

The Final Environmental Impact Statement (FEIS) For Training Range and Garrison Support Facilities Construction and Operation



Fort Stewart, Georgia

Volume II

Appendix A

Public Participation and Outreach Efforts

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Section I:

**Public Participation Plan for the
Training Range and Garrison Support Facilities
Construction and Operation
Final Environmental Impact Statement

Fort Stewart, Georgia**

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1. BACKGROUND FOR THE PROPOSED ACTION

The Army's mission is to fight and win our Nation's wars, accomplished by providing land dominance across the full range of military operations and spectrum of conflict. This occurs through organizing, equipping, and training forces for the conduct of prompt and sustained combat operations on land. The Army Vision is to remain the preeminent land-power on Earth - the ultimate instrument of national resolve - that is both ready to meet and relevant to the challenges of the dangerous and complex 21st century security environment (www.us.army.mil, accessed 20 OCT 09).

Fort Stewart is the home of the 3rd Infantry Division and well suited for training mechanized forces. Its mission is to “provide equitable, effective and efficient management of the installation in order to support mission readiness and execution, enable the well-being of soldiers, civilians and family members, improve infrastructure, and preserve the environment (www.stewart.army.mil., accessed 20 OCT 09).” Fort Stewart’s military complex along with the port of Savannah also serves as a world-class military power projection for the United States. This dynamic platform allows military units in the region to deploy rapidly anywhere in the world.

1.1 PURPOSE AND NEED FOR THE FORT STEWART TRAINING RANGE AND GARRISON SUPPORT FACILITIES CONSTRUCTION AND OPERATION ENVIRONMENTAL IMPACT STATEMENT

The purpose and need of the Fort Stewart Training Range and Garrison Support Facilities Construction and Operation Environmental Impact Statement (EIS) is to examine the environmental impacts of the Installation’s mission and master planning processes. This involves an examination of proposed and likely construction of range facilities, non-range facilities, and transportation improvement projects. Impacts on the environmental and socioeconomic resources present on the Installation and potential impacts to surrounding lands and/or local communities resulting from these actions are evaluated. Fort Stewart is an active military Installation and hosts various training activities, land rehabilitation, and range repairs on a daily basis. Specifically, this EIS will discuss and analyze the following:

- Discuss past, current, and future training operations on Fort Stewart (i.e., its Mission) and their impacts to the environment;
- Analyze range and Garrison construction projects scheduled to occur between Fiscal Year (FY) 11-14.
- Explain the master planning process and how it is utilized to determine where to locate projects. It will also explain how the siting of these projects is designed to promote the long-term sustainability of the Installation and the environment, and its role in resource-focused management (such as the Integrated Natural Resources Management Plan);
- Analyze potential direct, indirect, and cumulative (i.e., incremental) impacts to environmental and socioeconomic resources that may occur from training and construction activities on Fort Stewart; and
- Discuss methods used to avoid, minimize, and/or offset direct, indirect, and cumulative impacts of the training and construction.

1.2 NEED FOR PUBLIC AND STAKEHOLDER PARTICIPATION PLAN

The purpose of this Public Participation Plan (PPP) is to define how Fort Stewart, Georgia (FSGA), will solicit input, review, and comments from interested and affected parties on the environmental analysis of the Installation's Training Range and Garrison Support Facilities Construction and Operation EIS. The EIS is developed in accordance with the National Environmental Policy Act (NEPA), the regulations issued by the Council on Environmental Quality (CEQ), 40 CFR Parts 1505-1508 and the Army's implementing procedures, published in 32 CFR Part 651, *Environmental Analysis of Army Actions*.

NEPA mandates an analysis of the potentially significant environmental and socioeconomic impacts of actions occurring on Federal land, such as an Army Installation. The NEPA process also requires periodic public involvement during a scoping phase and during public comment periods. However, the Army is committed to facilitating and encouraging a continuous, two-way communication with the public and stakeholders. This communication will involve newspaper announcements of document availability and meetings, outreach to public officials and special interest groups, publicly accessible websites, invitations to comment at scoping meetings and

public hearings, distribution of fact sheets and/or newsletters, and possibly other actions as the EIS develops.

1.2.1 Public Participation Plan, as Required by National Environmental Policy Act

The Army's NEPA-implementing regulation (32 CFR Part 651) guides public participation opportunities with respect to the Draft and Final EIS and decision making on the proposed action. The regulation requires the preparation and implementation of a Public Participation Plan (PPP) to guide the public and stakeholder involvement process throughout the EIS process. The purpose of such a plan is to determine what actions to take during the course of the project to properly and most effectively conduct public communications and outreach.

The PPP includes a discussion of environmental and socioeconomic resources deemed important during the EIS process, as well as a discussion of the outreach techniques employed throughout the life of the process. These include: identification of newspapers to utilize for public notices or media releases; types and sizes of ads most effectively utilized in newspapers; the use of other public media, such as radio or television; the number of and best location for of public meetings; availability of the Draft and Final EIS for review; and other pertinent issues, such as the requirement for multilingual information. The PPP is updated periodically (as the EIS process progresses), is available for review at the EIS webpage (www.Fortstewart-mmp-eis.com), and is located within Appendix A of all drafts of the EIS.

1.2.2 Other Laws and Regulations

There are several laws and regulations requiring public notices and participation during the planning phases of a Federal project. These requirements are incorporated into public outreach efforts for the Training Range and Garrison Support Facilities Construction and Operation EIS. For example, public notification and comment opportunities related to Section 404 Clean Water Act permits for impacts to wetlands can now include posting of these notices on the Training Range and Garrison Support Facilities Construction and Operation EIS website, thereby providing even more opportunities for the public to access this information. Although NEPA may address some of the topics and issues in the environmental analysis, FSGA must still satisfy the requirements of these other laws and regulations. Website utilization will be a secondary

method of this notification rather than a primary one. Similar public outreach opportunities may also be possible for endangered species, water/wastewater quality reports, and others.

1.2.3 Goals of the PPP

FSGA is committed to meeting NEPA requirements and taking measures for more meaningful communication and involvement of the public and stakeholders in the Training Range and Garrison Support Facilities Construction and Operation EIS process. Limitations in resources, personnel, and time impose constraints that necessitate an efficient and realistic PPP. This PPP must assist the planners and be realistic for implementation. Goals for this PPP include the following:

- providing methods by which stakeholders are informed and have an understanding of the process, issues, and possible solutions from the perspectives of various interests;
- creating an open and visible decision-making process, to which stakeholders have access and input;
- developing partnerships with local community leaders, groups, and organizations to provide an integrated, environmentally aware approach to planning;
- specifying steps needed to meet legal responsibilities for comment opportunities of the public and stakeholders;
- including public comments throughout the decision-making process while ensuring that adequate input is obtained for developing context sensitive solutions;
- listing realistic time frames and responsible persons or offices for each step;
- coordinating activities to maximize the quality of the information while ensuring that the information relates to planning actions in process and incorporates any resultant feedback into future participation or planning processes;
- incorporating opportunities to present information in order to partner with the community effectively and efficiently; and
- keeping the Installation Public Affairs Officer (PAO) and the Environmental Division's Public Relations (ENV PR) Section informed at all levels.

The FSGA NEPA and PR specialists will keep the Installation PAO informed and involved regarding environmental planning and scoping for the EIS. The approval process will first go through the PR specialists and then to the PAO. When the PR receives a call, e-mail, letter and/or

correspondence pertaining to the EIS, they will refer it to the NEPA specialists. The PR will maintain a log of public and stakeholder inquiries for the Administrative Record (AR) and for appending to the EIS. A monthly log will be forwarded to the EIS POC and copied to the PAO.

The FSGA Execution Section Leader (in charge of the EIS process, EIS POC) is –

- Chuck Walden (912-767-8642; Charles.Walden4@us.army.mil).
- Mailing address is Chuck Walden, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137, Fort Stewart, Georgia 31314-4928.

Public relation specialists assigned to this EIS are –

- Angie Eason (912-315-6912); Angi.Eason@us.army.mil) and
- Amanda Hinesley (912-767-4459); Amanda.Hinesley@us.army.mil).

PAO for this EIS is –

- Richard Olson (912-435-9870; Rich.Olson@us.army.mil).

1.2.4 Elements of the Plan

The PPP has several elements to inform and involve the public in a meaningful way during the development of the EIS. The study team will be accessible to the public, share information in a complete and understandable manner, and record and consider all public comments and concerns. The plan is implemented through activities falling into three broad but interrelated areas:

- **Foundational** (creating a network to support communication): A project website, a database with a mailing list for e-mail notices, and a schedule of newsletters and public events is established. The study team will also develop a media contact list for advertising public meetings.
- **Civic Engagement** (creating opportunities for dialogue): A Public Scoping Meeting is held to announce to the public, stakeholders, and regulatory community that the Installation is preparing an EIS, as well as its purpose, need, and actions analyzed. A formal public

hearing is also held after the publication of the Draft EIS to solicit comments on the document.

- ***Communication Tools*** (using many methods to obtain and distribute information): A variety of tools are used to reach out to and hear from the public. Newsletters, fact sheets, summary documents, direct mail, website, meetings, document availability, reading rooms, comment periods, and press releases are also utilized.

2. PREPARATION OF THE ENVIRONMENTAL IMPACT STATEMENT

CEQ regulations require the preparation of an EIS when there is a potential for a significant effect to one or more environmental or socioeconomic resources on Federal lands; therefore, an EIS is the appropriate level of NEPA documentation for this action. Army Regulation 32 CFR 651 provides guidelines for the contents of an EIS and the processes required for full environmental analysis with participation by public, stakeholders, and regulators. This PPP will not restate the provisions of 32 CFR Part 651; therefore, attention to the specific requirements provided therein is required to fully comply with the Army's guidance on public and stakeholder participation. An EIS is prepared in a series of steps or milestones which include:

- conduct Internal Scoping to define the proposed action, its alternatives, and an initial level of analysis required for each of the environmental media (air, water, etc.);
- prepare a PPP to guide the public outreach efforts for the EIS;
- prepare and publish the Notice of Intent (NOI) in local media and the Federal Register;
- hold the Public Scoping Meeting to refine alternatives to the proposed action;
- prepare the Draft EIS and publish it for public, regulatory, and EPA review;
- hold the Public Meeting to gather additional input from the public who reviewed the Draft EIS;
- receive and respond to public comments on the Draft EIS;
- prepare and publish the Final EIS;
- respond to comments on the Final EIS;
- prepare and publish the Record of Decision (ROD); and
- proceed with the proposed action when all other non-NEPA requirements (permits, etc.) are obtained.

3. PUBLIC INVOLVEMENT

The sections of the Army's NEPA implementing regulations that describe requirements for scoping identify three phases: preliminary, public interaction, and final. These three scoping phases are used to organize the PPP. Although most of the actual public involvement occurs during the public interaction phase, the requirements of the preliminary phase are used to prepare for and respond to public and stakeholder involvement.

The scoping process is intended to aid in determining the level of the analyses and to identify significant issues of public concern that are related to the proposed action. Scoping participants are provided with information developed during the preliminary phase. They will be provided with as much information as is available on the existing environment at the affected location such as a description of the proposed alternatives, any related environmental assessments or impact statements (EAs or EISs), and any additional scoping issues or limitations. With FSGA approval, this information is presented in the scoping meeting, in updates on the website, and by periodic mailing of progress report newsletters to interested persons. Information is presented to the public in a straightforward and understandable manner. It is important to note that scoping does not end with a public meeting.

In addition to the interested and affected parties, participants in scoping should include:

- technical representatives that can describe the technical aspects of the proposed action and alternatives to other participants;
- Army contracted consulting firms that are writing the EIS or providing reports used to create substantial portions of the EIS;
- experts in various environmental disciplines or areas where impacts are expected and have not been represented by other scoping participants; and
- cooperating agencies, if/when identified, with expertise and/or regulatory input into the environmental processes at FSGA.

4. PRELIMINARY SCOPING PHASE

The preliminary scoping phase consists of internal scoping. Internal scoping begins with an initial Description of the Proposed Action and Alternatives (DOPAA) – a document potentially

revised based on public and stakeholder input. The DOPAA contains two sections. The first section will be the purpose and need for the proposed action; it will contain pertinent background information. The second section will be a description of the proposed action, preferred alternative, no-action alternative, and action alternatives. After refinement during the scoping phase, these two sections will become Chapters 1 and 2 of the Draft EIS.

4.1 IDENTIFY SIGNIFICANT ISSUES FOR ANALYSIS IN ENVIRONMENTAL IMPACT STATEMENT

The EIS analysis evaluates potential impacts of the proposed action (and its alternatives) on resources that are beneficial and valuable to the public. Processes to minimize or prevent the potential impacts are proposed as mitigation methods/actions. Initial alternatives to the proposed action are presented to the public and stakeholders during the scoping meetings. The scoping meeting seeks input on the issues which are relevant and significant to the public and stakeholders to modify the existing alternatives and/or to identify other alternatives.

The proposed action includes construction of range and Garrison facilities projects. Each construction project has more than one siting or course of action. Internal scoping has determined the two most favorable alternative locations, which are selected for detailed analysis. Resources potentially affected by the proposed action and its alternatives include (but are not limited to) the following : air quality, biological resources, soil conservation, water quality, wetlands/floodplains, cultural resources, noise, hazardous materials/wastes, utilities, traffic/transportation, land use, socioeconomics, disproportionately high impacts to minorities or low-income populations (environmental justice), protection of children, and provisions for individuals with disabilities.

4.2 IDENTIFY PROPONENT, LEAD, AND COOPERATING AGENCIES

The proponent is the person or activity that has initiated the action, has initiated a funding request, and makes the important decisions or recommendations regarding the project. For the Training Range and Garrison Support Facilities Construction and Operation EIS, the proponent is the FSGA Garrison Commander. The lead agency is the Department of the Army.

Agencies with a regulatory or other such associated status with Fort Stewart are invited to serve as Cooperating Agencies (CA) in this EIS. Invitations to be a CA were made via letter; copies of all such correspondence and replies are maintained in the Administrative Record for the EIS. The following agencies were approached regarding CA status:

- U.S. Fish and Wildlife Service (threatened and endangered species),
- U.S. Forest Service – Chattahoochee-Oconee National Forest,
- Savannah District Corps of Engineers – Regulatory Branch (wetlands),
- U.S. Environmental Protection Agency, Region 4,
- National Marine Fisheries Service – Southeast Regional Office,
- National Oceanic and Atmospheric Administration,
- Federally Recognized Tribes with an Ancestral Affiliation with the FSGA area,
 - Alabama-Quassarte Tribe of Oklahoma
 - Kialegee Tribal Town,
 - Miccosukee Tribe of Florida,
 - Muscogee (Creek) Nation,
 - Poarch Band of Creek Indians,
 - Seminole Nation of OK,
 - Seminole Tribe of FL,
 - Thlopthlocco Tribal Town,
 - Georgia Department of Natural Resources,
 - Non-Game Wildlife and Natural Heritage Section,
 - State Historic Preservation Officer,
 - Coastal Resources Division,
 - Environmental Protection Division, and
 - Georgia State Clearinghouse.

Of these, only the U.S. Army Corps of Engineers-Regulatory Branch (Wetlands) (USACE) accepted the invitation. They now serve as a CA for this EIS and are providing valuable data for development of the determination of affect to water quality and resources, such as wetlands, in this EIS.

4.3 IDENTIFY METHODS TO INVITE PARTICIPATION OF STAKEHOLDERS

Methods to invite public and regulatory participation in the EIS process include the following:

1. **Project Website:** A website (<http://www.fortstewart-mmp-eis.com>) is online, provides comprehensive information and the latest developments on the project, and helps the public understand the purpose and content of an EIS. The website has a library of background documents to read, print, or download; notices and reports of public meetings; and contact information for submitting comments or questions.
2. **Mailing List:** The Installation developed and maintains a mailing list of all interested people, organizations, and government officials with an interest in this EIS. The list is used to distribute newsletters, fact sheets, notices of meetings, and other project mailings. The list will be based on lists from prior projects, public meeting sign-ins, and sign-up at the project website. A database comprised of residents, elected officials, businesses, and institutions in the general project area was created for the purpose of meeting document availability notifications and tracking of public comments.
3. **Document Review:** A repository of informative documents is maintained on the project website and in local public libraries. All summaries, newsletters, and fact sheets will also be included.
4. **Document Summaries:** To make the content of technical documents understandable to the public, the study team summarizes key points in terms that are meaningful to the general public, utilizing graphic visualizations as needed.
5. **Presentations:** The study team is available to make presentations to groups requesting them.
6. **Media:** The study team may provide material on the development of the EIS to the press and other media outlets. Senior staff is available to make appearances on local radio and television programs.
7. **Public Comments:** The study team records and considers public comments made at public forums or submitted in writing either through the mail or as e-mail through the project website.

Website. An electronic project website is an increasingly useful tool for reaching the public and stakeholders. Functions on the website include announcements, a comment form, an electronic reading room, a request for e-mail notices or newsletters, links to informative videos, and draft documents for public/stakeholder review. In addition, visualizations and other useful information are on the website in response to both internal FSGA and external (public, regulatory agencies, etc.) comments and requests as the NEPA process proceeds. It also includes depictions of the various alternatives as overlays to maps. Additional useful visualizations include the locations of range alternatives, overlain with resource constraints. Information concerning upcoming events (such as school presentations and tours) is included. All questions from the public are answered in a timely manner.

Mailings. A mailing list was compiled to include Federal, state, and local government offices, Tribes, citizen advisory groups, special interest groups, and others specifically requesting correspondence (see Appendix A). This list is thoroughly reviewed and modified periodically in response to stakeholder input. An option for either electronic correspondence (e-mail) or traditional paper mail is available. Special interest groups and non-regulatory agencies are contacted when documents are ready for review and when meetings on the EIS are scheduled. The groups include:

- the cities of Hinesville, Savannah, Pooler, Bloomingdale, Pembroke, Richmond Hill, Glennville, Gum Branch, Allenhurst, Flemington, and Walthourville;
- the counties of Bryan, Effingham, Chatham, Liberty, Long, and Evans; and
- the Coastal Georgia Regional Development Center, the Heart of Georgia-Altamaha Regional Development Center, and the Savannah-Chatham Metropolitan Planning Commission.

Consultation was recommended for the following special interest groups:

- The Sierra Club – Coastal Group, Savannah (www.georgia.sierraclub.org/coastal/);
- The Audubon Society – Ogeechee Chapter, Savannah (www.savogeecheeaudubon.org/);
- The Savannah Riverkeeper (www.savannahriverkeeper.org/);
- The Ogeechee-Canoochee Riverkeeper (www.ogeecheecanoocheeriverkeeper.org/);
- Citizens for Environmental Justice, Savannah (www.theharambeehouse.com/);
- Coastal Conservation Association of Georgia, Savannah (www.ccaga.org/);
- Georgia Conservancy Incorporated, Savannah (www.georgiaconservancy.org/);
- Southern Alliance for Clean Energy, Savannah (www.cleanenergy.org/); and
- Savannah Tree Foundation (www.savannahtreefoundation.com/).

Document Review and Summaries. Informative background documents and drafts of the EIS will be available for review in either printed or electronic form. Electronic copies are accessible on the website to download the documents or read them online. Printed copies of relevant documents will be available at library reading rooms. Technical and non-technical summaries of the documents will be available to facilitate public review.

Printed Information. Informative project newsletters, brochures, or fact sheets are used to solicit public interest by distribution at area businesses, special events, or site tours. This information will also be available on the website and periodically updated as the NEPA process moves forward. The Environmental Division provides ideas for the contractor to produce briefing packets/graphics/posters/banner stands and other outreach support material, as deemed necessary for display at public meetings and workshops.

Presentations. Briefings for stakeholders will occur, as requested, to civic groups, such as the local Chamber of Commerce, Rotary, League of Women Voters, Parent-Teacher Associations, and other interested parties/groups/associations. To increase the public interest, informative videos may be available via links to video hosting websites, on the project website, in newsletters, or in e-mails.

Media. Media announcements produce additional public interest and awareness. All press and media contacts are coordinated with the PAO. All public notices go to the PAO prior to publication. Appearances on local radio and television may occur, as appropriate. Potential media contacts are in Appendix A.

Public Comments. Comments forms and surveys are available at all public meetings, on the project website, and included in project newsletters. Comment forms may be completed at the meetings, mailed to the Installation, or submitted online at the EIS webpage. All comments are compiled in a database for inclusion in the decision-making process and in Appendix A of the EIS.

4.4 NOTICE OF INTENT TO PREPARE AN EIS

On April 3, 2009, the Department of the Army issued a Notice of Intent (NOI) to prepare the Training Range and Garrison Support Facilities Construction and Operation EIS at Fort Stewart, Georgia, in the Federal Register (FR) (74 FR 15257) and local newspapers (*Savannah Morning News*, *Coastal Courier*, and *The Frontline*). Copies of the NOI and clippings validating its publication in these media sources are in Appendix A. Fort Stewart also mailed copies of the

NOI (including the notice of public scoping meetings) to local, county, State, Federal, and Tribal representatives, as well as other interested parties (such as local community organizations). The mailing list for the EIS is also included at Appendix A and updated regularly as the EIS process continues and people and/or organizations want to be added to or removed from the list.

4.5 PUBLIC SCOPING MEETINGS

The public scoping meetings were announced in the following newspapers: *Bryan County News* on April 4, 8, 11 and 15, 2009; in the *Savannah Morning News* on April 4, 9-14, and 16, 2009; *Coastal Courier* on April 12 and 15, 2009; *Glenville Sentinel* on April 9, 2009; and in the *Statesboro Herald* on April 8-12, 2009.

The scoping meetings were held on April 13, 2009, at the Mighty Eighth Air Force Museum in Pooler, Georgia; April 14, 2009, at the Georgia National Guard Armory in Hinesville, Georgia; and on April 16, 2009, at the Wetlands Education Center in Richmond Hill, Georgia. The public was informed of these meetings via the printing of the NOI and informed that comments are accepted throughout the entirety of the EIS process. They were encouraged to submit scoping comments at the meeting itself, by mailing in the handout comment forms, or by visiting the EIS webpage. Sign-in sheets and comments (both written and verbatim from the court reporter) are included in the public outreach appendix of this EIS (Appendix A).

Comments received after the meetings or submitted via the EIS website also are included in this appendix, as are articles from local, regional, or national newspapers, radio stations, and televised broadcasts, arranged in chronological order of publication.

4.6 COLLECTION AND ANALYSIS OF ENVIRONMENTAL DATA OR REQUIRED STUDIES

The timing of the preparation of the environmental analyses is important so that decision makers, the public, and stakeholders will have the information needed to determine and/or comment on the potential impacts of the alternatives on Installation resources. Supporting studies include:

- Transportation Surveys – Fort Stewart utilized information within its Comprehensive Transportation Study of 2007 and the Hinesville Area Planning Organization's (HAMPO) Transportation Improvement Plan for 2010-2013 to determine potential

projects of interest to the Fort Stewart infrastructure. The HAMPO operates under the leadership of a Policy Committee, comprised of elected officials and other decision makers from each participating jurisdiction, the Georgia Department of Transportation, and other state and federal agencies, such as Fort Stewart. Participation in this process provides an early insight into what the neighboring community of Hinesville is planning, to include transportation improvements, development of biking and pedestrian corridors within existing and future road systems, and other similar projects.

- Noise – Fort Stewart submitted its training data and other relevant information to U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) detailing current and future rounds fired on Fort Stewart; this information was used to generate noise contours which are presented in Section 4.8, Noise, of the EIS.
- Air Quality – Emissions generated from training, construction, and ongoing day-to-day operations on Fort Stewart are routinely captured in databases managed by the Installation Air Quality program manager. Recent studies include an Air Emission Inventory, Greenhouse Gas Emission Inventory, and Prevention of Significant Deterioration Analysis. Results of these database compilations \studies are summarized in Section 4.4, Air Quality, of the EIS.
- Wetlands Assessment – Wetlands delineation were conducted for all Alternative B (Preferred) sites in the EIS. The delineations were forwarded to the Savannah District Office of the U.S. Army Corps of Engineers (USACE)-Regulatory Branch, for verification. Results are presented in Section 4.4, Water Quality and Resources, Wetlands, of the EIS. The USACE is also a Cooperating Agency in this EIS and contributed to its development by providing watershed data and guidance in preparing the cumulative impact analysis for wetlands. For all Alternative C locations, the National Wetlands Inventory was utilized to predict potential impacts.
- Protected Species Surveys–surveys of the Installation’s population of federally protected red-cockaded woodpecker, frosted flatwoods salamander, indigo snake, wood stork, and shortnose sturgeon, as well as for the state-protected gopher tortoise are routinely conducted for a variety of reasons, to include compliance with the INRMP and in support of pending construction projects. Results of these surveys are summarized in the Section 4.5, Biological Resources, Protected Species, of the EIS. The Fort Stewart Wildlife

Management Branch prepared a Biological Assessment (BA) for submittal to the U.S. Fish and Wildlife Service (USFWS) and initiated formal consultation with them regarding the actions analyzed in this EIS. The BA is available for review in Appendix B of the Draft EIS. Due to modification to the Infantry Platoon Battle Course and Multipurpose Machine Gun Range, a modification to the BA was submitted to the USFWS in April 2010. This is also available for review in Appendix A of the EIS, as well as USFWS responses, when received.

