nestlings in 2010, 2011, 2012 and 2014. In 2013 the group had a failed nest.

Construction of the 2009 Northern Training Area Infrastructure Project Option C had impacts within 50 ft. of one cavity tree and 50 to 200 ft. of 9 cavity trees. The Repair of Existing Training Roads Project (Phase 1) had impacts within 50 ft. of one cavity tree (USACE 2009a)**.** These impacts resulted in "take" of the cluster by long-term indirect harassment impacts (USFWS 2011a).

Currently, one cavity tree (tag # 4862, the nest tree from 2010- 2014) occurs within 50 ft. of tank trails, 5 cavity trees occur within 50-200 ft. of tank trails (4116A, 4177A, 4119A, 4274A and 5234). One cavity tree has a suitable cavity (tag #4827) > 200 ft. from tank trails, however it is inactive and 370 ft. south and across a road from the other cavity trees.

The 2014 MSS baseline foraging habitat totals were 4,579.86 ft^2 of pine BA on 107.01 acres of suitable habitat, 400.33 ft^2 of pine BA on 8.80 acres of potentially suitable habitat and 897.46 ft^2 of pine BA on 54.94 acres of future potential habitat. There were 108.11 ft^2 of pine BA on 3.05 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster O03-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,496.84 ft^2 of pine BA on 53.81 acres of potentially suitable habitat and 3,380.82 ft^2 of pine BA on 116.94 acres of future potential habitat. There was no suitable habitat. Cluster O03-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take- indirect harassment) was unchanged.

Cluster O04-A (O14-01): This cluster had a PBG from 2010 to 2014. It contained 9 cavity trees in various stages of completion and suitability. This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 1 of 1 nestling in 2012, 1 of 1 nestling in 2013 and 1 of 2 nestlings in 2014.

This cluster was impacted by the Northern Training Area Infrastructure Support Project and was within the area used for the 19D/K OSUT training courses which required "take" due to foraging habitat impacts. Currently all cavity trees (4 cavity trees with suitable cavities) are > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 2,131.52 ft^2 of pine BA on 60.00 acres of suitable habitat, 70.07 ft^2 of pine BA on 1.54 acres of potentially suitable habitat and 1,486.47 ft^2 of pine BA on 66.95 acres of future potential habitat. Cluster O04-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 7.20 ft^2 of pine BA on 0.16 acre of potentially suitable habitat and 3,680.86 ft^2 of pine BA on 128.33 acres of future potential habitat. There was no suitable habitat. Cluster O04-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged. The cluster was split in 2009 (O04-A and O04-B) by the formation of a new group and the partition was cut in half.

Cluster O04-B (O14-04): This was a pioneer cluster found in September 2009. The cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability. This cluster successfully fledged 2 of 2 nestlings in 2010, 3 of 3 nestlings in 2011, 4 of 4 nestlings in 2012, 1 of 2 nestlings in 2013 and 2 of 2 nestlings in 2014.

This cluster was within the area used for the 19D/K OSUT training courses and required "take" due to long-term indirect harassment impacts. Fort Benning biologists installed 4 cavities in March 2010 as far from MCoE roads as possible and road widths were also reduced in this area so that no cavity trees would be within 200 ft. of MCoE construction.

Currently one cavity tree with a suitable cavity (tag #7327) and one cavity tree with an unsuitable cavity (tag # 6211) occur within 50-200 ft. of tank trails. There are 3 cavity trees with 4 suitable cavities (tag #6212, 6223 (2014 nest tree) and 7289) that are > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 4,643.84 ft^2 of pine BA on 110.67 acres of suitable habitat, 56.30 ft^2 of pine BA on 1.61 acres of potentially suitable habitat and 1,078.11 ft^2 of pine BA on 62.87 acres of future potential habitat. Cluster O04-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 5,778.25 ft^2 of pine BA on 175.15 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O04-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (taken due to indirect harassment) was changed to none. The cluster has > 4 suitable cavities > 200 ft. from tank trails and its group successfully bred the last 5 years.

Cluster O05-A (O01-01): This cluster had a PBG from 2010 to 2014 and had 13 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and had an indirect harassment take (USFWS 2008). The Northern Training Area Infrastructure Project had impacts within 50 to 200 ft. of 4 cavity trees (USACE 2009a).

Currently 4 cavity trees (tag #s 3928, 5448, 2811 and 2310) occur within 50-200 ft. of tank trails and there are 6 cavity trees (tree #s 2810, 3262, 3801A, 6530, 6816 (2014 nest tree) and 7425 (2^{nd} 2014 nest tree)) with suitable cavities > 200 ft. from tank trails and heavy maneuver training areas. The RCW group nested in 2 cavity trees (tag #s 6816 and 7425) during the 2014 breeding season.

The 2014 MSS baseline foraging habitat totals were 3,416.04 ft^2 of pine BA on 73.96 acres of suitable habitat, 2,638.49 ft^2 of pine BA on 55.60 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 11.03 acres of future potential habitat. Cluster O05-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 3,114.01 ft^2 of pine BA on 65.00 acres of potentially suitable habitat and 2,940.51 ft^2 of pine BA on 75.58 acres of future potential habitat. There was no suitable habitat. Cluster O05-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (indirect harassment) was unchanged.

Cluster O05-B (O01-02): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (JCA 2010). The Northern Training Area Infrastructure Project had impacts within 50 to 200 ft. of 4 cavity trees (USACE 2009a).

Currently, one active cavity (tag #2923) and 3 inactive, unsuitable cavity trees (tag #s 6531, 5427 and 5636) occur within 50-200 ft. of tank trails and there are 4 cavity trees with suitable cavities (tag #s 4779A, 6560A, 6561A and 7329 (2014 nest tree) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 2,126.20 ft^2 of pine BA on 48.79 acres of suitable habitat, 1,617.84 ft^2 of pine BA on 42.30 acres of potentially suitable habitat and

647.73 ft^2 of pine BA on 63.72 acres of future potential habitat. Cluster O05-B meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,578.81 ft^2 of pine BA on 32.31 acres of potentially suitable habitat and 2,812.96 ft^2 of pine BA on 122.50 acres of future potential habitat. There was no suitable habitat. Cluster O05-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to none. The pine basal area > 10" dbh has increased within this partition since the MCoE consultation, which contributed to O05-B now meeting the MSS guidelines (USACE 2008).

Cluster O06-A (O11-02R): This cluster had a PBG from 2010 to 2014. It contained 4 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,375.13 ft^2 of pine BA on 56.58 acres of suitable habitat and 472.60 ft^2 of pine BA on 28.02 acres of future potential habitat. There was no potentially suitable habitat. Cluster O06-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,592.37 ft^2 of pine BA on 34.47 acres of potentially suitable habitat and 1,255.36 ft^2 of pine BA on 50.13 acres of future potential habitat. There was no suitable habitat. Cluster O06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O06-B (O15-01): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts

(USFWS 2011a). Construction of the Northern Training Area Infrastructure Project had impacts within 50 to 200 ft. of 5 cavity trees.

Currently, there is one active (tag # 6144) and 2 inactive cavity trees (tag #s 5555 and 5638) within 50 to 200 ft. of tank trails and 6 cavity trees with suitable cavities (tag #s 5637 (2014 nest tree),3616A, 4372A, 5639, 6883 and 7116) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 850.80 ft^2 of pine BA on 23.91 acres of suitable habitat and 1,372.98 ft^2 of pine BA on 85.40 acres of future potential habitat. There was no potentially suitable habitat. Cluster O06-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,223.78 ft^2 of pine BA on 109.31 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O06-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O06-C (O15-02): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2011a). Construction of the Northern Training Area Infrastructure Project removed one inactive cavity tree (JCA 2010).

The 2014 MSS baseline foraging habitat totals were 2,577.95 ft^2 of pine BA on 71.09 acres of suitable habitat and 1,303.09 ft^2 of pine BA on 52.15 acres of future potential habitat. There was no potentially suitable habitat. Cluster O06-C does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 3,881.04 ft^2 of pine BA on 123.24 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O06-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O06-D (O15-03): This cluster had a PBG from 2010 to 2014 and contained 13 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,503.35 ft^2 of pine BA on 65.69 acres of suitable habitat, 124.69 ft^2 of pine BA on 3.43 acres of potentially suitable habitat and 132.09 ft^2 of pine BA on 17.40 acres of future potential habitat. Cluster O06-D does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 311.35 ft^2 of pine BA on 7.39 acres of potentially suitable habitat and 2,448.78 ft^2 of pine BA on 79.13 acres of future potential habitat.

There was no suitable habitat. Cluster O06-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O06-E (O15-04): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). Cluster O06-E is within Compartments O06, O13 and O12, which are used by the USAARMS and 3rd BDE for off-road heavy maneuver training.

Currently, all cavity trees are > 200 ft. from tank trails. However, there is a small unmarked trail that transects the cluster core that may be used for training. The Northern Training Area

Infrastructure Tank Trail Upgrade Project removed approximately 2.53 acres of 24 year old (in 2008) loblolly pine plantation as well as hardwood acreage within the partition. This cluster was pre-project deficient in suitable and potentially suitable habitat during MCoE and BRAC analyses and should have been analyzed at the cluster level.

The 2014 MSS baseline foraging habitat totals were 1,057.44 ft^2 of pine BA on 29.62 acres of suitable habitat and 35.88 ft^2 of pine BA on 9.00 acres of future potential habitat. There was no potentially suitable habitat. Cluster O06-E does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,093.32 ft^2 of pine BA on 38.62 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O06-E does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status was changed (former status of temporary indirect harassment take for 5 years) to foraging habitat take. The cluster was deficient pre-project in total pine habitat during prior analyses; any pine habitat removed would have resulted in a foraging habitat take.

Cluster O07-A (O13-01): This cluster had a PBG from 2010 to 2014 and contained 16 cavity trees in various stages of completion and suitability. This cluster successfully fledged 4 of 4 nestlings in 2010, 3 of 3 nestlings in 2011, 3 of 3 nestlings in 2012, was a non-breeding pair in 2013 and fledged 1 of 1 nestling in 2014.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The Training Area Infrastructure (19D/K OSUT) (PN 69741) had impacts within 50 ft. of one cavity tree, 50 to 200 ft of 6 cavity trees and removed one inactive insert tree and one inactive start tree.

The Repair of Existing Training Roads (Phase 1) had impacts within 50 ft. of one cavity tree, 50 to 200 ft. of 4 cavity trees and removed one inactive start tree. Cavity tree #5176 was an inactive start that was removed by both projects (USACE 2009a). Currently, 2 inactive, unsuitable cavity trees occur within 50 ft. of tank trails (tag #s 3123A and 5176) and 5 cavity trees (tag #s 5683, 3122A, 7288 (2014 nest tree), 5026 and 5530) occur within 50-200 ft. of tank trails. There are 2 cavity trees with suitable cavities (tag #s 3120A and 5027A) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 1,212.40 ft^2 of pine BA on 32.46 acres of suitable habitat, 2,933.27 ft^2 of pine BA on 63.92 acres of potentially suitable habitat and 165.19 ft^2 of pine BA on 17.56 acres of future potential habitat.

Cluster O07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,639.82 ft^2 of pine BA on 25.52 acres of potentially suitable habitat and 2,671.04 ft^2 of pine BA on 88.42 acres of future potential habitat. There was no suitable habitat. Cluster O07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to indirect harassment impacts. There are only 2 cavity trees with suitable cavities > 200 ft. from tank trails.

Cluster O07-C (O13-06R): This cluster had a PBG in 2010, a solitary male in 2011 and a

PBG between 2012 and 2014. It contained 13 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The Construction of Paved Training Area Roads had impacts within 50 ft. of one cavity and 50 to 200 ft. of a second cavity (USACE 2009a). Currently, all cavity trees are > 50 ft. from the constructed paved training area roads.

The 2014 MSS baseline foraging habitat totals were 4,077.85 ft^2 of pine BA on 109.25 acres of suitable habitat, 31.30 ft^2 of pine BA on 0.91 acre of potentially suitable habitat and 1,133.82 ft^2 of pine BA on 65.81 acres of future potential habitat. Cluster O07-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 5,242.97 ft^2 of pine BA on 175.97 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O07-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to none. The pine basal area in stand #O0817 (approximately 46.58 acres) has increased within this partition since the MCoE consultation, which contributed to O07-C now meeting the MSS guidelines (USACE 2009a).

Cluster O10-A (O10-01): This cluster had a PBG from 2010 to 2014 and contained 13 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts when pine decline was considered (USFWS 2009c). Reanalysis in 2009 revealed that this cluster needed "take" for foraging habitat impacts (USFWS 2009c). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,671.45 ft^2 of pine BA on 78.33 acres of suitable habitat and 807.85 ft^2 of pine BA on 98.38 acres of future potential habitat. There was no potentially suitable habitat. There were 2,671.45 ft^2 of pine BA on 78.33 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster O10-A does not currently meet the modified MSS requirements due to insufficient pine BA of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,194.46 ft^2 of pine BA on 22.51 acres of potentially suitable habitat and 3,543.59 ft^2 of pine BA on 180.28 acres of future potential habitat. There was no suitable habitat. Cluster O10-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take due to foraging habitat impacts) was unchanged.

Cluster O10-B (O10-03): This cluster was inactive from 2010 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to group density reduction (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). This cluster was monitored as a minimization effort for the DMPRC (Fort Benning, unpub. data).

The 2014 MSS baseline foraging habitat totals were 3,716.06 ft^2 of pine BA on 110.36 acres of suitable habitat, 57.79 ft^2 of pine BA on 0.84 acre of potentially suitable habitat and 642.00 ft^2 of pine BA on 30.43 acres of future potential habitat. Cluster O10-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 394.29 ft^2 of pine BA on 7.57 acres of potentially suitable habitat and 4,021.56 ft^2 of pine BA on 134.06 acres of future potential habitat. There was no suitable habitat. Cluster O10-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (group take) was unchanged.

Cluster O11-B (O10-04): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts when pine decline was considered (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 6,734.56 ft^2 of pine BA on 133.41 acres of suitable habitat and 95.85 ft^2 of pine BA on 23.50 acres of future potential habitat. There was no potentially suitable habitat. Cluster O11-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 6,057.60 ft^2 of pine BA on 115.80 acres of potentially suitable habitat and 772.81 ft^2 of pine BA on 41.11 acres of future potential habitat. There was no suitable habitat. Cluster O11-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take due to pine decline) was changed to none. This cluster had a net gain in pine BA of 32% from the original FHA (USACE 2008).

Cluster O12-A (O11-01): This cluster had a PBG from 2010 to 2014 and contained 18 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts when pine decline was considered (USFWS 2011a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,391.86 ft^2 of pine BA on 86.10 acres of suitable habitat and 876.63 ft^2 of pine BA on 52.76 acres of future potential habitat. There was no potentially suitable habitat. Cluster O12-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 3,010.59 ft^2 of pine BA on 50.42 acres of potentially suitable habitat and 2,257.90 ft^2 of pine BA on 88.44 acres of future potential habitat. There was no suitable habitat. Cluster O12-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (take due to pine decline) was unchanged.

Cluster O14-A (O01-03): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). The Northern Training Area Infrastructure Tank Trail Upgrade Project impacted 3 cavity trees within 50 to 200 ft. In addition, the Repair of Existing Training Roads Project (Phase I) impacted 2 other cavity trees within 50 to 200 ft. (USACE 2009a).

Currently one active cavity tree (tag # 4966A) and one inactive cavity tree (tag # 3456A) occur within 50-200 ft. of tank trails and 5 cavity trees with suitable cavities (tag #s 5381, 6565A (2014 nest tree), 6566A, 6568A and 7310) are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,788.61 ft^2 of pine BA on 108.38 acres of suitable habitat, 553.90 ft^2 of pine BA on 11.57 acres of potentially suitable habitat and 330.23 ft^2 of pine BA on 19.54 acres of future potential habitat.

Cluster O14-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,209.33 ft^2 of pine BA on 23.64 acres of potentially suitable habitat and 4,463.41 ft^2 of pine BA on 115.85 acres of future potential habitat. There was no suitable habitat. Cluster O14-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster O14-B (O01-04R): This cluster had a PBG in 2010, was inactive in 2011 and had a PBG from 2012 to 2014. It contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees occur > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 5,051.22 ft^2 of pine BA on 126.29 acres of suitable habitat, 343.55 ft^2 of pine BA on 6.40 acres of potentially suitable habitat and260.44 ft^2 of pine BA on 21.59 acres of future potential habitat.

Cluster O14-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 404.71 ft^2 of pine BA on 6.82 acres of potentially suitable habitat and 5,250.50 ft^2 of pine BA on 147.46 acres of future potential habitat. There was no suitable habitat. Cluster O14-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster O15-A (O03-01): This cluster had a PBG from 2010 to 2014 and contained 11 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The Northern Training Area Infrastructure Project had impacts within 50 ft. of 3 cavity trees, 50 to 200 ft. of 3 cavity trees and removed 2 inactive cavities and one active drilled cavity (USACE 2009a).

Currently 4 active cavity trees (5106A, 5107A, 6906 (2014 nest tree) and 5520A) occur within 50 ft. of tank trails, one active cavity tree (tag #5790) and 2 inactive cavity trees (tag #s 6028 and 1741) occur within 50-200 ft. of tank trails and one suitable cavity tree (tag #6569A) is > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 1,354.18 ft^2 of pine BA on 34.57 acres of suitable habitat, 880.60 ft^2 of pine BA on 25.16 acres of potentially suitable habitat and 526.03 ft^2 of pine BA on 24.76 acres of future potential habitat.

Cluster O15-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 6.38 ft^2 of pine BA on 0.11 acre of potentially suitable habitat and 2,754.43 ft^2 of pine BA on 84.38 acres of future potential habitat. There was no suitable habitat. Cluster O15-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O15-B (O03-03): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to cavity tree impacts and foraging habitat loss (JCA 2010, USFWS 2011a). The Northern Training Area Infrastructure

Tank Trail Upgrade Project had impacts within 50 ft. of one cavity tree, 50 to 200 ft. of one cavity tree and removed 2 active and one inactive cavity tree.