- Cultural Resource Management Surveys – surveys (Phase I and/or II) were previously conducted for most of the areas proposed for construction. Results are presented in Section 4.6, Cultural Resources, of the EIS. Formal consultation with both the Georgia State Historic Preservation Office (SHPO) and the Native American Tribes with whom the Installation consults is complete and available for review in Appendix C of the EIS, as well as supporting documentation for determinations of effect in this EIS. The sensitive information on archaeological sites are not distributed to the public in accordance with Section 9 of the Archaeological Resource Protection Act and Section 304 of the National Historic Preservation Act.

4.7 PREPARATION AND REVIEW OF DRAFT AND FINAL EIS

4.7.1 Draft EIS

The 45-day public comment period for the Draft EIS began with publication of the Notice of Availability (NOA) in the Federal Register on April 2, 2010. The NOA was also published in local media sources. Federal, State, local, and Tribal representatives, as well as other stakeholders and members of the public expressing interest in the Draft EIS, were mailed a copy of the NOA of the Draft EIS, providing information on its availability, the request for its review and comment, and details regarding the scheduled public meetings.

The Draft EIS was available to the public via the EIS webpage (www.Fortstewart-mmp-eis.com) and local libraries. The Army held three public meetings to receive comment on this Draft EIS on April 26, 2010 at the Mighty Eighth Air Force Museum in Pooler, Georgia; April 27, 2010 at the Liberty County Recreation Area in Hinesville, Georgia; and April 29, 2010 at the Richmond

Hill City Center, Richmond Hill, Georgia. Attendees were encouraged to submit comments at the meeting itself, by mailing in comment forms, or by visiting the EIS webpage. Sign-in sheets and comments (written and transcribed) are in Appendix A. Comments received after the meetings or submitted via the EIS website are in this appendix, as are articles from local, regional, or national newspapers, radio stations, and televised broadcasts, arranged in chronological order of publication.

4.7.2 Final EIS

Comments received on the Draft EIS were utilized to complete the Final EIS. An NOA will be published in the Federal Register and local news media announcing its availability and where copies of the document may be obtained. This will mark the beginning of the 30-day public comment review period for the Final EIS. Federal, State, local, and Tribal representatives, as well as other stakeholders and members of the public expressing interest in the Final EIS, will receive a mailed copy of the NOA providing information on its availability. All comments received during the public comment period will be considered in the preparation of the ROD. All comments on the Final EIS will be provided in Appendix A.

4.7.3 ROD

The ROD will document the decision made by the Installation and the basis for that decision. It will (32 CFR part 651)

- (i) Clearly state the decision by describing it in sufficient detail to address the significant issues and ensure necessary long-term monitoring and execution;
- (ii) Identify all alternatives considered by the Army in reaching its decision, specifying the environmentally preferred alternative(s). The Army will discuss preferences among alternatives based on relevant factors, including environmental, economic, and technical considerations and agency statutory missions;
- (iii) Identify and discuss all such factors, including any essential considerations of national policy that were balanced by the Army in making its decision. Because economic and technical analyses are balanced with environmental analysis, the agency preferred alternative will not necessarily be the environmentally preferred alternative;
- (iv) Discuss how those considerations entered into the final decision;

- (v) State whether all practicable means to avoid or minimize environmental harm from the selected alternative have been adopted, and if not, why they were not; and
- (vi) Identify or incorporate by reference the mitigation measures that were incorporated into the decision.

The ROD will be distributed to agencies with authority or oversight over aspects of the proposal, cooperating agencies, appropriate congressional, state, and district offices, all parties that are directly affected, and others upon request. No decision will be made on a proposed action until 30 days after EPA has published the Notice of Weekly Receipts (NWR) of the Final EIS in the FR or 90 days after the NWR of the Draft EIS, whichever is later.

4.8 PROCEED WITH PROPOSED ACTION

During the implementation of the decision, monitoring will be required to assure that the mitigation methods, or other conditions established in the EIS or during the decision-making process, are enacted. Specific mitigation requirements may be established in the Biological Opinion from US Fish and Wildlife Service, wetland permits (Section 404 Dredge and Fill Permit), water quality permits (National Pollutant Discharge Elimination System permit for construction), or stream buffer variances.

5. REFERENCES

Army Public Involvement Toolbox, 2005. Leader's Guide to Environmental Public Involvement. February 2005.

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Section II:

**Notice of Intent to Prepare an Environmental Impact Statement,
Notification Letters and Cooperating Agency Invitations,
Public Notifications, and EIS Mailing List**

DEPARTMENT OF DEFENSE**Department of the Army****Notice of Intent To Prepare an Environmental Impact Statement for Mission and Master Planning Actions at Fort Stewart/Hunter Army Airfield, GA**

AGENCY: Department of the Army, DoD.
ACTION: Notice of intent.

SUMMARY: The United States Army announces its intent to proceed with an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart/Hunter Army Airfield. This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of recent personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will also be used by Army decision makers as an important resource to consult when making future decisions about future land uses and operations at Fort Stewart/Hunter Army Airfield.

FOR FURTHER INFORMATION CONTACT: Ms. Melissa Kendrick, National Environmental Policy Act Specialist, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, Georgia 31314-4928. Written comments may be mailed to that address or e-mailed to Melissa.B.Kendrick@army.mil. For media queries please contact Fort Stewart Public Affairs Office at (912) 435-9874 during normal business hours (9 a.m. to 5 p.m.).

SUPPLEMENTARY INFORMATION: Fort Stewart/Hunter Army Airfield, located in southeastern Georgia, is the largest Army installation east of the Mississippi River covering approximately 280,000 acres. Updates to the installation's mission and master planning process will allow the installation to continue to train Soldiers, protect valuable environmental and cultural resources, and minimize negative impacts to neighboring communities. The Army's intent in moving forward with this EIS is to provide decision makers with a comprehensive planning tool, a public information source, and a reference for mitigation.

The proposed action involves constructing ranges and facilities to support military units assigned to Fort Stewart, accommodating current and future training requirements, and the updating of operational and management plans for training lands

and infrastructure. The EIS will address the effects of the proposed activities beginning in FY11 and extending through FY14. Construction projects include ranges, cantonment expansion, Georgia Highway 144 by-pass, widening of Highway 144, and other transportation improvements on Fort Stewart. The EIS will also include an assessment of Fort Stewart's alternative energy potential and will evaluate alternative energy projects which may be implemented at Fort Stewart in the future.

Alternatives may consist of different locations on the installation for specific projects or modifications to those projects. Range projects will be located on areas currently dedicated to military training. The size of the cantonment area may increase. Alternatives will be developed during preparation of the Draft EIS and as a result of public input and environmental analysis.

Several areas present the potential for significant impacts. Fort Stewart/Hunter Army Airfield land provides known or potential habitat for protected plant and wildlife species. Fort Stewart/Hunter Army Airfield provides habitat for 40 percent of the protected red-cockaded woodpecker in Georgia and intensively manages installation land to protect their habitat. Approximately 60 percent of the installation has been surveyed for cultural resources. As a result of these surveys, numerous sites have been recommended as eligible or potentially eligible for the National Register of Historic Places. Another issue of concern is that approximately 30 percent of the installation is potentially wetlands.

The EIS will analyze the potential impacts of the proposed action and the alternatives. Impacts analyzed will include a wide range of environmental resource areas including, but not limited to, air quality, traffic, noise, water resources, biological resources, cultural resources, socioeconomic, utilities, land use, solid and hazardous materials/waste, and cumulative environmental effects. Additional resources and conditions may be identified as a result of the scoping process initiated by this Notice of Intent (NOI).

The public will be invited to actively participate in the EIS process, which includes three scoping meetings to provide input on the proposed actions and alternatives. The public will also be invited to review and comment on the Draft EIS. Dates and times for these public involvement opportunities will be announced in the local news media. Comments from the public will be considered before any decision is made regarding implementing the proposed

action at Fort Stewart/Hunter Army Airfield.

The public scoping period will last for 30 days following the publication of this NOI in the **Federal Register**. Comments from the public will be considered before any decision is made regarding implementing the proposed action.

Dated: March 20, 2009.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health).

[FR Doc. E9-7320 Filed 4-2-09; 8:45 am]

BILLING CODE 3710-06-M

PUBLIC NOTICE

Scoping Meetings to Prepare an Environmental Impact Statement Analyzing the Impacts of Mission and Master Planning Actions at Fort Stewart, Georgia

Fort Stewart/Hunter Army Air Field (FSGA) announces scoping meetings to engage members of the public and other interested parties in the environmental impact statement (EIS) process addressing its Mission and Master Planning (M&MP) actions. The EIS will address known and reasonably anticipated changes in missions and operations of FSGA. It will analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will be used by Army decision-makers as an important resource to consult when making major decisions about future land uses and operations at FSGA. To the degree possible, given existing data, it will also evaluate the potential environmental impacts of essential mission and support management activities at FSGA.

The FSGA M&MP actions have the potential to significantly impact certain natural, economic, social, and cultural resources of the FSGA community. The objective is to provide a comprehensive EIS that will serve as a planning tool, a public information source, and a reference for mitigation tracking. The EIS will analyze the impacts associated with construction of training ranges and other facilities as well as revisions to the M&MP process. Revisions to the M&MP process will allow the installation to continue to train soldiers, protect valuable environmental and cultural resources, and minimize negative impacts to neighboring communities.

The proposed action involves constructing ranges and facilities to support the re-structuring of military units, accommodate the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

The FSGA M&MP EIS will analyze the environmental and socioeconomic impacts of several alternatives including the No Action Alternative. Alternatives will be developed during preparation of the Draft EIS and as a result of public input and environmental analysis.

The scoping meetings will evaluate alternatives for constructing new and modifying existing training ranges and for expanding onsite facilities at FSGA. Discussions will include the assessment of potential environmental impacts from future land use changes, infrastructure development, and stationing decisions.

All members of the public; Federal, State, and local agencies; Tribes and other interested parties are invited to actively participate in this EIS process. FSGA seeks comments on the alternatives proposed for analysis, on the proposed scope of the analysis for specific resource areas, and other comments participants wish to make addressing the proposed action. Additional alternatives may be developed in response to comments received during the public scoping period. Information about the EIS process as well as supporting documentation will also be available on the FSGA M&MP website at www.FortStewart-nmuelis.com.

Public Scoping meetings will be held on the dates and at the locations listed below. Meetings will begin at 5:00 p.m. with an informal poster display. Representatives will be available to describe the technical aspects of the proposed action and alternatives. Experts in environmental disciplines will also be available to discuss anticipated impacts. The meetings will end at 8:00 p.m., or when no further comments are forthcoming.

Military Bldg. Air Force Museum
175 Bourne Avenue
Pinebluff, Georgia 31322
Monday, April 13, 2009

Georgia National Guard Bureau Annex
617 West Oglethorpe Highway
Hiramville, Georgia 31313
Tuesday, April 14, 2009

John W. Stevens
Wynlands Education Center Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 16, 2009

Savannah Morning News, April 2009

PUBLIC NOTICE

Scoping Meetings to Prepare an Environmental Impact Statement Analyzing the Impacts of Mission and Master Planning Actions at Fort Stewart, Georgia

Fort Stewart/Harrier Army Air Field (FSGA) announces scoping meetings to engage members of the public and other interested parties in the environmental impact statement (EIS) process addressing its Mission and Master Planning (M&MP) actions. The EIS will address known and reasonably anticipated changes in missions and operations at FSGA. It will analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will be used by Army decision-makers as an important resource to consult when making major decisions about future land uses and operations at FSGA. To the degree possible, given existing data, it will also evaluate the potential environmental impacts of essential mission and supporting management activities on FSGA.

The FSGA M&MP actions have the potential to significantly impact certain natural, economic, social, and cultural resources of the FSGA community. The objective is to provide a comprehensive EIS that will serve as a planning tool, a public information source, and a reference for mitigation tracking. The EIS will analyze the impacts associated with construction of training ranges and other facilities as well as revisions to the M&MP process. Revisions to the M&MP process will allow the Installation to continue to train soldiers, protect valuable environmental and cultural resources, and minimize negative impacts to neighboring communities.

The proposed action involves constructing ranges and facilities to support the re-stationing of military units, accommodating the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

The FSGA M&MP EIS will analyze the environmental and socioeconomic impacts of several alternatives including the No Action Alternative. Alternatives will be developed during preparation of the Draft EIS and as a result of public input and environmental analysis.

The scoping meeting will evaluate alternatives for constructing new and modifying existing training ranges and for expanding onsite facilities at FSGA. Discussions will include the assessment of potential environmental impacts from future land use changes, infrastructure development, and stationing decisions.

All members of the public, Federal, State, and local agencies; Tribes; and other interested parties are invited to actively participate in this EIS process. FSGA seeks comments on the alternatives proposed for analysis, on the proposed scope of the analysis for specific resource areas, and other comments participants wish to make addressing the proposed action. Additional alternatives may be developed in response to comments received during the public scoping period. Information about the EIS process as well as supporting documentation will also be available on the FSGA M&MP website at www.Fortstewart-mmp-eis.com.

Public Scoping meetings will be held on the dates and at the locations listed below. Meetings will begin at 6:00 p.m. with an informal poster display. Representatives will be available to describe the technical aspects of the proposed action and alternatives. Experts in environmental disciplines will also be available to discuss anticipated impacts. The meeting will end at 8:00 p.m., or when no further comments are forthcoming.

Mighty Eighth Air Force
Museum
175 Bourne Avenue
Pooler, GA 31322
Monday, April 13, 2009

Georgia National Guard
Bureau Armory
607 West Oglethorpe HWY
Milledgeville, GA 31313
Tuesday, April 14, 2009

John W. Stevens
Wetlands Education Center
Cedar Street
Richmond Hill, GA 31324
Thursday, April 16, 2009

For more information, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928. Written comments may be mailed to that address or e-mailed to him at Charles.Walden4@us.army.mil.

PUBLIC NOTICE

Scoping Meetings to Prepare an Environmental Impact Statement Analyzing the Impacts of Mission and Master Planning Actions at Fort Stewart, Georgia

Fort Stewart-Hunter Army Air Field (FSGA) announces scoping meetings to engage members of the public and other interested parties in the environmental impact statement (EIS) process addressing its Mission and Master Planning (M&MP) actions. The EIS will address known and reasonably anticipated changes in missions and operations at FSGA. It will analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will be used by Army decision-makers as an important resource to consult when making major decisions about future land uses and operations at FSGA. To the degree possible, given existing data, it will also evaluate the potential environmental impacts of essential mission and supporting management activities on FSGA.

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Monday, April 13, 2009

Georgia National Guard Bureau Armory
607 West Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 14, 2009

John W. Stevens
Wetlands Education Center
Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 16, 2009

For more information, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort

Glennville Sentinel, April 2009

PUBLIC NOTICE

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Wetlands Education Center
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Richmond Hill, Georgia 31324
Thursday, April 16, 2009**

For more information, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928. Written comments

PUBLIC NOTICE

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For more information, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1530 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928. Written comments may be mailed to that address or e-mailed to



DEPARTMENT OF THE ARMY
SAVANNAH DISTRICT, CORPS OF ENGINEERS
100 W. OGLETHORPE AVENUE
SAVANNAH, GEORGIA 31401-3640

AUG 07 2009

Regulatory Division
200801442

Fort Stewart Directorate of Public Works
Attention: Mr. Robert Baumgardt
1587 Frank Cochran Drive
Fort Stewart, Georgia 31314

Dear Mr. Baumgardt:

I refer to your letter of July 21, 2009, requesting the US Army Corps of Engineers, Savannah District, Regulatory Division to be a Cooperating Agency in the preparation of the Fort Stewart Mission and Master Planning Environmental Impact Statement (M&MP EIS).

The US Army Corps of Engineers has been charged by Congress, under Section 404 of the Clean Water Act (33 U.S.C. 1344) with responsibility to regulate all construction and fill activities performed in waters of the United States and their adjacent wetland areas. There are a number of proposed range construction projects included in the M&MP EIS which would involve impacts to wetlands and require Department of the Army authorization.

By this letter we accept your invitation to be a Cooperating Agency on the M&MP EIS. As a cooperating agency the Regulatory Division may adopt without recirculating the EIS for our Section 404 permit processes for the wetland impacts associated with the proposed ranges. It is crucial to the success of this endeavor that we insure the document addresses all of the necessary elements to fulfill our Section 404 and National Environmental Policy Act requirements.

We look forward to assisting in the development of a document that can be utilized for all applicable environmental reviews and requirements. If you have any further questions concerning this matter, please contact Mark J. Padgett of the Regulatory Division at 912-652-5052.

Sincerely,

A handwritten signature in blue ink, reading "Richard W. Morgan", is positioned above the printed name.

Richard W. Morgan
Acting Chief, Coastal Branch



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Alabama-Quassarte Tribe of Oklahoma
Attn: Chief Tarpie Yargee
PO Box 187
101 East Broadway
Wetumka, OK 74880

Dear Chief Tarpie Yargee:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

The Army is committed to facilitating and encouraging a continuous, two-way communication with the public and stakeholders. Comments from the public and Federal, state, and local agencies will be considered before any decision is made to implement the proposed action at FSGA. Areas of specific concern to you will be addressed, and your input will assist us in preparing this environmental document. Public scoping meetings will be from 6-8 p.m. at the locations and dates listed below.

- a. Monday, April 13, 2009 at the Mighty Eighth Air Force Museum, 175 Bourne Avenue, Pooler, Georgia 31322.
- b. Tuesday, April 14, 2009 at the Georgia National Guard Bureau Armory, 607 West Oglethorpe Highway, Hinesville, Georgia 31313.
- c. Thursday, April 16, 2009 at the John W. Stevens Wetlands Education Center, Cedar Street, Richmond Hill, Georgia 31324.

For questions and/or additional information regarding the EIS, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Protection and Compliance Branch, Environmental Division, 1550 Frank Cochran Street, Building 1137-A, Fort Stewart, Georgia 31314-4928. Written comments may be mailed to that address or e-mailed to him at Charles.Walden4@us.army.mil.

Sincerely,

Todd A. Buchs
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Attn: Dr. W. Ray Luce
Deputy State Historic Preservation Officer
34 Peachtree Street, NW, Suite 1600
Atlanta, GA 30303-2316

Dear Dr. Luce:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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For questions and/or additional information regarding the EIS, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Protection and Compliance Branch, Environmental Division, 1550 Frank Cochran Street, Building 1137-A, Fort Stewart, Georgia 31314-4928. Written comments may be mailed to that address or e-mailed to him at Charles.Walden4@us.army.mil.

Sincerely,

Todd A. Buchs
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
964 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Coastal Resources Division
Attention: Ms. Susan Shipman, Dir
One Conservation Way, Suite 300
Brunswick, GA 31520-8687

Dear Ms. Shipman:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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For questions and/or additional information regarding the EIS, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Protection and Compliance Branch, Environmental Division, 1550 Frank Cochran Street, Building 1137-A, Fort Stewart, Georgia 31314-4928. Written comments may be mailed to that address or e-mailed to him at Charles.Walden4@us.army.mil.

Sincerely,

Todd A. Buchs
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

U.S. Department of Interior
Fish and Wildlife Service
Attention: Sandra Tucker
4270 Norwich Street
Brunswick, GA 31520

Dear Ms. Tucker:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

U.S. Forest Service
Attention: Ms. Kathleen Atkinson
Chattahoochee-Oconee National Forest
1755 Cleveland Highway
Gainesville, GA 30501

Dear Ms. Atkinson:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
964 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Attn: Ms. Betsy Shirk
34 Peachtree Street, NW
Suite 1600
Atlanta, GA 30303-2316

Dear Ms. Shirk:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Savannah District Corps of Engineers
Wetland Regulatory Division
Attn: Mark Padgett
100 W. Oglethorpe Ave.
Savannah, GA 31401

Dear Mr. Padgett:

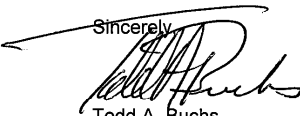
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HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
964 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

National Marine Fisheries Service
Southeast Regional Office
Attention: Mr. David Keys
263 13th Avenue, S.,
St. Petersburg, FL 33701

Dear Mr. Keys:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Non Game Wildlife & Natural Heritage Section
Attn: Ms. Trina Morris
2065 US Highway 278 SE
Social Circle, GA 30025

Dear Ms. Morris:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

U.S. Environmental Protection Agency
Environmental Policy Section
Attn: Mr. Heinz J. Mueller
61 Forsyth Street, SW
Atlanta, GA 30303-3104

Dear Mr. Mueller:

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964 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Environmental Protection Division
Attention: Dr. Carol Couch, Director
2 Martin Luther King Jr. Dr., Southeast
Atlanta, GA 30334-9000

Dear Dr. Couch:

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Thlopthlocco Tribal Town
Town King Vernon Yarholar
Clairview Road Exit 227
Building 103
Okemah, OK 74859

Dear Town King Vernon Yarholar:

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Kialegee Tribal Town
Attn: Mekko Jennie Lillard
PO Box 332
108 North Main Street
Wetumka, OK 74883

Dear Mekko Jennie Lillard:

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HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Miccosukee Tribe of Florida
Attn: Chairman Billy Cypress
Mile Marker 70
United States Highway 41
Tamiami Trail
Miami, FL 33144

Dear Chairman Billy Cypress:

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Muscogee Creek Nation
Chief A. D. Ellis
PO Box 580
1008 East Eufala
Okmulgee, OK 74447

Dear Chief A. D. Ellis:

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954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Poarch Band of Creek Indians
Chairman Buford L. Rolin
5811 Jack Springs Road
Atmore, AL 36502

Dear Chairman Buford L. Rolin:

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US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Seminole Nation of Oklahoma
Attn: Chief Enoch Kelly Haney
PO Box 1498
Junction 270 and 56 Highway
¼ Mile East on 270
Wewoka, OK 74884

Dear Chief Enoch Kelly Haney:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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- a. Monday, April 13, 2009 at the Mighty Eighth Air Force Museum, 175 Bourne Avenue, Pooler, Georgia 31322.
- b. Tuesday, April 14, 2009 at the Georgia National Guard Bureau Armory, 607 West Oglethorpe Highway, Hinesville, Georgia 31313.
- c. Thursday, April 16, 2009 at the John W. Stevens Wetlands Education Center, Cedar Street, Richmond Hill, Georgia 31324.

For questions and/or additional information regarding the EIS, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Protection and Compliance Branch, Environmental Division, 1550 Frank Cochran Street, Building 1137-A, Fort Stewart, Georgia 31314-4928. Written comments may be mailed to that address or e-mailed to him at Charles.Walden4@us.army.mil.

Sincerely,

Todd A. Buchs
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Georgia Department of Natural Resources
Coastal Resources Division
Attention: Ms. Kelie Moore
One Conservation Way, Suite 300
Brunswick, GA 31520-8687

Dear Ms. Moore:

The United States Army is drafting an Environmental Impact Statement (EIS) to address known and reasonably anticipated changes in missions and operations at Fort Stewart and Hunter Army Airfield, Georgia (FSGA). This is necessary to analyze the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. The attached Notice of Intent (NOI) to prepare this EIS contains a brief description of the proposed action, the development of alternatives, potential impacts, and the scoping process.

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Sincerely,

Todd A. Buchs
Colonel, US Army
Commanding

Enclosure

Section III:

2009 Public Scoping Meetings and Public Comments Received

MONDAY, APRIL 13, 2008
EIGHTH

Environmental Impact Statement Scoping Meeting

Guest Log

STAFF

Name	Address	Phone	Organization
Brian Greer	DPW, ENV, CRM	767-0992	
Robert Lloyd	DPW ENRD - Wetlands	767-9443	
Vernice L. Vainer	DPW ENRD - P & C	767-6287	
Angi Eason	DPW ENRD - P & C	767-7863	
Larry Bertile	DPW, Fish & W	767-8241	
Shalonda Pountree	DPW, ENVIRON	767-7981	
Melissa Kendrick	DPW, ENV	767-2400	
Shirley Thomas	DPW, ENV	767-4139	
Ray GRIGGS	DPTMS, ENG Control	435-8164	
Arte RAMON	DPW, ENV Forestry	435-8024	
Anthony Robine	DPW, ENV, Forestry	435-8089	
ANDREA STUBA	DPW, MASTER PLANNING	767-9149	
BRIAN MEXON	DPTMS, AIR TRAFFIC & AIR QUAL	435-3130	
David Laverdes	DPW, ENV, Fish & Wildlife	767-6765	
Tim Beatty	DPW, Env, Fish & Wildlife	767-7261	
Karin Montano	DPW, Environmental	767-4933	
CHUCK WARDEN	DPW, ENV	228-7132	
George HARRIS	" "	767-2010	

Environmental Impact Statement Scoping Meeting

Guest Log

Staff

[illegible]

Environmental Impact Statement Scoping Meeting Guest Log

[illegible]

1 FORT STEWART AND HUNTER ARMY AIRFIELD

2
3 MISSION AND MASTER PLANNING

COPY

4
5 ENVIRONMENTAL IMPACT STATEMENT

6
7 SCOPING MEETING

8
9
10
11 Mighty Eighth Air Force Museum

12
13 Pooler, Georgia

14
15 April 13, 2009

16
17 6:00 p.m. - 8:00 p.m.

18
19
20 REPORTED BY: ANNETTE PACHECO, CGR, RPR, RMR

21
22
23 Transcript Prepared By:

24 MCKEE COURT REPORTING, INC.
25 P. O. Box 9092
Savannah, Georgia 31401
(912) 232-8322

1 MR. JEFFRY C. COOK: I came this evening
2 because I'm a resident of Lake Lorraine, which is
3 a homeowner-association-owned lake in Ellabell in
4 Bryan County. And my concern this evening was
5 that our lake is fed by a creek called Malden
6 Branch, and Malden Branch drains out of Fort
7 Stewart in the C-1 through C-4 areas and up into
8 B-17 and B-18.

9 So, our concern with the master plan is
10 how any future development could affect the
11 drainage of those lands and the possible increase
12 of the water flow coming out of Fort Stewart into
13 our lake. And I have lived out there for 20 years
14 and hunted Fort Stewart for over 30 years. So, I
15 have seen that as certain projects are done, that
16 there is new ditching and larger ditches. So, we
17 know that the flow of water has increased over the
18 years.

19 We are currently making improvements to
20 the dam on the lake because we know as the years
21 go by, continued improvements and continued
22 drainage projects will occur on the Fort and the
23 amount of water will continue to increase. So,
24 we're making improvements to our dam now.

25 But all of that was in the planning over

1 the past two years. And upon seeing that this
2 meeting was going to take place and I brought it
3 to the attention of the board of directors, now
4 we're all wondering are we doing enough.
5 Shouldn't we know what's going to be happening in
6 the future? And by the same token, shouldn't the
7 people who are creating this plan know what the
8 possible effects of drainage programs and possible
9 paving of roads and, you know, different things
10 that they're going to do so that we can kind of
11 work in concert with each other a little bit so
12 that everyone is aware of what -- so that we're
13 aware of what's going to happen at Fort Stewart?
14 And Fort Stewart is aware that it has an impact on
15 our lake.

16 We're a very unique situation in that we
17 are the only impoundment of water that is
18 completely fed by water coming out of Fort
19 Stewart. We're it. Most all other waters on Fort
20 Stewart drains into the Canoochee and into the
21 Ogeechee Rivers, which just flow down rivers.
22 They're tidal affected and it really doesn't
23 affect anybody else. So, we're very unique in our
24 situation.

25 And my purpose is just so that we can be

1 as informed as possible of what the impacts of the
2 master plan will have on the work we are doing now
3 and whether the work that we are doing now to
4 improve the dam is enough to carry us into the
5 future without laying the burden on the next
6 generation to do more because we were not informed
7 enough. So, that's why I'm here.

8 - - - - -

CERTIFICATE

1
2 GEORGIA:

3 CHATHAM COUNTY:
4

5 I, Annette Pacheco, Registered Professional
6 Reporter and Certified Shorthand Reporter for the
7 State of Georgia, do hereby certify that the foregoing
8 transcript is a true, accurate and complete record.

9 I further certify that I am neither related to
10 nor counsel for any party to the cause pending or
11 interested in the events thereof.
12

13 This, the 24th of April, 2009.
14

15
16 
17

18 Annette Pacheco, CSR, RPR, RMR
19 B-2153
20
21
22
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24
25

1 FORT STEWART AND HUNTER ARMY AIRFIELD

2

3 MISSION AND MASTER PLANNING

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COPY

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ENVIRONMENTAL IMPACT STATEMENT

6

7

SCOPING MEETING

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11

Georgia National Guard Bureau Armory

12

13

Hinesville, Georgia

14

15

April 14, 2009

16

17

6:00 p.m. - 8:00 p.m.

18

19

20

REPORTED BY: AMY JO KASKA, CCR-2531

21

22

Transcript Prepared By:

23

McKEE COURT REPORTING, INC.

24

P.O. Box 9092

Savannah, Georgia 31412-9092

25

(912) 691-4545

1 MR. DON GARDNER: My comment is I
2 wondered what the incorporation of low impact
3 design or LID is in the projects, particularly use
4 of pervious paving and other techniques to use
5 water retention on site to reduce downstream
6 effects.

7 And also if there is any discussion of
8 using water from sinks and showers to use that for
9 irrigation purposes rather than putting it into
10 the waste water treatment stream.

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CERTIFICATE

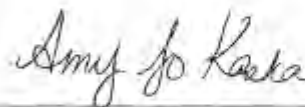
GEORGIA:

CHATHAM COUNTY:

I, Amy Jo Kaska, Certified Court Reporter for the State of Georgia, do hereby certify that the foregoing transcript is a true, accurate and complete record.

I further certify that I am neither related to nor counsel for any party to the cause pending or interested in the events thereof.

This, the 28th of April, 2009.



AMY JO KASKA, CCR-2531

1 IN THE MATTER OF:)

2)
3 FT. STEWART & HUNTER ARMY)
4 AIRFIELD MISSION AND MASTER)
5 PLANNING ENVIRONMENTAL IMPACT)
6 STATEMENT SCOPING MEETING)
7)

8 Date: April 16, 2009)
9)
10)
11)
12)

COPY

13 FT. STEWART & HUNTER ARMY AIRFIELD MISSION
14 AND MASTER PLANNING ENVIRONMENTAL IMPACT STATEMENT
15 SCOPING MEETING, pursuant to notice and by agreement
16 of counsel, under the Georgia Civil Practice Act,
17 reported by Elise M. Napier, CCR-2492, at the John
18 Stevens Wetland Center, Cedar Street, Richmond Hill,
19 Georgia, on Thursday, April 16, 2009, commencing from
20 6:00 p.m. to 8:00 p.m. wherein no public comments
21 were presented.
22
23
24
25

Transcript Prepared By:

McKEE COURT REPORTING, INC.
P.O. Box 9092
Savannah, Georgia 31412-9092
(912) 691-4545

CERTIFICATE

1
2 GEORGIA:

3 CHATHAM COUNTY:

4 I, Elise M. Napier, Certified Court Reporter
5 for the State of Georgia, do hereby certify:

6 That the foregoing deposition was taken
7 before me on the date and at the time and location
8 stated on Page 1 of this transcript; that the witness
9 was duly sworn to testify to the truth, the whole
10 truth and nothing but the truth; that the testimony
11 of the witness and all objections made at the time of
12 the examination were recorded stenographically by me
13 and were thereafter transcribed by computer-aided
14 transcription; that the foregoing deposition, as
15 typed, is a true, accurate and complete record of the
16 testimony of the witness and of all objections made
17 at the time of the examination.

18 I further certify that I am neither related
19 to nor counsel for any party to the cause pending or
20 interested in the events thereof.

21 Witness my hand, I have hereunto affixed my
22 official seal this 14th day of May 2010, at Savannah,
23 Chatham County, Georgia.

24
25 ELISE M. NAPIER CCR-2492

D I S C L O S U R E


Pursuant to Article 8.B. of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia, I make the following disclosure:

I am a Georgia Certified Court Reporter. I was contacted by my office of McKee Court Reporting, Inc. to provide court reporting services for this deposition.

I will not be taking this deposition under any contract that is prohibited by O.C.G.A. 15-14-37(a) and (b).

I have no contract/agreement to provide reporting services with any party to the case, any counsel in the case or any reporter or reporting agency from whom a referral might have been made to cover the deposition.

I will charge its usual and customary rates to all parties in the case, and a financial discount will not be given to any party to this litigation.



ELISE M. NAPIER CCR-2492

Fort Stewart Response to Public Comments Received at 2009 Public Scoping Meetings

Two verbatim comments were received at these meetings. They are summarized below, along with an identification of where in the Draft EIS the comments are best addressed. No other public comments were received, either at the meetings or via submittal of a comment by mail, email, or the EIS website.

Verbatim Comment #1, Mr. Jeffry Cooke, transcribed during Public Scoping Meeting in Pooler. Cooke was interested in acquiring information concerning stormwater, surface water, and water quality, and how projects within the scope of the Fort Stewart EIS may affect these resources in the communities downstream (such as his) from the Installation. He was referred to the appropriate subject matter experts (SMEs) at the meeting, who discussed these resources, Federal, state, and local laws protecting them, how this information would be presented in the pending Draft EIS, and how Fort Stewart would notify the public when the Draft EIS was ready for public review. **This information he requested is presented in Sections 3.4 (Existing Environment) and 4.3 (Environmental Consequences, Water Quality and Resources) of the Draft EIS.**

Verbatim Comment #2, Mr. John Gardner, transcribed during Public Scoping Meeting in Hinesville. Gardner was interested in acquiring information regarding the Installation's incorporation of Low Impact Design measures into the design and implementation phases of the projects addressed in this EIS. He was referred to the appropriate SME, who discussed how the Installation ensures compliance with LID requirements, as well as how this information would be presented in the pending Draft EIS, and how Fort Stewart would notify the public when the Draft EIS was ready for public review. **This information he requested is presented in Sections 3.4.4.1 (Existing Environment) and 4.3 Environmental Consequences, Water Quality and Resources) of the Draft EIS.**

No verbatim comments were received during the Public Scoping Meeting in Richmond Hill.

Section IV:

Notice of Availability of Draft EIS, Public Meetings, Public and Regulatory Comments Received, and Installation Response to Comments

make its comments on EISs issued by other Federal agencies public. Historically, EPA has met this mandate by publishing weekly notices of availability of EPA comments, which includes a brief summary of EPA's comment letters, in the Federal Register. Since February 2008, EPA has been including its comment letters on EISs on its Web site at: <http://www.epa.gov/compliance/nepa/eisdata.html>. Including the entire EIS comment letters on the Web site satisfies the Section 309(a) requirement to make EPA's comments on EISs available to the public. Accordingly, after March 31, 2010, EPA will discontinue the publication of this notice of availability of EPA comments in the Federal Register.

EIS No. 20100097, Final EIS, USFS, OR, EXF Thinning, Fuel Reduction, and Research Project, Proposal for Vegetation Management and Fuel Reduction within the Lookout Mountain Unit of the Pringle Falls Experimental Forest, Bend/Ft. Rock Ranger District, Deschutes National Forest, Deschutes County, OR, Wait Period Ends: 05/03/2010, Contact: Beth Peer 541-383-4769.

EIS No. 20100098, Final EIS, FHWA, WA, WA-502 Corridor Widening Project, Proposes Improvements to Five Miles of WA-502 (NE-219th Street) between NE 15th Avenue and NE 102nd Avenue, Funding, Clark County, WA, Wait Period Ends: 05/03/2010, Contact: Chris Tams 360-759-1310.

EIS No. 20100099, Final EIS, FHWA, FL, Interstate 395 (I-395) Development and Environment Study Project, From I-95 to West Channel Bridges of the MacArthur Causeway at Biscayne Bay, City of Miami, Miami-Dade County, FL, Wait Period Ends: 05/03/2010, Contact: Linda K. Anderson 850-942-9650 Ext. 3053.

EIS No. 20100100, Draft EIS, BLM, OR, West Butte Wind Power Project, Construction and Operation of Access Roads and a Transmission Line, Application for Right-of-Way (ROW) Grant, Deschutes and Crook Counties, OR, Comment Period Ends: 05/17/2010, Contact: Steve Storo 541-416-6700.

EIS No. 20100101, Draft EIS, FTA, TX, D2 Downtown Dallas Transit Study, To Support Increased Demand and Implementation of the 2030 Transit System Plan (TSP), Dallas Area Rapid Transit (DART), in the City of Dallas, Dallas County, TX, Comment Period Ends: 05/17/2010, Contact: Lynn

Construction, Operation and Decommission a Solar Thermal Facility on Public Lands, Approval for Right-of-Way Grant, Possible California Desert Conservation Area Plan Amendment, Riverside County, CA, Comment Period Ends: 07/01/2010, Contact: Holly Roberts 760-833-7149.

EIS No. 20100103, Draft EIS, FERC, 00, Apex Expansion Project, Proposal to Expand its Natural Gas Pipeline System, WY, UT and NV, Comment Period Ends: 05/17/2010, Contact: Julia Bovey 1-866-208-3372.

EIS No. 20100104, Draft EIS, USFS, NM, McKinley County Easement—Forest Roads 191 and 191D, Implementation, Cibola National Forest, McKinley County, NM, Comment Period Ends: 05/17/2010, Contact: Keith Baker 505-346-3820.

EIS No. 20100105, Draft EIS, USA, GA, Fort Stewart Training Range and Garrison Support Facilities Construction and Operation, Liberty, Long, Bryan, Evans and Tattnall Counties, GA, Comment Period Ends: 05/17/2010, Contact: Mike Ackerman 410-436-2522.

EIS No. 20100108, Draft EIS, BLM, CA, Granite Mountain Wind Energy Project, Proposed to Develop an up to 84-megawatt Wind Energy Plant and Associated Facilities on Public Land and Private Land, California Desert Conservation Areas Plan, San Bernardino County, CA, Comment Period Ends: 07/01/2010, Contact: Edythe Seehafer 760-252-6021.

EIS No. 20100107, Draft EIS, BLM, CA, Calico Solar Project, Proposed Solar Thermal Electricity Generation Facility Located Public Lands, Construction and Operation, Right-of-Way Grant, San Bernardino County, CA, Comment Period Ends: 07/01/2010, Contact: Jim Stobaugh 775-861-6478.

Amended Notices

EIS No. 20100018, Draft EIS, NPS, WV, New River Gorge National River Project, General Management Plan, Implementation, Fayette, Raleigh and Summers Counties, WV, Comment Period Ends: 04/02/2010, Contact: Deborah Darden 304-465-6509.

Revision to FR Notice Published 01/29/2010: Correction to Comment Period from 03/29/2010 to 04/02/2010.

EIS No. 20100054, Draft EIS, NASA, VA, Wallops Flight Facility, Shoreline Restoration and Infrastructure Protection Program, Implementation,

Revision to FR Notice Published 02/28/2010: Correction to Comment Period from 04/12/2010 to 04/19/2010.

Dated: March 30, 2010.
Robert W. Hargrove,
Director, NEPA Compliance Division, Office
of Federal Activities.
[FR Doc. 2010-7501 Filed 4-1-10; 8:45 am]
BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[E-FRL-6989-6]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at 202-564-7146 or <http://www.epa.gov/compliance/nepa/>.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated July 17, 2009 (74 FR 35754).

Final Notice

In accordance with Section 309(a) of the Clean Air Act, EPA is required to make its comments on EISs issued by other Federal agencies public. Historically, EPA has met this mandate by publishing weekly notices of availability of EPA comments, which includes a brief summary of EPA's comment letters, in the Federal Register. Since February 2008, EPA has been including its comment letters on EISs on its Web site at: <http://www.epa.gov/compliance/nepa/eisdata.html>. Including the entire EIS comment letters on the Web site satisfies the Section 309(a) requirement to make EPA's comments on EISs available to the public. Accordingly, this is the final publication of this notice of availability of EPA comments in the Federal Register.

Draft EISs

EIS No. 20090378, ERP No. D-COE- F09806-MN, NorthMet Project, Proposes to Construct and Operate an Open Pit Mine and Processing Facility, Located in Hoyt Lakes—Babbitt Area of St. Louis County, MN
Summary: The project as proposed

Public Meetings on the Draft Environmental Impact Statement For Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia

Fort Stewart announces public meetings to provide information on the Draft Environmental Impact Statement (DEIS) and to provide opportunities for public involvement and comment. The DEIS addresses known and reasonably anticipated changes in missions and operations at Fort Stewart. It analyzes the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing ac-

tions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will be used by Army decision-makers as an important resource to consult when making major decisions about future land uses and operations at Fort Stewart.

The proposed actions at Fort Stewart have the potential to significantly impact certain natural, economic, social, and cultural resources of the Fort Stewart community. The objective is to provide a comprehensive EIS that will serve as a planning tool, a public information source, and a reference for mitigation tracking. The DEIS analyzes the impacts associated with construction of training ranges and other facilities. Construction and operation of the proposed facilities will allow the installation to continue to train soldiers, protect valuable environmental and cultural resources, and minimize negative impacts to neighboring communities.

The proposed actions involve constructing ranges and facilities to support the re-stationing of military units, accommodating the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

The DEIS analyzes the environmental and socioeconomic impacts of several alternatives including the No Action Alternative. Alternatives examined in the DEIS consist of different siting locations within Fort Stewart for the training ranges and containment area support facilities.

Under the No Action Alternative, the current mission and support activities already occurring at Fort Stewart would continue. Soldiers, however, would not be trained to standard. Other alternatives considered were measured against a set of screening criteria to determine which would be operationally and environmentally preferred. Impacts analyzed include a wide range of environmental resource areas including, but not limited to, air quality, noise, water resources, biological resources, cul-

tural resources, socioeconomic, infrastructure (utilities and transportation), land use, solid and hazardous materials/waste, and cumulative environmental effects.

The public is invited to participate and comment on the DEIS. The public comment period will last for 45 days following the publication of the Notice of Availability for the DEIS in the Federal Register by the Environmental Protection Agency. The DEIS is available for public review at local libraries near Fort Stewart and on the Fort Stewart website at www.fortstewart-mmp-eis.com.

Public meetings will be held on the dates and at the locations listed below. Meetings will begin at 6:00 p.m. with an informal poster display. Representatives will be available to describe the technical aspects of the proposed action and alternatives. Experts in environmental disciplines will also be available to discuss anticipated impacts. The meeting will end at 8:00 p.m., or when no further comments are forthcoming.

Mighty Eighth Air Force Museum
175 Bourne Avenue
Pooler, Georgia 31322
Monday, April 26, 2010
Liberty County Recreational Center
607 East Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010

Richmond Hill City Center
520 Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 29, 2010

For more information, please contact: Dina McKain at (912) 485-9674, Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1107-A, Fort Stewart, GA 31314-4075
c93389 04/07/10

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The proposed actions involve constructing ranges and facilities to support the re-stationing of military units, accommodating the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

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preferred. Impacts analyzed include a wide range of environmental resource areas including, but not limited to, air quality, noise, water resources, biological resources, cultural resources, socio-economics, infrastructure (utilities and transportation), land use, solid and hazardous materials/waste, and cumulative environmental effects.

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Monday, April 26, 2010

Liberty County Recreational Center
607 East Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010

Richmond Hill City Center
520 Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 29, 2010

For more information, please contact: Dina McKain at (912) 435-9874, Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928.

Bryan County News, April 2010

MTS
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PUBLIC NOTICE
Public Meetings on the Draft
Environmental Impact
Statement
For Training Range and Garrison
Support Facilities Construction
and Operation
at Fort Stewart, Georgia

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The proposed actions involve constructing ranges and facilities to support the re-stationing of military units, accommodating the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

The DEIS analyzes the environmental and socioeconomic impacts of several alternatives including the No Action Alternative. Alternatives examined in the DEIS consist of different siting locations within Fort Stewart for the training ranges and garrison area support facilities.

Under the No Action Alternative, the current mission and support activities already occurring at Fort Stewart would continue. Soldiers, however, would not be trained to standard. Other alternatives considered were measured against a set of screening

criteria to determine which would be operationally and environmentally preferred. Impacts analyzed include a wide range of environmental resource areas including, but not limited to, air quality, noise, water resources, biological resources, cultural resources, socioeconomic, infrastructure (utilities and transportation), land use, solid and hazardous materials/waste, and cumulative environmental effects.

The public is invited to participate and comment on the DEIS. The public comment period will last for 45 days following the publication of the Notice of Availability for the DEIS in the Federal Register by the Environmental Protection Agency. The DEIS is available for public review at local libraries near Fort Stewart and on the Fort Stewart website at www.FortStewart-mmp-eis.com.

Public meetings will be held on the dates and at the locations listed below. Meetings will begin at 6:00 p.m. with an informal poster display. Representatives will be available to describe the technical aspects of the proposed action and alternatives. Experts in environmental disciplines will also be available to discuss anticipated impacts. The meeting will end at 8:00 p.m. or when no further comments are forthcoming.

Liberty County Recreational Center
607 East Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010
Richmond Hill City Center
520 Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 29, 2010

For more information, please contact Dina McKain at (912) 435-9874. Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928.

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Mighty Eighth Air Force Museum
175 Bourne Avenue
Pooler, Georgia 31322
Monday, April 26, 2010
Liberty County Recreational Center
607 East Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010
Richmond Hill City Center
520 Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 29, 2010

For more information, please contact Dina McKain at (912) 435-9874. Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928.

30450
(Apr. 7, 9, 11, 14, 16, 18, 20, 23, 25, 28)

Coastal Courier, April 2010.

Public Notice

Public Meetings on the Draft Environmental Impact Statement For Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia

Fort Stewart announces public meetings to provide information on the Draft Environmental Impact Statement (DEIS) and to provide opportunities for public involvement and comment. The DEIS addresses known and reasonably anticipated changes in missions and operations at Fort Stewart. It analyzes the cumulative socioeconomic and environmental impacts associated with a number of personnel stationing actions and changes in how the Army trains and deploys our nation's Soldiers. When the EIS is completed, it will be used by Army decision-makers as an important resource to consult when making major decisions about future land uses and operations at Fort Stewart.

The proposed actions at Fort Stewart have the potential to significantly impact certain natural, economic, social, and cultural resources of the Fort Stewart community. The objective is to provide a comprehensive EIS that will serve as a planning tool, a public information source, and a reference for mitigation tracking. The DEIS analyzes the impacts associated with construction of training ranges and other facilities. Construction and operation of the proposed facilities will allow the installation to continue to train soldiers, protect valuable environmental and cultural resources, and minimize negative impacts to neighboring communities.

The proposed actions involve constructing ranges and facilities to support the re-stationing of military units, accommodating the current and future training requirements, and revising operational and management plans for training lands and infrastructure.

The DEIS analyzes the environmental and socioeconomic impacts of several alternatives including the No Action Alternative. Alternatives examined in the DEIS consist of different siting locations within Fort Stewart for the training ranges and cantonment area support facilities.

Under the No Action Alternative, the current mission and support activities already occurring at Fort Stewart would continue. Soldiers, however, would not be trained to standard. Other alternatives considered were measured against a set of screening criteria to determine which would be operationally and environmentally preferred. Impacts analyzed include a wide range of environmental resource areas including, but not limited to, air quality, noise, water resources, biological resources, cultural resources, socioeconomic, infrastructure (utilities and transportation), land use, solid and hazardous materials/waste, and cumulative environmental effects.

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175 Bourne Avenue
Pooler, Georgia 31322
Monday, April 26, 2010

Liberty County Recreational Center
607 East Oglethorpe Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010

Richmond Hill City Center
520 Cedar Street
Richmond Hill, Georgia 31324
Thursday, April 29, 2010

For more information, please contact: Dina McKain at (912) 435-9874, Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928.

Glennville Sentinel, April 2010.

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Mighty Eighth
Air Force Museum
175 Bourne Avenue
Pooler, Georgia 31322
Monday, April 26, 2010

Liberty County
Recreational Center
607 East Oglethorpe
Highway
Hinesville, Georgia 31313
Tuesday, April 27, 2010

Richmond Hill
City Center
520 Cedar Street
Richmond Hill, Georgia
31324
Thursday, April 29, 2010

For more information, please contact: Cita McKain at (912) 435-9874. Fort Stewart Public Affairs Office. Written comments may be sent to Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1530 Frank Cochran Drive, Building 1137-A, Fort Stewart, GA 31314-4928.

Savannah Morning News, April 2010.