Currently, one inactive, unsuitable cavity tree (tag #0115) occurs within 50 ft. of tank trails and one suitable cavity tree (tag #3488) occurs within 50-200 ft. of tank trails. There are 3 cavity trees with 4 suitable cavities > 200 ft. from tank trails (tag #s 3943 (2014 nest tree), 6736A and 6737A).

The 2014 MSS baseline foraging habitat totals were 2,462.45 ft^2 of pine BA on 57.90 acres of suitable habitat and 610.97 ft^2 of pine BA on 91.69 acres of future potential habitat. There was no potentially suitable habitat. There were 67.65 ft^2 of pine BA on 1.65 acres of suitable and potentially suitable, but temporarily noncontiguous habitat.

Cluster O15-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat. The 2014 RS baseline foraging habitat totals were 1,003.08 ft^2 of pine BA on 19.29 acres of potentially suitable habitat and 2,070.34 ft^2 of pine BA on 130.30 acres of future potential habitat. There was no suitable habitat.

Cluster O15-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O15-C (O03-04): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (JCA 2010, USFWS 2011a). The "baseline" sections of had impacts within 50 to 200 ft. of 4 cavity trees (JCA 2010). There are currently 4 cavity trees (tag #s 7383, 1193, 2798A and 2799A) within 50-200 ft. of tank trails and 4 cavity trees with suitable cavities (tag #s 0768, 2794A, 2797A and 2800A) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 1,856.83 ft^2 of pine BA on 50.76 acres of suitable habitat, 1,784.25 ft^2 of pine BA on 49.83 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 77.82 acres of future potential habitat. Cluster O15-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 198.34 ft^2 of pine BA on 4.22 acres of potentially suitable habitat and 3,442.74 ft^2 of pine BA on 174.19 acres of future potential habitat. Cluster O15-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to none. The pine basal area > 10" dbh has increased within this partition since the MCoE BA was submitted, which contributed to O15-C now meeting the MSS guidelines (USACE 2008).

Cluster O16-A (O04-05): This cluster was discovered in September 2009 and Fort

Benning biologists installed 3 artificial cavities in March 2010. It had a PBG from 2010 to 2014. It contained 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and was taken at the group level due to group density reduction (JCA 2010). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,264.69 ft^2 of pine BA on 111.72 acres of suitable habitat and 721.62 ft^2 of pine BA on 36.73 acres of future potential habitat. There was no potentially suitable habitat. Cluster O16-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 41.32 ft^2 of pine BA on 0.79 acre of potentially suitable habitat and 4,944.99 ft^2 of pine BA on 147.66 acres of future potential habitat. There was no suitable habitat. Cluster O16-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly group level take) was changed to none. There are currently 3 active, untaken clusters within 1.25 miles of the O16-A cluster center.

Cluster O17-B (O08-02): This cluster had a PBG from 2010 to 2014 and contained 13 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The 2009 Construct Training Area Roads Project had impacts within 50 to 200 ft. of 2 cavity trees (USACE 2009a). Currently, all cavity trees are > 200 ft. from tank trails and > 50 ft. from constructed training area roads.

The 2014 MSS baseline foraging habitat totals were 2,572.23 ft^2 of pine BA on 73.39 acres of suitable habitat and 2,633.38 ft^2 of pine BA on 159.33 acres of future potential habitat. There was no potentially suitable habitat. Cluster O17-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 5,205.61 ft^2 of pine BA on 232.72 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O18-A (O09-02): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to group density reduction (USFWS 2009a). The construction of the Stationary Tank Range and beaten area had impacts within 50 to 200 ft. of 2 cavity trees (USACE 2009a). Currently, all cavity trees are > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline foraging habitat totals were 4,126.41 ft^2 of pine BA on 119.22 acres of suitable habitat and 1,823.53 ft^2 of pine BA on 89.20 acres of future potential habitat. There was no potentially suitable habitat. Cluster O18-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 5,949.94 ft^2 of pine BA on 208.42 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O18-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly group level take) was changed to none. There are currently 3 active and one captured, untaken cluster within 1.25 miles of the O16-A cluster center.

Cluster O18-B (O09-03): This cluster had a PBG from 2010 to 2012, was captured by the group at O17-A in 2013 and had a PBG in 2014 which did not breed. It contained 7 cavity trees in various stages of completion and suitability.

Cluster O18-B was directly impacted by BRAC and MCoE projects. However, it was captured by O17-A during analyses (2006-2008), therefore no foraging habitat analyses were conducted and its habitat was allocated to adjacent clusters (USACE 2009a). The 2009 Training

Area Roads Project (widening of Lorraine Rd.) had impacts within 50 to 200 ft. of 4 cavity trees (USACE 2009a). Currently, one active cavity tree (tag #7455) containing a suitable cavity is within 50 ft. of tank trails and 2 active cavity trees (tag #s 3768 and 3769) containing suitable cavities are within 50 to 200 ft. of tank trails. Two inactive cavity trees (tag #s 3770A and 3771A) containing unsuitable cavities are within 50 to 200 ft. of tank trails. Of the 2 cavity trees >200 ft. from tank trails, #6587 contains an inactive unsuitable cavity and tree #6588 contains an active suitable cavity. However, tree #6588 is closer to the trees in Cluster O17-A than O18-B and falls within the O17-A foraging partition.

Cluster O18-B does not have 4 suitable cavities that are not within 50 ft. of disturbance; therefore, based on the criteria used in past consultations, this cluster will require "take" for direct harassment impacts.

The 2014 MSS baseline foraging habitat totals were 4,081.32 ft^2 of pine BA on 100.68 acres of suitable habitat and 376.92 ft^2 of pine BA on 25.28 acres of future potential habitat. There was no potentially suitable habitat. There were 74.42 ft^2 of pine BA on 1.58 acres of suitable and potentially suitable, but temporarily noncontiguous, habitat. Cluster O18-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 343.99 ft^2 of pine BA on 7.73 acres of potentially suitable habitat and 4,188.67 ft^2 of pine BA on 119.81 acres of future potential habitat. There was no suitable habitat. Cluster O18-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was changed to direct harassment take.

Cluster O19-A (K02-01a): This cluster was split by 2 PBGs in 2010 and had a PBG from

2011 to 2014. It had 4 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat and cavity tree impacts (USFWS 2009a). Ware Range removed 5 cavity trees resulting in a "take" of the cluster from loss of cavity trees (USACE 2009a). Fort Benning biologists provisioned 3 cavity trees in 2011 and the cluster fledged 2 of 2 nestlings in 2014. All of the cavity trees are within the Ware Range beaten area.

The 2014 MSS baseline foraging habitat totals were 756.27 ft^2 of pine BA on 64.38 acres of future potential habitat. There were 301.32 ft^2 of pine BA on 9.72 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster O19-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,057.59 ft^2 of pine BA on 74.10 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O19-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat and cavity tree loss take) was unchanged.

Cluster O19-B (K02-01b): Fort Benning biologists installed artificial cavities at Cluster

O19-A (K02-01) with the intent to shift the cluster out of the footprint for Ware Range.

The RCW group inhabiting Cluster O19-A did not move, however, and an unrelated pair of RCWs moved into the new cavity trees. O19-B had a PBG in 2010 and was captured by O19-A from 2011 to 2014. It had 4 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects, but was disregarded from analysis in the supplemental BA based on correspondence between the Service and Fort Benning (J. Doresky,

USFWS and M. Barron, Fort Benning, pers. comm.) (JCA 2010).

The 2014 MSS baseline foraging habitat totals were 1,012.31 ft^2 of pine BA on 27.15 acres of suitable habitat, 206.99 ft^2 of pine BA on 3.27 acres of potentially suitable habitat and 2,063.21 ft^2 of pine BA on 96.45 acres of future potential habitat. Cluster O19-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 3,282.51 ft^2 of pine BA on 126.87 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O19-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged since it has been captured by O19-A since 2011.

Cluster O21-A (O07-03R): This cluster had a PBG in 2010, was inactive in 2011, had a solitary male in 2012 and had a PBG in 2013 and 2014. It had 5 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "group take" due to group density reduction (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 8,521.88 ft^2 of pine BA on 198.07 acres of suitable habitat, 72.60 ft^2 of pine BA on 1.50 acres of potentially suitable habitat and

644.85 ft^2 of pine BA on 42.48 acres of future potential habitat. Cluster O21-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 202.00 ft^2 of pine BA on 5.05 acres of potentially suitable habitat and 9,037.33 ft^2 of pine BA on 237.00 acres of future potential habitat. There was no suitable habitat. Cluster O21-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly group level take) was changed to none. There are currently 3 active, untaken clusters within 1.25 miles of the O21-A cluster center.

Cluster O21-B (O08-03): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by BRAC projects and required "take" due to foraging habitat impacts (USFWS 2007a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,636.24 ft^2 of pine BA on 92.61 acres of suitable habitat and 1,682.76 ft^2 of pine BA on 101.91 acres of future potential habitat. There was no potentially suitable habitat. Cluster O21-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,076.43 ft^2 of pine BA on 26.70 acres of potentially suitable habitat and 4,242.57 ft^2 of pine BA on 167.82 acres of future potential habitat. There was no suitable habitat. Cluster O21-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was changed to none. The pine basal area $\geq$ 10" dbh has increased within this partition since the BRAC BA was submitted, which contributed to O21-B now meeting the MSS guidelines (USACE 2008). Also, the partition increased from 127.81 acres of manageable, potentially contiguous pine habitat to 194.52 acres of manageable, potentially contiguous pine habitat.

Cluster O24-A (O04-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The Repair of Existing Training Roads (Phase I) had impacts within 50 ft. of 2 cavity trees, 50 to 200 ft. of 3 cavity trees and removed one active cavity (USACE 2009a). Currently 2 cavity trees with suitable cavities (tag #s 4717A and 6205) and one cavity tree with an unsuitable cavity (tag #4595) occur within 50 ft. of tank trails and one cavity tree with 2 inactive, unsuitable cavities (tag #1289) occurs within 50-200 ft. of tank trails. There is one cavity tree with a suitable cavity (tag #6204) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 184.73 ft^2 of pine BA on 5.38 acres of suitable habitat and 2,479.08 ft^2 of pine BA on 100.17 acres of future potential habitat. There was no potentially suitable habitat. Cluster O24-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 618.05 ft^2 of pine BA on 13.15 acres of potentially suitable habitat and 2,111.72 ft^2 of pine BA on 111.21 acres of future potential habitat. There was no suitable habitat. Cluster O24-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster O25-A (O03-05): This cluster had a PBG from 2010 to 2014 and contained 11 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). The Repair of

Existing Training Roads Project (Phase I) had impacts within 50 ft. of one cavity tree and 50 to 200 ft. of 4 cavity trees (USACE 2009a). Currently one active, suitable cavity tree (tag #2608A) occurs within 50 ft. and one inactive, unsuitable cavity tree (tag #2591A) occurs within 50 to 200 feet of tank trails. Three suitable cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 7,133.49 ft^2 of pine BA on 163.70 acres of suitable habitat, 1,687.51 ft^2 of pine BA on 42.51 acres of potentially suitable habitat and 251.60 ft^2 of pine BA on 54.19 acres of future potential habitat. Cluster O25-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 4,028.47 ft^2 of pine BA on 87.45 acres of potentially suitable habitat and 5,044.13 ft^2 of pine BA on 172.95 acres of future potential habitat. There was no suitable habitat. Cluster O25-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster O25-B (O03-06R): This cluster was inactive in 2010, but had a PBG from 2011 to 2014. It contained 8 cavity trees in various stages of completion and suitability. The cluster had a non-breeding pair in 2011 and 2012, fledged 2 of 2 nestlings in 2013 and fledged 1 of 3 nestlings in 2014.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts when pine decline was considered (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently one active cavity tree (tag #7042A (2014 nest tree)) and one inactive cavity tree (tag #6680) occur 50 to 200 ft. from tank trails (Table 7-6). There are 2 cavity trees with suitable cavities (tag #s 6646 and 7043A) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,123.46 ft^2 of pine BA on 99.07 acres of suitable habitat, 709.78 ft^2 of pine BA on 21.39 acres of potentially suitable habitat and 1,709.97 ft^2 of pine BA on 86.01 acres of future potential habitat. Cluster O25-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 6,543.21 ft^2 of pine BA on 206.47 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O25-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

Although pine decline analyses were not conducted for this BA, the O25-B foraging partition had a net gain in pine BA of 21.2% from the original FHA (USACE 2008). Therefore, "take" due to foraging habitat loss with pine decline was no longer considered to be necessary. However, only 2 cavity trees with suitable cavities are > 200 ft. from tank trails.

The 2014 Incidental Take status (take due to pine decline) was therefore changed to indirect harassment take.

Cluster O26-A (O03-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,455.06 ft^2 of pine BA on 115.23 acres of suitable habitat and 443.51 ft^2 of pine BA on 39.87 acres of future potential habitat. There was no potentially suitable habitat. Cluster O26-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 227.93 ft^2 of pine BA on 3.72 acres of potentially suitable habitat and 4,670.64 ft^2 of pine BA on 151.38 acres of future potential habitat. There was no suitable habitat. Cluster O26-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster O26-B (O03-07): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,142.76 ft^2 of pine BA on 93.19 acres of suitable habitat, 197.71 ft^2 of pine BA on 6.44 acres of potentially suitable habitat and

1,048.12 ft^2 of pine BA on 80.12 acres of future potential habitat. Cluster O26-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 5,388.59 ft^2 of pine BA on 179.75 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O26-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged. This cluster is also an UC and is included in the ESMC ITS (USFWS 2014a).

Cluster O28-A (O05-01): This cluster had a PBG from 2010 to 2014 and contained 14 mature cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). Currently all cavity trees are > 200 ft. from tank trails and heavy maneuver areas.

The 2014 MSS baseline foraging habitat totals were 6,007.13 ft^2 of pine BA on 131.34 acres of suitable habitat, 5,070.06 ft^2 of pine BA on 93.47 acres of potentially suitable habitat and 11.82 ft^2 of pine BA on 41.87 acres of future potential habitat. Cluster O28-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,372.92 ft^2 of pine BA on 22.92 acres of potentially suitable habitat and 9,716.09 ft^2 of pine BA on 243.76 acres of future potential habitat. There was no suitable habitat. Cluster O28-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster O28-B (O05-02): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to indirect harassment impacts (USFWS 2009a). The Repair of Existing Training Roads Project (Phase I) had impacts within 50 ft. of one cavity tree and 50 to 200 ft. of 2 cavity trees (USACE 2009a). Currently, one active cavity tree (tag #2262) and one inactive cavity tree (tag #0770) are 50 to 200 ft. from tank trails (Table 7-6). There are 4 cavity trees with 5 suitable cavities (tag #s 2250, 2263, 6544A and 6545A) that are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 3,169.37 ft^2 of pine BA on 77.08 acres of suitable habitat, 223.86 ft^2 of pine BA on 4.87 acres of potentially suitable habitat and 272.50 ft^2 of pine BA on 22.14 acres of future potential habitat. Cluster O28-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 3,665.73 ft^2 of pine BA on 104.09 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (indirect harassment impacts) was unchanged because of ongoing activity surrounding the cluster area and throughout the partition from Daniel Lee Range, Call Range, a tank trail improved for MCoE (Midwest Rd.) and a paved road constructed for MCoE.

Cluster O30-A (O05-03R): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE2008, 2009a and 2009b). Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 6,909.55 ft^2 of pine BA on 160.72 acres of suitable habitat, 100.32 ft^2 of pine BA on 2.28 acres of potentially suitable habitat and 733.77 ft^2 of pine BA on 39.85 acres of future potential habitat. Cluster O07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 632.44 ft^2 of pine BA on 13.04 acres of potentially suitable habitat and 7,111.20 ft^2 of pine BA on 189.81 acres of future potential habitat. There was no suitable habitat. Cluster O07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster O33-A: This was a new recruitment cluster provisioned in March 2014. It contained 4 provisioned inactive, suitable cavity trees.

This cluster was impacted by BRAC and MCoE projects, but the cluster was inactive, so the partition was deleted prior to analyses (USACE 2008), and no Incidental Take was necessary (USFWS 2009a). Currently, all cavity trees are > 200 ft. from tank trails and HMAs.

The 2014 MSS baseline foraging habitat totals were 3,901.26 ft^2 of pine BA on 73.27 acres of suitable habitat, 8,753.96 ft^2 of pine BA on 162.52 acres of potentially suitable habitat and3.71 ft^2 of pine BA on 6.37 acres of future potential habitat. Cluster O33-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 303.09 ft^2 of pine BA on 6.26 acres of potentially suitable habitat and 12,355.84 ft^2 of pine BA on 235.90 acres of future potential habitat. There was no suitable habitat. Cluster O33-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster O34-A (O07-01R): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to group density reduction (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,793.02 ft^2 of pine BA on 125.29 acres of suitable habitat, 143.62 ft^2 of pine BA on 3.31 acres of potentially suitable habitat and 523.97 ft^2 of pine BA on 144.68 acres of future potential habitat. Cluster O34-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 872.87 ft^2 of pine BA on 19.43 acres of potentially suitable habitat and 5,587.74 ft^2 of pine BA on 253.85 acres of future potential habitat. There was no suitable habitat. Cluster O34-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (group level take) was unchanged. There is currently 1 active, untaken cluster within 1.25 miles of the O34-A cluster center.