**The Draft Environmental Impact Statement (DEIS) for
Training Range and Garrison Support Facilities Construction
and Operation Meeting**

Mighty-Eighth Air Museum - Monday, April 26, 2010

Guest Log

[illegible]

**The Draft Environmental Impact Statement (DEIS) for
Training Range and Garrison Support Facilities Construction
and Operation Meeting**

Liberty County Recreation Center – Tuesday, April 27, 2010

Guest Log

[illegible]

Mighty-Eighth Air Museum - Monday, April 26, 2010

Liberty County Recreation Center – Tuesday, April 27, 2010

Richmond Hill City Center – Thursday, April 29, 2010

[illegible]

THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
FOR TRAINING RANGE AND GARRISON SUPPORT
FACILITIES CONSTRUCTION AND OPERATION

COPY

Transcript of comments for the Public Scoping
meeting for the Fort Stewart Environmental Impact
Statement held on April 26, 2010, at the Mighty Eighth
Air Force Museum, 175 Bourne Avenue, Pooler, Georgia,
31322, beginning at 6:00 p.m.

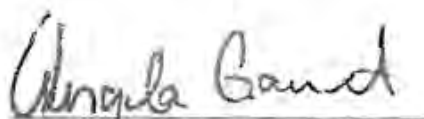
1 CERTIFICATE

2
3 GEORGIA:4
5 CHATHAM COUNTY:

6
7 I, Angela S. Garrett, Certified Shorthand
8 Reporter and Registered Professional Reporter, in and
9 for the State of Georgia at Large, do hereby certify
10 that I was employed to take down via stenographic
11 transcription all comments from the public regarding the
12 Fort Stewart Environmental Impact Statement at the
13 Mighty Eighth Air Force Museum, 175 Bourne Avenue,
14 Pooler, Georgia, 31322, on April 26, 2010, from 5:00
15 p.m. until 8:00 p.m., and that no comments were
16 requested to be taken down.

17 Witness my hand and seal this 1st day of May,
18 2010, at Savannah, Chatham County, Georgia.

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20
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25


Angela S. Garrett, CSR, RPR

1 IN THE MATTER OF: }

2 THE DRAFT ENVIRONMENTAL IMPACT }

3 STATEMENT (DEIS) FOR TRAINING }

4 RANGE AND GARRISON SUPPORT }

5 FACILITIES CONSTRUCTION AND }

6 OPERATING MEETING }

7 Date: April 27, 2010 }

COPY

8

9 THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

10 (DEIS) FOR TRAINING RANGE AND GARRISON SUPPORT

11 FACILITIES CONSTRUCTION AND OPERATING MEETING,

12 pursuant to notice and by agreement of counsel, under

13 the Georgia Civil Practice Act, reported by Elise M.

14 Napier, CCR-2492, at the Liberty County Recreational

15 Center, 607 West Oglethorpe Highway, Hinesville,

16 Georgia, on Tuesday, April 27, 2010, commencing from

17 5:00 p.m. to 8:00 p.m. wherein no comments were

18 presented.

19

20

21 Transcript Prepared By:

22 MCKEE COURT REPORTING, INC.

23 P.O. Box 9092

24 Savannah, Georgia 31412-9092

25 (912) 691-4545

CERTIFICATE

GEORGIA:

CHATHAM COUNTY:

I, Elise M. Napier, Certified Court Reporter
for the State of Georgia, do hereby certify:

That the foregoing deposition was taken
before me on the date and at the time and location
stated on Page 1 of this transcript; that the witness
was duly sworn to testify to the truth, the whole
truth and nothing but the truth; that the testimony
of the witness and all objections made at the time of
the examination were recorded stenographically by me
and were thereafter transcribed by computer-aided
transcription; that the foregoing deposition, as
typed, is a true, accurate and complete record of the
testimony of the witness and of all objections made
at the time of the examination.

I further certify that I am neither related
to nor counsel for any party to the cause pending or
interested in the events thereof.

Witness my hand, I have hereunto affixed my
official seal this 6th day of May 2010, at Savannah,
Chatham County, Georgia.



ELISE M. NAPIER CCR-2492

D I S C L O S U R E

Pursuant to Article 8.B. of the Rules and Regulations of the Board of Court Reporting of the Judicial Council of Georgia, I make the following disclosure:

I am a Georgia Certified Court Reporter. I was contacted by my office of McKee Court Reporting, Inc. to provide court reporting services for this deposition.

I will not be taking this deposition under any contract that is prohibited by O.C.G.A. 15-14-37(a) and (b).

I have no contract/agreement to provide reporting services with any party to the case, any counsel in the case or any reporter or reporting agency from whom a referral might have been made to cover the deposition.

I will charge its usual and customary rates to all parties in the case, and a financial discount will not be given to any party to this litigation.



ELISE M. NAPIER CCR-2492

THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)
FOR TRAINING RANGE AND GARRISON SUPPORT
FACILITIES CONSTRUCTION AND OPERATION

COPY

Transcript of comments for the Public Scoping
meeting for the Fort Stewart Environmental Impact
Statement held on April 29, 2010, at the Richmond Hill
City Center, 520 Cedar Street, Richmond Hill, Georgia,
31324, beginning at 6:00 p.m.

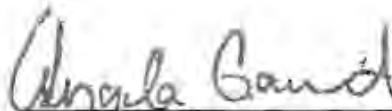
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3 GEORGIA:4
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11 transcription all comments from the public regarding the
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13 Richmond Hill City Center, 520 Cedar Street, Richmond
14 Hill, Georgia, 31324, on April 29, 2010, from 5:00 p.m.
15 until 8:00 p.m., and that no comments were requested to
16 be taken down.

17 Witness my hand and seal this 1st day of May,
18 2010, at Savannah, Chatham County, Georgia.

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Angela S. Garrett, CSR, RPR

Fort Stewart Response to Public Comments Received at 2010 Scoping Meetings

No verbatim comments were received at these meetings.

Note: Formal responses to comments submitted by regulatory agencies and/or Tribes are addressed in the formal letters that follow this page.

**GEORGIA STATE CLEARINGHOUSE MEMORANDUM
EXECUTIVE ORDER 12372 REVIEW PROCESS**

TO: Charles Walden
Dept. of the Army
DPW-P&CB, Environmental Div.
1550 Frank Cochran Drive, Bldg 1137
Fort Stewart, GA 31314-4928

FROM: Barbara Jackson

DATE: 4/5/2010

APPLICANT: Dept. of the Army - Fort Stewart, GA

PROJECT: Draft EIS: Training Range and Garrison Support Facilities Construction
and Operation

CFDA #:

STATE ID: GA100405002

FEDERAL ID:

Correspondence related to the above project was received by the Georgia State Clearinghouse on 4/5/2010. The review has been initiated and every effort is being made to ensure prompt action. The proposal will be reviewed for its consistency with goals, policies, plans, objectives, programs, environmental impact, criteria for Developments of Regional Impact (DRI) or inconsistencies with federal executive orders, acts and/or rules and regulations, and if applicable, with budgetary restraints.

The initial review process should be completed by 5/4/2010 (*approximately*). If the Clearinghouse has not contacted you by that date, please call (404) 656-3855, and we will check into the delay. We appreciate your cooperation on this matter.

In future correspondence regarding this project, please include the State Application Identifier number shown above. If you have any questions regarding this project, please contact us at the above number.

Form SC-1
Oct. 2008



CHRIS CLARK
COMMISSIONER

April 22, 2010

A.G. "SPUD" WOODWARD
DIRECTOR

Mr. Charles Walden, Project Manager
Directorate of Public Works
Prevention and Compliance Branch, Environmental Division
1550 Frank Cochran Drive, Bldg. 1137
Fort Stewart, Georgia 31314-4928

RE: Consistency Determination for Training Ranges and Garrison Support Facilities DEIS,
Fort Stewart, Liberty County, Georgia

Dear Mr. Walden:

Staff of the Coastal Management Program has reviewed your April 5, 2010 letter and attached description. The proposed project includes construction and operation of twelve ranges and two Garrison area facilities at Fort Stewart.

The Program concurs with your consistency determination. This determination ensures that the proposed project has been designed to comply to the maximum extent practicable with the applicable enforceable policies of the Georgia Coastal Management Program.

Please feel free to contact Kelie Moore or me if we can be of further assistance.

Sincerely,

A.G. "Spud" Woodward
Director

SW/km

-----Original Message-----

From: John J Petrick [mailto:jpetrick@fs.fed.us]

Sent: Wednesday, April 14, 2010 4:04 PM

To: Walden, Charles L Mr CIV USA IMCOM

Subject: DEIS for Training Range and Garrison Support

The USDA Forest Service has no comments on your draft proposal.

+++++

John J. Petrick

Forest Planner; NEPA; Inventory and Monitoring Chattahoochee-Oconee NF's, R8

ph/vmail: 770/297-3005

jpetrick@fs.fed.us

.....

Classification: UNCLASSIFIED

Caveats: FOUO

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Dr., SE, Suite 1154, Atlanta, Georgia 30334-9000

Chris Clark, Commissioner

Environmental Protection Division

F. Allen Barnes, Director

Land Protection Branch

Mark Smith, Branch Chief

Phone: 404/656-7802 FAX: 404/651-9425

May 17, 2010

BY E-MAIL

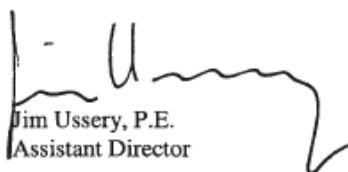
Mr. Charles Walden
Project Manager
Directorate of Public Works
Prevention and Compliance Branch
Environmental Division
1550 Frank Cochran Drive
Building 1137
Fort Stewart, Georgia 31314-4928

RE: Comments on the *Draft Environmental Impact Statement (EIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia*, received April 6, 2010

Dear Mr. Walden:

The Georgia Environmental Protection Division (GA EPD) has completed its review of the above-referenced document. Thank you for the opportunity to comment. EPD has no comments at this time.

Sincerely,



Jim Ussery, P.E.
Assistant Director

JU:ap

File: Fort Stewart (R)

S:\RDRIVE\AMY\DoD User\NEPA\stewart\EIS for Train Range & Garrison Supp Facs.doc



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
SAM NUNN
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA GEORGIA 30303-8960

May 14, 2010

Mr. Charles Walden,
Project Manager,
Directorate of Public Works
Prevention and Compliance Branch
Environmental Division
1550 Frank Cochran Drive,
Building 1137,
Fort Stewart, GA 31314-4928

Subject: Draft Environmental Impact Statement (DEIS) for Training Range and Garrison
Support Facilities Construction and Operation at Fort Stewart, Georgia; CEQ Number
20100105

Dear Mr. Walden:

EPA has reviewed and is providing comments on the above referenced DEIS pursuant to its responsibilities under the Clean Air Act (CAA) § 309 and National Environmental Policy Act (NEPA) § 102 (2)(C) responsibilities. Based on our review we have given the DEIS a rating of EC -2¹ environmental concerns with additional information requested. The concerns are primarily focused in the areas of noise, water quality, and aquatic resource impacts and they are briefly outlined below and in detail in the enclosed comments.

Background

Fort Stewart (Fort) comprises 279,270 acres (435.9 mi²), is the largest military installation east of the Mississippi River, and the largest federal landholder in Georgia. The Fort is located on a relatively flat, coastal landscape of sandy soils, riparian areas, and marshland. The National Wetlands Inventory indicates 91,960 acres (30%) of the Fort are wetlands. The Fort has implemented a wetland mitigation banking program by restoring the Canoochee Creek reservoir, a 1,086-acre pond, to its original hydrologic regime of a free-flowing stream and the restoration of an adjacent ecosystem.

Over 400 acres of tank trails and 246,553 acres of training/maneuver areas, of which 123,335 acres is designated as contiguous heavy maneuver area, are used for training activities and 19,985 acres are designated as impact/restricted areas, including the cantonment area. The Fort has over 30,000 buildings, most of which are located in the cantonment area.

¹ See enclosed EPA rating system criteria definition document.

Proposed Action

The proposed action consists of two categories of projects: the construction and operation of ranges and garrison support facilities. Twelve new ranges are proposed to supplement the 10 existing ranges: Multipurpose Machine Gun Range, two Modified Record Fire Ranges (2011 & 2013), Qualification Training Range, Combat Pistol Qualification Range, Fire and Movement Range, a 10/25 meter Zero Range, Infantry Platoon Battle Course, Infantry Squad Battle Course, Digital Multipurpose Training Range, Known Distance Range, and Convoy Live Fire Range.

Two new garrison support facilities are proposed, involving an additional 288,000 ft² of buildings projected to require external combustion for heating and hot water and electricity for cooling. One facility's purpose is to support the unit designated to operate the Sky Warrior System associated unmanned Aerial Vehicle System (UAVS). The second facility would support the 10th Engineer Battalion (EN BN) or a similar-sized unit.

The proposed action is needed because the Fort's existing facilities have become inadequate to support its mission. Several range projects are needed to modernize ranges to create a more realistic training environment. The other range projects will increase the capacity of available ranges required to serve the number of soldiers and using the Fort as a training platform.

Alternatives Analysis

The alternatives analysis evaluated Alternative A, the no-action alternative of continuing the current mission using existing or previously programmed ranges and facilities, and two additional alternative site locations: Alternative B (the preferred alternative) and Alternative C.

Environmental Impacts

It is assumed the proposed actions will realize a 15% increase in transportation associated with the new ranges and roads. The preferred alternative will impact 3,115 total acres including 190.21 wetlands acres, removal of 997 acres of timber, and impacts to protected species habitat: 1,649.7 acres of Redcockaded Woodpecker (RCW) Habitat Management Units, 41 cavity trees, and 31 RCW foraging partitions; 186.2 acres of primary buffer, 518.4 acres of secondary buffer, and 14.4 acres of breeding ponds for the Frosted Flatwoods Salamander habit, 308.8 acres of Gopher Tortoise Habitat, and 452 acres of Eastern Indigo Snake habitat.

EPA Concerns

Noise

Documentation of the project actions' noise exposure impacts should be expanded in the FEIS by enumeration of the number and kinds of homes newly exposed to noise contours extending outside the Fort's boundaries, as well as the number of people experiencing such exposure while living in these newly exposed homes. Moreover, the noise levels of the noise

contours should be better defined and preferably compared to more conventional metrics such as the day-night sound level (DNL) used by the Federal Interagency Committee on Noise. Finally, the noise levels of the risk of complaints categories appear high. Also, the definition of “dBp” appears missing from the Glossary of Terms, and its use is unclear in the text. It should be defined in the FEIS as well as compared against more conventional metrics such as instantaneous maximum or DNL levels. The FEIS conclusions may therefore change depending on the metric of the noise levels associated with the risk level characterizations. In essence, the FEIS should better disclose noise exposure impacts at noise sensitive receptors and provide impacts and risk levels in more conventional metrics.

Water Quality/Quantity

- EPA’s primary concerns are focused on the stormwater runoff associated with the construction and operation of the ranges and garrison support facilities, particularly the potential to detrimentally affect streams in the area including any listed impaired streams. Details of these concerns are provided in the enclosed comments.
- The FEIS should discuss whether any of the proposed new demands for water from one watershed and corresponding wastewater treatment discharge into another watershed may result in a significant transfer of water between watersheds.
- It is indicated in the DEIS that several of the ranges will be located in the 100-yr floodplain. The FEIS should include a figure that depicts all facilities in relation to the 100-yr floodplain. It is also recommended that an analysis be conducted to evaluate the hydrologic impacts of building these facilities in the 100-yr floodplain. This analysis should include predicted water surface elevations downstream of the ranges for various storm events and identify potential impacts.
- EPA also recommends an additional analysis and evaluation of the existing stormwater conveyance infrastructure to ensure that the existing system will not be undersized for any of the proposed projects, which could lead to indirect water quality impacts and potential flooding.

Aquatic Resource Impacts

- EPA is concerned with the substantial level of wetland impacts identified in the DEIS. EPA is also concerned that all impacts identified in the DEIS have been characterized as solely wetlands impacts when two projects recently noticed by the U.S. Army Corp of Engineers (IPBC and MPMGR) show impacts to streams on the 7.5-minute USGS topo quad maps. Stream impacts associated with any of the actions listed in the DEIS should also be appropriately mitigated.
- Because expanded Clean Water Act (CWA) § 404(b)(1) analyses have not been prepared for three ranges² EPA is unable to but would like to review and comment on these analyses

² P. 4-27.

before they appear in the FEIS. Please send them to Bob Lord, Region 4's Wetlands Program.

- The FEIS should discuss: the application of the Fort's regional permit for low water crossings, which allows for a maximum of 15 acres of cumulative wetlands impacts from low-water crossings, how the cumulative wetlands impacts are defined, and water quality impacts and other aquatic resources impacts associated with this permit.
- EPA disagrees with the DEIS' position that applying for a CWA § 404 permit is a minimization of wetlands impacts, implying wetlands mitigation. CWA 404 requires a permit for any dredge and fill impacts to jurisdictional waters of the U.S., including wetlands. The CWA is a regulatory requirement, not a mitigation option. The FEIS should clarify this fact.
- EPA recommends that the FEIS should also discuss how the proposed mitigation meets the requirements of the Compensatory Mitigation for Losses of Aquatic Resources Final Rule.³
- Given the opportunity, EPA would have discouraged the use of the Wilkinson - Oconee Mitigation Bank since it is out of the watershed, out of the ecoregion, and likely does not fully compensate for the functions lost at the project sites. EPA is also concerned that the Fort is not fully debiting its own mitigation bank before going to off-site alternatives. The Fort's mitigation bank is within the same watershed and ecoregion and thus more likely to replace the lost wetland functions. There appears to be ample time to expand this bank to accommodate the future needs, which is currently presented as a reason for not fully using it for these projects. Typically, EPA discourages applicants from purchasing mitigation credits until the Section 404 permit has been issued, because this precludes other, possibly preferable, mitigation actions.
- The FEIS should explain how the proposed mitigation will adequately compensate for lost wetland functions and values such that it results in no net loss of wetland functions and values. EPA is concerned that the credit calculations using the Savannah District Standard Operating Procedure (SOP) do not fully compensate for the impacts. The Savannah District has frequently indicated to EPA that the SOP is not applicable to large impacts, such as those over 10 acres. EPA agrees and has proposed a scaling factor to address the cumulative impacts of large projects such as the factor used in the Charleston District SOP. This is the approach used by the Georgia Department of Transportation for its projects that exceed the 10 acre threshold. For very large projects this scaling factor could be capped at an appropriate level. EPA has suggested 3.0 acres, which is equal to the next largest factor used in the SOP. Application of the SOP without a scaling factor for large impacts, particularly the 108.1 acres for the MPMGR is not appropriate, even according to past findings from the Savannah District.

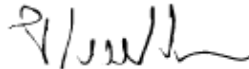
³ 33 CFR Parts 325 & 332 and 40 CFR Part 230

Cumulative Impacts

- The DEIS indicates the construction of six new ranges is reasonably foreseeable on the Fort 2016 and 2017. The EIS should mention whether there is sufficient land on the Fort to accommodate these new ranges or whether the Fort will have a training land shortfall requiring acquisition of new lands outside the Fort's boundaries.

Thank you for the opportunity to review and provided comments. If you wish to discuss this matter further, please contact Beth Walls (404-562-8309 or walls.beth@epa.gov) of my staff regarding NEPA issues and Bob Lord (404-562-9408 or lord.bob@epa.gov) for aquatic-resource-related issues.

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

cc: District Engineer, Savannah District, U.S. Army Corps of Engineers

Enclosures: Summary of Rating Definitions
EPA's DEIS Comments

SUMMARY OF RATING DEFINITIONS AND FOLLOW UP ACTION ¹

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impacts. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS state, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collecting is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for the EPA to fully assess the environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant

¹ From EPA Manual 1640 Policy and Procedures for the Review of the Federal Actions Impacting the Environment.

EPA's Detailed Comments on the Draft Environmental Impact Statement (DEIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia: CEQ Number 20100105

EPA's concerns are primarily focused in the areas of noise, water quality impacts, and aquatic resource impacts and are discussed in detail below.

Water Quality – potential stormwater impacts

According to the DEIS each alternative has the potential for moderate to adverse cumulative impacts to streams, stormwater, and floodplains and to impact impaired water bodies and stream buffers.

Ranges

Stormwater runoff associated with the construction and operation of the ranges has the potential to detrimentally affect streams in the area, particularly any listed impaired streams. An example of a potential stream impact includes stormwater runoff from unfinished (i.e., dirt) range-associated roads.

The DEIS suggest that compliance with both the Clean Water Act (CWA) and the Georgia Erosion and Sedimentation Control Act (ESCA) will keep waters from being degraded or that compliance with these two laws is the maximum required for NEPA mitigation purposes. While the existence of both the CWA and ESCA and their implementing regulations are intended to prevent further water-resource degradation, inferring that these existing protections are 100 percent effective is not a substitute for demonstrating that impacts to water resources will be moderate. The DEIS does not describe the applicability and potential effectiveness of the Georgia Erosion and Sedimentation Control Act to military live-fire and maneuver ranges. For example, EPA notes that Table 6-2¹ lists as a mitigation measure- *the attainment of a stream buffer variance when construction activities require crossing or encroaching within 25 feet of state waters*. EPA does not consider a stream buffer variance as a NEPA mitigation measure nor a measure protective of water quality. The DEIS does not discuss the water-quality and aquatic-resource impacts associated with these anticipated buffer variances or identify how many of the variances will be pursued. These issues should be addressed in the Final EIS (FEIS).

Accumulation of Spent Ammunition

Of particular interest is the use of these lands for live fire training and the resulting cumulative impacts to the surrounding ecosystem. The Fort Stewart's (Fort) range areas, particularly now with the expected increase in use and their associated berms, represent a

¹ p. 6-11

potential for emerging mini-toxic sites. The soil berms serve to collect spent ammunition (lead and tungsten) that over time can accumulate into concentrations that will threaten surface and ground-water supplies, e.g., lead contamination associated with stormwater runoff, and will require costly clean up. Furthermore, the Department of Defense (DoD) Directive Number 3200.15 states DoD's policy that planning and management for the DoD range sustainment program shall identify range environmental considerations and safety factors that may influence current or future range activities, including reasonably anticipated future uses if the range has a finite withdrawal or lease period that shall not be renewed.

Additionally, DoD Directive Number 4715.11 states DoD's policy is to ensure the long term viability of operational ranges while protecting human health and the environment; limit the potential for explosive mishaps and the damaging effects of such to personnel, operational capability, property, and the environment; design and use operational ranges and the munitions used on them to minimize harmful environmental impacts; and to promote resource recovery and recycling. In light of these directives, EPA encourages the use of applicable technologies that would minimize or eliminate above concern.

Of additional interest is the potential for use, exposure to, and the accumulation of potentially toxic materials (e.g., beryllium, dichlorobenzenes, dioxin, 2,4-Dinitrotoluene (DNT), lead, nanomaterials, N-nitrosodimethylamine (NDMA), polybrominated diphenylethers (PBDEs)/polybrominated biphenyls (PBBs), perfluorooctanoic sulfonate (PFOS)/perfluorooctanoic acid (PFOAs), trichloropropane (TCP), tetrachloroethylene, 1,4-dioxane, chromium VI, naphthalene, perchlorate, Cyclotrimethylenetrinitramine (RDX), and trichloroethylene (TCE)). These contaminants represent the potential for adverse health effects on operating forces, DoD employees, the public, and the surrounding ecosystem, potentially reducing training/readiness and use restrictions on ranges, and increased operation and maintenance and/or clean up costs, which may amount to a drain or diversion of resources from mission needs. Perchlorate is reportedly a growing issue that must be proactively addressed. The FEIS should discuss the potential for use and increased use of these contaminants in light of the proposed action and how they may pose human health and environmental risks.

Garrison Facilities

Construction and operation of the proposed facilities will likely increase the area of impervious surfaces. One concern with increased impervious surfaces is the potential of stormwater from recharging groundwater (i.e., aquifers) and channels it directly into surface waterbodies. The DEIS does not recognize the need to allow stormwater to recharge groundwater and avoid diverting all of the stormwater to surface waterbodies in the area.

Additionally, EPA is concerned with any reliance on sediment ponds for stormwater runoff control as these ponds can effectively capture, contain, and accumulate various chemical compounds into toxic levels requiring landfill disposal. For example, coal-tar sealants spread on driveways and parking lots contain chemical compounds classified as likely carcinogens, polycyclic aromatic hydrocarbons, which can be washed into stormwater runoff and accumulate in these ponds.

Noise Impacts

The DEIS states that both Alternatives B and C will have moderate adverse cumulative impacts to noise sensitive areas. It also states that, in general, noise-producing activities would occur in remote locations where sensitive receptors would not be affected.² The FEIS should discuss the noise durations and frequencies as part of the noise discussion. The following comments are based on the noise information provided in Appendix I.

General – The overall readability of the noise appendices should be simplified in the FEIS. Although glossaries are provided at the end of appendices, the glossary text should also provide definitions at first mention (e.g., “PK15(met)”) as well as other additional information. For example, it is unclear why dBC (dB (decibels) at the C scale) was used when dBA is the conventional noise metric, relative to human ear perception. Also, the definition for the term “dBP” (used on page 14 to define the noise level of complaint risks) was not found and should be included in the FEIS.

More importantly, the noise metrics for the noise contours (noise exposure iso-lines generated by each proposed action) for Zones II and III is not clear to public or agency reviewers. These are defined as “PK15(met) 87 dB” for Zone II and “PK15(met) 104 dB” for Zone III. Apparently, these contours are the maximum instantaneous pressure levels (rather than averaged values) that can be expected from the actions. While these metrics may be typical descriptors for military facilities, we suggest that the significance of 87 dB and 104 dB be discussed and that a conversion to a more conventional metric (e.g., dBA DNL (day-night sound level) used by Federal Aviation Administration and other members of the Federal Interagency Committee on Noise (FICON) also be provided for public comparison.

Minimization of Impacts – It is unclear from the DEIS if any of the proposed actions could be minimized to prevent or reduce noise contours from extending beyond the Fort boundaries. That is, the FEIS should discuss if the location of the proposed training actions could be shifted centrally within the Fort boundaries to prevent extension of elevated noise exposures outside property lines, or if any contour extensions outside the property could be directed to only those areas without Noise Sensitive Receptors (NSRs). Also, if not already the case, could noise generation of these actions be limited to daytime hours so that they would not occur during nighttime sleeping hours for nearby NSRs?

Disclosure of Impacts – As suggested above, noise contours for several actions would extend beyond the boundaries of the Fort. EPA notes that portions of these noise contours incorporate NSRs such as Fort housing. The FEIS should enumerate the number and kinds of inhabited homes (single or multi-family homes) and number of affected people living in these homes to document the magnitude of the elevated noise exposure. These data should be presented by noise contour, location, and the noise source (small caliber, grenade launcher, etc.).

² P. 5-29.

Risk of Complaints – Risks of Complaints were characterized as “Low”, “Moderate”, “High”, or “Risk of Hearing Damage to Unprotected Ears.” These risk levels were associated with distances from the noise source and noise levels presented in an undefined “dBP” metric (as suggested above, the FEIS should define dBP). Without a definition of dBP, the meaning of the associated noise levels for each risk level remains unclear. Even after dBP is defined, these values should also be presented as more conventional metrics such as instantaneous maximum dBA noise values and/or DNL averages. However, if dBP is similar to either metric, EPA finds them to be too high for their risk characterization. For example, EPA does not believe that values approaching 115 dB are a “low” risk of complaints or that a value of 115 dB should be considered a “moderate” risk of complaints. Similarly, a “high” risk of complaints would likely start before the listed >130 dB. The initial level for risking hearing damage is less certain and is also related to time of exposure, but is also likely to start before the listed >140 dB level. As such, the FEIS conclusions reached for the noise impacts of the proposed actions may change depending on the metric of the noise levels associated with the risk level characterizations.

Watersheds

The DEIS indicates the Fort’s boundaries encompass four different watersheds. Water transfers between watersheds can be an issue of concern, e.g., during periods of drought. For example, water piped from one watershed for potable use and returned via a permitted wastewater treatment plant discharge or septic discharge to another watershed. The FEIS should discuss whether any of the proposed new demands for water and corresponding wastewater treatment realize a significant transfer of water between watersheds.

Aquatic Resource Impacts

Wetlands

EPA is currently reviewing a joint public notice dated April 21, 2010, for four individual permits for four projects (DMPTR, IPBC, MPMGR and QTR) with a total of 185.9 acres of wetland impacts. This is a substantial level of wetland impacts, particularly in relation to recently permitted impacts throughout Georgia. EPA is particularly concerned that all impacts have been characterized as wetland impacts when two of the four projects show the potential for streams impacts on the 7.5-minute USGS topo quad maps. EPA notes that while the Fort has had a significant cumulative impact to streams from past projects, these impacts have not been mitigated.

The FEIS should provide more discussion regarding the quality of the wetlands impacted. The DEIS mentions they’re freshwater wetlands and that the Army has acquired mitigation credits to restore a historically but degraded hardwood wetland system.³ It is unclear what type of wetlands ecosystems are being impacted by the ranges and garrison proposed projects.

³ P. 6-9.

EPA is unable to fully evaluate wetlands impacts, which is an area of CWA-designated responsibility for the Agency, in the DEIS because expanded CWA § 404(b)(1) analyses have not been prepared for three ranges: FY13 Modified Record Fire Range, FY 13 10/25 Meter Zero Range, and FY14 Convoy Live Fire Range.⁴ This is a concern. EPA would like to review and comment on these analyses before they appear in the FEIS. Please coordinate with Bob Lord, Region 4's Wetlands Program to discuss further.

The DEIS states that the preferred alternative for the Engineer Battalion facilities has more wetland impacts than Alternative C, but the DEIS is unclear how much more impacts, i.e., no wetland acres are provided.⁵ The DEIS does indicate that these wetlands are not pristine and are located in a portion of the cantonment area already impacted by previous construction, operation, and maintenance activities. The FEIS should address this issue.

The DEIS states that the Fort has a regional permit for low water crossings, developed in 2001 and renewed in 2006 for 5 years, which allows for a maximum of 15 acres of cumulative wetlands impacts from low-water crossings. Approximately 5 acres of wetlands have been impacted using this permit.⁶ The FEIS should discuss the application of the Fort's regional permit for low water crossings, which allows for a maximum of 15 acres of cumulative wetlands impacts from low-water crossings, how the cumulative wetlands impacts are defined, and the water quality impacts and other aquatic resources impacts associated with this permit.

Wetlands Mitigation

EPA is concerned that the credit calculations using the Savannah District Standard Operating Procedure (SOP) do not fully compensate for the impacts. The Savannah District has frequently indicated to EPA that the SOP is not applicable to large impacts, such as those over 10 acres. EPA agrees and has proposed a scaling factor to address the cumulative impacts of large projects such as the factor used in the Charleston District SOP. This is the approach used by the Georgia Department of Transportation for its projects that exceed the 10 acre threshold. For very large projects this scaling factor could be capped at an appropriate level. EPA has suggested 3.0 acres, which is equal to the next largest factor used in the SOP. Application of the SOP without a scaling factor for large impacts, particularly the 108.1 acres for the MPMGR is not appropriate, even according to past finding from the Savannah District.

The DEIS indicates that approximately one-third of the Fort's lands are wetlands. It also states some of the remaining 160 credits contained in the Fort's on-site mitigation bank will be used for the Garrison construction projects. Additionally, the Army has previously purchased credits from an established off-Fort wetland mitigation bank in accordance with the Compensatory Mitigation Rule (33 CFR Part 332) to cover the proposed range projects.⁷ The Fort canvassed the available mitigation banks nearly one year ago, which may not reflect the current banks and credit availability. Given the opportunity, EPA would have discouraged the

⁴ P. 4-27.

⁵ P. 4-43.

⁶ P. 3-40.

⁷ P. 6-6.

use of the Wilkinson - Oconee Mitigation Bank since it is out of the watershed, out of the ecoregion, and likely does not fully compensate for the functions lost at the project sites. EPA is also concerned, despite the rationale provided in the DEIS, that the Fort is not fully debiting its own mitigation bank before going to off-site alternatives. The Fort's mitigation bank is within the same watershed and ecoregion and thus more likely to replace the lost wetland functions. There appears to be ample time to expand this bank to accommodate the future needs presented as a reason for not fully using it for these projects. Typically, EPA discourages applicants from purchasing mitigation credits until the Section 404 permit has been issued, because this precludes other, possibly preferable, mitigation actions.

EPA disagrees with the statement that applying for a CWA § 404 permit is a minimization of wetlands impacts. The DEIS states "While the Army strives to avoid negative impacts to wetlands when it sites new range and training facilities on Fort Stewart, if impacts to regulated wetlands cannot be avoided, the Army minimizes those impacts by applying for a Section 404 permit as required by the Clean Water Act."⁸ CWA 404 requires a permit for any dredge and fill impacts to jurisdictional waters, including wetlands. The CWA is a regulatory requirement, not a mitigation option. The FEIS should clarify this misrepresentation of CWA § 404 permit program as a form of mitigation.

The DEIS discusses wetlands compensatory mitigation in context of NEPA-required mitigation when it should also discuss how the proposed mitigation meets the requirements of the Compensatory Mitigation for Losses of Aquatic Resources Final Rule.⁹ NEPA requires that to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act, the National Historic Preservation Act of 1966, the Endangered Species Act of 1973, and **other environmental review laws and executive orders**.¹⁰ The Compensatory Mitigation for Losses of Aquatic Resources Final Rule is considered to be a relevant "other environmental review law" as it is one of the CWA § 404 implementing regulations. The FEIS should discuss and apply the Final Rule in its wetlands mitigation discussion.

While EPA does not expect the precise replication of all wetlands adversely impacted by the proposed action, the FEIS should explain how the proposed mitigation will adequately compensate for lost wetland functions and values such that it results in no net loss of wetland functions and values. This discussion is absent from the DEIS. Furthermore since the U.S. Army Corp of Engineers (USACOE) cannot issue a CWA § 404 permit if there is a less damaging practicable alternative, the FEIS should discuss compliance with this provision.

Cumulative Impacts

The DEIS states that the USACOE documents approximately 1,467,774 acres of wetlands impacted within 20 Georgia counties and by deducting 1,982.87 acres of wetlands impacts since 1990 there are at least 1,465,791.13 acres of wetlands remaining. According to the

⁸ P. 6-5.

⁹ 33 CFR Parts 325 & 332 and 40 CFR Part 230

¹⁰ 40 CFR § 1502.25 (a)

DEIS, this amounts to a loss of 0.14% of wetlands since 1990 – an insignificant amount.¹¹ It is unclear if the USACOE document referenced in the DEIS is referring to the 1,467,774 acres of wetlands as being impacted in the 20 Georgia counties or existing (un-impacted) wetlands in these counties. This paragraph needs to be clarified in the FEIS.

The DEIS indicates the construction of six new ranges is reasonably foreseeable on the Fort 2016 and 2017. The EIS should mention whether there is sufficient land on the Fort to accommodate these new ranges or whether the Fort suffers a training land shortfall requiring acquisition of new lands outside the Fort's boundaries.

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Insert FSGA response to EPA comments when completed and signed



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Heinz J. Mueller, Chief
National Environmental Policy Act Program Office
Office of Policy and Management
United States Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street
Atlanta, Georgia 30303-8960

Dear Mr. Mueller:

Thank you for your recent comments and questions regarding the *Draft Environmental Impact Statement (EIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia (hereafter, Fort Stewart EIS)*. Your time and attention to the Fort Stewart EIS is greatly appreciated.

We have prepared formal responses to your comments in the enclosure to this letter. Please note that the information provided in this letter is also being incorporated into Fort Stewart's Final EIS, which will be issued for a 30-day public review and comment period in June 2010. Your letter and our response will be included in an appendix to the Final EIS. Your office will be provided with a CD copy of the Final EIS and we welcome your continued input and interest in this proposed action.

If you have any further questions, please contact Mr. Charles Walden, at (912) 767-8642 or Charles.Walden4@us.army.mil. Please also cc Ms. Amber E. Franks, at (912) 767-1434 or Amber.Franks@us.army.mil. If emailing a comment, please reference the *Fort Stewart EIS* in the subject line.

Sincerely,

KEVIN W. MILTON
Colonel, US Army
Commanding

Clarification and Response to Comments
Received from: Environmental Protection Agency (EPA)
(Mueller, May 14, 2010)

Answers to general comments regarding floodplains and stormwater are provided below.

General Comment A: It is indicated in the Draft EIS (DEIS) that several of the ranges will be located in the 100-yr floodplain. The Final EIS (FEIS) should include a figure that depicts all facilities in relation to the 100-yr floodplain. It is also recommended that an analysis be conducted to evaluate the hydrologic impacts of building these facilities in the 100-yr floodplain. This analysis should include predicted water surface elevations downstream of the ranges for various storm events and identify potential impacts.

Answer A: Two figures (4-1 and 4-2) have been inserted into Chapter 4, *Environmental Consequences*, of the FEIS to show the location of the proposed action in relation to floodplains on Fort Stewart. The discussion of the potential hydrologic impacts of building these facilities (i.e., the proposed action) and their results to floodplains, as well as the best management practices (BMPs) recommended by the state of Georgia for constructing within a floodplain, is in Sections 3.4.3 and 4.3.1 of the FEIS. These projects have not undergone complete design. The Installation's design process requires engineers to include stormwater flow calculations demonstrating that runoff from rain events will not adversely impact (a) existing streams, (b) upstream systems, and (c) downstream systems of the proposed site. Surface water elevations downstream of the ranges will be met by the requirements for stormwater flows to remain the same pre-construction and post-construction.

General Comment B: EPA also recommends an additional analysis and evaluation of the existing stormwater conveyance infrastructure to ensure that the existing system will not be undersized for any of the proposed projects, which could lead to indirect water quality impacts and potential flooding.

Answer B: The text in Section 4.3.1 has been updated to reflect that during the design stage for each action more precise studies will be conducted to analyze the capacity of the existing stormwater conveyance systems and what additional measures should be implemented as a result of new construction. In 2008, the Installation conducted stormwater modeling for the Mill Creek, Taylors Creek, and Peacock Creek Basins, and recommendations were made for pipe size increases and required maintenance for existing pipes/culverts to allow and maintain proper

flow. Fort Stewart has implemented these stormwater conveyance recommendations. Fort Stewart also adheres to the requirements of the Municipal Separate Storm Sewer System (MS4) National Pollutant Discharge Elimination System (NPDES) Permit requirements, the GA Stormwater Management Manual/Coastal Stormwater Supplement, the Energy Independence Security Act (EISA)-Section 438, and all applicable Executive Orders for all projects within the cantonment or range areas. In addition, Fort Stewart recommends the utilization of the United Facilities Criteria (UFC 3-210-10 October 2004) "*Design: Low Impact Development (LID) Manual*", and the United States Army Corp of Engineers (USACOE) Public Works Technical Bulletin (200-1-62 October 2008) "*LID for Sustainable Installations: Stormwater Design Planning Guidance for Development within Army Training Areas.*" This text is located in Section 3.4.4 of the FEIS.

The remainder of the questions are more specific and are taken from the enclosure titled "EPA's Detailed Comments on the Draft Environmental Impact Statement (EIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia: CEQ Number 20100105."

Question #1: Stormwater runoff associated with the construction and operation of the ranges has the potential to detrimentally affect streams in the area, particularly any listed impaired streams. An example of a potential stream impact includes stormwater runoff from unfinished (i.e., dirt) range-associated roads.

Answer #1: The Installation proactively works to minimize impacts to all streams, impaired or not, from the construction, operation, and maintenance of new and existing ranges. Since 2001, the Installation has spent more than \$15 million on erosion and sediment control projects for existing facilities, roads, tank trails, and other applicable structures in the cantonment area and range and training lands. For example, Fort Stewart hardened the tank trail crossing in the Metz Training Area, eliminating an estimated 300 tons of silts and sediments previously transferring to waters of the state (Canoochee Creek) during rain events. Similar environmental results were achieved by hardening tank trail crossings at Bridges 11, 28, and 29, and at Fort Stewart Road 29 (East and West). The Installation recently hardened and raised Fort Stewart Road 20, an old Colonial-era road, which always washed out during rain events. Since its hardening and raising, this road has not washed out again, providing not only an environmental benefit, but a dependable route for Soldiers training in that portion of Post. The Installation's stormwater maintenance standard operating procedures (SOPs) and the EPA's own Guidelines for Dirt Road

Installation and Turnouts/Maintenance are also utilized on range areas, dirt roads, and forestry trails. This information has been incorporated in Section 3.2.2 and Section 3.4.1.1 of the FEIS.

Question #2: The DEIS suggests that compliance with both the Clean Water Act (CWA) and the Georgia Erosion and Sedimentation Control Act (GA ESCA) will keep waters from being degraded or that compliance with these two laws is the maximum required for NEPA mitigation purposes. While the existence of both the CWA and ESCA and their implementing regulations are intended to prevent further water-resource degradation, inferring that these existing protections are 100 percent effective is not a substitute for demonstrating that impacts to water resources will be moderate. The DEIS does not describe the applicability and potential effectiveness of the Georgia Erosion and Sedimentation Control Act to military live-fire and maneuver ranges. For example, EPA notes that Table 6-2 lists as a mitigation measure- *the attainment of a stream buffer variance when construction activities require crossing or encroaching within 25 feet of state waters*. EPA does not consider a stream buffer variance as a NEPA mitigation measure nor a measure protective of water quality. The DEIS does not discuss the water-quality and aquatic resource impacts associated with these anticipated buffer variances or identify how many of the variances will be pursued. These issues should be addressed in the Final EIS (FEIS).

Answer #2: To ensure full compliance with the GA ESCA on existing and future training ranges, the Installation mandates full utilization of Timber Harvest BMPs, NPDES permit requirements, site-specific Erosion and Sedimentation Pollution Control Plans (ESPCPs), and pre- and post-construction BMPs to reduce the potential adverse impacts to water bodies, such as streams. As mentioned earlier, these projects have not undergone complete design. The text in Sections 4.1 and 4.3.1 have been updated to reflect that the Installation has a resident Natural Resource Conservation Service (NRCS) advisor who provides technical expertise during preparation of ESPCPs prior to the Installation approving the final design. During this process, the Installation's stormwater specialist and NRCS advisor review ESPCPs for compliance with the GA ESCA and the CWA. These technical experts continually inspect and monitor on-going construction projects to assure compliance and that BMP's are being maintained. They will also do this during the construction of these proposed projects to ensure adherence to associated ESPCPs. In addition, training area inspectors (from the Installation's Environmental Division, Integrated Training Area Management team, and Range Control Division) routinely inspect tank trails, range access roads, range course roads, and dirt roads/trails to see if any damage is occurring (such as hardened tank trails or water crossings need repairs, to prevent sedimentation

of adjacent streams). These inspectors report these issues and the Installation works to get them fixed before they become a detriment to the environment or Soldier training.

Potential water quality and/or aquatic resource impacts of stream buffer variances (such as warming of streams due to tree canopy removal during construction or sedimentation from soil disturbance along the streamside) are minimized via many measures, to include proper stream bank stabilization (for prevention of erosion and scouring of stream banks) and implementation of appropriate LID BMPs, as noted in USACOE PWTB 200-1-62. These measures are also identified on the associated project's ESPCP. The GA EPD must approve the ESPCP when a stream buffer variance is requested. A need for a stream buffer variance is identified during the design process and any action that would include a stream buffer variance must be approved by the GA EPD. Often times, Fort Stewart obviates the need to apply for a variance, by working with engineers design the layout of a range to avoid stream impacts when possible and still meet the underlying training requirements. The text in Sections 3.4.5 and 4.3.1 have been updated with this information. All inferences equating compliance with the GA ESCA, other laws, or stream buffer variances with mitigation measures were removed from the text of the FEIS and the discussion clarified.

Question #3: Of particular interest is the use of these lands for live fire training and the resulting cumulative impacts to the surrounding ecosystem. The Fort Stewart's (Fort) range areas, particularly now with the expected increase in use and their associated berms, represent a potential for emerging mini-toxic sites. The soil berms serve to collect spent ammunition (lead and tungsten) that over time can accumulate into concentrations that will threaten surface and groundwater supplies, e.g., lead contamination associated with stormwater runoff, and will require costly clean up. Furthermore, the Department of Defense (DoD) Directive Number 3200.15 states DoD's policy that planning and management for the DoD range sustainment program shall identify range environmental considerations and safety factors that may influence current or future range activities, including reasonably anticipated future uses if the range has a finite withdrawal or lease period that shall not be renewed.

Answer #3: Earthen berms are often used on Fort Stewart to contain bullets for the protection of threatened and endangered species (TES). The 1992 Biological Opinion issued by the USFWS on effects of the military mission on TES required the construction of berms on all small arms ranges. Contouring the backstop, adding clay to the soil, and planting appropriate vegetation are ways to minimize lead migration (USAEC and USATSC 1998). The FEIS has additional discussion of tungsten at 3.11.1.2.

The Army Operational Range Assessment Program (ORAP) is currently assessing 378 facilities in the United States and territories with range complexes/ranges and will focus on off-range migration pathways and Munitions Constituents. The intent of the program is to keep ranges open and available for training and testing while protecting human health and the environment (www.ecos.org/files/1843_file_Army.PPT). The Military Munitions Rule states that used or fired munitions are considered a solid waste only when they are removed from their landing spot (www.epa.gov/epaoswer/hazwaste/military/index.htm). Therefore, since the proposed ranges will be constructed within existing impact areas and the munitions will be used for their intended purposes and will be left where they land, the munitions are not considered solid waste.

The best practices to minimize the impact of lead on the environment, are stormwater and erosion controls, vegetation management, soil amendments, bullet traps, and soil pH modifiers. The berms must be 12 feet high (Carlile 2009). To minimize soil erosion from the berms, sand/clay soil is the preferred construction material because it is more structurally stable. This material can be placed at a 45 degree slope, which better controls ricochet. The sand clay has a higher pH, which substantially reduces the incidence of lead leachate release. Also, lime application and fertilization during berm construction helps establish good vegetative cover crops, which also greatly reduces erosion and leaching (Houston 2009). In addition, the berms are periodically maintained to keep their integrity. Therefore, the impact from lead at ranges on Fort Stewart are being minimized by all of the best management practices listed above.

The Installation maintains compliance with all applicable DoD Directives, Federal and state laws, and Army regulations and has an active, highly efficient Range Sustainability Program. Through it, the Environmental Division works closely with the Directorate of Planning, Training, Mobilization, and Security to ensure ranges maintain their operational efficiency, adhere to environmental requirements, and ensure optimal safety measures for Soldiers training on the ranges/training lands. Ranges are inspected, controlled, and certified by the Fort Stewart Range Control Division. The officer in charge (OIC) for the range is responsible for the operation of the range. The Range Safety Officer works for the OIC and ensures all Soldiers adhere to safety aspects, Risk Management procedures, and regulations. Spent casings from all small arms ranges are collected by the Soldiers after each use at the training range, which is then taken to the

Ammunition Supply Point for reuse or recycling. This text was incorporated into Section 3.11.1.2 of the FEIS.

Question #4: Additionally, DoD Directive Number 4715.11 states DoD's policy is to ensure the long term viability of operational ranges while protecting human health and the environment; limit the potential for explosive mishaps and the damaging effects of such to personnel, operational capability, property, and the environment; design and use operational ranges and the munitions used on them to minimize harmful environmental impacts; and to promote resource recovery and recycling. In light of these directives, EPA encourages the use of applicable technologies that would minimize or eliminate above concern.

Answer #4: The Army strives to utilize the latest technologies whenever possible to protect human health and the environment. The discussion of Fort Stewart's range safety program may be found in Sections 3.10.1 and 3.10.3 of the FEIS.

Question #5: Of additional interest is the potential for use, exposure to, and the accumulation of potentially toxic materials (e.g., beryllium, dichlorobenzenes, dioxin, 2, 4-Dinitrotoluene (DNT), lead, nanomaterials, N-nitrosodimethylamine (NDMA), polybrominated diphenylethers (PBDEs) / polybrominated biphenyls (PBBs), perfluorooctanoic sulfonate (PFOS) / perfluorooctanoic acid (PFOAs), trichloropropane (TCP), tetrachloroethylene, 1,4-dioxane, chromium VI, naphthalene, perchlorate, Cyclotrimethylenetrinitramine (RDX), and trichloroethylene (TCE)). These contaminants represent the potential for adverse health effects on operating forces, DoD employees, the public, and the surrounding ecosystem, potentially reducing training readiness and use restrictions on ranges, and increased operation and maintenance and/or clean up costs, which may amount to a drain or diversion of resources from mission needs. Perchlorate is reportedly a growing issue that must be proactively addressed. The FEIS should discuss the potential for use and increased use of these contaminants in light of the proposed action and how they may pose human health and environmental risks.

Answer #5: The proposed firing range projects include a mix of small arm ranges and a multipurpose training range that will accommodate small and large caliber training rounds. Only the following four chemicals from the list above are associated with munition firing.

Perchlorate: The Army has stopped production and use of perchlorates in its two most prevalent systems that used the contaminant (Artillery Simulators and Practice Hand Grenades) and

replacements systems which do not utilize perchlorates have been created. By eliminating the use and production of these training aids the Army has reduced the potential release for perchlorate by 2/3. The Army monitors to ensure perchlorates do not leave Army ranges or represent a hazard to human health and is looking for ways to replace all of the systems in its inventories that may present a future perchlorate hazard.