Cluster Q03-A (Q02-02): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 6,849.49 ft^2 of pine BA on 162.83 acres of suitable habitat and 0.00 ft^2 of pine BA on 3.73 acres of future potential habitat. There was no potentially suitable habitat. Cluster Q03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,049.70 ft^2 of pine BA on 17.18 acres of potentially suitable habitat and 5,799.79 ft^2 of pine BA on 149.38 acres of future potential habitat. There was no suitable habitat. Cluster Q03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster Q03-C (Q02-04R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects but no Incidental Take was necessary (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 5,298.14 ft^2 of pine BA on 142.85 acres of suitable habitat, 111.40 ft^2 of pine BA on 71.65 acres of future potential habitat and 12.12 acres of pine habitat not managed for RCWs. Cluster Q03-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 198.46 ft^2 of pine BA on 4.49 acres of potentially suitable habitat, 5,211.08 ft^2 of pine BA on 210.01 acres of future potential habitat and 12.12 acres of pine habitat not managed for RCWs. There was no suitable habitat. Cluster Q03-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster R01-A (R01-01): This cluster had a PBG from 2010 to 2012, a solitary male in 2013 and a PBG in 2014. It contained 9 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to group density reduction (USFWS 2009a). Construction of the Vehicle Recovery Course Project had impacts within 50-200 ft. of 2 cavity trees (USACE 2009a). Currently, one active, cavity tree (tag # 6941 (2014 nest tree)) and 2 inactive cavity trees (tag #s 4976 and 5740) are within 50 to 200 ft. of the vehicle recovery course. Four suitable cavity trees (4661A, 4681, 4975A and 5846) are > 200 ft. from the vehicle recovery course.

The 2014 MSS baseline foraging habitat totals were 2,458.90 ft^2 of pine BA on 58.12 acres of suitable habitat, 954.09 ft^2 of pine BA on 22.18 acres of potentially suitable habitat, 1,413.11 ft^2 of pine BA on 91.03 acres of future potential habitat and an unknown amount of pine BA on 4.51 acres of unmanaged pine dominated habitat. Cluster R01-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,559.24 ft^2 of pine BA on 29.91 acres of potentially suitable habitat, 3,266.86 ft^2 of pine BA on 141.42 acres of future potential habitat and an unknown amount of pine BA on 4.51 acres of unmanaged pine-dominated habitat. There was no suitable habitat. Cluster R01-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (group level take) was unchanged. There is currently one active, untaken cluster within 1.25 miles of the R01-A cluster center.

Cluster R01-B (R01-03): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster had "take" for foraging habitat impacts in the BRAC BO and was deleted prior to the MCoE analyses because it had no chance of meeting RS in the future (defined as containing more than 150 acres of total pine habitat post-BRAC) (USACE 2008). There was one small trail that led into this cluster that was marked as closed for use by the ARC (Fort Benning 2011a).

The 2009 vehicle recovery course had impacts within 50 to 200 ft. of all cavity trees (13 total) within the cluster (USACE 2008a). Currently, 2 active cavity trees (tag #s 6043A (2014 nest tree) and 6044A) and 3 inactive cavity trees (tag #s 2652A, 3902A and 5867) are 50 to 200 ft. from tank trails and the vehicle recovery course. Four suitable cavity trees (tag #s 2654A, 2657A, 6147 and 6833) are > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 1,215.42 ft^2 of pine BA on 33.83 acres of suitable habitat, 370.50 ft^2 of pine BA on 8.92 acres of potentially suitable habitat and 322.28 ft^2 of pine BA on 127.51 acres of future potential habitat. Cluster R01-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 1,386.87 ft^2 of pine BA on 36.50 acres of potentially suitable habitat and 521.33 ft^2 of pine BA on 133.76 acres of future potential habitat. There was no suitable habitat. Cluster R01-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster R03-A (R02-01): This cluster was inactive in 2010 and had a PBG from 2011 to 2014. It contained 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). One active cavity tree (tag #7462 (2014 nest tree)) found in

May 2014 that occurs within 50 ft. of the vehicle recovery course and one cavity tree (tag #7341) is within 50 to 200 ft. of the infrastructure support - utilities project. There are 6 cavity trees with suitable cavities > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 3,356.22 ft^2 of pine BA on 85.31 acres of suitable habitat, 973.28 ft^2 of pine BA on 13.95 acres of potentially suitable habitat and 1,165.27 ft^2 of pine BA on 112.70 acres of future potential habitat. Cluster R03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 282.54 ft^2 of pine BA on 6.05 acres of suitable habitat 1,747.18 ft^2 of pine BA on 28.65 acres of potentially suitable habitat and 3,465.05 ft^2 of pine BA on 177.26 acres of future potential habitat. Cluster R03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was changed to none.

Cluster S02-A (HCC-03): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was "taken" by BRAC projects due to cavity tree loss (USFWS 2007a) and was not reanalyzed for MCoE (USFWS 2009a). Construction of the 2009 Centralized Wash

Facility was anticipated to remove 2 of 9 cavity trees and have impacts within 50 to 200 ft. of 2 others. In addition, the 2011 3rd ID Brigade Combat Team project was anticipated to remove 5 of 9 cavity trees (USACE 2007a). However, no cavity trees were ultimately removed by BRAC or MCoE project construction. This cluster was near one small trail that was not used by the

ARC; therefore, no additional "take" was necessary (USFWS 2011b). Currently, all cavity trees are > 200 ft. from the wash facility and tank trails.

The 2014 MSS baseline foraging habitat totals were 3,243.68 ft^2 of pine BA on 76.61 acres of suitable habitat and 287.13 ft^2 of pine BA on 59.93 acres of future potential habitat. There was no potentially suitable habitat. There were 116.79 ft^2 of pine BA on 3.21 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster S07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 709.16 ft^2 of pine BA on 13.77 acres of potentially suitable habitat and 2,938.44 ft^2 of pine BA on 125.98 acres of future potential habitat. There was no suitable habitat. Cluster S02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to loss of cavity trees) was changed to none. No cavity trees were removed by BRAC or MCoE projects.

Cluster S02-B (S02-01R): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects, but no "Incidental take was necessary

(USFWS 2009a). It was potentially impacted by harassment from ARC training, but no "take" was necessary (USFWS 2011b). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 3,268.30 ft^2 of pine BA on 69.97 acres of suitable habitat, 0.32 ft^2 of pine BA on 0.01 acre of potentially suitable habitat and 780.65 ft^2 of pine BA on 31.78 acres of future potential habitat. Cluster S02-B does not currently meet the modified MSS requirements for the 0.5 mile radius foraging partition due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 3,007.01 ft^2 of pine BA on 63.26 acres of potentially suitable habitat and 1,042.26 ft^2 of pine BA on 38.50 acres of future potential habitat. There was no suitable habitat. Cluster S02-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly no take) was changed to take due to foraging habitat loss (acreage). The partition shifted since it was originally analyzed resulting in additional noncontiguous habitat.

Cluster S04-A (S01-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE and ARC projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

There is currently one active cavity tree (tag #6541A) and one inactive cavity tree (tag #6542A) within 50 to 200 ft. of tank trails. There are 4 suitable cavity trees (tag #s 5053, 6103A, 6104A and 6876 (2014 nest tree) > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 930.20 ft^2 of pine BA on 24.50 acres of suitable habitat and 236.70 ft^2 of pine BA on 72.40 acres of future potential habitat. There was no potentially suitable habitat. There were 163.20 ft^2 of pine BA on 4.80 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster S04-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 169.00 ft^2 of pine BA on 3.50 acres of potentially suitable habitat and 1,161.10 ft^2 of pine BA on 98.20 acres of future potential habitat.

There was no suitable habitat. Cluster S04-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster S04-B (S03-01): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). It was near one small trail that was not used by the ARC; therefore, no "take" was necessary (USFWS 2011b). No cavity trees were taken or impacted by BRAC or

MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 2,463.18 ft^2 of pine BA on 71.73 acres of suitable habitat and 523.17 ft^2 of pine BA on 78.87 acres of future potential habitat. There was no potentially suitable habitat. Cluster S04-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 20.91 ft^2 of pine BA on 0.41 acre of potentially suitable habitat and 2,965.44 ft^2 of pine BA on 150.19 acres of future potential habitat. There was no suitable habitat. Cluster S04-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster SHC-A (SHC-02): This cluster had a solitary male in 2010, was inactive in 2011, had a PBG in 2012 and was inactive in 2013 and 2014. It had 4 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to group density reduction (USACE 2008). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 4,180.15 ft^2 of pine BA on 100.28 acres of suitable habitat, 843.28 ft^2 of pine BA on 41.47 acres of future potential habitat and an unknown amount of pine BA on 0.25 acre of minimally managed pine habitat. There was no potentially suitable habitat. Cluster SHC-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,554.02 ft^2 of pine BA on 36.14 acres of potentially suitable habitat, 3,469.41 ft^2 of pine BA on 105.61 acres of future potential habitat and an unknown amount of pine BA on 0.25 acre of minimally managed pine habitat. There was no suitable habitat. Cluster SHC-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (taken at group level) was unchanged. There are currently no clusters within 1.25 miles of the SHC-A cluster center.

Cluster SHC-B (U04-01): This cluster was inactive from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was taken at the cluster level by BRAC projects due to loss of foraging habitat (USFWS 2007a) and was not reanalyzed for MCoE projects (USFWS 2009a). Cluster SHC-B had no chance of meeting RS in the future (defined as containing more than 150 acres of total pine habitat post-BRAC) and habitat within the partition was reallocated to adjacent foraging partitions (USACE 2007a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 588.64 ft^2 of pine BA on 9.67 acres of suitable habitat and 834.21 ft^2 of pine BA on 97.41 acres of future potential habitat. There was no potentially suitable habitat. There were 1,805.50 ft^2 of pine BA on 42.74 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster SHC-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat. The 2014 RS baseline foraging habitat totals were 1,543.94 ft^2 of pine BA on 27.46 acres of potentially suitable habitat and 1,683.41 ft^2 of pine BA on 122.36 acres of future potential habitat. There was no suitable habitat. Cluster SHC-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster T04-A (T01-02): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects, but no Incidental Take was necessary (USFWS 2009a). The MCoE project impacting this cluster, the Railroad Loading Facility Expansion, was moved to Compartments P5 and P6. Cluster T04-A was also not affected by the changes to the ARC (Fort Benning 2011b); therefore, this cluster is no longer affected by MCoE projects. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).The 2014 MSS baseline foraging habitat totals were 3,143.52 ft^2 of pine BA on 86.60 acres of suitable habitat and 1,619.76 ft^2 of pine BA on 65.36 acres of future potential habitat. There was no potentially suitable habitat. There were 135.60 ft^2 of pine BA on 2.26 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster T04-A meets the modified MSS requirements for the 0.5 mile radius foraging partition. The 2014 RS baseline foraging habitat totals were 5.58 ft^2 of pine BA on 0.12 acre of potentially suitable habitat and 4,893.30 ft^2 of pine BA on 154.10 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (none) was unchanged.

Cluster T05-B (T02-02R): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). The MCoE project impacting this cluster, the Railroad Loading Facility Expansion, was moved to Compartments P5 and P6. Cluster T04-A was also not affected by the changes to the ARC change (Fort Benning 2011b); therefore, this cluster is no longer affected by MCoE projects. No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b).

The 2014 MSS baseline foraging habitat totals were 555.56 ft^2 of pine BA on 15.80 acres of suitable habitat and 1,464.49 ft^2 of pine BA on 72.93 acres of future potential habitat. There was no potentially suitable habitat. Cluster T05-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat. The 2014 RS baseline foraging habitat totals were 2,020.05 ft^2 of pine BA on 88.73 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster T05-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to none. There were no impacts from BRAC or MCoE projects

Cluster T06-A (J02-02R): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required "take" due to foraging habitat impacts (USFWS 2009a). One of the MCoE projects impacting this cluster, the Railroad Loading Facility Expansion, was moved to Compartments P5 and P6 and is no longer within the foraging partition for Cluster T06-A. The Construction of Paved Training Area Roads had impacts within 50-200 ft. of 8 cavity trees. Currently, 2 active cavity trees (tag #s 5511 and 6830 (2014 nest tree) and 5 inactive cavity trees (2686A, 2688A, 5691, 5913 and 2685A) occur within 50 to 200 ft. of paved training area roads and 3 suitable cavity trees occur > 200 ft. from paved training area roads. The 2014 MSS baseline foraging habitat totals were 950.00 ft^2 of pine BA on 27.07 acres of suitable habitat, 1,071.23 ft^2 of pine BA on 27.95 acres of potentially suitable habitat and1,058.62 ft^2 of pine BA on 70.59 acres of future potential habitat. Cluster T06-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 408.04 ft^2 of pine BA on 9.19 acres of potentially suitable habitat and 2,671.81 ft^2 of pine BA on 116.42 acres of future potential habitat. There was no suitable habitat. Cluster T06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (foraging habitat take) was unchanged.

Cluster T06-B (T02-01): This cluster had a PBG from 2010 to 2014 and contained 11 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE and BRAC projects and required "take" due to foraging habitat impacts (USFWS 2009a). No cavity trees were taken or impacted by BRAC or MCoE projects (USACE 2008, 2009a and 2009b). The 2014 MSS baseline foraging habitat totals were 3,639.91 ft^2 of pine BA on 89.36 acres of suitable habitat, 407.66 ft^2 of pine BA on 9.12 acres of potentially suitable habitat and 775.03 ft^2 of pine BA on 50.25 acres of future potential habitat. Cluster T06-B meets the modified MSS requirements for the 0.5 mile radius foraging partition. The 2014 RS baseline foraging habitat totals were 4,822.60 ft^2 of pine BA on 148.73 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster T06-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 Incidental Take status (formerly taken due to foraging habitat impacts) was changed to none. The pine basal area > 10" dbh has increased within this partition since the MCoE BA was submitted, which contributed to T06-B now meeting the MSS guidelines (USACE 2008).

Direct and Indirect Harassment Impacts

Of the clusters directly impacted by BRAC or MCoE actions, 8 clusters (D11-A, D11-B, E06-A, O14-A, O14-B, O25-A, O26-A and O26-B) could require "take" for temporary indirect harassment for 5 years (previously 9 clusters) and 9 impacted clusters (A14-B, D07-A, K16-A, N04-C, O03-B, O05-A, O07-A, O25-B and O28-B) that could require "take" for indirect harassment impacts (previously 7). One cluster (O18-B) (previously N04-C) will require "take" for direct harassment impacts.

In the revised 2014 baseline, Cluster O06-E changed from temporary indirect harassment to a foraging habitat "take." Cluster N04-C changed from a direct harassment "take" to an indirect harassment "take." O04-B changed from needing "take" for indirect harassment to not needing "take." O25-B changed from requiring "take" due to foraging habitat with pine decline to an indirect harassment take. Cluster O07-A changed from a foraging habitat "take" to an indirect harassment "take." The remaining clusters previously "taken" due to indirect harassment (A14-B, D07-A, K16-A, O03-B, O05-A and O28-B) were unchanged.

In the MCoE BO (USFWS 2009a), 17 clusters were issued temporary indirect harassment take until the ARC moved off-post, of which 9 clusters were directly impacted by BRAC or MCoE actions and had foraging habitat analyses conducted above. The 10 clusters listed below were not directly impacted by BRAC or MCoE projects, but were analyzed for indirect harassment impacts. "Take" was issued for 8 of the clusters below for temporary indirect harassment impacts (USFWS 2009a). Two additional clusters (K28-A andE08-C) were inactive or have split since the MCoE BO (USFWS 2009a) but are now within 200 ft. of tank trails and were analyzed for harassment impacts.

Cluster E02-A (KPR-01): This cluster had a PBG from 2010 to 2014 and contained 14 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a). Currently one inactive, suitable cavity tree (tag #5899) occurs within 0 to 50 ft. of tank trails and3 active, suitable cavity trees (tag #5716, 5741 and 7319) occur within 50 to 200 ft. of tank trails. There are 5 cavity trees (tag #s 5219, 5896, 6957 (2014 nest tree), 6584, and 6643) with 4 suitable cavities > 200 ft. from tank trails. This cluster had 2 failed nest attempts in 2 cavity trees in 2010, successfully fledged 2 of 3 nestlings in 2011, 4 of 4 nestlings in 2012, 3 of 4 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster E08-C (E08-05R): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

Currently one active, suitable cavity tree (tag #7492) occurs within 50 to 200 ft. of tank trails and heavy maneuver training areas. There are 7 cavity trees (tag #s 5120A, 5121A, 5122A, 5123A, 6156, 7235 (2014 nest tree) and 7316) with 7 suitable cavities > 200 ft. from tank trails. This cluster successfully fledged 3 of 3 nestlings in 2010, 4 of 4 nestlings in 2011, 3 of 3 nestlings in 2012, 2 of 2 nestlings in 2013 and 1 of 2 nestlings in 2014.cluster was not previously impacted by BRAC or MCoE actions and will not require "take" due to indirect harassment impacts.