Cyclotrimethylenetrinitramine (RDX): RDX is a common high explosive used in large caliber munitions and residues may increase as a result of the training range project. The DoD/Army continues to investigate and respond to RDX releases at installations as part of DoD's overall environmental restoration program. Existing RDX toxicity and carcinogenicity data are 20 years old; federal agencies are working together to generate new environmental health data. The EPA will use the new data in its IRIS process to refine the toxicity values for RDX used to protect human and environmental health.

Lead: The US Army has a three-fold approach to minimizing lead contamination at firing ranges. The Army has developed multiple types of lead-free ammunition to reduce dependence on lead-containing bullets in training. The Army also uses bullet traps to contain bullets and prevent range contamination. As a last line of defense, the Army also constructs impact berms to stop bullets from leaving the firing range. In addition to these preventative measures, the Army has aggressive cleanup goals for remediating existing contaminated sites. These mitigations are being considered as part of this EIS and a final determination will be made as part of the Record of Decision as to which measures will be utilized to best minimize lead contamination and potential for migration.

Dinitrotoluene (DNT): The US Army Environmental Command has performed research on the connection between small arms training and DNT contamination on ranges. The Army is also researching process changes and remediation technologies to meet regulatory requirements associated with applicable DNT drinking water standards. In the absence of a federal drinking water standard, risk based guidelines have been developed for DNT by several USEPA regional offices and state regulatory agencies. These guidelines are used in site screening—to identify areas, contaminants and conditions that do not require further attention—and to establish initial and final cleanup goals. The USEPA made a pre-regulatory determination that a national primary drinking water regulation would not present a meaningful opportunity for health risk reduction.

The information regarding potential toxic chemicals on training ranges has been expanded and included in Section 3.11.1.2 and Section 4.10 of the FEIS.

Question #6: Construction and operation of the proposed facilities will likely increase the area of impervious surfaces. One concern with increased impervious surfaces is the potential of stormwater from recharging groundwater (i.e., aquifers) and channels it directly into surface water bodies. The DEIS does not recognize the need to allow stormwater to recharge groundwater and avoid diverting all of the stormwater to surface water bodies in the area.

Answer #6: Because Fort Stewart is flat and the surficial (near the surface) water table is high, some portions of the collection system have groundwater infiltration. In addition, the Installation requires utilization of LID techniques in all construction projects, such as bioretention and infiltration basins, rain barrels, and permeable pavements to promote the natural movement of water within an ecosystem or watershed, instead of diverting all associated runoff to local surface water bodies. Furthermore, only a small amount of the proposed projects will include impermeable surfaces. For the proposed ranges, the only impermeable surfaces will consist of the range operations area and cover only 2% of each project footprint. The majority of the two garrison facilities will add impermeable surfaces; however, LID techniques help to reduce diverting all stormwater to surface water bodies. The Georgia Environmental Protection Division also requires maintaining pre construction stormwater runoff rates. This text can be found in Sections 3.4.4 and 4.3.1 of the FEIS.

Question #7: Additionally, EPA is concerned with any reliance on sediment ponds for stormwater runoff control as these ponds can effectively capture, contain, and accumulate various chemical compounds into toxic levels requiring landfill disposal. For example, coal-tar sealants spread on driveways and parking lots contain chemical compounds classified as likely carcinogens, polycyclic aromatic hydrocarbons, which can be washed into stormwater runoff and accumulate in these ponds.

Answer #7: Fort Stewart only utilizes sedimentation ponds and/or basins during the construction phase of a project. The existing retention ponds and detention basins on the Installation are post construction measures (basically, structural BMPs), meant to ensure NPDES permitting for runoff reduction, water quality, and total suspended solids removal of 80% are being met, as required. Additionally, as required under the MS4 NPDES Permitting, a Stormwater Checklist with inspection and maintenance schedule is implemented for these structural BMPs to ensure

optimal operation, proper maintenance, and proper disposal of any hazardous materials, if ever necessary. Text in Section 3.4.4 has been added to the Final EIS.

Question #8: The overall readability of the noise appendices should be simplified in the FEIS. Although glossaries are provided at the end of appendices, the glossary text should also provide definitions at first mention (e.g., “PK15 (met)”) as well as other additional information. For example, it is unclear why dBC (dB (decibels) at the C scale) was used when dBA is the conventional noise metric, relative to human ear perception. Also, the definition for the term “dBP” (used on page 14 to define the noise level of complaint risks) was not found and should be included in the FEIS.

Answer #8: The text has been modified in Section 4.6 to clarify the noise appendices. The DEIS discussed that C-weighting is the appropriate weighting for sounds with low frequency that can generate vibration. The American National Standards Institute (ANSI) states that CDNL should be used for large caliber weapons’ assessments. The C-weighting is also specified in Army Regulation 200-1 and was used in this assessment as was presented in the DEIS Table 3-7.

Question #9: More importantly, the noise metrics for the noise contours (noise exposures iso-lines generated by each proposed action) for Zones II and III is not clear to public or agency reviewers. These are defined as “PK15 (met) 87 dB” for Zone II and “PK15 (met) 104 dB” for Zone III. Apparently, these contours are the maximum instantaneous pressure levels (rather than averaged values) that can be expected from the actions. While these metrics may be typical descriptors for military facilities, we suggest that the significance of 87 dB and 104 dB be discussed and that a conversion to a more conventional metric (e.g., dBA DNL (day-night sound level)) used by Federal Aviation Administration and other members of the Federal Interagency Committee on Noise (FICON) also be provided for public comparison.

Answer #9: Table 3-7 has been updated in the FEIS and additional clarification has been provided regarding definitions for Zone II noise contour areas and metrics.

Question #10: It is unclear from the DEIS if any of the proposed actions could be minimized to prevent or reduce noise contours from extending beyond the Fort boundaries. That is, the FEIS should discuss if the location of the proposed training actions could be shifted centrally within the Fort boundaries to prevent extension of elevated noise exposures outside property lines, or if any contour extensions outside the property could be directed to only those areas without Noise Sensitive Receptors (NSRs). Also, if not already the case, could noise generation of these

actions be limited to daytime hours so that they would not occur during nighttime or sleeping hours for nearby NSRs?

Answer #10: Fort Stewart's siting criteria, discussed in Section 2.3.2, explains how the Installation must also utilize existing impact areas when analyzing potential range action alternatives. The text in Section 4.6.2.1 was updated to explain that the existing impact areas are located in the center and in the southwest of Fort Stewart. To the extent practicable, range footprints were modified to reduce noise impacts, as well as other sensitive resource impacts. For example, the proposed Convoy Live Fire Alternative B engagement boxes were originally sited in close proximity to the northeast boundary, which showed a Noise Zone III contour extending outside the boundary. The engagement boxes were moved south to prevent Zone III contours from extending beyond the Installation boundary. Fort Stewart reduces night-time training when possible but combat and peace keeping operations are not limited to daylight hours, so Soldiers must be afforded an opportunity for realistic training at night.

Question #11: As suggested above, noise contours for several actions would extend beyond the boundaries of the Fort. EPA notes that portions of these noise contours incorporate NSRs such as Fort housing. The FEIS should enumerate the number and kinds of inhabited homes (single or multi-family homes) and number of affected people living in these homes to document the magnitude of the elevated noise exposure. These data should be presented by noise contour, location, and the noise source (small caliber, grenade launcher, etc.).

Answer #11: Additional information regarding noise impacts has been added to Section 4.6 of the FEIS. However, since no significant impacts or changes to existing noise contours are projected to occur, the level of detail requested regarding number of people and homes effected by the proposed action is not seen as a critical element of this EIS analysis and has not been added to the EIS.

Question #12: Risk of Complaints were characterized as "Low," "Moderate," or "Risk of Hearing Damage to Unprotected Ears." These risk levels were associated with distances from the noise source and noise levels presented in an undefined "dBP" metric (as suggested above, the FEIS should define dBP). Without a definition of dBP, the meaning of the associated noise levels for each risk level remains unclear. Even after dBP is defined, these values should also be presented as more conventional metrics such as instantaneous maximum dBA noise values and/or DNL averages. However, if dBP is similar to either metric, EPA finds them to be too high for their risk characterization. For example, EPA does not believe that values approaching

115 dB are a “low” risk of complaints or that a value of 115 dB should be considered a “moderate” risk of complaints. Similarly, a “high” risk of complaints would likely start before the listed >130 dB. The initial level for risking hearing damage is less certain and is also related to time of exposure, but is also likely to start before the listed > 140 dB level. As such, the FEIS conclusions reaching for the noise impacts of the proposed actions may change depending on the metric of the noise levels associated with the risk level characterizations.

Answer #12: The text in Section 3.7.1 which defines unweighted decibel Peak (dBP) has been updated. As for the reason for using dBP as a measure instead of what others may consider to be a more conventional metric, the Army believes that dBP is a more acceptable standard measure for short impulsive sounds, such as the noise generated by the firing of weapons on ranges since these peak sound levels are last for approximately 35 milliseconds. Other metrics are employed to measure longer or more continuous sound, such as noise generated by a loud speaker (at 115 dBA).

OHSA guidelines even recognize that under a dBP metric for short impulsive sounds the upper limit is 140 dBP, not 115 dBP. (www.osha.gov).

The risk of receiving complaints as a result of noise generated from the live firing on Fort Stewart of weapons on ranges, was not a criterion used to determine the Threshold Level of Significance. In any case, the Army feels the risk of complaints is low. One reason is that, when the Installation consulted with citizens in the local communities during its public outreach conducted as part of this EIS, noise concerns were not raised. Also, the analysis of the noise contours indicates that the number of people potentially impacted by increased noise on these new ranges would not change appreciably. In addition, as discussed in the EIS, the Installation has been working with surrounding county and municipal governments as well as their zoning and land use planning boards for a number of years, to avoid the development of incompatible land uses, such as those that may be sensitive to the noise generated by live firing on Fort. This information is incorporated into Section 3.7.2, and Section 3.8 of the FEIS. As a result of the 2004 Joint Land Use Study, many of the affected local governmental entities have taken measures to limit the development of incompatible land uses on lands located in noise sensitive areas off Post. For example, both Liberty County and Bryan County Georgia have entered into separate Memoranda of Agreement with the Installation which provide for better coordination and communication of proposed changes in land uses and zoning in or near noise prone areas.

And in Liberty County, as well as Chatham County, these efforts have resulted in at least two petitions to re-zone land from agricultural use to residential use.

Question #13: The DEIS indicates the Fort's boundaries encompass four different watersheds. Water transfers between watersheds can be an issue of concern, e.g., during periods of drought. For example, water piped from one watershed for potable use and returned via a permitted wastewater treatment plant discharge or septic discharge to another watershed. The FEIS should discuss whether any of the proposed new demands for water and corresponding wastewater treatment realize a significant transfer of water between watersheds.

Answer #13: This is typically only a concern when withdrawing drinking water from one watershed, then discharging wastewater into another, different watershed. Fort Stewart withdraws its drinking water supplies from groundwater sources, not surface water sources, and is not transferring water from one watershed into another. Additionally, Fort Stewart has partnered with the City of Hinesville to provide reuse water for irrigation of Fort Stewart golf course and cooling systems of the Installation's central energy plant, further minimizing wastewater releases into the watershed. This text has been added to Section 3.9.2.

Question #14: EPA is currently reviewing a joint public notice dated April 21, 2010, for four individual permits for four projects (DMPTR, IPBC, MPMGR and QTR) with a total of 185.9 acres of wetland impacts. This is a substantial level of wetland impacts, particularly in relation to recently permitted impacts throughout Georgia.

Answer #14: Fort Stewart avoids and minimizes wetlands impacts when possible. The implementation of the actions proposed in the preferred alternative (Alternative B Sitings) has the potential to negatively impact up to 0.2% of the Installation's nearly 91,000 acres of wetlands. More importantly, of the "up to 0.2% of the Installation's wetlands being impacted," most of those impacts are not the result of adding fill to the wetlands, but rather vegetative maintenance for line-of-sight and grubbing/grading for target placement. As stated earlier in this reply, the Installation anticipates wetland impacts will be much less than projected through further avoidance and minimization incorporated during the design phases of each project after the site is selected. It is important to note, that despite the large amount of military training activity that occurs on Fort Stewart, because of the Installation's proactive efforts to avoid, enhance, and mitigate wetlands, its wetlands remain of a high quality, retaining and transmitting large amounts of fresh water and providing habitat for countless local species. Proactive

environmental stewardship programs also help to keep our wetlands pristine. As discussed in opening paragraphs in Chapter 3 of the FEIS, Fort Stewart's Integrated Training Area Management (ITAM) program conducts land rehabilitation through the construction of low water crossings and Soldier training related to sustainability of Fort Stewart lands.

Much of the avoidance and minimization takes place before actual site selection. Training ranges of this kind have fairly specific requirements and it is not always possible to build them without impacting every wetland in the footprint. Site designers may alter certain aspects of a proposed range in response to environmental concerns during various stages of the design process, typically reviewed at the 10%, 35%, 60%, 90%, and 100% stages of completion, if they can do so while still meeting the operational and training requirements of the range. For example, the currently on-going design process reduced the wetland impacts from the IPBC to a third of what they were at the time of writing the DEIS. Impacts from the MPMGR have also been slightly reduced. Several proposed range projects were sited without wetland impacts of any kind. It is hoped that impacts from the QTR and DMPTR may be reduced, but as they are not yet in the design process this cannot be precisely determined.

It is also important to note that not all of the 185.9 acres (now 179.03 acres) of wetlands will actually be cleared, grubbed, and/or filled. Rather, that is a maximum projected "up to" amount. The actual number of acres impacted will likely be reduced further at each design level for target placement, etc.). Therefore, although the "permitted impacts" of this project may seem large in relation to other recently permitted impacts in Georgia, they do not represent substantial impacts to Fort Stewart wetlands resources. This text has been added to Section 4.3.2.2 of the FEIS.

Question #15: EPA is particularly concerned that all impacts have been characterized as wetland impacts when two of the four projects show the potential for streams impacts on the 7.5-minute USGS topo quad maps. EPA notes that while the Fort has had a significant cumulative impact to streams from past projects, these impacts have not been mitigated.

Answer #15: The footprints of the MPMGR and IPBC on the 7.5-minute USGS topographic quads show “blue line” streams in the areas, however, a site visit by Fort Stewart and the Georgia Environmental Protection Division (GA EPD) on January 20, 2010, found no streams. The Savannah District also did not identify any streams within the range footprints. This information was added to Section 4.3.1, of the FEIS.

Over the years, Fort Stewart has worked diligently to mitigate impacts – direct and indirect, as well as cumulative – to the Installation’s streams, as well as wetlands. During the development of the Installation’s wetland bank, for example, thousands of feet of Canoochee Creek and Strum Bay were restored without being credited to the Installation’s mitigation bank. The Installation takes pride in that fact and welcomes working with ORK and other local environmental stakeholders on future projects.

Question #16: The FEIS should provide more discussion regarding the quality of the wetlands impacted. The DEIS mentions they're freshwater wetlands and that the Army has acquired mitigation credits to restore a historically but degraded hardwood wetland system. It is unclear what type of wetlands ecosystems are being impacted by the ranges and garrison proposed projects.

Answer #16: Surveys of the proposed range and garrison sites by Fort Stewart determined these ecosystems were predominantly broadleaf hardwood palustrine wetlands consisting of vegetative communities typical of wetlands in the Coastal Plain: pond pine (*Pinus serotina*), pond cypress (*Taxodium ascendens*), water oak (*Quercus nigra*), water tupelo (*Nyssa aquatica*), sweetgum (*Liquidambar styraciflua*), loblolly bay (*Gordonia lasianthus*), green ash (*Fraxinus pennsylvanica*), American hornbeam (*Carpinus caroliniana*), Highbush blueberry (*Vaccinium corymbosum*), fetterbush lyonia (*Lyonia lucida*), and sweetbay (*Magnolia virginiana*) among many others including varied herbs and grasses. These plants occur with varying frequency depending on the landform and hydrology of particular areas. Animal communities are also supported by these areas – wading birds such as the Great Egret (*Casmerodius albus*), the Snowy Egret (*Egretta thula*), and the Great Blue Heron (*Ardea herodias*), amphibians such as the Bullfrog (*Rana catesbeiana*) and Wood Frog (*Rana sylvatica*), and mammals such as the Whitetail Deer (*Odocoileus virginiana*) were all observed during the surveys of the range project sites. Soil types are hydric sand-loam mixtures of the Ellabelle, Bibb, Pelham, and Leefield types. Text reflecting this information was incorporated into Section 6.4.1, of the FEIS.

Question #17: EPA is unable to fully evaluate wetlands impacts, which is an area of CWA-designated responsibility for the Agency, in the DEIS because expanded CWA 404(b)(1) analyses have not been prepared for three ranges: FY 13 Modified Record Fire Range, FY 13 10/25 Meter Zero Range, and FY 14 Convoy Live Fire Range. This is a concern. EPA would like to review and comment on these analyses before they appear in the FEIS. Please coordinate with Bob Lord, Region 4's Wetlands Program to discuss further.

Answer #17: As we mentioned in Section 4.3.2.2. of the FEIS, the Installation has not prepared §404(b)(1) analyses for the FY13 MRFR, FY13 10/25 Meter Zero Range, and FY14 CLFR because some or all impacts to wetlands will likely be avoided during the design phase of these projects. The wetlands located on these sites are less than 5 acres each. If, however, wetlands cannot be avoided, the Installation will prepare §404(b)(1) analyses for these projects and request a §404(b) permit at that time.

Question #18: The DEIS states that the preferred alternative for the Engineer Battalion facilities has more wetland impacts than Alternative C, but the DEIS is unclear how much more impacts, i.e., no wetland acres are provided. The DEIS does indicate that these wetlands are not pristine and are located in a portion of the cantonment area already impacted by previous construction, operation, and maintenance activities. The FEIS should address this issue.

Answer #18: Construction of the Engineer Battalion at the Alternative C Siting would impact 5.41 acres, compared to 0.9 acres under the Alternative B Siting. For this reason, the Alternative B Siting was determined the better option of the two. The language regarding “pristine” and “already impacted” characteristics was removed to make the section easier to read and instead focused on the amount of wetlands affected. The text in Section 4.3.2.3 was modified accordingly.

Question #19: The DEIS states that the Fort has a regional permit for low water crossings, developed in 2001 and renewed in 2006 for 5 years, which allows for a maximum of 15 acres of cumulative wetlands impacts from low-water crossings. Approximately 5 acres of wetlands have been impacted using this permit. The FEIS should discuss the application of the Fort's regional permit for low water crossings, which allows for a maximum of 15 acres of cumulative wetlands impacts from low-water crossings, how the cumulative wetlands impacts are defined, and the water quality impacts and other aquatic resources impacts associated with this permit.

Answer #19: Low water crossings are not a part of the proposed action and there are no new low water crossings anticipated in the foreseeable future. As discussed in Section 3.4.4.2, only routine maintenance and repair of existing low water crossings in the range and training areas will be conducted.

Question #20: EPA is concerned that the credit calculations using the Savannah District Standard Operating Procedure (SOP) do not fully compensate for the impacts. The Savannah District has frequently indicated to EPA that the SOP is not applicable to large impacts, such as those over 10 acres. EPA agrees and has proposed a scaling factor to address the cumulative impacts of large projects such as the factor used in the Charleston District SOP. This is the approach used by the Georgia Department of Transportation for its projects that exceed the 10 acre threshold. For very large projects this scaling factor could be capped at an appropriate level. EPA has suggested 3.0 acres, which is equal to the next largest factor used in the SOP. Application of the SOP without a scaling factor for large impacts, particularly the 108.1 acres for the MPMGR is not appropriate, even according to past finding from the Savannah District.

Answer #20: While a scaling factor may be appropriate to use in many large scale projects where a great deal of fill is being introduced into the wetland system and where the projects require large amounts of impermeable surfaces, neither of these considerations constitute significant components of any of the projects under consideration in the FEIS. Of this filled acreage only a small amount will include the introduction of impermeable surfaces. The only impermeable surfaces will consist of the range operations area and cover only 2% of each project footprint. As noted in Answer #14 above, while maximum projected “up to” amounts have been provided, most of those impacts are not the result of adding fill to the wetlands, but rather vegetative maintenance for line-of-sight and grubbing/grading for target placement. This information is located in Section 4.3.2.2.

As a result, it is the Installation’s position that use of any scaling factor is not necessary to compensate for the cumulative impacts associated with these types of projects and applying a scaling factor, as called for in the Charleston District’s SOP, to these types of projects would appear to be arbitrary and capricious as it would not appear to be based on any sound engineering or hydrologic rational but would appear to be more punitive than compensatory in nature.

Moreover, the Installation always takes into account secondary wetland impacts. In reference to the MPMGR, which is the project that contains the majority of the 179.03 acres of wetlands to be potentially impacted, the Installation has evaluated potential secondary / cumulative impacts. In our planning process, as noted above, the Installation took a “worst case scenario” approach when determining how to compensate for the quantity of wetlands loss. The Installation is planning to off-set secondary / cumulative wetland effects from this range and has obtained an additional 287 mitigation credits from the Wilkinson-Oconee Bank. The Installation did account for the lost functions and values impacted by the project with respect to direct and indirect impacts.

As noted in Sections 3.4.5 and 4.3.2, the Savannah District is a cooperating agency to this EIS, and was consulted with regard to the factors noted above. Additionally, Fort Stewart participated in pre-application meetings with the Corps to discuss potential mitigation requirements and information needs. Having reviewed these documents and the associated 404(b)(1), the Savannah District did not suggest a need to utilize a scaling factor.

Question #21: The DEIS indicates that approximately one-third of the Fort's lands are wetlands. It also states some of the remaining 160 credits contained in the Fort's on-site mitigation bank will be used for the Garrison construction projects. Additionally, the Army has previously purchased credits from an established off-Fort wetland mitigation bank in accordance with the Compensatory Mitigation Rule (33 CFR Part 332) to cover the proposed range projects. The Fort canvassed the available mitigation banks nearly one year ago, which may not reflect the current banks and credit availability. Given the opportunity, EPA would have discouraged the use of the Wilkinson - Oconee Mitigation Bank since it is out of the watershed, out of the ecoregion, and likely does not fully compensate for the functions lost at the project sites. EPA is also concerned, despite the rationale provided in the DEIS, that the Fort is not fully debiting its own mitigation bank before going to off-site alternatives. The Fort's mitigation bank is within the same watershed and ecoregion and thus more likely to replace the lost wetland functions. There appears to be ample time to expand this bank to accommodate the future needs presented as a reason for not fully using it for these projects. Typically, EPA discourages applicants from purchasing mitigation credits until the Section 404 permit has been issued, because this precludes other, possibly preferable, mitigation actions.

Answer #21: Although the Fort Stewart mitigation bank has sufficient credits to offset impacts from the two Garrison support construction projects, the Army has determined it is not sufficient

to cover the unavoidable negative impacts to wetlands from the FY11-14 training range construction projects, for which the Installation must purchase credits from an off-site wetlands mitigation bank. The remaining acres within the Installation wetland bank allows Commanders to respond to emergency range training requirements, which surface from “In Theater” conditions and scenarios, or award Congressional Garrison or training additions that must be executed by Fort Stewart within one year or less. If Commanders did not have this flexibility, Installation projects with unavoidable wetland impacts would be cancelled or held up in significant delays awaiting Congressional funding to purchase “off-Post” wetland credits.

As discussed in Chapter 6 of the DEIS, despite the physical distance between the Wilkinson - Oconee Bank (WOB) restoration area and Fort Stewart, looking at the choice from a more holistic watershed perspective shows that the two locations are rooted in an interconnected complex of wetlands and open water bodies. The WOB wetlands were determined to be an ecologically acceptable replacement for the small portion of Fort Stewart wetlands impacts due to the proposed action. Hydrologic and habitat wetland functions will remain unimpaired. .

At the time the credits were purchased, there were no other readily available mitigation banks open in the primary service area with the quantity and quality of credits needed to cover the Installation’s projected needs. The Federal appropriations process did not provide the Installation with the flexibility to wait until Section 404 permits were issued to initiate the required solicitation process to purchase the credits without putting the funding for the specific FY 2011 range projects in jeopardy. As part of the Installation’s standard procurement processes, market research is conducted in accordance with the Federal Acquisition Regulation. This research requirement as it relates to contracting of off-post wetland credit purchases includes evaluating the current market and availability of primary service area mitigation credits. This process will also be implemented when seeking mitigation options for ranges beyond FY11.

For projects beyond FY 2011, Fort Stewart has not precluded the use of other acceptable compensatory mitigation alternatives (provided through mitigation banks or in-lieu fee programs). For instance, the Installation is actively seeking opportunities to incorporate off-site compensatory mitigation projects into its private lands conservation initiatives in partnership with the Georgia Land Trust and will continue to do so to further provide compensatory mitigation within the primary service area and watershed. Under the Savannah District’s SOP, the Wilkinson-Oconee Bank (WOB) is grandfathered as a pre-existing bank created prior to the

Compensatory Mitigation Final Rule (please refer to Answer 23). As such, the WOB is an acceptable mitigation alternative that is in full compliance with the policy and purpose of mitigation required by the CWA, the Savannah District SOP, and the Compensatory Mitigation Final Rule. The information contained in this answer has been added to Section 6.4.1.1 of the FEIS.

Question #22: EPA disagrees with the statement that applying for a CWA Section 404 permit is a minimization of wetlands impacts. The DEIS states "While the Army strives to avoid negative impacts to wetlands when it sites new range and training facilities on Fort Stewart, if impacts to regulated wetlands cannot be avoided, the Army minimizes those impacts by applying for a Section 404 permit as required by the Clean Water Act. CWA 404 requires a permit for any dredge and fill impacts to jurisdictional waters, including wetlands. The CWA is a regulatory requirement, not a mitigation option. The FEIS should clarify this misrepresentation of CWA Section 404 permit program as a form of mitigation.

Answer #22: The information in the text and tables located in Section 6.4.3 of the FEIS has been edited to identify more accurately and clearly the differences between what is a required measure, such as a regulatory permit, and what is a mitigation option.

Question #23: The DEIS discusses wetlands compensatory mitigation in context of NEPA-required mitigation when it should also discuss how the proposed mitigation meets the requirements of the Compensatory Mitigation for Losses of Aquatic Resources Final Rule. NEPA requires that to the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act, the National Historic Preservation Act of 1966, the Endangered Species Act of 1973, and other environmental review laws and executive orders. The Compensatory Mitigation for Losses of Aquatic Resources Final Rule is considered to be a relevant "other environmental review law" as it is one of the CWA Section 404 implementing regulations. The FEIS should discuss and apply the Final Rule in its wetlands mitigation discussion.

Answer #23: The Installation utilized the Compensatory Mitigation Rule (33 CFR Part 332) when developing its mitigation plan for the proposed FY11 MPMGR, FY11 IPBC, FY13 QTR, and the FY13 DMPTR. Fort Stewart participated in pre-application meetings with the Corps to discuss potential mitigation requirements and information needs. Section 6.4.1.1 of the FEIS has been revised to clearly explain that a mitigation decision has not yet been made for the FY13

QTR and the FY13 DMPTR. For projects beyond FY 2011, Fort Stewart has not precluded the use of other acceptable compensatory mitigation alternatives (provided through mitigation banks or in-lieu fee programs). Similar to the process outlined in the Compensatory Mitigation Rule, the Installation's standard procurement processes conducts market research in accordance with the Federal Acquisition Regulation. This research requirement as it relates to contracting of off-post wetland credit purchases includes evaluating the current market and availability of primary and secondary service area mitigation credits. This process will also be implemented when seeking mitigation options for ranges beyond FY11.

According to 33 CFR 332, *Compensatory Mitigation for Losses of Aquatic Resources*, mitigation bank credits may be used if the project is in the service area of a mitigation bank. Section 332.3 (b)(2) has a description of why mitigation bank credits are acceptable in compensating for wetland impacts:

“Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved, thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger, more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the district engineer should give preference to the use of mitigation bank credits when these considerations are applicable.” Fort Stewart followed these requirements during the development of its mitigation plan.

Question #24: While EPA does not expect the precise replication of all wetlands adversely impacted by the proposed action, the FEIS should explain how the proposed mitigation will adequately compensate for lost wetland functions and values such that it results in no net loss of wetland functions and values. This discussion is absent from the DEIS. Furthermore, since the

U.S. Army Corp of Engineers (USACOE) cannot issue a CWA 404 permit if there is a less damaging practicable alternative, the FEIS should discuss compliance with this provision.

Answer #24: The wetlands in the Wilkinson-Oconee Bank (WOB) are “in-kind” to the wetlands on Fort Stewart. Consistent with the fact that both areas are on Georgia’s Coastal Plain, wetlands within the WOB are very similar to those slated for impact by the proposed Fort Stewart range projects. Surveys of the proposed range sites by Fort Stewart determined that dominant vegetation communities consist of plants typical of wetlands in the Coastal Plain: mixtures of pond and bald cypress (*Taxodium ascendens* and *distichum*, respectively), water oak (*Quercus nigra*), water tupelo (*Nyssa aquatica*), sweetgum (*Liquidambar styraciflua*), loblolly bay (*Gordonia lasianthus*), green ash (*Fraxinus pennsylvanica*), privet (*Ligustrum sinense*), American hornbeam/ironwood (*Carpinus caroliniana*), highbush blueberry (*Vaccinium corymbosum*), fetterbush lyonia (*Lyonia lucida*), and sweetbay (*Magnolia virginiana*) among many others including varied herbs and grasses. These plants occur with varying frequency depending on the landform and hydrology of particular areas, and essentially identical communities with similar distribution are found in the Wilkinson-Oconee’s Mitigation Bank. Animal communities also supported by these areas are: wading birds, such as the Great Egret (*Casmerodius albus*), the Snowy Egret (*Egretta thula*), and the Great Blue Heron (*Ardea Herodias*); amphibians, such as the Bullfrog (*Rana catesbeiana*) and Wood Frog (*Rana sylvatica*); and mammals, such as the Whitetail Deer (*Odocoileus virginiana*) were all observed during the surveys of the range project sites, and have been similarly reported in the Wilkinson-Oconee area. The American alligator (*Alligator mississippiensis*) is common throughout Fort Stewart and has also been observed at Wilkinson-Oconee. The locally endangered Wood Stork *Mycteria Americana* can also be found at both locations (though they are not expected to be impacted by the proposed projects).

Soil types were also consistent between the two areas. The Ellabelle, Bibb, Pelham, and Leefield types predominated in the proposed project areas. Analyses of the Natural Resources Conservation Service profiles show these to be comparable to the Chewacla, Chastain and Congaree soils which cover the Wilkinson-Oconee area. All are characterized by loamy surface layers and clayey or loamy subsoils, and all soils are on the National Hydric Soils list.

Although the area of the Coastal Plain in which the Wilkinson-Oconee area is situated features more relief than that of Fort Stewart, the specific area of the restoration situated as it is in the Oconee River floodplain, is flatter than the surrounding general topography, resulting in a similar hydrologic profile to Fort Stewart. The bottomland hardwood wetland systems found at both locations share the typical functions of holding temporary storage surface water, maintenance of

characteristic subsurface hydrology, removal and sequestration of elements, retention of particulates, export of organic carbon, maintenance of characteristic plant community, and habitat for wildlife. Based on this comparison, despite the distance between the two areas, wetlands on Fort Stewart and at the Wilkinson-Oconee restoration area are very similar and, therefore, their use for mitigation fully supports the requirement for “no net loss”. Text reflecting this information was incorporated into Section 6.4.1.1 of the FEIS.

Question #25: The DEIS states that the USACOE documents approximately 1,467,774 acres of wetlands impacted within 20 Georgia counties and by deducting 1,982.87 acres of wetlands impacts since 1990 there are at least 1,465,791.13 acres of wetlands remaining. According to the DEIS, this amounts to a loss of 0.14% of wetlands since 1990 - an insignificant amount." It is unclear if the USACOE document referenced in the DEIS is referring to the 1,467,774 acres of wetlands as being impacted in the 20 Georgia counties or existing (un-impacted) wetlands in these counties. This paragraph needs to be clarified in the FEIS.

Answer #25: There are 1,467,774 existing acres of existing wetlands within the 20 Georgia counties referenced, of which 1,465,791.13 acres of wetlands are un-impacted. This is how the Installation calculated a loss of 0.14% of wetlands since 1990 and the determination of “insignificant” derived. Text clarifying this information was incorporated into Section 5.3.3.2 of the FEIS.

Question #26: The DEIS indicates the construction of six new ranges is reasonably foreseeable on the Fort [during] 2016 and 2017. The EIS should mention whether there is sufficient land on the Fort to accommodate these new ranges or whether the Fort suffers a training land shortfall requiring acquisition of new lands outside the Fort's boundaries.

Answer #26: Currently, Fort Stewart has sufficient land within its existing boundaries to support the construction of all ranges discussed in the EIS. The EIS does not consider the expansion of land holdings at Fort Stewart as a reasonably foreseeable future action at this time. The Army’s position is that Fort Stewart currently has sufficient land to train assigned Soldiers and units adequately, including the necessary land for the six FY 16 and FY 17 range construction projects discussed in Section 5.2 of the FEIS.



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Garrison Commander

Savannah District Army Corps of Engineers
Wetland Regulatory Division
Attention: Mark Padgett
100 W. Oglethorpe Avenue
Savannah, Georgia 31401

Dear Mr. Padgett:

Thank you for forwarding the recent Southern Environmental Law Center (SELC) comments and questions regarding the Savannah District Army Corps of Engineers (ACOE) Joint Public Notice (JPN) for projects analyzed in the *Draft Environmental Impact Statement (EIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, Georgia (hereafter, Fort Stewart EIS)*.

As you requested, we have prepared formal responses to the SELC comments on the JPN in the enclosure to this cover letter. Some of the information provided in our response will be incorporated into Fort Stewart's FEIS, which we anticipate will be issued for a 30-day public review in July 2010. The SELC letter, our response, and the Savannah District ACOE position will also be included in an appendix to the FEIS.

If you have any further questions, please contact Mr. Charles Walden, at (912) 767-8642 or Charles.Walden4@us.army.mil. Please also cc Ms. Amber E. Franks at (912) 767-1434 or Amber.Franks@us.army.mil. If emailing a comment, please reference the *Fort Stewart EIS* in the subject line.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is positioned above the printed name.

KEVIN W. MILTON
Colonel, US Army
Commanding

Fort Stewart's Response to Comments
Received from Southern Environmental Law Center (SELC),
Sent to Mark Padgett, U.S. Army Corp of Engineers - Regulatory Branch
(Hunt, May 21, 2010)

Digital Multi-Purpose Training Range

Question #1: The applicant's alternatives analysis in the DEIS includes alternative COA 3 which is a "heavily utilized" existing multipurpose range complex (MPRC) (*Fort Stewart note: the range proposed for construction is actually a Digital Multi-Purpose Training Range, or DMPTR*). DEIS, Appendix D at 10. This, of course, begs the question as to why the Applicant is including as an alternative a site that could never be used even if it determined that the site would have fewer environmental impacts. Alternative COA 3 is not a practicable alternative at all.

Answer #1: Transforming the existing MPRC was an option legitimately considered as a practical alternative but rejected due to current and expected military operations and training demands. Transforming the existing MPRC and other operational ranges will remain a consideration on future range projects as the types of military training and weapon systems evolve over time and possibly render older ranges obsolete. An example of this is the COA 1 for the DMPTR, which involves the transformation of another existing range, Red Cloud Foxtrot. In siting the DPMTR over top of an existing range, we are attempting to minimize and avoid the wetland impacts that would be associated with constructing the DPMTR elsewhere on Fort Stewart.

Question #2: The other alternative which the Applicant examined yielded wetlands impacts of 240 acres. It is difficult to accept that there were no other practicable alternatives at Fort Stewart for this proposed range. Two-hundred forty acres is more than the combined wetlands impacts of all four of the proposed ranges.

Answer #2: Based on the Installation's location in a relatively flat coastal plain and the location of pre-existing military training ranges and facilities on high ground, impacts to 240 acres of wetlands to build a new 995 acre range is not beyond the realm of reasonable consideration as a viable alternative. The fact that wetland impacts in the preferred alternative are less than five percent of the overall range size demonstrates the Installation's efforts to avoid and minimize wetland impacts associated with the siting of new military ranges and training facilities. Army Installations, including Fort Stewart, must maintain their training lands to fully sustain mission

requirements for national security. The way the Army does this is through its master planning process. It is important to note that the Installation's planning efforts to minimize wetland impacts begins with attempts to select a site with the least amount of wetlands. At this point in the planning process, the range design is limited to placement on site of a footprint of the proposed range. This footprint shows the maximum number of wetland impacts and that is why we state "up to" so many acres; however, once a final site is selected, further attempts are made to avoid and minimize negative impacts to wetlands inside the range footprint through the range design process.

The final range design cannot be prepared prior to a site being selected. Also, despite Fort Stewart's large size, much of its lands are already committed to other training, recreational, and environmental activities. Maneuver and dismounted maneuver training areas occupy large portions of the Installation, where the integration of large firing ranges is not suitable. The west side of the Installation is devoted to maneuver training and, in its entirety, is necessary to meet Brigade mission training requirements. Maneuver training is necessary in upland areas to reduce wetland impacts resulting from heavy wheeled and tracked military vehicles, as well as to avoid vehicles from getting stuck in wet areas. The southeast side of the Installation is devoted to dismounted maneuver training (i.e. training on foot) and also contains a wooded recreational area for campers. More than 100,000 acres are devoted to the restoration and management of environmentally sensitive areas, such as habitat for threatened and endangered species (including the red-cockaded woodpecker (RCW) and gopher tortoise) and wetlands.

During the planning process for the FY13 DMPTR, which Fort Stewart initiated in 2006, the Installation developed a total of eight siting alternatives. This process allowed both operational and environmental aspects, including impacts to wetlands, to be thoroughly analyzed in a collective manner by members of the Installation's Environmental Division, Range Control Division, and Master Planning Division. As the analysis progressed, these siting alternatives were ranked using screening criteria, as discussed in Chapter 2, *Description of the Proposed Action and Alternatives*, of the FEIS. Minimization of environmental impacts, including wetlands, was a factor in which alternatives were considered viable and which were not. One DMPTR discounted alternative, not discussed in the FEIS, contained 673 acres of wetlands impact. Another site, also not considered any further, contained 313 acres of wetland impact and would have resulted in the elimination of 683 acres of RCW habitat (compared to an RCW habitat loss of 22.4 acres and 31 acres as a result of Alternatives B and C, respectively). Even

though these eliminated sites were operationally viable, they were removed from consideration after environmental impacts were determined to be significant.

Multi Purpose Machine Gun Range (MPMGR)

Question #3: As an alternative for this range, the Applicant proposed course of action (COA) 5 which would have yielded wetlands impacts of less than 9 acres had it been chosen as the preferred alternative. However, the Applicant eliminated this alternative because it emerged as the preferred alternative for DMPTR. As such, COA 5 should not be discussed as a viable alternative for the MPMGR.

Answer #3: As a large military training and deployment complex, Fort Stewart must examine and analyze the cumulative effects of all its proposed ranges within its training platform as constrained by the Installation borders, adjacent and associated training facilities, and surface danger zones relative to one another. This analysis is in addition to examining other resources, such as wetlands, to optimize training while minimizing the overall impact to our environment. The decisions made on the siting of each range and what are practical alternatives are inherently intertwined and interdependent. This may not have been reflected well in Section 404 permit applications, but is more fully explained in Section 6.4.1.1 of the FEIS. The possibility remains that the MPMGR could be selected to occupy that site currently under consideration for the DMPTR if the DMPTR is ultimately selected to occupy another site.

Also, many other impacts, in addition to wetland impacts, are examined and analyzed in the siting of new ranges and training facilities, including other environmental factors (such as threatened and endangered species) and non-environmental factors (such as the impact the site has on the ability to conduct timely and realistic military training based on current threats to our nation's armed forces when engaged in combat or peace keeping operations overseas). Both the MPMGR and DMPTR were approved for funding, and as has been noted, COA 2 for the DMPTR would have carried a level of wetland impact even greater than the current impacts from both the MPMGR and the DMPTR. Given the many constraints (see Appendix D for siting criteria) at play in siting both ranges, the preferred COAs for the two ranges were seen as a necessary compromise for ensuring all needed ranges are built and military training requirements met.

Question #4: Notwithstanding the above, the Applicant needs to more adequately explain why it did not select COA 5 as the preferred alternative for MPMGR considering it would have reduced the wetlands impacts from 116.7 acres down to 9 acres.

Answer #4: Unfortunately, it would not be possible to ignore the fact that the site was already selected as the preferred site for the DMPTR, as suggested. Two independently proposed ranges cannot have the same preferred site. The Installation agrees that nine acres of impact for a 250-acre range is far more desirable than 116.7 acres of wetland impacts (which we now have down to 103.3 acres); however, wetlands impacts for this specific range were only one factor examined and analyzed in selecting this site as the preferred alternative. Selection of this site as the preferred alternative helps the Installation's ability to avoid and minimize the overall and cumulative impacts to all wetlands associated with planned or reasonably anticipated range construction, as reflected in Sections 4.3.2, 5.3.3.2, and 6.4.1 of the FEIS.

Qualification Training Range (QTR)

Question #5: For this proposed range, the Applicant discusses but then rules out COA 3, which would have less wetlands impacts than the Preferred Alternative B. The Applicant rules out this alternative site because it is the proposed location for a future Modified Record Fire (MRF) range, which is not before the Corps at this time. Again, given the significant size of Fort Stewart, alternatives for one range should not be eliminated for future potential ranges, or, such a site should never be discussed as an alternative. The Applicant is required under the Section 404(b)(1) guidelines to identify "practicable alternatives," not alternatives that could never be chosen regardless of how favorable they might be from an environmental standpoint.

Answer #5: Again, as a large military training and deployment complex, Fort Stewart must examine and analyze the cumulative effects of all its proposed ranges within its training platform as constrained by the Installation borders, adjacent and associated training facilities, and surface danger zones relative to one another. This analysis is in addition to examining other resources, such as wetlands, to optimize training while minimizing the overall impact to our environment. The decisions made on the siting of each range and what are practical alternatives are inherently intertwined and interdependent. This may not have been reflected well in Section 404 permit applications; but is more fully explained in the FEIS. One reason the COA 3 was deemed unsuitable was the fact the site is currently an operational range that is projected for reuse or transformation as a future MRF range. While Fort Stewart has a large land mass, much of its land mass is not environmentally or operationally suitable for range construction or for a number of considerations. Although significant, wetland impacts are only one of several significant

factors considered when examining the suitability for siting of a range. The remaining lands that are suitable for future range construction are limited because the best locations are currently being used to capacity as military ranges or training areas. The Installation contains many sensitive resources, such as wetlands and protected species habitat, which limit the locations suitable for constructing new military training ranges that are capable of maximizing military training while minimizing environmental impacts. Because of the operational impacts examined and analyzed when siting ranges, and because the Installation was able to minimize impacts and mitigate those that did occur, the decision was made to retain the COA 3 site for a future project. The alternative was practicable but was not chosen in this instance.

Inadequate Mitigation

Question #6: Ogeechee Riverkeeper (ORK) is concerned with several flaws in the Application's proposed mitigation measures. Considering the Project's significant destruction and alteration of wetlands, it is imperative that the value and functions of wetlands on Fort Stewart are mitigated. ORK shares the concerns expressed by the Environmental Protection Agency (EPA) in its comments on the Draft Environmental Impact Statement dated May 14, 2010. First, the Applicant's usage of the Savannah District's Standard Operating Procedure (SOP) for calculation of mitigation credits is inconsistent with the district's position that the SOP should not be applied to projects with large wetlands impacts. Given the Project's substantial wetlands impact of 190 acres, we urge the Corps to apply the SOP, but do so with a scaling factor to address the cumulative impact of the Project, an approach that is followed by the Charleston District. The Applicant's use of the SOP without a scaling factor will not successfully and adequately replace the lost functions and values of wetlands impacted by the Project.

Answer #6: The implementation of the actions proposed in the preferred alternative (Alternative B Sitings) has the potential to negatively impact up to 0.2% of the Installation's nearly 91,000 acres of wetlands. More importantly, of the up to 0.2% of the Installation's wetlands being impacted, most of those impacts are not the result of adding fill to the wetlands, and as stated earlier, the Installation anticipates wetland impacts will be much less than projected through further avoidance and minimization incorporated during the design phases of each project after the site is selected. It is important to note, that despite the large amount of military training activity that occurs on Fort Stewart, because of the Installation's proactive efforts to avoid, enhance and mitigate wetlands, its wetlands remain of a high quality, retaining and transmitting large amounts of fresh water and providing habitat for countless local species.

While a scaling factor may be appropriate to use in many large scale projects where a great deal of fill is being introduced into the wetland system and where the projects require large amounts of impermeable surfaces, neither of these considerations constitute significant components of any of the projects under consideration in the FEIS. Of this filled acreage only a small amount will include the introduction of impermeable surfaces. The only impermeable surfaces will consist of the range operations area and cover only 2% of each project footprint. As noted above, while maximum projected “up to” amounts have been provided, most of those impacts are not the result of adding fill to the wetlands, but rather vegetative maintenance for line-of-sight and grubbing/grading for target placement. This information is located in Section 4.3.2.2.

As a result, it is the Installation’s position that use of any scaling factor is not necessary to compensate for the cumulative impacts associated with these types of projects and applying a scaling factor, as called for in the Charleston District’s SOP, to these types of projects would appear to be arbitrary and capricious as it would not appear to be based on any sound engineering or hydrologic rationale but would appear to be more punitive than compensatory in nature.

Moreover, the Installation always takes into account secondary wetland impacts. In reference to the MPMGR, which is the project that contains the majority of the 190 acres (now 179.03 acres) of wetlands to be potentially impacted, the Installation has evaluated potential secondary / cumulative impacts. In our planning process, as noted above, the Installation took a “worst case scenario” approach when determining how to compensate for the quantity of wetlands loss. The Installation is planning to off-set secondary / cumulative wetland effects from this range and has obtained an additional 287 mitigation credits from the Wilkinson-Oconee Bank. The Installation did account for the lost functions and values impacted by the project with respect to direct and indirect impacts.

As noted in Sections 3.4.5 and 4.3.2 of the FEIS, the Savannah District is a cooperating agency to this EIS, and was consulted with regard to the factors noted above. Additionally, Fort Stewart participated in pre-application meetings with the Corps to discuss potential mitigation requirements and information needs. Having reviewed these documents and the associated 404(b)(1), the Savannah District did not suggest a need to utilize a scaling factor.

Question #7: Second, the Applicant's choice of the Wilkinson-Oconee Mitigation Bank conflicts with the policy and purpose of mitigation required by the CWA. Under the Corp's regulation, the Applicant's "compensatory mitigation should be located within the same watershed as the impact site" 33 C.F.R. § 332.3. The purpose of this rule is to preserve and maintain water resources within a watershed, and ensure that wetlands lost are compensated by wetlands with similar characteristics, values, and functions. The Application, however, proposes mitigation outside of Fort Stewart and in another watershed at the Wilkinson-Oconee Mitigation Bank. This choice not only conflicts with the Corps' policy but also ignores the available 160 credits contained in Fort Stewart's on-site mitigation bank. ORK believes that the Corps should require the Applicant's use of the on-site mitigation.

Answer #7: Mitigation credits generated from the on-Post compensatory mitigation bank are not being used because there are insufficient credits available to satisfy requirements associated with the projects and the Installation needs to retain the few credits remaining for potential use to compensate for last minute and unanticipated Congressional add-on projects that occur on the Installation on a not-infrequent basis. Regarding use of mitigation banks, the Compensatory Mitigation for Losses of Aquatic Resources Final Rule states, "In many cases, the environmentally preferable compensatory mitigation may be provided through mitigation banks or in-lieu fee programs because they usually involve consolidating compensatory mitigation projects where ecologically appropriate, consolidating resources, providing financial planning and scientific expertise (which often is not practical for permittee-responsible compensatory mitigation projects), reducing temporal losses of functions, and reducing uncertainty over project success." The rule then lists types of compensatory mitigation measures in order of preference. The rule states that "[in] general, the required compensatory mitigation should be located within the same watershed as the impact site." But mitigation bank credits may be used if the project is in the service area of the bank. Section 332.3 (b)(2) has a description of why mitigation bank credits are given in the regulation:

"Since an approved instrument (including an approved mitigation plan and appropriate real estate and financial assurances) for a mitigation bank is required to be in place before its credits can begin to be used to compensate for authorized impacts, use of a mitigation bank can help reduce risk and uncertainty, as well as temporal loss of resource functions and services. Mitigation bank credits are not released for debiting until specific milestones associated with the mitigation bank site's protection and development are achieved, thus use of mitigation bank credits can also help reduce risk that mitigation will not be fully successful. Mitigation banks typically involve larger,

more ecologically valuable parcels, and more rigorous scientific and technical analysis, planning and implementation than permittee-responsible mitigation. Also, development of a mitigation bank requires site identification in advance, project-specific planning, and significant investment of financial resources that is often not practicable for many in-lieu fee programs. For these reasons, the district engineer should give preference to the use of mitigation bank credits when these considerations are applicable.” Fort Stewart followed these requirements during the development of its mitigation plan.