Cluster J04-A (J03-01): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a).Currently, all cavity trees are > 200 ft. from tank trails. This cluster successfully fledged 1 of 2 nestlings in 2010, 3 of 3 nestlings in 2011, 2 of 2 nestlings in 2012, 3 of 4 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster J07-A (J04-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a).Currently, all cavity trees are > 200 ft. from tank trails. This cluster failed in 2010, successfully fledged 1 nestling in 2011, failed in 2012 and 2013 and fledged 2 of 2 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster J07-B (J05-01): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a). Currently one inactive cavity tree (tag #2266) occurs within 0 to 50 ft. of tank trails and five active cavity trees (tag #s 1958, 6924, 3652, 5917 and 7388 (2014 nest tree)) occur within50 to 200 ft. of tank trails. There is one active, suitable cavity tree (tag #s 5831A) > 200 ft. from tank trails. However, it is on the other side (southeast) of the tank trail and 1,275 feet from the other active cavity trees. This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 2 of 3 nestlings in 2012, 3 of 3 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster K25-A (K14-01R): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a). Currently 3 active, suitable cavity trees (tag #4610A, 5280A, and 5281A) occur within 50 to 200 ft. of tank trails. There are 2 cavity trees (tag #s 4613A (2014 nest tree) and 4611) with 2 suitable cavities > 200 ft. from tank trails. This cluster successfully fledged 3 of 3 nestlings in 2010, 3 of 4 nestlings in 2011, 3 of 3 nestlings in 2012, 3 of 3 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster K28-A (K18-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

Cluster K18-01 "split" into 2 groups (K28-A and K28-B) in 2008 (Fort Benning, unpub. data).This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a).Currently one inactive, unsuitable cavity tree (tag #4232) occurs within 50 to 200 ft. of tank trails. There are 2 cavity trees (tag #s 7223 (2014 nest tree) and 3659A) with 2 suitable cavities> 200 ft. from tank trails. This cluster had a failed nest attempt in 2010, successfully fledged 2 of 2 nestlings in 2011, 2 of 2 nestlings in 2012, 2 of 3 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster K28-B (K18-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

Cluster K18-01 "split" into 2 groups (K28-A and K28-B) in 2008 (Fort Benning, unpub. data).This cluster was impacted by MCoE projects and was not issued temporary indirect harassment take. However, when K18-01 split into 2 RCW groups, the partition was split down the middle and the same heavy maneuver training that impacted K28-A would have impactedK28-B. Currently all cavity trees are within 200 ft. of tank trails. Two active, suitable cavity trees (tag #s 6708A and 6709A) occur within 0 to 50 ft. of tank trails and 4 cavity trees (tag #s5918, 6206 (2010-2014 nest tree), 7060A and 7061A) with 4 suitable cavities occur 50 to 200 ft. from tank trails. This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 3 of 4 nestling in 2012, 3 of 4 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 Incidental Take status (none) was unchanged. However, it may need to be readdressed if the proposed Action does not occur.

Cluster T07-B (T03-02): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a).Currently, all cavity trees are > 200 ft. from tank trails. This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 4 of 4 nestlings in 2012, 3 of 3 nestlings in 2013 and 4 of 4 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster T07-C (T03-04R): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

This cluster was impacted by MCoE projects and required temporary "take" due to indirect harassment until the heavy maneuver component of the ARC moved off-post (USFWS 2009a).

Currently, all cavity trees are > 200 ft. from tank trails. This cluster successfully fledged 2 of 3 nestlings in 2010, 3 of 3 nestlings in 2011, 2 of 3 nestlings in 2012, 2 of 2 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 Incidental Take status (temporary indirect harassment take for 5 years) was unchanged.

Cluster Level Analysis (*Enhanced Training*)

As a result of the proposed action, to move the heavy maneuver portion of the ARC to the GHMTA and associated development of heavy maneuver areas in the GHMTA, the following cluster level analysis is provided.

Cluster D03-A (D15-01): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. The cluster center has moved since the DMPRC BA (Fort Benning 2004b) and is currently 0.61 mile from the DMPRC clearing limits.

Currently, all cavity trees are > 200 ft. from tank trails and the SMTA. The 2014 MSS baseline foraging habitat totals were 7,131.75 ft^2 of pine BA on 164.11 acres of suitable habitat, 1,102.36 ft^2 of pine BA on 60.97 acres of future potential habitat and an unknown amount of pine BA on 6.65 acres of minimally-managed pine habitat. There was no potentially suitable habitat. Cluster D03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 1,884.88 ft^2 of pine BA on 48.62 acres of
28 suitable habitat, 0.00 ft^2 of pine BA on 2.24 acres of future potential habitat and an unknown amount of pine BA on 12.73 acres of minimally-managed pine-dominated habitat previously
2 proposed for removal.

The post-action MSS foraging habitat totals will be 9,016.63 ft^2 of pine BA on 212.73 acres of suitable habitat, 1,102.36 ft^2 of pine BA on 63.21 acres of future potential habitat and an unknown amount of pine BA on 19.38 acres of minimally-managed pine habitat.

There was no potentially suitable habitat. Cluster D03-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 552.28 ft^2 of pine BA on 8.33 acres of potentially suitable habitat, 7,681.83 ft^2 of pine BA on 216.75 acres of future potential habitat and an unknown amount of pine BA on 6.65 acres of minimally-managed pine habitat. There was no suitable habitat. Cluster D03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 1,884.88 ft2 of pine BA on 50.86 acres of future potential habitat and an unknown amount of pine BA on 12.73 acres of minimally managed pine-dominated habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 552.28 ft2 of pine BA on 8.33 acres of potentially suitable habitat, 9,566.71 ft^2 of pine BA on 267.61 acres of future potential habitat and an unknown amount of pine BA on 19.38 acres of minimally-managed pine habitat. There was no suitable habitat. Cluster D03-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (none) was unchanged by the action.

Construction of the DMPRC was under construction in 2008 and operational by 2010. There were no direct impacts, the cluster center is 0.61 mile from the cleared part of the DMPRC and the partition has large amounts of suitable and potentially suitable habitat (approximately 9,016.63 ft^2 of pine BA on 212.73 acres of suitable and potentially suitable habitat).

Cluster D06-B (D05-04R): This cluster had a PBG from 2010 to 2012, was inactive in 2013 and had a PBG in 2014. Cluster D06-B contained 6 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. Currently one inactive, unsuitable cavity tree (tag #6619) occurs within the SMTA. Four cavity trees (tag #s 5408A, 5410A, 5411A and 7445) with 5 suitable cavities are > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 3,969.12 ft^2 of pine BA on 95.22 acres of suitable habitat, 348.54 ft^2 of pine BA on 9.42 acres of potentially suitable habitat and 171.21 ft^2 of pine BA on 20.61 acres of future potential habitat. Cluster D06-B meets the modified MSS requirements for the 0.5 mile radius foraging partition. The post-action MSS foraging habitat totals will be 8,611.33 ft^2 of pine BA on 201.87 acres of suitable habitat, 579.45 ft^2 of pine BA on 14.54 acres of potentially suitable habitat and 546.61 ft^2 of pine BA on 50.42 acres of future

potential habitat (Table 9-2, Appendices H and I). Cluster D06-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 1,868.61 ft^2 of pine BA on 42.57 acres of potentially suitable habitat and 2,620.26 ft^2 of pine BA on 82.68 acres of future potential habitat. There was no suitable habitat.

Cluster D06-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 945.80 ft^2 of pine BA on 19.75 acres of potentially suitable habitat and 4,302.72 ft^2 of pine BA on 121.83 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,814.41 ft^2 of pine BA on 62.32 acres of potentially suitable habitat and 6,922.98 ft^2 of pine BA on 204.51 acres of future potential habitat. There was no suitable habitat.

Cluster D06-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 4,642.21 ft^2 of pine BA on 106.65 acres of suitable habitat, 230.91 ft^2 of pine BA on 5.12 acres of potentially suitable habitat and 375.40 ft^2 of pine BA on 29.81 acres of future potential habitat previously proposed for removal.

The 2014 baseline Incidental Take status (none) was unchanged by the action.

Cluster D07-A (D05-02R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was indirect harassment. Currently 5 active cavity trees (tag #s 4645A, 4646A, 5270A (2014 nest tree), 5657 and 7443) are within 50-200 ft. of the SMTA. One tree (#4648A) with an active, suitable cavity is > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 3,309.11 ft^2 of pine BA on 88.02 acres of suitable habitat and 258.38 ft^2 of pine BA on 11.82 acres of future potential habitat. There was no potentially suitable habitat. Cluster D07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 1,416.67 ft^2 of pine BA on 31.76 acres of suitable habitat and 572.22 ft^2 of pine BA on 26.01 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 4,725.78 ft^2 of pine BA on 119.78 acres of suitable habitat and 830.60 ft^2 of pine BA on 37.83 acres of future potential habitat. There was no potentially suitable habitat. Cluster D07-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 389.86 ft^2 of pine BA on 7.57 acres of potentially suitable habitat and 3,177.63 ft^2 of pine BA on 92.27 acres of future potential habitat. There was no suitable habitat.

Cluster D07-A does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 716.88 ft^2 of pine BA on 13.92 acres of potentially suitable habitat and 1,272.01 ft^2 of pine BA on 44.59 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 1,106.74 ft^2 of pine BA on 21.49 acres of potentially suitable habitat and 4,449.64 ft^2 of pine BA on 136.12 acres of future potential habitat. There was no suitable habitat.

Cluster D07-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (take- indirect harassment) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster D09-A (D17-02): This cluster was captured by D09-B in 2008, had a PBG from 2009 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. Currently all cavity trees are > 200 ft. from tank trails and the SMTA.

The 2014 MSS baseline foraging habitat totals were 2,505.56 ft^2 of pine BA on 68.77 acres of suitable habitat, 212.39 ft^2 of pine BA on 6.34 acres of potentially suitable habitat and 1,127.91 ft^2 of pine BA on 104.47 acres of future potential habitat.

There were 359.82 ft^2 of pine BA on 10.97 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster D09-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat previously proposed for removal.

Implementation of the proposed action will add 3.88 ft^2 of pine BA on 0.11 acre of suitable habitat and 69.63 ft^2 of pine BA on 4.16 acres of future potential habitat.

The post-action MSS foraging habitat totals will be 2,510.44 ft^2 of pine BA on 68.88 acres of suitable habitat, 212.39 ft^2 of pine BA on 6.34 acres of potentially suitable habitat and 1,487.73 ft^2 of pine BA on 115.44 acres of future potential habitat.

There were 359.82 ft^2 of pine BA on 10.97 acres of suitable and potentially suitable, but temporarily noncontiguous habitat. Cluster D09-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 462.33 ft^2 of pine BA on 10.86 acres of potentially suitable habitat and 3,674.72 ft^2 of pine BA on 175.53 acres of future potential habitat. There was no suitable habitat.

Cluster D09-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 73.51 ft^2 of pine BA on 4.27 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 462.33 ft^2 of pine BA on 10.86 acres of potentially suitable habitat and 3,748.23 ft^2 of pine BA on 179.80 acres of future potential habitat. There was no suitable habitat.

Cluster D09-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action. The 2009 Southern Training Area Infrastructure - Upgrade Paved Roads and Tank Trails project removed foraging habitat within the partition and construction was completed between February 2011 and December 2012.

Cluster D09-B (D17-03): This cluster had a PBG in 2008, was captured by D09-C in 2009, was captured by D09-A in 2010 and had a PBG from 2011 to 2014. The cluster contained 6 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 2,226.60 ft^2 of pine BA on 50.53 acres of suitable habitat, 12.40 ft^2 of pine BA on 0.37 acre of potentially suitable habitat and 601.48 ft^2 of pine BA on 30.17 acres of future potential habitat.

Cluster D09-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 14.56 ft^2 of pine BA on 0.32 acre of suitable habitat and 5.80 ft^2 of pine BA on 0.26 acre of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 2,241.16 ft^2 of pine BA on 50.85 acres of suitable habitat, 12.40 ft^2 of pine BA on 0.37 acre of potentially suitable habitat and 607.28 ft^2 of pine BA on 30.43 acres of future potential habitat. Cluster D09-B will not meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,044.93 ft^2 of pine BA on 45.37 acres of potentially suitable habitat and 795.55 ft^2 of pine BA on 35.70 acres of future potential habitat. There was no suitable habitat.

Cluster D09-B does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future. Implementation of the proposed action will add 14.56 ft^2 of pine BA on 0.32 acre of potentially suitable habitat and 5.80 ft^2 of pine BA on 0.26 acre of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,059.49 ft^2 of pine BA on 45.69 acres of potentially suitable habitat and 801.35 ft^2 of pine BA on 35.96 acres of future potential habitat. There was no suitable habitat. Cluster D09-B does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action. The 2009 Southern Training Area Infrastructure - Upgrade Paved Roads and Tank Trails project removed foraging habitat within the partition and construction was completed between February 2011 and December 2012.

Cluster D09-C (D17-04R): This cluster had a PBG in 2010 and 2012, was inactive in 2011 and 2013 and captured in 2014 by D09-B. It contained 7 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. Currently one inactive cavity tree (tag #5273) is within 50 ft. of the SMTA and 5 cavity trees (tag #s 2637A, 2676A, 4942A, 5012 and 6232) are within 50-200 ft. of the SMTA. One tree (tag #22638A) with an active, suitable cavity is > 200 ft. from the SMTA.

The 2014 MSS baseline foraging habitat totals were 2,474.04 ft^2 of pine BA on 58.24 acres of suitable habitat, 177.55 ft^2 of pine BA on 5.30 acres of potentially suitable habitat and 529.26 ft^2 of pine BA on 48.03 acres of future potential habitat. Cluster D09-C does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 1,115.01 ft^2 of pine BA on 26.99 acres of suitable habitat, 410.04 ft^2 of pine BA on 12.24 acres of potentially suitable habitat and 1,465.03 ft^2 of pine BA on 54.69 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 3,589.05 ft^2 of pine BA on 85.23 acres of suitable habitat, 587.59 ft^2 of pine BA on 17.54 acres of potentially suitable habitat and 1,994.29 ft^2 of pine BA on 102.72 acres of future potential habitat. Cluster D09-C meets the modified MSS requirements for the 0.5 mile radius partition.

The 2014 RS baseline foraging habitat totals were 1,905.12 ft^2 of pine BA on 43.85 acres of potentially suitable habitat and 1,275.73 ft^2 of pine BA on 67.72 acres of future potential habitat. There was no suitable habitat.

Cluster D09-C does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future. Implementation of the proposed action will add 394.04 ft^2 of pine BA on 9.07 acres of potentially suitable habitat and 2,596.04 ft^2 of pine BA 84.85 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,299.16 ft^2 of pine BA on 52.92 acres of potentially suitable habitat and 3,871.77 ft^2 of pine BA on 152.57 acres of future potential habitat. There was no suitable habitat. Cluster D09-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster D11-A (D11-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability. The 2014 baseline Incidental Take status was temporary indirect harassment for 5 years. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 4,305.35 ft^2 of pine BA on 91.57 acres of suitable habitat, 68.11 ft^2 of pine BA on 2.19 acres of potentially suitable habitat and 0.00 ft^2 of pine BA on 46.09 acres of future potential habitat. Cluster D11-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 3.87 ft^2 of pine BA on 0.10 acre of suitable habitat and 0.00 ft^2 of pine BA on 0.01 acre of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 4,309.22 ft^2 of pine BA on 91.67 acres of suitable habitat, 68.11 ft^2 of pine BA on 2.19 acres of potentially suitable habitat and 0.00 ft^2 of

pine BA on 46.10 acres of future potential habitat. Cluster D11-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 3,189.59 ft^2 of pine BA on 58.30 acres of potentially suitable habitat and 1,183.87 ft^2 of pine BA on 81.55 acres of future potential habitat. There was no suitable habitat. Cluster D11-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 0.58 ft^2 of pine BA on 0.01 acre of potentially suitable habitat and 3.29 ft^2 of pine BA 0.10 acre of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 3,190.17 ft^2 of pine BA on 58.31 acres of potentially suitable habitat and 1,187.16 ft^2 of pine BA on 81.65 acres of future potential habitat. There was no suitable habitat. Cluster D11-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster D11-B (D11-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment for 5 years. There is currently one cavity tree with 2 active cavities (tag #6947) within 50 ft. and 2 inactive cavity trees (tag #s 5655 and 4240A) within 50-200 ft. of tank trails. There are 4 cavity trees (tag #s 3852A, 5697, 6149 and 6948) with suitable cavities > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 4,953.81 ft^2 of pine BA on 111.19 acres of suitable habitat, 3.11 ft^2 of pine BA on 0.10 acre of potentially suitable habitat and 292.25 ft^2 of pine BA on 14.59 acres of future potential habitat. Cluster D11-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 8.59 ft^2 of pine BA on 0.20 acre of suitable habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 4,962.40 ft^2 of pine BA on 111.39 acres of suitable habitat, 3.11 ft^2 of pine BA on 0.10 acre of potentially suitable habitat and 292.25 ft^2 of pine BA on 14.59 acres of future potential habitat. Cluster D11-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.
The 2014 RS baseline foraging habitat totals were 2,364.16 ft^2 of pine BA on 42.25 acres of potentially suitable habitat and 2,885.01 ft^2 of pine BA on 83.63 acres of future potential habitat.

There was no suitable habitat. Cluster D11-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 2.88 ft^2 of pine BA on 0.05 acre of potentially suitable habitat and 5.71 ft^2 of pine BA 0.15 acre of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,367.04 ft^2 of pine BA on 42.30 acres of potentially suitable habitat and 2,890.72 ft^2 of pine BA on 83.78 acres of future potential habitat. There was no suitable habitat. Cluster D11-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster D12-A (D10-01): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. There are currently 2 inactive cavity trees (tag #s 2823 and 5461A) and one active cavity tree (tag #5762A) within 50-200 ft. of tank trails. There are 4 cavity trees (tag #s 4004, 5716A, 7283 and 7362) with suitable cavities that are > 200 ft. from trails.

The 2014 MSS baseline foraging habitat totals were 22.80 ft^2 of pine BA on 0.74 acre of suitable habitat, 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,482.60 ft^2 of pine BA on 87.94 acres of future potential habitat. Cluster D12-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 117.00 ft^2 of pine BA on 3.60 acres of suitable habitat and 8.32 ft^2 of pine BA 4.78 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 139.80 ft^2 of pine BA on 4.34 acres of suitable habitat, 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,490.92 ft^2 of pine BA on 92.72 acres of future potential habitat. Cluster D12-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.
The 2014 RS baseline foraging habitat totals were 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,505.40 ft^2 of pine BA on 88.68 acres of future potential habitat. There was no suitable habitat. Cluster D12-A does not meet the RS requirements due to

insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 125.32 ft^2 of pine BA on 8.38 acres of future potential habitat previously proposed for removal. The post-action RS foraging habitat totals were 93.91 ft^2 of pine BA on 2.22 acres of potentially suitable habitat and 1,630.72 ft^2 of pine BA on 97.06 acres of future potential habitat. There was no suitable habitat. Cluster D12-A does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action. The 2009 Southern Training Area Infrastructure - Upgrade Paved Roads and Tank Trails project removed foraging habitat within the partition.

Cluster D13-A (D17-01): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was group level take. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 4,116.09 ft^2 of pine BA on 127.31 acres of suitable habitat, 458.53 ft^2 of pine BA on 10.84 acres of potentially suitable habitat and 1,577.66 ft^2 of pine BA on 141.88 acres of future potential habitat. Cluster D13-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 2.13 ft^2 of pine BA on 0.06 acre of suitable habitat, 0.85 ft^2 of pine BA on 0.02 acre of potentially suitable habitat and 9.05 ft^2 of pine BA 0.34 acre of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 4,118.22 ft^2 of pine BA on 127.37 acres of suitable habitat, 459.38 ft^2 of pine BA on 10.86 acres of potentially suitable habitat and 1,586.71 ft^2 of pine BA on 142.22 acres of future potential habitat. Cluster D13-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 458.53 ft^2 of pine BA on 10.84 acres of potentially suitable habitat and 5,693.75 ft^2 of pine BA on 269.19 acres of future potential habitat. There was no suitable habitat. Cluster D13-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 0.85 ft^2 of pine BA on 0.02 acre of potentially suitable habitat and 11.18 ft^2 of pine BA 0.40 acre of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 459.38 ft^2 of pine BA on 10.86 acres of potentially suitable habitat and 5,704.93 ft^2 of pine BA on 269.59 acres of future potential

habitat. There was no suitable habitat. Cluster D13-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (taken at group level) was unchanged by the action. The cluster will have one active, untaken cluster within 1.25 miles of its cluster center post-Action.

Cluster D14-A (D16-01): This cluster had a PBG from 2010 to 2014 and had 10 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was group-level take. It had one untaken cluster (at the cluster level) within 1.25 miles of its cluster center. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 1,857.00 ft^2 of pine BA on 49.41 acres of suitable habitat, 2,508.32 ft^2 of pine BA on 56.65 acres of potentially suitable habitat and 1,188.95 ft^2 of pine BA on 115.91 acres of future potential habitat. Cluster D14-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

Implementation of the proposed action will add 51.62 ft^2 of pine BA on 1.16 acres of suitable habitat and 8.42 ft^2 of pine BA on 0.37 acre of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 1,908.62 ft^2 of pine BA on 50.57 acres of suitable habitat, 2,508.32 ft^2 of pine BA on 56.65 acres of potentially suitable habitat and 1,197.37 ft^2 of pine BA on 116.28 acres of future potential habitat. Cluster D14-A meets the modified MSS requirements for the 0.5 mile radius foraging partition provided that potentially suitable habitat is made suitable through management.

The 2014 RS baseline foraging habitat totals were 1,453.92 ft^2 of pine BA on 30.29 acres of potentially suitable habitat and 4,100.35 ft^2 of pine BA on 191.68 acres of future potential habitat. There was no suitable habitat. Cluster D14-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 60.04 ft^2 of pine BA on 1.53 acres of future potential habitat previously proposed for removal. The post-action RS foraging habitat totals will be 1,453.92 ft^2 of pine BA on 30.29 acres of potentially suitable habitat and 4,160.39 ft^2 of pine BA on 193.21 acres of future potential habitat. There was no suitable habitat. Cluster D14-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (taken at group level) was changed to none. The cluster will have 3 active, untaken clusters within 1.25 miles of its cluster center post-Action.

Cluster D14-B (D16-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. Currently one active (tag #7248) and one inactive cavity tree (tag #6978) occur within 50 ft. of tank trails (Table 7-6). There are 2 cavity trees (tag #3450A and 3451A) with suitable cavities > 200 ft. from tank trails.

The 2014 MSS baseline foraging habitat totals were 2,844.95 ft^2 of pine BA on 181.33 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 29.85 ft^2 of pine BA on 1.36 acres of future potential habitat previously proposed for removal. The post-action MSS foraging habitat totals will be 2,874.80 ft^2 of pine BA on 182.69 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,844.95 ft^2 of pine BA on 181.33 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 29.85 ft^2 of pine BA on 1.36 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,874.80 ft^2 of pine BA on 182.69 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D14-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action.

Cluster D15-A (D06-01R): This cluster had a PBG from 2010 to 2014 and had 7 cavity trees in various stages of completion and suitability. The 2014 baseline Incidental Take status was foraging habitat level take. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 1,179.37 ft^2 of pine BA on 35.09 acres of suitable habitat, 772.61 ft^2 of pine BA on 15.93 acres of potentially suitable habitat and 990.79 ft^2 of pine BA on 62.33 acres of future potential habitat. Cluster D15-A does not currently meet

the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 0.63 ft^2 of pine BA on 0.02 acre of suitable habitat, 710.71 ft^2 of pine BA on 15.62 acres of potentially suitable habitat and 250.80 ft^2 of pine BA on 25.12 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 1,180.00 ft^2 of pine BA on 35.11 acres of suitable habitat, 1,483.32 ft^2 of pine BA on 31.55 acres of potentially suitable habitat and 1,241.59 ft^2 of pine BA on 87.45 acres of future potential habitat. Cluster D15-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 2,942.77 ft^2 of pine BA on 113.35 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster D15-A does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable pine habitat to meet the RS in the future.

Implementation of the proposed action will add 710.71 ft^2 of pine BA on 15.62 acres of potentially suitable habitat and 251.43 ft^2 of pine BA 25.14 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 710.71 ft^2 of pine BA on 15.62 acres of potentially suitable habitat and 3,194.20 ft^2 of pine BA on 138.49 acres of future potential habitat. There was no suitable habitat. Cluster D15-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action.

Cluster D19-A (D08-01R): This cluster had a PBG from 2010 to 2012 and a solitary male in 2013 and 2014. There were 5 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. No cavity trees are currently impacted or within 200 ft. of tank trails.
The 2014 MSS baseline foraging habitat totals were 1,321.29 ft^2 of pine BA on 38.82 acres of suitable habitat, 342.63 ft^2 of pine BA on 7.29 acres of potentially suitable habitat and 167.88 ft^2 of pine BA on 52.83 acres of future potential habitat. Cluster D19-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 1,231.67 ft^2 of pine BA on 31.67 acres of suitable habitat, 63.92 ft^2 of pine BA on 1.36 acres of potentially suitable habitat and 681.01 ft^2 of pine BA 38.29 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 2,552.96 ft^2 of pine BA on 70.49 acres of suitable habitat, 406.55 ft^2 of pine BA on 8.65 acres of potentially suitable habitat and 848.89 ft^2 of pine BA on 91.12 acres of future potential habitat. Cluster D19-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 20.78 ft^2 of pine BA on 0.48 acre of potentially suitable habitat and 1,811.02 ft^2 of pine BA on 98.46 acres of future potential habitat. There was no suitable habitat. Cluster D19-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 14.29 ft^2 of pine BA on 0.33 acre of potentially suitable habitat and 1,962.31 ft^2 of pine BA 70.99 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 35.07 ft^2 of pine BA on 0.81 acre of potentially suitable habitat and 3,773.33 ft^2 of pine BA on 169.45 acres of future potential habitat. There was no suitable habitat. Cluster D19-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action.

Cluster E06-A (E04-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years. No habitat will be added back to the cluster post-Action.

Currently, tank trails occur within 200 ft. of all cavity trees within the cluster. Two active cavity trees (tag #5109 and 6826) and one inactive cavity tree (tag #5185) are within 0 to 50 ft. and 6 cavity trees (3 active (tag #2804, 6150, 6945 (2014 nest tree)) and 3 inactive (tag #180, 3957 and 5108)) are within 50 to 200 ft. of tank trails.
The 2014 MSS baseline and post-action foraging habitat totals were 4,151.92 ft^2 of pine BA on 101.58 acres of suitable habitat, 224.77 ft^2 of pine BA on 4.55 acres of potentially suitable habitat and 860.76 ft^2 of pine BA on 50.54 acres of future potential habitat. Cluster E06-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.
The 2014 RS baseline and post-action foraging habitat totals were 1,474.97 ft^2 of pine BA on 26.73 acres of potentially suitable habitat and 3,762.48 ft^2 of pine BA on 129.94 acres of future potential habitat. There was no suitable habitat. Cluster E06-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable pine habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster E07-B (E03-02): This cluster had a PBG from 2013 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 5,401.65 ft^2 of pine BA on 135.74 acres of suitable habitat, 1,023.72 ft^2 of pine BA on 30.06 acres of potentially suitable habitat and 1,223.52 ft^2 of pine BA on 111.37 acres of future potential habitat. Cluster E07-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 34.43 ft^2 of pine BA on 0.81 acre of suitable habitat, 16.79 ft^2 of pine BA on 0.54 acre of potentially suitable habitat and 48.84 ft^2 of pine BA 0.98 acre of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 5,436.08 ft^2 of pine BA on 136.55 acres of suitable habitat, 1,040.51 ft^2 of pine BA on 30.60 acres of potentially suitable habitat and 1,272.36 ft^2 of pine BA on 112.35 acres of future potential habitat. Cluster E07-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 7,648.89 ft^2 of pine BA on 277.17 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster E07-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 100.06 ft^2 of pine BA on 2.33 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 7,748.95 ft^2 of pine BA on 279.50 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster E07-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (none) was unchanged by the action.

Cluster F02-A (F01-02): This is a recruitment cluster that was inactive from 2004 to 2014 and contained 4 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. This cluster was directly impacted by MCoE projects, but was not analyzed due to inactivity (USFWS 2009a). This cluster was also not

assessed for the ARC BE due to inactivity (Fort Benning 2011b). Currently, all of the cavity trees are within the SMTA. There is a 200 ft. buffer around each cavity tree.

The 2014 MSS baseline foraging habitat totals were 330.01 ft^2 of pine BA on 8.56 acres of suitable habitat, 521.95 ft^2 of pine BA on 12.48 acres of potentially suitable habitat and 148.80 ft^2 of pine BA on 37.99 acres of future potential habitat. Cluster F02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 439.43 ft^2 of pine BA on 14.24 acres of suitable habitat, 70.06 ft^2 of pine BA on 2.21 acres of potentially suitable habitat and 1,820.29 ft^2 of pine BA 137.66 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 769.44 ft^2 of pine BA on 22.80 acres of suitable habitat, 592.01 ft^2 of pine BA on 14.69 acres of potentially suitable habitat and 1,969.09 ft^2 of pine BA on 175.65 acres of future potential habitat. Cluster F02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 232.09 ft^2 of pine BA on 5.36 acres of potentially suitable habitat and 768.67 ft^2 of pine BA on 53.67 acres of future potential habitat. There was no suitable habitat. Cluster F02-A does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 12.56 ft^2 of pine BA on 0.29 acre of potentially suitable habitat and 2,317.22 ft^2 of pine BA 153.82 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 244.65 ft^2 of pine BA on 5.65 acres of potentially suitable habitat and 3,085.89 ft^2 of pine BA on 207.49 acres of future potential habitat. There was no suitable habitat. Cluster F02-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

This cluster has been inactive since 2004 and therefore there is no 2014 baseline take status.

Cluster F05-A (F02-01R): This cluster had a PBG from 2010 to 2014 and had 6 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was foraging habitat level take. Currently, all of the cavity trees are within the SMTA. There is a 50 ft. buffer around each cavity tree.
The 2014 MSS baseline foraging habitat totals were 330.01 ft^2 of pine BA on 8.56 acres of suitable habitat, 521.95 ft^2 of pine BA on 12.48 acres of potentially suitable habitat and 148.80 ft^2 of pine BA on 37.99 acres of future potential habitat. Cluster F02-A does not currently meet

the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

Implementation of the proposed action will add 760.08 ft^2 of pine BA on 23.28 acres of suitable habitat, 925.86 ft^2 of pine BA on 19.92 acres of potentially suitable habitat and 1,519.11 ft^2 of pine BA 79.48 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 1,071.51 ft^2 of pine BA on 30.17 acres of suitable habitat, 961.67 ft^2 of pine BA on 20.69 acres of potentially suitable habitat and 2,510.79 ft^2 of pine BA on 160.22 acres of future potential habitat. Cluster F02-A does not currently meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline foraging habitat totals were 366.35 ft^2 of pine BA on 8.08 acres of potentially suitable habitat and 972.57 ft^2 of pine BA on 80.32 acres of future potential habitat. There was no suitable habitat. Cluster F05-A does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 906.75 ft^2 of pine BA on 19.50 acres of potentially suitable habitat and 2,298.30 ft^2 of pine BA 103.18 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 1,273.10 ft^2 of pine BA on 27.58 acres of potentially suitable habitat and 3,270.87 ft^2 of pine BA on 180.50 acres of future potential habitat. There was no suitable habitat. Cluster F05-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (foraging habitat level take) was unchanged by the action.

Cluster K35-C (K21-02R): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. No cavity trees are currently impacted or within 200 ft. of tank trails.
The 2014 MSS baseline foraging habitat totals were 6,401.36 ft^2 of pine BA on 146.50 acres of suitable habitat and 27.30 ft^2 of pine BA on 641.55 acres of future potential habitat. There was no potentially suitable habitat. Cluster K35-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 1,309.29 ft^2 of pine BA on 32.74 acres of suitable habitat and 93.06 ft^2 of pine BA on 3.96 acres of future potential habitat previously proposed for removal.

The post-action MSS foraging habitat totals will be 7,710.65 ft^2 of pine BA on 179.24 acres of suitable habitat and 734.61 ft^2 of pine BA on 31.26 acres of future potential habitat. There was no potentially suitable habitat. Cluster K35-C meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,753.71 ft^2 of pine BA on 53.47 acres of potentially suitable habitat and 4,289.20 ft^2 of pine BA on 120.33 acres of future potential habitat. There was no suitable habitat. Cluster K35-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future. Implementation of the proposed action will add 1,402.35 ft^2 of pine BA on 36.70 acres of future potential habitat previously proposed for removal.

The post-action RS foraging habitat totals will be 2,753.71 ft^2 of pine BA on 53.47 acres of potentially suitable habitat and 5,691.55 ft^2 of pine BA on 157.03 acres of future potential habitat. There was no suitable habitat. Cluster K35-C does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (none) was unchanged by the action.

Cluster K35-D (K21-05R): This cluster had a PBG from 2010 to 2014 and had 4 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. No cavity trees are currently impacted or within 200 ft. of tank trails.

The 2014 MSS baseline foraging habitat totals were 5,221.08 ft^2 of pine BA on 122.28 acres of suitable habitat and 0.00 ft^2 of pine BA on 2.44 acres of future potential habitat. There was no potentially suitable habitat. Cluster K35-D meets the modified MSS requirements for the 0.5 mile radius foraging partition.

Implementation of the proposed action will add 2,507.04 ft^2 of pine BA on 60.02 acres of suitable habitat, 131.69 ft^2 of pine BA on 2.92 acres of potentially suitable habitat and 123.82 ft^2 of pine BA 5.64 acres of future potential habitat.

The post-action MSS foraging habitat totals will be 7,728.12 ft^2 of pine BA on 182.30 acres of suitable habitat, 131.69 ft^2 of pine BA on 2.92 acres of potentially suitable habitat and 123.82 ft^2 of pine BA on 8.08 acres of future potential habitat. Cluster K35-D meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline foraging habitat totals were 2,785.48 ft^2 of pine BA on 61.39 acres of potentially suitable habitat and 2,435.60 ft^2 of pine BA on 63.33 acres of future potential habitat. There was no suitable habitat. Cluster K35-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

Implementation of the proposed action will add 159.10 ft^2 of pine BA on 3.52 acres of potentially suitable habitat and 2,603.45 ft^2 of pine BA 65.06 acres of future potential habitat.

The post-action RS foraging habitat totals will be 2,944.58 ft^2 of pine BA on 64.91 acres of potentially suitable habitat and 5,039.05 ft^2 of pine BA on 128.39 acres of future potential habitat. There was no suitable habitat. Cluster K35-D does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (none) was unchanged by the action.

Cluster O06-E (O15-04): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was a foraging habitat level take and a temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently, all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline and post-action foraging habitat totals were 1,057.44 ft^2 of pine BA on 29.62 acres of suitable habitat and 35.88 ft^2 of pine BA on 9.00 acres of future potential habitat. There was no potentially suitable habitat. Cluster O06-E does not meet the modified MSS requirements due to insufficient acreage of suitable and potentially suitable habitat.

The 2014 RS baseline and post-action foraging habitat totals were 1,093.32 ft^2 of pine BA on 38.62 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O06-E does not meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat and has insufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status relative to the foraging habitat level take is unchanged by the action. However, the temporary indirect harassment take for 5 years was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines. This cluster was pre-project deficient in suitable and potentially suitable habitat during MCoE and BRAC analyses and pine habitat was removed for the Northern Training Area Infrastructure Tank Trail Upgrade Project.

Cluster O14-A (O01-03): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently one active cavity tree (tag # 4966A) and one inactive cavity tree (tag # 3456A) occur within 50-200 ft. of tank trails. Of the 7 cavity trees within the cluster, there are 5 cavity trees with suitable cavities (tag #s 5381, 6565A, 6566A, 6568A and 7310) > 200 ft. from tank trails.

The 2014 MSS baseline and post-action foraging habitat totals were 4,788.61 ft^2 of pine BA on 108.38 acres of suitable habitat, 553.90 ft^2 of pine BA on 11.57 acres of potentially suitable habitat and 330.23 ft^2 of pine BA on 19.54 acres of future potential habitat. Cluster O14-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline and post-action foraging habitat totals were 1,209.33 ft^2 of pine BA on 23.64 acres of potentially suitable habitat and 4,463.41 ft^2 of pine BA on 115.85 acres of future potential habitat. There was no suitable habitat. Cluster O14-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but may have sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster O14-B (O01-04R): This cluster had a PBG in 2010, was inactive in 2011 and had a PBG from 2012 to 2014. It contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently, all cavity trees occur > 200 ft. from tank trails and heavy maneuver training areas.

The 2014 MSS baseline and post-action foraging habitat totals were 5,051.22 ft^2 of pine BA on 126.29 acres of suitable habitat, 343.55 ft^2 of pine BA on 6.40 acres of potentially suitable habitat and 260.44 ft^2 of pine BA on 21.59 acres of future potential habitat. Cluster O14-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline and post-action foraging habitat totals were 404.71 ft^2 of pine BA on 6.82 acres of potentially suitable habitat and 5,250.50 ft^2 of pine BA on 147.46 acres of future potential habitat. There was no suitable habitat. Cluster O14-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster O25-A (O03-05): This cluster had a PBG from 2010 to 2014 and contained 11 cavity trees in various stages of completion and suitability.

This cluster was directly impacted by MCoE projects and required temporary "take" due to indirect harassment impacts until the ARC moved off-post (USFWS 2009a). The Repair of

Existing Training Roads Project (Phase I) had impacts within 50 ft. of one cavity tree and 50 to 200 ft. of 4 cavity trees (USACE 2009a). Currently one active, suitable cavity tree (tag #2608A) occurs within 50 ft. and one inactive, unsuitable cavity tree (tag #2591A) occurs within 50 to 200 feet of tank trails. Three suitable cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline and post-action foraging habitat totals were 7,133.49 ft^2 of pine BA on 163.70 acres of suitable habitat, 1,687.51 ft^2 of pine BA on 42.51 acres of potentially suitable habitat and 251.60 ft^2 of pine BA on 54.19 acres of future potential habitat. Cluster O25-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline and post-action foraging habitat totals were 3,630.12 ft^2 of pine BA on 87.45 acres of potentially suitable habitat and 5,044.13 ft^2 of pine BA on 172.95 acres of future potential habitat. There was no suitable habitat. Cluster O25-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster O26-A (O03-02): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline and post-action foraging habitat totals were 4,455.06 ft^2 of pine BA on 115.23 acres of suitable habitat and 443.51 ft^2 of pine BA on 39.87 acres of future potential habitat. There was no potentially suitable habitat. Cluster O26-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.
The 2014 RS baseline and post-action foraging habitat totals were 227.93 ft^2 of pine BA on 3.72 acres of potentially suitable habitat and 4,670.64 ft^2 of pine BA on 151.38 acres of future potential habitat. There was no suitable habitat. Cluster O26-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster O26-B (O03-07): This cluster had a PBG from 2010 to 2014 and contained 5 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently all cavity trees are > 200 ft. from tank trails.

The 2014 MSS baseline and post-action foraging habitat totals were 4,142.99 ft^2 of pine BA on 93.20 acres of suitable habitat, 197.58 ft^2 of pine BA on 6.44 acres of potentially suitable habitat and 1,047.85 ft^2 of pine BA on 80.10 acres of future potential habitat. Cluster O26-B meets the modified MSS requirements for the 0.5 mile radius foraging partition.

The 2014 RS baseline and post-action foraging habitat totals were 5,388.41 ft^2 of pine BA on 179.74 acres of future potential habitat. There was no suitable or potentially suitable habitat. Cluster O26-B does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster O28-A (O05-01): This cluster had a PBG from 2010 to 2014 and contained 14 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). No habitat will be added back to the cluster post-Action. Currently all cavity trees are > 200 ft. from tank trails and heavy maneuver areas.

The 2014 MSS baseline and post-action foraging habitat totals were 6,007.13 ft^2 of pine BA on 131.34 acres of suitable habitat, 5,070.06 ft^2 of pine BA on 93.47 acres of potentially suitable habitat and 11.82 ft^2 of pine BA on 41.87 acres of future potential habitat. Cluster O28-A meets the modified MSS requirements for the 0.5 mile radius foraging partition.
The 2014 RS baseline and post-action foraging habitat totals were 1,372.92 ft^2 of pine BA on 22.92 acres of potentially suitable habitat and 9,716.09 ft^2 of pine BA on 243.76 acres of future potential habitat. There was no suitable habitat. Cluster O28-A does not currently meet the RS requirements due to insufficient acreage of suitable and potentially suitable habitat, but has sufficient manageable habitat to meet the RS in the future.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Direct and Indirect Harassment Impacts

In the post-Action analysis, the take status for all clusters with Incidental Take for temporary indirect harassment impacts until the ARC moved off-post (Clusters D11-A, D11-B, E06-A, O14-A, O14-B, O25-A, O26-A, O26-B and O28-A) was changed to none.

An additional 5 clusters (E02-A, J07-B, K-25-A, K28-A and K-28B) with temporary indirect harassment takes (USFWAS 2009a), which were only analyzed for harassment impacts, was also changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

There were 8 clusters (A14-B, K16-A, N04-C, O03-B, O05-A, O07-A, O25-B and O28-B) (decreased from 9) that had Incidental Take for indirect harassment impacts and one cluster (O18-B) with a direct harassment take
.
In the post-Action analysis, Cluster D07-A changed from indirect harassment to none due to the removal of the heavy maneuver component of the ARC. An additional 10 clusters were analyzed for harassment impacts only. They were within 200 ft. of tank trails and indirectly impacted by projects.

In the MCoE BO and associated addendums (USFWS 2009a), 17 clusters were issued temporary indirect harassment take until the ARC moved off-post (increased to 18 when K18-01 split), of which 10 clusters had foraging habitat analyses reanalyzed.

Nine of the following 10 clusters had temporary indirect harassment for 5 years until the ARC moved off-post. No habitat was removed, therefore they did not have foraging habitat analyses conducted.

Cluster E02-A (KPR-01): This cluster had a PBG from 2010 to 2014 and contained 14 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, one inactive, suitable cavity tree (tag #5899) occurs within 0 to 50 ft. of tank trails and 3 active, suitable cavity trees (tag #5716, 5741 and 7319) occur within 50 to 200 ft. of tank trails. There are 5 cavity trees (tag #s 5219, 5896, 6957 (2014 nest tree), 6584, and 6643) with 4 suitable cavities > 200 ft. from tank trails.

This cluster had 2 failed nest attempts in 2 cavity trees in 2010, successfully fledged 2 of 3 nestlings in 2011, 4 of 4 nestlings in 2012, 3 of 4 nestlings in 2013 and 3 of 3 nestlings in 2014. The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines.

Cluster E08-C (E08-05R): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was none. Currently, one active, suitable cavity tree (tag #7492) occurs within 50 to 200 ft. of tank trails and heavy maneuver training areas. There are 7 cavity trees (tag #s 5120A, 5121A, 5122A, 5123A, 6156, 7235 (2014 nest tree) and 7316) with 7 suitable cavities > 200 ft. from tank trails.

This cluster successfully fledged 3 of 3 nestlings in 2010, 4 of 4 nestlings in 2011, 3 of 3 nestlings in 2012, 2 of 2 nestlings in 2013 and 1 of 2 nestlings in 2014.
The 2014 baseline Incidental Take status (none) was unchanged.

Cluster J04-A (J03-01): This cluster had a PBG from 2010 to 2014 and contained 8 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees are > 200 ft. from tank trails.

This cluster successfully fledged 1 of 2 nestlings in 2010, 3 of 3 nestlings in 2011, 2 of 2 nestlings in 2012, 3 of 4 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster J07-A (J04-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees are > 200 ft. from tank trails.

This cluster failed in 2010, successfully fledged 1 nestling in 2011, failed in 2012 and 2013 and fledged 2 of 2 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster J07-B (J05-01): This cluster had a PBG from 2010 to 2014 and contained 10 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, one inactive cavity tree (tag #2266) occurs within 0 to 50 ft. of tank trails and five active cavity trees (tag #s 1958, 6924, 3652, 5917 and 7388 (2014 nest tree)) occur within 50 to 200 ft. of tank trails. There is one active, suitable cavity tree (tag #s 5831A) > 200 ft. from tank trails. However, it is on the other side (southeast) of the tank trail and 1,275 feet from the other active cavity trees.

This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 2 of 3 nestlings in 2012, 3 of 3 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster K25-A (K14-01R): This cluster had a PBG from 2010 to 2014 and contained 12 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, 3 active, suitable cavity trees (tag #4610A, 5280A, and 5281A) occur within 50 to 200 ft. of tank trails. There are 2 cavity trees (tag #s 4613A (2014 nest tree) and 4611) with 2 suitable cavities > 200 ft. from tank trails.

This cluster successfully fledged 3 of 3 nestlings in 2010, 3 of 4 nestlings in 2011, 3 of 3 nestlings in 2012, 3 of 3 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster K28-A (K18-01): This cluster had a PBG from 2010 to 2014 and contained 9 cavity trees in various stages of completion and suitability. Cluster K18-01 "split" into 2 groups (K28-A and K28-B) in 2008 (Fort Benning, unpub. data).
The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, one inactive, unsuitable cavity tree (tag #4232) occurs within 50 to 200 ft. of tank trails. There are 2 cavity trees (tag #s 7223 (2014 nest tree) and 3659A) with 2 suitable cavities > 200 ft. from tank trails.

This cluster had a failed nest attempt in 2010, successfully fledged 2 of 2 nestlings in 2011, 2 of 2 nestlings in 2012, 2 of 3 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster K28-B (K18-01): This cluster had a PBG from 2010 to 2014 and contained 6 cavity trees in various stages of completion and suitability. Cluster K18-01 "split" into 2 groups (K28-A and K28-B) in 2008 (Fort Benning, unpub. data).

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees are within 200 ft. of tank trails. Two active, suitable cavity trees (tag #s 6708A and 6709A) occur within 0 to 50 ft. of tank trails and 4 cavity trees (tag #s 5918, 6206 (2010-2014 nest tree), 7060A and 7061A) with 4 suitable cavities occur 50 to 200 ft. from tank trails.

This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 3 of 4 nestling in 2012, 3 of 4 nestlings in 2013 and 3 of 3 nestlings in 2014.

The 2014 Incidental Take status (none) was unchanged. However, it may need to be readdressed if the proposed Action doesn't occur.

Cluster T07-B (T03-02): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.

The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees are > 200 ft. from tank trails.

This cluster successfully fledged 3 of 3 nestlings in 2010, 2 of 2 nestlings in 2011, 4 of 4 nestlings in 2012, 3 of 3 nestlings in 2013 and 4 of 4 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

Cluster T07-C (T03-04R): This cluster had a PBG from 2010 to 2014 and contained 7 cavity trees in various stages of completion and suitability.
The 2014 baseline Incidental Take status was temporary indirect harassment take for 5 years until the ARC was moved off-post (USFWS 2009a). Currently, all cavity trees are > 200 ft. from tank trails.

This cluster successfully fledged 2 of 3 nestlings in 2010, 3 of 3 nestlings in 2011, 2 of 3 nestlings in 2012, 2 of 2 nestlings in 2013 and 2 of 2 nestlings in 2014.

The 2014 baseline Incidental Take status (temporary indirect harassment take for 5 years) was changed to none due to the removal of the heavy maneuver component of the ARC and the understanding that the remaining training activities will adhere to the 2007 Army RCW Guidelines (USACE 2007).

4.23 Group Level Analysis

The Group Level Analysis evaluates density effects to clusters directly impacted by BRAC and MCoE projects, but not "taken" at the cluster level. The post-Action analysis had group level take status for 8 clusters (D13-A, K04-A, K07-A, O10-B, O34-A, R01-A, S02-A and SHC-A). Cluster D-14A changed from a group-level take to none post-action. Six of the 8 analyzed clusters previously had group level take issued in the MCoE BO and additional addendums (D13-A, K04-A, O10-B, O34-A, R01-A and SHC-A) (USFWS 2009a).

4.24 Neighborhood Level Analysis

The neighborhood level analysis evaluates indirect group density impacts to clusters not directly impacted by BRAC and MCoE projects, but within a 2.20 mile radius "Neighborhood". Three clusters (J02-A, O23-A and O32-A) were considered adversely affected to such an extent that "take" is likely due to project-related neighborhood level impacts. These clusters were previously issued "take" at the neighborhood level as a result of MCoE impacts (USFWS 2009a).

4.25 Population Level Analysis

The population level analysis considers the ability of Fort Benning to meet its RCW population goal (351 PBGs in 382 total managed clusters (Fort Benning 2014a)) with the 2014 revised baseline. Calculating whether a population's recovery goal can be met sometime in the future, based on project-related impacts today, also requires knowledge, or estimates, of the percent of (1) inactive clusters, (2) solitary RCW groups and (3) captured clusters at the time when the overall habitat-based population goal would likely be achieved (USFWS 2005). Values for these 3 parameters are subtracted from the total managed clusters (measured in active clusters), along with estimates of groups that are predicted to be lost due to project-related impacts, in order to determine if the required number of potential breeding groups can be achieved in the future (USFWS 2005).

In 2014, there were 374 total manageable clusters on Fort Benning, of which 363 clusters were active and 342 clusters had a PBG (Fort Benning unpub. data). Of the 342 clusters with PBGs, 323 groups nested. The active number of clusters increased from 2010 to 2014 by 15 and the number of PBGs increased from 2010 to 2014 by 12. Fort Benning monitors all accessible clusters for nest success (382 clusters). However, they monitor a subset of the population for reproductive success (267 clusters), which includes banding of nestlings and identifying individual color bands of fledglings in active clusters. In 2014, of the 267 monitored clusters, 257 clusters were active and 246 clusters had a PBG. Approximately 236 of the 267 monitored active clusters had nests, in which 186 (78.8%) successfully fledged nestlings. Under the revised 2014 baseline, 10 previously "taken" RCW clusters (all direct takes) no longer require "take" and could be counted toward the recovery population total.

4.26 RCW Impacts

With the impact reductions described previously, the amount of Incidental Take expected to be necessary for direct impacts encompassed within the revised baseline analyses are as follows (previous totals as of the MCoE BO (USFWS 2009a) and subsequent consultation (USFWS 2009c, 2011a) are in parentheses): 37 foraging habitat and/or loss of cavity tree takes (decreased from 43), 3 foraging habitat takes combined with pine decline (decreased from 6), one direct harassment take (no change) and 9 group density takes (decreased from 10). This totals 50 direct "takes," as compared to 60 direct "takes" in the MCoE BO (USFWS 2009a). Indirect harassment will require "take" at 25 clusters (16 are temporary) prior to the migration of the ARC off-Post (MCoE required 7 indirect harassment and 17 temporary indirect harassment takes). A total of 117 clusters had foraging habitat analyses, 10 clusters were analyzed for harassment impacts only, 4 clusters had partition shifts and therefore had no impacts (A10-A,K20-A, O17-A and O11-A), and 3 neighborhood level takes associated with the enhanced training actions were included in this document, therefore, 134 total clusters were analyzed. A total of 88 clusters had "takes" previously issued for BRAC/MCoE impacts, not including 3 "takes" that have been carried out (i.e., all cavity trees cut). After the 2014 baseline reanalysis, 78 clusters will require Incidental Take. Under the revised baseline, Fort Benning has the potential to add a net of 10 clusters back into the recovery population objective.

Of the 134 total impacted clusters, 121 clusters had PBGs, 2 clusters had solitary males, 4 clusters were captured and 7 clusters were inactive. Seventy-three of the 78 "taken" clusters (94%) were inhabited by PBGs in 2014. In addition, 7 impacted (but not "taken") clusters will have less than 120 acres of manageable potentially contiguous habitat and will be unable to meet the RS in the future. Ten other impacted clusters will have between 120 and 150 acres of habitat and may or may not be able to meet the RS depending on local site conditions and management regime.

5 CUMULATIVE EFFECTS

Cumulative effects are defined in the USFWS Consultation Handbook to "include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area" (USFWS and NMFS 1998). Since most future Federal actions will at some point be subject to the Section 7 consultation process, their effects on a particular species will be considered at that time and are not included in the cumulative effects analysis (*Federal Register*, 50 CFR 402.02).

Off-post developments meeting the above-listed criteria that are expected to occur within the Action Area are listed below.

5.1 Development of the MTP (Ongoing). Most of the 2,124 acre MTP, located adjacent to

Compartments N1, O5 and O2 on Fort Benning, is undeveloped at this time although several parcels are available for purchase and development. Much of the pine habitat on the MTP was cleared in 2005 and 2007 (JCA 2008a).

While RCWs from Fort Benning and the "taken" Cluster N2-1 on City property may utilize the MTP for foraging habitat, development of the tract has been, and will continue to be, within the constraints of the Land Exchange BO (USFWS 1998), Restrictive Covenants (US Army and the Consolidated Government of Columbus 1999) and other legally-binding documents. Further development of the MTP will therefore not have an effect on the Ft. Benning RCW population that has not already been accounted for in a Services BO.

5.2 Chattahoochee Fall Line Wildlife Management Area (WMA) (2015).

A 10,800-ac. tract spanning north central Marion County and southern Talbot County was created by a partnership between the GA Department of Natural Resources (DNR), TNC, and the US Army at Fort Benning through the Army Compatible Use Buffer Program. This new WMA provides opportunities for outdoor recreational activities such as hunting, hiking, camping and bird-watching, and will serve as a demonstration site for longleaf pine ecosystem restoration which provides important habitat for wildlife, including both game and non-game species like the RCW and the gopher tortoise. The entire property is jointly managed by the DNR and TNC.

5.3 Benning Technology Park and Custer Road Interchange Improvements (2015 –2018).

The GA Department of Transportation will be implementing a road improvements project that consists of interchange improvements at the intersection of US Hwy. 27 (Victory Drive) and Custer Road in Muscogee County. The proposed project would improve the existing security checkpoint interchange system in the Sand Hill Cantonment Area by providing civilians access to a proposed commercial development off-Post without having to pass through the Fort Benning security checkpoint. The commercial development, to be known as Benning Technology Park, borders Fort Benning directly west of the Patton Place military housing area. Benning Technology Park is a private/public joint venture with Columbus State University, Flournoy Development Company, and the Development Authority of Columbus, which will include offices, retail services, and educational facilities.

6 CONCLUSIONS

Red-cockaded woodpecker

After reviewing the current status of the red-cockaded woodpecker, the environmental baseline for the action area, the effects of the Enhanced Training proposal, and the cumulative effects, the Service concludes the effects of Enhanced Training, as proposed, is not likely to appreciably reduce the survival and recovery of the red-cockaded woodpecker. No critical habitat has been designated for this species, therefore, none will be affected.

6.1 Reassessing BRAC and MCoE Actions

As part of the Enhanced Training proposal, the Installation reports that since there have been changes to construction and the training impacts evaluated in the MCoE consultation (USFWS 2009a), the post-project conditions presented in the MCoE BO (and subsequent consultations) no longer represent an accurate "starting-point" for analysis. Instead, the Installation states the "post-MCoE" conditions described in the Enhanced Training BA, and subsequently in this document, reflect all construction and training impacts that occurred to date, to include those additional training impacts that would occur in the future under MCoE without implementation of the Enhanced Training proposal.

In 2009, implementation of the MCoE Reasonable and Prudent Alternative was developed by the Service to remove the likelihood of jeopardy (USFWS 2009a). Based on (1) the 2014 revised baseline (an interrelated function of the proposed action), (2) the proposed Enhanced Training analyses, (3) the newly proposed location for heavy maneuver training in the GHMTA (instead of off-Post as stated in the MCoE BO), (4) the reductions in training loads, and (5) project impacts that have and have not occurred since MCoE, the Service considers these actions to functionally meet the purpose of the "training-migration-component" that was stated in the MCoE RPA.

Prior to MCoE actions, Installation data suggests there were 307 managed clusters on Fort Benning, of which 267 counted toward the Installation population recovery goal (when inhabited by PBGs) (USACE 2008). Post-Enhanced Training action, the Army suggests there will be 374 managed clusters (assumes the 5 splits will lead to 5 individual territories, otherwise the managed number of clusters is 369), of which 298 would count toward the Installation's population recovery objective. Considering these data, Fort Benning suggests they will effectively be at the same point in reaching their population recovery objective post-Enhanced Training action, as it would have been prior to the MCoE action. Considering only these population demographics, the Service agrees with Fort Benning's assertion.

6.2 Reassessing RCW Datasets

From the Installation's 2015 RCW Endangered Species Management Component (Fort Benning 2015), Fort Benning suggests the remaining pine-dominated habitat on the Installation is projected to be sufficient for approximately 410 clusters, without including habitat analyzed to be impacted by off-road heavy maneuver training in the SMTA.

The 2014 demographic configuration of RCWs on Fort Benning is suggested by the Army to result in 382 clusters needed in order to yield 351 PBGs (the difference in totals accounts for those clusters that are projected, by percentage, to be either inactive, captured, or occupied by a single bird). From these data, Fort Benning suggests that "the proposed action is therefore not expected to inhibit the Installation from meeting its RCW population recovery objective and it is likely that the Installation will attain this goal sooner than previously analyzed."

The Service analysis of the Installation's "updated 2014 dataset" supports the Installation's overall determination that the RCW population will reach its population recovery goal sooner than what was projected in the MCoE consultation. This affirmation appears likely when using both the 2007 MCoE datasets and the Enhanced Training proposals 2014 data. In addition to the Installation's data assessments, the Service reviewed two additional resources in order to examine the overall state of the Installation's RCW population. First, we reviewed Bruggeman's 2013 SEPM runs that were conducted for the Fort Benning RCW population as part of an ACUB initiative. Second, we used a Service 2014 rangewide RCW projection to estimate the number of years needed to attain site specific population objectives, which then informs the time needed to estimate recovery by way of each of the 13 Recovery Units.

Bruggeman's 2013 SEPM projections, using the Installation's data and the most optimistic set of assumptions, ran 200 Monte Carlo iterations, which on average, revealed Ft. Benning would have 366 pbgs in the year 2014. The Installation's 2014 empirical data shows they have 342 pbgs (i.e., 24 fewer pbgs than projected by the SEPM). Irrespective in the difference of 24 pbgs, it is reasonable to conclude that both modeled and material datasets suggest limited vulnerability in the Installation's likelihood of attaining its population recovery objective in the near-term.

The Service's rangewide RCW estimates using the Installation's 2014 data, although not as optimistic as the SEPM, shows Ft. Benning reaching its population recovery objective in the year 2018 (this projection assumes, like the SEMP, that all incidental takes are reinstated to the Installations population recovery objective). Similar to the SEPM, in some instances the Service's projections also included assumptions when material data (pbgs in this case) were unavailable. As an example, although not the case on Fort Benning, when pbg data is unknown or incomplete, active cluster tallies can be used as surrogates to estimate pbgs (ratios used were 1.12 active clusters needed to yield 1 pbg).

Across the entirety of the RCW range, using the Services' rangewide estimates, the Sandhills Recovery Unit (which includes Ft. Benning) is projected to meet its population recovery objective by the year 2026. For the species at large, the Services' current projection for RCW recovery is 2083. These data show that the SHRU will meet its population recovery objective 57 years prior to the species population recovery goal. Indeed, the Enhanced Training action yields a significantly better scenario for RCWs than what was projected in the MCoE consultation. Most significant is that the Ft. Benning population is projected to reach its recovery population goal before the SHRU and before the species at large, which are both contrary to what was determined in the MCoE consultation.

Although the current RCW population dynamics on Fort Benning are more than promising, the acres needed to support and sustain "long-term" good quality foraging habitat is disconcerting.

Using Fort Benning's Enhanced Training BA (2014 data tables), the following are revealed:
Note: Five, 2014 splits are not included in the following calculations.

- Pre-Enhanced Training, 96 managed clusters on the landscape had incidental take protections for project related actions (excludes 12 "unprotected clusters" and all unmanaged clusters). The Post-Enhanced Training landscape (which requests 30 taken clusters to be returned to the Installations population tally); leaves 69% (66 of 96) of those taken clusters on the landscape and therefore, still vulnerable to adverse effects.
- Post-Enhanced training, 18% of all currently managed territories remain taken (54 of 369).
- 29% of the 66 remaining taken clusters cannot meet the recovery standard for acres required per territory (i.e., 2 cannot meet Managed Stability Standard and 17 cannot meet the RS or 19 of 66).
- 17% of the 30 clusters submitted for reinstatement to the population recovery objective, do not currently meet the managed stability standard for acres required per territory (5 of 30).
- 39% of all managed territories (144 of 369) on the Installation cannot meet the recovery standard for acres required per territory.
- 14% of all of managed territories (52 of 369) cannot meet the managed stability standard for acres required per territory.
- 18% of the territories (65 of 369) categorized as "can meet the managed stability standard, but may not be able to meet the recovery standard," would be considered vulnerable due to acreage deficiencies, and finally,
- Only 43% of all managed territories (160 of 369) are able to meet both the managed stability and the recovery standard for acres required.

6.3 Enhanced Training Proposal and Reinitiation of MCoE Consultation

Changes to the Army's plan to migrate the ARC heavy maneuver training within the GHMTA is proposed in order to meet the intent of the MCoE RPA. Due to budget constraints and reduction of forces since the MCoE BO (USFWS 2009a), the Installation's preference to acquiring land was put on hold in 2012 at least until alternative approaches could be examined using the updated 2014 information (Fort Benning 2012).

As the Installation is better informed by their 2014 dataset, Fort Benning proposes to modify one portion of the MCoE RPA (USFWS 2009a) requirement of moving the heavy maneuver training component of the ARC from the SMTA to a location off of the FY09 Installation boundary, such that, there would be no RCW conflicts associated with the proposed action.

The Service's intent in the requirement to migrate training off-post was to remove indirect harassment impacts to several RCW clusters in the SMTA and NMTA resulting from the net increase in use of both areas for off-road heavy maneuver training by the ARC and the 3rd BDE. Because of reduced overall training loads and the 2011 changes in the implementation of the ARC POI, training land availability (particularly for off-road heavy maneuver training) has not been the limiting factor that was anticipated by the Army and the Service. The Installation reports, the 3rd BDE has been able to schedule the SMTA as needed; therefore, extensive use of the NMTA has not been necessary. Furthermore, when the proposed conversion of the 3rd BDE to an IBCT is analyzed by the Installation, the effects analysis – specific to heavy maneuver training in the NMTA - should no longer be anticipated to result in an adverse effect.

As described in the ARC Biological Evaluation, to date, tracked vehicles have not been used for the ARC and therefore, there has been no need to have the protections afforded by the indirect harassment "take" in the SMTA. However, the Army reports the use of BFVs remains an option in the POI and could be added at a later date. For this reason, instead of eliminating the option of tracked vehicles entirely, Fort Benning proposes that in the case that future leadership chooses to employ the use of tracked vehicles, this training would be conducted in the GHMTA instead of the SMTA or off-post. Since the GHMTA does not contain RCW cavity trees, is not being managed as RCW habitat and is not considered to be necessary for recovery (Fort Benning 2015), locating ARC off-road maneuver training in the GHMTA is seen by the Service as equivalent to moving this training off-Post.

6.4 Specific Training Changes

Operation Blackjack is currently a 4-day training exercise that begins with dismounted reconnaissance in Alabama, transitions to route reconnaissance along improved roads over to the SMTA region, and ends with mounted and dismounted reconnaissance (one platoon at a time) through the SMTA region.

The proposed change to the Blackjack phase includes the operation ending in the GHMTA instead of the SMTA region. The number of vehicles will change from 3 platoons of either 6 HMMWVs or 4 Strykers each to one platoon of 6 BFVs (only up to 4 BFVs would be used at any one time). Personnel involved will be reduced from approximately 100(60-65 students and 35-40 cadre) to 60 (24-36 students and 15-24 cadre). The duration of the operation will be reduced from 4 days per iteration and 10 iterations per year to 2 days per iteration and up to 8 iterations per year.

Fort Benning proposes the minimization measures put in place in the ARC BE (Fort Benning 2011b) to keep students and cadre out of Uchee Creek will remain in effect in order to prevent impacts to shinyrayed pocketbook habitat. Additionally, the signed buffers around relict trillium and Georgia rockcress populations will continue to minimize impacts to these populations by dismounted or wheeled traffic associated with the 3rd BDE and the ARC. Per the ARC Biological Evaluation, Fort Benning personnel will maintain signs along many roads within the ARC training areas to prevent students from traveling into or through RCW clusters; as such, the Service supports these actions.

Based on the vehicle tracking data provided by CERL, the Installation reports the time spent within 200 feet of RCW clusters - that are not blocked - is negligible. The signs used to block trails have also required more maintenance than expected; therefore, Fort Benning proposes to discontinue maintenance of signs on the currently blocked roads. The Installation also proposes to discontinue the other RCW impact minimization measures described in the 2011 ARC BE (Fort Benning 2011b), with the exception that GPS tracking of most vehicles will continue through at least the 2015 nesting season and until the proposed heavy maneuver training is approved to be conducted in the GHMTA. Most minimization measures in the 2011 BE (Fort Benning 2011b) were included in order to minimize habitat damage from off-road heavy maneuver training. Since that training has not occurred, and is not proposed to occur, outside of the GHMTA, the Installation suggests extensive monitoring is no longer considered to be necessary. The Service agrees with these assertions and will no longer require the minimization strategies associated with this function.

Monitoring and banding at RCW clusters will continue; if Fort Benning biologists notice a trend of nest failure or abnormally high adult turnover, banding at additional clusters may be added after consulting with the Service. As with all training on the Installation, students in the ARC will adhere to the 2007 Army Guidelines (DA 2007). As mentioned previously, no changes are proposed to the minimization measures in place for the Georgia rockcress populations and shinyrayed pocketbook Critical Habitat. The use of erosion control best management practices during construction of GHMTA improvements will also help prevent erosion and sedimentation loading. Additional minimization measures described in the relevant ESMCs (Fort Benning 2015) must be followed.

6.5 Summary of Effects from Enhanced Training

The realignment of the 3rd BDE as an IBCT and the movement of the heavy maneuver portion of the ARC to the GHMTA, as proposed, will reduce the RCW foraging habitat and harassment impacts evaluated in the MCoE and subsequent consultations. The proposed improvements to the Good Hope Maneuver Training Area will not affect any known Federally-listed species. The Army's proposed action of solely deactivating the 3rd BDE at Fort Benning is stated to have a net beneficial effect to the RCW as well, and would have no effect on other federally-listed species. The reduction in training levels in areas used by the 3rd BDE is not likely however to result in a change in "take" status for many RCW clusters.

The Army, through its Enhanced Training BA informs the Service that after the MCoE consultation, an Army-wide force reduction and restructuring have led to a condition where Fort Benning's FY14 and projected FY15-18 training loads are now realized to be lower than those the Army projected to occur prior to the USAARMS move to Fort Benning and the establishment of the MCoE. As a result, the USAARMS training courses described and evaluated in the MCoE consultation have not been conducted at the frequency or duration that the Army reported. Impacts of the BRAC and MCoE actions, for example, were measured against a "baseline" of ongoing off-road heavy maneuver training by the 3rd BDE. Under the Enhanced Training proposed action, the transition of the 3rd BDE to an IBCT will significantly reduce the increase in heavy maneuver training that was otherwise evaluated in the MCoE consultation.

The realignment of the 3rd BDE from an ABCT to an IBCT will result in substantial differences in equipment and training missions and their impacts on the environment. The Enhanced Training BA reports that an IBCT does not use any tracked vehicles, such as M1A2 tanks, M2/M3 BFVs, or Paladins for off-road heavy maneuvers. They state a typical IBCT consists of approximately 750 light and medium wheeled vehicles (e.g., HMMWVs and cargo trucks) that are used primarily on roads for command and control or logistical purposes. The Army suggests, as an IBCT, the 3rd BDE will conduct dismounted training instead of tracked vehicle training as the main part of their mission.

The 11th Engineer Battalion will be restructured in order to accommodate a change of the 3rd BDE's Brigade Special Troops Bn (BSTB) from its current structure to the Army's new Brigade Engineer Battalion (BEB) structure. The 11th Engineer Battalion will inactivate its Bridge, Concrete, Vertical and Horizontal Companies as part of this transition. The BSTB transition to a BEB in the IBCT will mean the loss of 31 tracked engineer vehicles (e.g., armored vehicle launched bridges and bulldozers); approximately 6 tracked engineer vehicles will be retained to support the 3rd BDE

With the realignment, the Army reports the 3rd BDE may gain one maneuver battalion from Fort Riley, Kansas, resulting in a small personnel increase of approximately 100 Soldiers. As of 2014, there were approximately 4,708 total personnel in the 3rd BDE. The slight personnel increase from realignment to an IBCT will be offset by reductions of BCT support personnel so that Fort

Benning expects virtually no net change in personnel numbers due to the 3rd BDE action. Existing facilities will support the realignment, so no new construction is proposed. Although the increases were not analyzed the Service believes current monitoring regimes should detect any adverse effects. If detected, the Service should be notified within already established time frames (i.e., 24 hours).

With the transition, the 3rd BDE will lose all 301 of its armored tracked vehicles and its 3 Strykers and will gain 3 ASV Knights. Heavy wheeled vehicles will be reduced from 153 (with 119 trailers) to 97 (91 trailers). Medium or light wheeled vehicles will increase from 570 (367 trailers) to 731 (465 trailers) (Fort Benning 2014d).

In general, the schedule for BCTs includes training for proficiency at the individual, squad, platoon, company and battalion levels, with an annual culminating event involving the entire brigade. With the adoption of the Army Force Generation (ARFORGEN) model, BCTs are now on a 24-month cycle comprised of down time, light training and incorporating new personnel followed by a period of more intensive, targeted training, then deployment (or availability for deployment) for the second year.

Based on Fort Benning's in-house "NEPA like" approval document (Form 144-R) the 3rd BDE conducted field training from 2011-2014, using training compartments throughout the Installation, with portions of the four compartments being used for most events. The training areas designated for each training event were recorded in Geographical Information System attribute data; this process generated the number of unique training events planned for each training area from 2011-2014.

Note: These numbers do not necessarily reflect frequency of use, since many FB Form 144-Rs approve training for many months to a year.

Most events involving off-road heavy maneuver occurred in and around the SMTA in Compartments D1-3, D5-18, F1-10 and T8-9. Scheduling conflicts with the ARC in the SMTA have not been as much of an issue as once projected by the Installation, due, in part, to the 2011 reduction in ARC training loads and changes to ARC training areas (Fort Benning 2011b). Therefore, based on FB Form 144-Rs submitted for review, off-road heavy maneuver training has not been displaced to areas outside of the SMTA as evaluated by the Installation and then subsequently presented in the Services' MCoE BO and RPA (USFWS 2009a).

As an IBCT, the Installation suggests the 3rd BDE will follow the same general schedule of an ABCT of training for proficiency at the individual, squad, platoon, company and battalion levels, with an annual culminating event involving the entire brigade. As an ABCT, it's reported that the primary training land use has been within designated heavy maneuver lands. Infantry units are reported to not be restricted to heavy maneuver lands and will be able to use compartments not generally utilized by the 3rd BDE. Potential training events of the 3rd BDE as an IBCT and the locations where they are predicted to occur are shown in Figure 8-3 of the BA. Depending on the type of battalion (e.g., cavalry, engineer or artillery), units are required to complete annual or biannual weapons, live fire, mortar, artillery and other qualifications progressing from the individual level up to a culminating brigade-level event. The proposed Enhanced Training action should not reduce the likelihood of survival of RCWs at Fort Benning because RCW nesting and foraging habitat formerly planned for removal will be retained. The proposed action will result in the elimination of all tracked vehicle training by the 3rd Brigade and all tracked vehicle training conducted by the Army Reconnaissance Course which will be moved to the Good Hope Maneuver Training Area.

Due to RCW territory acreage deficiencies, the Reasonable and Prudent Alternative (reinitiated and reanalyzed) agreed upon by the Service and the Army during the MCOE consultation will remain in effect, with the exception of moving the heavy mechanized training component of "ARC" off the Installation. The Service agrees that the "heavy mechanized training component" planned for the SMTA (as well as any other like it proposed in these areas) can be moved to the Good Hope Training Area, and in so doing, satisfies the intent of that component of the RPA (i.e., "Migrate the field training aspects of the Scout Leaders Course (Army Reconnaissance Course), a MCoE-related heavy mechanized training course, from the Southern Maneuver Training Area to training areas located off the FY09 Ft. Benning installation boundary within five years from the training start date of the Scout Leaders Course".).

No critical habitat has been designated for this species, therefore, none will be affected.

7 INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4 (d) of the Act prohibit the take of endangered and threatened species without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by Ft. Benning for the exemption in section 7(o)(2) to apply. Ft. Benning has a continuing duty to regulate the activity covered by this incidental take statement. If Ft. Benning fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Ft. Benning must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(I)(3)]

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species. However, limited protection of listed plants from take is provided to the extent that the Act prohibits the removal and reduction of possession of federally-listed endangered plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of endangered plants on non-Federal areas in violation of State law or regulation or in the course of any violation of State criminal trespass law. If Ft. Benning (1) fails to assume and implement the terms and conditions or (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permits or grant documents, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Ft. Benning must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement. [50 CFR §402.14(1)(3)]

8 AMOUNT OR EXTENT OF TAKE ANTICIPATED

As a result of the proposed action, 37 (19 indirect, 18 direct) clusters (see Table 1) that were previously anticipated to be adversely effected and had incidental take protection due to BRAC, MCoE or DMPRC actions, no longer require protection, and can be added back to the Installation's assemblage of managed clusters.

Table 1. 37 Managed Clusters Reinstated to the Fort Benning Landscape.

A10-A	D11-B	J07-B	O05-B	O14-B	O18-A	O26-A	T07-B
D03-A*	E02-A	K20-A	O07-C	O15-B	O21-A	O26-B**	T07-C
D07-A	E06-A	K25-A	O11-A	O15-C	O21-B	R03-A	
D09-C	J04-A	K28-A	O11-B	O16-A	O24-B	T05-B	
D11-A	J07-A	O04-B	O14-A	O17-A	O25-A	T06-B	

* - Take previously associated with DMPRC consultation.
** - Take associated with ESMC consultation (when occupied, UC's receive take protection and are uniquely counted in the managed cluster tallies).

Additionally, seven clusters (see Table 2 below) will receive incidental take protection and will be added to the Installation's count of taken clusters for BRAC, MCoE and ET actions that still remain on the landscape (i.e., a revised sum of 59).

Table 2. Seven RCW Clusters Receiving Incidental Take Protection.

A10-D	K07-A	S02-B
D09-A	K21-A**	
D09-B	O18-B	

** - Take associated with ESMC consultation.

Although seven clusters require incidental take protection, none of the seven require protection as a result of military training activities. Instead, these take protections are afforded to the Installation because of the fluctuations that occur within a landscape as RCWs partition the resource. The Service recognizes these behavioral responses are dynamic and although not considered regular, they do occur commonly through time (e.g., cluster center and partition shifts, cluster capturing, repartitioning of territories as cluster activations fluctuate, etc.).

9 EFFECT OF TAKE

In the accompanying biological opinion, the Service determined that the net effect of take is reduced, and therefore, is not likely to result in jeopardy to the species or destruction or adverse modification of habitat.

10 REASONABLE AND PRUDENT MEASURES

Reasonable and prudent measures can include only actions that occur within the action area, involve only minor changes to the project, and reduce the level of take associated with the project activities. These measures should minimize the impacts of incidental take to the extent that they are reasonable and prudent. For this consultation, the interrelated functions (i.e., restructuring one of the MCoE's RPA components, reanalyzing the anticipated effects from BRAC and MCoE, and updating the "baseline" datasets for RCW demographic and habitat conditions) associated with this action have yielded a positive net effect. No additional reasonable and prudent measures are proposed by the Service and all current monitoring protocols should remain in place.

11 TERMS AND CONDITIONS

Terms and conditions set out the specific methods by which the reasonable and prudent measures are to be accomplished. For this consultation, terms and conditions do not apply as there are no reasonable and prudent measures required.

12 COORDINATION OF INCIDENTAL TAKE STATEMENT WITH OTHER LAWS, REGULATIONS AND POLICIES

Migratory Birds

The Fish and Wildlife Service will not refer the incidental take of any migratory bird for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), if such take is in compliance with the terms and conditions specified above (not applicable to this consultation).

13 CONSERVATION RECOMMENDATION

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purpose of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

Red-Cockaded Woodpecker

1. As soon as possible, contact the RCW Recovery Coordinator regarding the RCW territory acreage deficiencies. The purpose is to further evaluate and plan restoration management actions with the intent to accelerate and improve foraging habitat quality and quantity.

2. Report to the Service if/when additional BFV's are proposed for use in the GHMTA.

3. Athough small arms range use is proposed to remain unchanged from its current throughputs, if/when "beaten areas" encroach into RCW foraging habitat beyond what has been estimated by the Army, the Service should be notified.

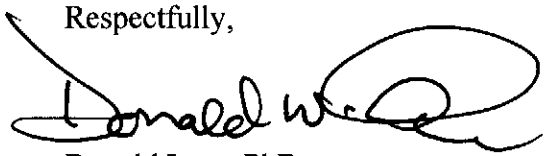
In order for the Service to keep informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

14 REINITIATION NOTICE

This concludes formal consultation on the action outlined in the April 3, 2015 request. As provided in 50 CFR § 402.16, Reinitiation of formal consultation is required where discretionary Army involvement of control over the action has been retained (or is authorized by law) and if: (1) the amount of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the actions. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease pending Reinitiation of consultation. For this biological opinion the incidental take would be exceeded when the take exceeds the 12 active clusters expected to be directly taken and the 18 active clusters to be indirectly taken. These RCW groups are exempted from the prohibition of section 9 by this opinion.

The Service greatly appreciates the cooperation of Ft. Benning during this consultation. We would like to continue working with you and your staff regarding this project. If you have any questions about this opinion or consultation of for further coordination, please contact John Doresky, Fish and Wildlife Biologist, West Georgia Sub Office, at (706) 544-6030.

Respectfully,



Donald Imm, PhD.
Project Leader

Appendix A

Appendix A: Modified from Enhanced Training Consultation (Updated on: December 16, 2015)

ALL Clusters Impacted by the BRAC, MCoE and/or Enhanced Training Actions

		BRAC/MCoE/ET impacted clusters ONLY					ALL Clusters	
		Post-MCoE/ Pre-ET Analyses		Revised 2014 Baseline Incidental Take Status	Post-Action Incidental Take Status	Change in "take" status pre- to post-Action	Current BO where "take" issued/ requested	Type or Reason for IT
Cluster ID	Old Cluster ID	*Previous Most Recent Applicable BO*	IT Previously Issued?					
-	J01-03R	*MCoE*	Y-N	**N/A**	**N/A**	x	MCoE	N
-	O09-04	*BRAC*	Y-T,F	**N/A**	**N/A**	x	BRAC	T,F
-	O09-05	*BRAC*	Y-T,F	**N/A**	**N/A**	x	BRAC	T,F
A10-D	-	-	N/A	Y-D	Y-D	1	ET	F-Decline
D09-A	D17-02	*(MCoE)*	N/A	Y-F	Y-F	1	ET	F
D09-B	D17-03	*MCoE*	N	Y-F	Y-F	1	ET	F
K07-A	K05-01	*(MCoE)*	N/A	Y-G	Y-G	1	ET	G
O18-B	O09-03	*(MCoE)*	N/A	Y-H	Y-H	1	ET	H
S02-B	S02-01	*MCoE*	N	Y-F	Y-F	1	ET	F
O06-E	O15-04	*MCoE*	Y-IH5	Y-F	Y-F	n	ET	F
O07-A	O13-01	*MCoE*	Y-F	Y-IH	Y-IH	n	ET	IH
O25-B	O03-06	*MCoE*	Y-D	Y-IH	Y-IH	n	ET	IH
S02-A	HCC-03	*BRAC*	Y-T	Y-G	Y-G	n	ET	G
A14-B	A09-03	*MCoE*	Y-IH	Y-IH	Y-IH	x	ET	IH
BB08-A	BB03-01	*BRAC*	Y-F	Y-F	Y-F	x	ET	F
C01-B	C01-03	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
D12-A	D10-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
D13-A	D17-01	*MCoE*	Y-G	Y-G	Y-G	x	ET	G
D14-B	D16-02	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
D15-A	D06-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
D19-A	D08-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
F05-A	F02-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
HCC-B	HCC-08	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
HCC-C	HCC-10	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
HCC-D	HCC-11	*BRAC*	Y-F	Y-F	Y-F	x	ET	F
J02-A	J01-01	*MCoE*	Y-N	Y-N	Y-N	x	ET	N
J03-A	J01-02	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
K04-A	O12-02	*MCoE*	Y-G	Y-G	Y-G	x	ET	G
K16-A	K08-03	*MCoE*	Y-IH	Y-IH	Y-IH	x	ET	IH
L07-A	L03-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
N03-A	M08-04	*SBA*	Y-D	Y-D	Y-D	x	ET	F-Decline
O03-A	O14-02	*SBA*	Y-F	Y-F	Y-F	x	ET	F
O03-B	O14-03	*SBA*	Y-IH	Y-IH	Y-IH	x	ET	IH
O04-A	O14-01	*SBA*	Y-F	Y-F	Y-F	x	ET	F
O05-A	O01-01	*MCoE*	Y-IH	Y-IH	Y-IH	x	ET	IH
O06-A	O11-02	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O06-B	O15-01	*SBA*	Y-F	Y-F	Y-F	x	ET	F
O06-C	O15-02	*SBA*	Y-F	Y-F	Y-F	x	ET	F
O06-D	O15-03	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O10-A	O10-01	*LMB*	Y-F	Y-F	Y-F	x	ET	F
O12-A	O11-01	*SBA*	Y-D	Y-D	Y-D	x	ET	F-Decline
O15-A	O03-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O17-B	O08-02	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O19-A	K02-01a	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O23-A	O06-03	*MCoE*	Y-N	Y-N	Y-N	x	ET	N
O24-A	O04-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F

		BRAC/MCoE/ET impacted clusters ONLY					ALL Clusters	
		Post-MCoE/ Pre-ET Analyses		Revised 2014 Baseline Incidental Take Status	Post-Action Incidental Take Status	Change in "take" status pre- to post-Action	Current BO where "take" issued/ requested	Type or Reason for IT
Cluster ID	Old Cluster ID	*Previous Most Recent Applicable BO*	IT Previously Issued?					
O24-C	O04-03a	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O24-D	O04-03b	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
O28-B	O05-02	*MCoE*	Y-IH	Y-IH	Y-IH	x	ET	IH
O32-A	O06-04	*MCoE*	Y-N	Y-N	Y-N	x	ET	N
O34-A	O07-01	*MCoE*	Y-G	Y-G	Y-G	x	ET	G
R01-A	R01-01	*MCoE*	Y-G	Y-G	Y-G	x	ET	G
R01-B	R01-03	*BRAC*	Y-F	Y-F	Y-F	x	ET	F
S04-A	S01-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
S04-B	S03-01	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
T06-A	J02-02	*MCoE*	Y-F	Y-F	Y-F	x	ET	F
SHC-B	U04-01	*BRAC*	Y-F	Y-F	Y-F (INA)	x	ET (INA), BRAC	F (INA)
O10-B	O10-03	*MCoE*	Y-G	Y-G	Y-G (INA)	x	ET (INA), MCoE	G (INA)
SHC-A	SHC-02	*MCoE*	Y-G	Y-G	Y-G (INA)	x	ET (INA), MCoE	G (INA)
K21-A	K11-05	*MCoE**	N/A	Y-F	Y-F	1	ET, ESMC	F, UC
L06-A	L02-02	*MCoE*	Y-G	Y-F	Y-F	n	ET, ESMC	F, UC
N04-C	M08-02b	*MCoE*	Y-H	Y-IH	Y-IH	n	ET, ESMC	IH, UC
O26-B	O03-07	*MCoE*	Y-IH5	Y-IH5	N	-1	ESMC	UC
HCC-A	HCC-04	*BRAC), (MCoE*	N	N	N	x	ESMC	UC
K35-D	K21-05	*MCoE*	N	N	N	x	ESMC	UC
A10-A	A08-02a	*MCoE*	Y-D	N	N	-1		
D03-A	D15-01	*MCoE, DMPRC*	DMPRC	DMPRC	N	-1		
D07-A	D05-02	*MCoE*	Y-IH	Y-IH	N	-1		
D09-C	D17-04	*MCoE*	Y-F	Y-F	N	-1		
D11-A	D11-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
D11-B	D11-02	*MCoE*	Y-IH5	Y-IH5	N	-1		
E02-A	KPR-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
E06-A	E04-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
J04-A	J03-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
J07-A	J04-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
J07-B	J05-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
K20-A	K09-01	*MCoE*	Y-D	N	N	-1		
K25-A	K14-01	*MCoE*	Y-IH5	Y-IH5	N	-1		
K28-A	K18-01a	*MCoE*	Y-IH5	Y-IH5	N	-1		
O04-B	O14-04	*SBA*	Y-IH	N	N	-1		
O05-B	O01-02	*MCoE*	Y-F	N	N	-1		
O07-C	O13-06	*MCoE*	Y-F	N	N	-1		
O11-A	O10-02	*MCoE*	Y-F	N	N	-1		
O11-B	O10-04	*MCoE*	Y-D	N	N	-1		
O14-A	O01-03	*MCoE*	Y-IH5	Y-IH5	N	-1		
O14-B	O01-04	*MCoE*	Y-IH5	Y-IH5	N	-1		
O15-B	O03-03	*SBA*	Y-F	N	N	-1		
O15-C	O03-04	*SBA*	Y-F	N	N	-1		
O16-A	O04-05	*SBA*	Y-G	N	N	-1		
O17-A	O08-01	*MCoE*	Y-F	N	N	-1		
O18-A	O09-02	*MCoE*	Y-G	N	N	-1		
O21-A	O07-03	*MCoE*	Y-G	N	N	-1		
O21-B	O08-03	*BRAC*	Y-F	N	N	-1		
O24-B	O04-02	*MCoE*	Y-N	N	N	-1		
O25-A	O03-05	*MCoE*	Y-IH5	Y-IH5	N	-1		
O26-A	O03-02	*MCoE*	Y-IH5	Y-IH5	N	-1		
R03-A	R02-01	*LMB*	Y-F	N	N	-1		
T05-B	T02-02	*MCoE*	Y-F	N	N	-1		
T06-B	T02-01	*MCoE*	Y-F	N	N	-1		

		BRAC/MCoE/ET impacted clusters ONLY					ALL Clusters	
		Post-MCoE/ Pre-ET Analyses		Revised 2014 Baseline Incidental Take Status	Post-Action Incidental Take Status	Change in "take" status pre- to post-Action	Current BO where "take" issued/ requested	Type or Reason for IT
Cluster ID	Old Cluster ID	*Previous Most Recent Applicable BO*	IT Previously Issued?					
T07-B	T03-02	*MCoE*	Y-IH5	Y-IH5	N	-1		
T07-C	T03-04	*MCoE*	Y-IH5	Y-IH5	N	-1		
D14-A	D16-01	*MCoE*	N	Y-G	N	n		
A02-A	A04-01	*MCoE*	N	N	N	x		
A11-A	A08-01	*MCoE*	N	N	N	x		
A11-B	A08-03	*MCoE*	N	N	N	x		
A11-C	A08-04	*MCoE*	N	N	N	x		
A13-A	A09-04	*MCoE*	N	N	N	x		
A13-B	A09-05	*MCoE*	N	N	N	x		
BB01-A	BB05-01	*BRAC*	N	N	N	x		
BB01-B	N/A	-	N	N	N	x		
C02-A	C01-05	-	N	N	N	x		
C02-B	C01-06	*MCoE*	N	N	N	x		
D06-B	D05-04	*MCoE*	N	N	N	x		
E07-B	N/A	*MCoE*	N/A	N	N	x		
F02-A	F01-02	*(MCoE)*	N	N	N	x		
J04-B	J03-02	*(MCoE)*	N	N	N	x		
K06-A	K03-01	*(MCoE)*	N	N	N	x		
K14-B	K08-02	-	N	N	N	x		
K16-B	K08-04	*MCoE*	N	N	N	x		
K20-C	K09-03	*MCoE*	N	N	N	x		
K35-C	K21-02	*MCoE*	N	N	N	x		
M01-A	M01-01	*MCoE*	N	N	N	x		
M02-A	M02-01	*MCoE??*	N	N	N	x		
M06-C	M06-03	*MCoE??*	N	N	N	x		
N04-B	M08-02a	*MCoE*	N	N	N	x		
N04-D	M08-05	*MCoE*	N	N	N	x		
N05-A	O02-01	*MCoE*	N	N	N	x		
O01-A	O12-04	*(MCoE)*	N	N	N	x		
O19-B	K02-01b	-	N	N	N	x		
O28-A	O05-01	*MCoE*	N	N	N	x		
O30-A	O05-03	*MCoE*	N	N	N	x		
O33-A	O07-02	-	N	N	N	x		
Q03-A	Q02-02	*MCoE*	N	N	N	x		
Q03-C	Q02-04	*MCoE*	N	N	N	x		
T04-A	T01-02	*MCoE*	N	N	N	x		

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