Under the Savannah District’s SOP, the Wilkinson-Oconee Bank is “grandfathered” as a pre-existing bank created prior to the Compensatory Mitigation Final Rule. As such, the Wilkinson-Oconee Bank is an acceptable mitigation alternative that is in full compliance with the policy and purpose of mitigation required by the CWA, the Savannah District SOP, and the Compensatory Mitigation Final Rule. Fort Stewart’s use of the Wilkinson-Oconee Bank as mitigation for the proposed FY11 range projects was fully coordinated with the Savannah District, which was a cooperating agency on the EIS.

The wetlands in the Wilkinson-Oconee Bank are “in-kind” to the wetlands on Fort Stewart. Consistent with the fact that both areas are on Georgia’s Coastal Plain, wetlands within the Wilkinson-Oconee are essentially identical to those slated for impact by the proposed Fort Stewart range projects. Surveys of the proposed range sites by Fort Stewart determined that dominant vegetation communities consist of plants typical of wetlands in the Coastal Plain: mixtures of pond pine (*Pinus serotina*), pond cypress (*Taxodium ascendens*), water oak (*Quercus nigra*), water tupelo (*Nyssa aquatica*), sweetgum (*Liquidambar styraciflua*), loblolly bay (*Gordonia lasianthus*), green ash (*Fraxinus pennsylvanica*), American hornbeam (*Carpinus caroliniana*), Highbush blueberry (*Vaccinium corymbosum*), fetterbush lyonia (*Lyonia lucida*), and sweetbay (*Magnolia virginiana*) among many others including varied herbs and grasses. These plants occur with varying frequency depending on the landform and hydrology of particular areas, and essentially identical communities with similar distribution are found in the Wilkinson-Oconee’s Mitigation Bank. Animal communities also supported by these areas are: wading birds, such as the Great Egret (*Casmerodius albus*), the Snowy Egret (*Egretta thula*), and the Great Blue Heron (*Ardea Herodias*); amphibians, such as the Bullfrog (*Rana catesbeiana*) and Wood Frog (*Rana sylvatica*); and mammals, such as the Whitetail Deer (*Odocoileus virginiana*) were all observed during the surveys of the range project sites, and have been similarly reported in the Wilkinson-Oconee area.

Soil types were also consistent between the two areas. Hydric sand-loam mixtures of the Ellabelle, Bibb, Pelham, and Leefield types predominated in the proposed project areas. Analyses of Natural Resources Conservation Service profiles show these to be comparable to the Chastain and Congaree soils which cover the Wilkinson-Oconee area. All soils are on the National Hydric Soils list. Although the area of the Coastal Plain in which the Wilkinson-Oconee area is situated features more relief than that of Fort Stewart, the specific area of the restoration is flatter than the surrounding general topography, resulting in a similar hydrologic profile to Fort Stewart. The bottomland hardwood wetland systems found at both locations share the typical functions of holding temporary storage surface water, maintenance of characteristic subsurface hydrology, removal and sequestration of elements, retention of particulates, export of organic carbon, maintenance of characteristic plant community, and habitat for wildlife. Based on this comparison, despite the distance between the two areas, wetlands on Fort Stewart and at the Wilkinson-Oconee restoration area are very similar and, therefore, their use for mitigation fully supports the requirement for “no net loss”. Text reflecting this information was incorporated into Section 6.4.1.1 of the FEIS.

Question #8: Before seeking compensatory mitigation in a different watershed, the Applicant should explore the use of existing and new mitigation banks in Ogeechee River Watershed. According to the DEIS's evaluation of mitigation banks in 2009, the Ogeechee River/Margin Bay and Black Creek Banks may now have available credits. DEIS at 6-8. Also, given the significant amount of wetlands within the boundaries of Fort Stewart as well as Fort Stewart's experience in the creation of mitigation banks, the Corps should require the Applicant to take a hard look at a potential onsite mitigation bank that would ensure the compensation of the wetlands' lost values and functions.

Answer #8: Existing and new mitigation banks within this watershed were not available at the time Fort Stewart was required to begin planning for the required wetlands credit acquisition for its FY 2011 range projects with known and/or anticipated wetlands impacts (see answer to Question #9, below, for additional details). On-site wetlands mitigation was not a viable option because, as discussed in Section 5.3.3.2 of the FEIS, although Fort Stewart has an existing mitigation bank and an on-site wetlands restoration project, it is running out of new places where additional on-site mitigation can be conducted. If credits are available in the primary service area in the future, however, then Fort Stewart will work to try and obtain these credits, in accordance with the Compensatory Mitigation Rule For Losses of Aquatic Resources (33 CFR

332) and the Federal Acquisition Regulation. For projects beyond FY 2011, Fort Stewart has not precluded the use of other acceptable compensatory mitigation alternatives (provided through mitigation banks or in-lieu fee programs).

After exploring and selecting reasonable site alternatives for the proposed FY11-FY14 range projects, the Installation determined that the last remaining on-site mitigation bank (Pond 4) could not support the wetland mitigation requirements for these facilities and sustain itself for mitigation of proposed and future garrison construction, and other unplanned projects that arise out of mission changes. The remaining acres within the Installation Wetland Bank allows Command to respond to emergency range training requirements which surface from "In Theater" conditions and scenarios, or award Congressional garrison or training additions that must be executed by Fort Stewart within one year or less. If Commanders did not have this flexibility, Installation projects with unavoidable wetland impacts would be cancelled or held up in significant delays awaiting Congressional funding to purchase "off-Post" wetland credits.

Question #9: The Applicant's proposed mitigation plan is based on mitigation credits purchased a year ago from the Wilkinson-Oconee Bank which was the "only bank that provided an offer to the solicitation...." DEIS at 6-8. It is our understanding that Section 404 permit applicants are discouraged from procuring mitigation credits in advance of receiving a permit so that the Applicant is not limited in its mitigation options, such as the use of new mitigation banks. This reasoning is at play here. It has been a year since the Applicant solicited a mitigation contract and, according to the Applicant's DEIS mitigation bank table 6.1, at least two Ogeechee River Watershed banks may now have credits available.

Answer #9: The timeline associated with Congressional Budget approval and Federal Appropriation process for military construction requires advance planning to enable construction to be implemented in the timeframe appropriation was made. The timeline for planning and construction of these projects is quite early (two years out or more) and did not allow for a later solicitation. To secure the funds necessary to build a proposed range, Headquarters-Department of the Army (HQDA) requires the Installation to budget for wetland impacts that will be unavoidable at least two years prior to the proposed project's anticipated contract award date. If an Installation fails to provide this to HQDA within the given timeline, the project is not funded. In the past, Fort Stewart has been able to mitigate using its on-Post wetland mitigation bank; however, as mentioned above, the on-Post bank no longer has an adequate amount of credits available to support these ranges while also meeting the requirements of the Installation's "In-

Theater” mission requirements. The Installation utilized the Compensatory Mitigation Rule (33 CFR Part 332) when developing its mitigation plan for the proposed FY11 MPMGR, FY11 IPBC, FY13 QTR, and the FY13 DMPTR. Fort Stewart participated in pre-application meetings with the Corps to discuss potential mitigation requirements and information needs. Section 6.4.1.1 of the FEIS has been revised to clearly explain that a mitigation decision has not yet been made for the FY13 QTR and the FY13 DMPTR.

Question #10: Furthermore, we share EPA's concerns that the Applicant is not sufficiently mitigating impacts on streams. It is our understanding that Fort Stewart's projects in the past have significantly affected streams that were not mitigated. ORK urges the Corps to ensure that stream impacts are assessed separately from wetlands impacts and that the loss of streams is compensated appropriately. Overall, ORK is concerned that the Applicant's proposed mitigation plan simply does not include adequate compensation for Fort Stewart's wetlands and streams that will be significantly impacted by the Project.

Answer #10: No streams will be lost as a result of the proposed project. The footprints of the MPMGR and IPBC on the 7.5-minute USGS topographic quads show “blue line” streams in the areas; however, a site visit by Fort Stewart and the Georgia Environmental Protection Division (GA EPD) on January 20, 2010, found no streams. The Savannah District also did not identify any streams within the range footprints. This information was added to Section 4.3.1, of the FEIS.

Over the years, Fort Stewart has worked diligently to mitigate impacts – direct and indirect, as well as cumulative – to the Installation’s streams, as well as wetlands. During the development of the Installation’s wetland bank, for example, thousands of feet of Canoochee Creek and Strum Bay were restored without being credited to the Installation’s mitigation bank. The Installation takes pride in that fact and welcomes working with ORK and other local environmental stakeholders on future projects.

Failure to Minimize Impacts to Marine Resources

Question #11: Section 404(b)(1) guidelines prohibit issuance of a permit where “[t]he proposed discharge does not include all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem.” 40 C.F.R. § 230.12(a)(3)(iii) (emphasis added). None of the information that we have reviewed demonstrates that the Applicant has tried to adequately

minimize the impacts of the Project. The Applicant repeatedly contends that because it is utilizing existing range footprints the Project will "avoid and minimize impacts to more pristine and un-fragmented wetlands systems" on Fort Stewart. See e.g. Public Notice at 3. While ORK appreciates the Applicant's utilization of existing ranges for the Project, this reuse of range areas does not ensure minimization of harm to aquatic ecosystems or satisfy the regulation's mandate that the Project includes "all appropriate and practicable measures to minimize potential harm to the aquatic ecosystem." 40 C.F.R. § 230. 12(a)(3)(iii).

Answer #11: In addition to avoiding and minimizing impacts to more pristine and un-fragmented wetlands systems, as noted in the comment, Fort Stewart consistently seeks to minimize and avoid wetland impacts at each stage of the design process. It is also important to note that the proposed ranges would be constructed on existing ranges that are operational and already cleared of vegetation. First, much of the avoidance and minimization process takes place before actual site selection. (See response to Question #2.) Training ranges of this kind have fairly specific requirements and it is not always possible to build them without impacting every wetland in the footprint; however, site designers may alter certain aspects in response to environmental concerns during various stages of the design process (10%, 35%, 60%, 90%, and 100% stages of design completion). This is easiest if they can do so while still meeting the operational and training requirements of the range. For example, the currently on-going design process reduced the wetland impacts from the IPBC to a third of what they were at the time of writing the DEIS. Impacts from the MPMGR were also slightly reduced during that time and several proposed range projects were sited without wetland impacts of any kind. It is hoped that impacts from the QTR and DMPTR may be reduced, but as they are not yet in the design process, this cannot be precisely determined.

To ensure compliance with the Georgia (GA) Erosion and Sedimentation Control Act (ESCA) and the CWA on existing and future training ranges, Fort Stewart mandates full utilization of Timber Harvest best management practices (BMPs), National Pollutant Discharge Elimination System (NPDES) permit requirements, site-specific Erosion and Sedimentation Pollution Control Plans (ESPCPs), and pre- and post-construction BMPs to reduce the potential adverse impacts to water bodies, such as streams. The projects discussed in the JPN and FEIS have not undergone complete design. During this process, however, Fort Stewart stormwater specialists review ESPCPs for compliance with the GA ESCA and the CWA. The Installation also utilizes the Natural Resources Conservation Service (NRCS) to provide technical expertise during preparation of ESPCPs prior to Fort Stewart providing construction approval. Fort Stewart

stormwater compliance assessors and NRCS consistently inspect and monitor on-going construction actions. They will also do this during the construction of these proposed projects to ensure adherence to associated ESPCPs. Fort Stewart inspectors also routinely inspect tank trails, range access roads, range course roads, and dirt roads/trails to see if any damage is occurring (such as hardened tank trails or water crossings need repairs, to prevent sedimentation of adjacent streams).

Question #12: The Applicant-specifically, in Appendix D to the DEIS, fails to adequately describe measures intended to minimize impacts besides asserting that the ranges will be placed in existing disturbed areas. The proposed plans for MPMGR and QTR consist of wetlands impacts of 116.7 acres and 26.7 acres, respectively. Contrary to the Applicant's assertion that these proposed impacts are not extensive, the two ranges impact all wetlands within MPMGR and QTR areas. Thus, when all wetlands in each project area are destroyed or altered, the Applicant has failed to demonstrate that it has adequately minimized impacts to the aquatic ecosystem. The Applicant's failure to offer measures to minimize impacts to wetlands and streams violates the Section 404(b)(1) guidelines and the CWA. ORK urges the Corps to require the Applicant to set forth specific measures intended to minimize wetlands impacts on each of the four proposed ranges.

Answer #12: As noted in previous response, Fort Stewart attempts to avoid and minimize wetland impacts throughout the siting and design process. The most substantial avoidance and minimization occurs during the siting process as part of the site alternatives to carry forward for detailed analysis. Please note that, at the initial siting phase, the amount of wetland acres impacted attributed to each range is simply a total of all wetland acres that *would be located within the range footprint that could potentially be impacted*, and it is likely not *all of the wetlands within the footprint will be impacted by the project because avoiding and minimizing negative impacts wetland are carried forward as a consideration into the actual range design process after the site is selected*. Efforts are made to reduce these impacts as the design progresses and, it is anticipated that, as design proceeds, additional wetlands avoidance and minimization of effect will be achieved. Again as an example, the currently on-going design process for the IPBC range has reduced the wetland impacts to a third of what they were at the time of writing the DEIS. Design efforts for the MPMGR have produced similar results, as well. Furthermore, little-to-no impervious surfaces will exist on these ranges, so runoff will not increase appreciably. The primary areas of "hardened surfaces" will consist of concrete turning pads, hardened stream crossings, etc., but not hardened roads and/or completely paved areas.

The range surfaces will still be permeable, and, after construction, will acquire a covering of grasses and light herbaceous vegetation. Furthermore, wildlife may still traverse the ranges and graze during periods (sometimes weeks or more) the ranges are not in use.

In regard to the general issues of siting ranges and orienting them to avoid wetlands, further mention must be made of the Surface Danger Zone, or SDZ. Every range has an SDZ, an area within which people, property, and wildlife are in danger of being struck by projectiles during live fire exercises. Because of this danger, safety of Fort Stewart personnel, the public, and wildlife is a primary consideration in range siting. As previously noted, an SDZ may cover hundreds or even thousands of acres, and ranges must be sited to ensure areas of habitation, daily operations, traffic, and environmental sensitivity do not fall within them. A further limitation to siting is the fact that Fort Stewart is essentially cut into quarters by two major Georgia highways conveying regular civilian traffic. Injury or loss of human life during live fire exercises due to an improperly placed SDZ would be unacceptable to any party. Therefore, all organizations involved in siting ranges are forced to site ranges and their attendant SDZs very carefully. Efforts are made to ensure SDZs overlap. This maximizes land use and minimizes areas impacted by live fire; in part this is itself an environmental consideration as vegetation and animal populations may suffer losses from carelessly directed live fire.

Deposition of Munitions

Question #13: Finally, to our knowledge the Applicant fails to discuss the impact to water quality of any munitions landing in any waters of the United States on the proposed ranges. Under the Section 404(b)(1) guidelines, the Corps has an independent duty to evaluate water quality impacts before it issues a permit. The deposition of the munitions in such waters will be an indirect impact of the proposed Project.

Answer #13: The Military Munitions Rule states that used or fired munitions are considered a solid waste only when they are removed from their original landing spot (www.epa.gov/epaoswer/hazwaste/military/index.htm). Therefore, since the proposed ranges will utilize existing impact areas and the munitions will be used for their intended purposes and will be left where they land, the munitions are not considered solid waste. The best practices to minimize the impact of lead on the environment are stormwater and erosion controls, vegetation management, soil amendments, bullet traps, and soil pH modifiers which are utilized.

Section V:

Notice of Availability of Final EIS

response to reports and notification of incidents involving assigned personnel.

ROUTINE USES OF RECORDS MAINTAINED IN THE SYSTEM, INCLUDING CATEGORIES OF USERS AND THE PURPOSES OF SUCH USES:

In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act of 1974, these records contained therein may specifically be disclosed outside the DoD as a routine use pursuant to 5 U.S.C. 552a(b)(3) as follows:

The DoD 'Blanket Routine Uses' set forth at the beginning of the DISA's compilation of systems of records notices apply to this system.

POLICIES AND PRACTICES FOR STORING, RETRIEVING, ACCESSING, RETAINING, AND DISPOSING OF RECORDS IN THE SYSTEM:

STORAGE:

Records are stored in file folders.

RETRIEVABILITY:

Information is retrieved by name of the individual.

SAFEGUARDS:

Records are maintained in a locked security file container and may be accessed only by the Commander, Deputy Commander, Chief, Command Support Division, or other persons specifically designated by the Commander.

RETENTION AND DISPOSAL:

Records are maintained in an active file during the period of the individual's assignment to DISA Europe and destroyed on his or her departure.

SYSTEM MANAGER(S) AND ADDRESS:

Command Support Division, EU1, Defense Information Systems Agency-Europe, APO AE 09131-4103.

NOTIFICATION PROCEDURE:

Individuals seeking to determine whether information about themselves is contained in this system should address written inquiries to the Command Support Division, EU1, Defense Information Systems Agency-Europe, APO AE 09131-4103.

The full name of the requesting individual will be required to determine if the system contains a record about him or her. As proof of identity, the requester must present a current DISA identification badge or driver's license.

RECORD ACCESS PROCEDURES:

Individuals seeking access to information about themselves contained in this system should address written inquiries to the Command Support Division, EU1, Defense Information Systems Agency-Europe, APO AE 09131-4103.

The full name of the requesting individual will be required to determine if the system contains a record about him or her. As proof of identity, the requester must present a current DISA identification badge or driver's license.

CONTESTING RECORD PROCEDURES:

DISA's rules for accessing records, for contesting contents and appealing initial agency determinations are published in DISA Instruction 210-225-2; 32 CFR part 316; or may be obtained from the system manager.

RECORD SOURCE CATEGORIES:

Information is obtained from reports, documents, and correspondence received from Civilian and Military Police Service Investigative Agencies, Military Exchange and Commissary systems, or any other agency or individual that reports information of an incident nature to the Commander DISA Europe.

EXEMPTIONS CLAIMED FOR THE SYSTEM:

None.

[FR Doc. 2010-19989 Filed 8-12-10; 8:45 am]

BILLING CODE 5001-06-P

DEPARTMENT OF DEFENSE

Department of the Army

Notice of Availability of the Final Environmental Impact Statement (FEIS) for Training Range and Garrison Support Facilities Construction and Operation at Fort Stewart, GA

AGENCY: Department of the Army, DoD.

ACTION: Notice of Availability (NOA).

SUMMARY: The Department of the Army announces the availability of an FEIS to analyze the environmental and socioeconomic impacts resulting from the proposed construction and operation of 12 range projects and two garrison support facilities at Fort Stewart, Georgia.

DATES: The waiting period for the FEIS will end 30 days after the publication of an NOA in the **Federal Register** by the U.S. Environmental Protection Agency.

ADDRESSES: For further information regarding the FEIS, please contact Mr. Charles Walden, Project Manager, Directorate of Public Works, Prevention and Compliance Branch, Environmental Division, 1550 Frank Cochran Drive, Building 1137-A, Fort Stewart, Georgia 31314-4928 or via e-mail at: Charles.Walden4@us.army.mil.

FOR FURTHER INFORMATION CONTACT: Ms. Dina McKain, Public Affairs Office, at (912) 435-9874 during normal business hours.

SUPPLEMENTARY INFORMATION: To meet the needs of Soldiers at Fort Stewart, additional ranges and garrison support facilities are required. This Final EIS examines the potential environmental and socioeconomic impacts of the construction and operation of 12 ranges (a Multipurpose Machine Gun Range, an Infantry Platoon Battle Course, a Known Distance Range, two Modified Record Fire Ranges, a Qualification Training Range, an Infantry Squad Battle Course, a Fire and Movement Range, a Digital Multipurpose Training Range, a 25 Meter Zero Range, a Combat Pistol Range, and a Convoy Live-Fire Course and associated engagement boxes) and two garrison support facilities (a Sky Warrior Unmanned Aerial System (UAS) facility and a 10th Engineering Battalion Complex) to be constructed over a 4-year time period. It also examines potential impacts to surrounding lands and/or local communities.

In addition to consideration of a No Action Alternative (Alternative A), under which the construction and operation of the ranges and facilities would not take place, the FEIS analyzed two action alternatives. Alternative B includes project sites which predominantly utilize footprints of existing ranges, limit construction and restrictions to existing maneuver terrain, are located in relatively close proximity to the cantonment area to reduce unit transit time, and have fewer overall environmental impacts. Alternative C includes sites that are not predominantly pre-existing range sites and generally are located at greater distances from the cantonment area. These locations generally have a higher level of environmental impacts. After consideration of all anticipated operational and environmental impacts, the Army has selected Alternative B as its preferred alternative.

Impacts were analyzed for a wide range of environmental resource areas including, but not limited to, air quality, noise, water resources, biological resources (to include protected species), cultural resources, socioeconomic, infrastructure (utilities and transportation), land use, and solid and hazardous materials/waste, as well as cumulative environmental effects. No significant impacts are anticipated on any environmental resources. Moderate adverse impacts have been identified for soils, water quality, protected species, timber resources, wildland fire, and noise. Adverse impacts to other resource areas were negligible or minor.

The Final EIS is available at local libraries surrounding Fort Stewart and

may also be accessed at <http://www.Fortstewart-mmp.eis.com>.

Dated: July 28, 2010.

Addison D. Davis, IV,

Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health).

[FR Doc. 2010-19987 Filed 8-12-10; 8:45 am]

BILLING CODE 3710-08-P

DEPARTMENT OF EDUCATION

Office of Postsecondary Education; Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI), Native American-Serving Nontribal Institutions (NASNTI), Hispanic Serving Institutions-STEM and Articulation (HSI-STEM), and Predominantly Black Institutions (PBI) Programs

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Notice reopening the application for eligibility for AANAPISI, NASNTI, HSI-STEM, and PBI fiscal year (FY) 2010 competitions.

SUMMARY: On December 7, 2009, we published in the **Federal Register** (74 FR 64059-64062) a notice inviting applications for eligibility for the programs authorized under Titles III and Title V of the Higher Education Act of 1965, as amended (FY 2010 Eligibility Notice). The FY 2010 Eligibility Notice established a January 6, 2010 deadline date for applicants to apply for designation as an eligible institution under the Title III and Title V programs.

SUPPLEMENTARY INFORMATION: In this notice, the Department announces the reopening of the period for submitting an application for a designation of eligibility. This reopening of the application period applies only to those institutions that intend to apply for new awards in competitions to be announced this fall under the AANAPISI, NASNTI, HSI-STEM, and PBI programs. This limited reopening is intended to ensure that all potential applicants to the AANAPISI, NASNTI, HSI-STEM, and PBI programs have the opportunity to submit applications for eligibility prior to the announcement of these competitions. (While HSI-STEM was not included in the FY 2010 Eligibility Notice, it has been added to this notice due to funds made available by the Student Aid and Fiscal Responsibility Act.) If you have already submitted an application for eligibility based on the FY 2010 Eligibility Notice and were designated as eligible, you do not need to resubmit your application. Deadline

for Transmittal of Applications: September 13, 2010.

Note: Applications for designation of eligibility must be submitted electronically using the following Web site: <https://opeweb.ed.gov/title3and5>.

To enter the Web site, you must use your institution's unique eight-digit identifier, *i.e.*, your Office of Postsecondary Education Identification Number (OPE ID Number). Your business office or student financial aid office should have the OPE ID Number. If not, contact the Department using the e-mail addresses of the contact persons listed in this notice under **FOR FURTHER INFORMATION CONTACT**.

You will find detailed instructions for completing the application form electronically under the "Eligibility" link at the following Web site: <http://www.ed.gov/programs/iduestitle3a/index.html>.

FOR FURTHER INFORMATION CONTACT:

Kelley Harris or Carnisia Proctor, Institutional Development and Undergraduate Education Service, U.S. Department of Education, 1990 K Street, NW., room 6033, Request for Eligibility Designation, Washington, DC 20006-8513. You may contact these individuals at the following e-mail addresses or phone numbers: Kelley.Harris@ed.gov, 202-219-7083. Carnisia.Proctor@ed.gov, 202-502-7606.

If you use a telecommunications device for the deaf (TDD), call the Federal Relay Service (FRS), toll-free, at 1-800-877-8339.

Accessible Format: Individuals with disabilities can obtain this notice in an accessible format (*e.g.*, braille, large print, audiotope, or computer diskette) by contacting the persons listed in this section.

Electronic Access to This Document: You can view this document, as well as other Department of Education documents published in the **Federal Register**, in text or Adobe Portable Document Format (PDF), on the Internet at the following site: <http://www.ed.gov/news/fedregister>.

To use PDF, you must have Adobe Acrobat Reader, which is available free at this site.

Note: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available on GPO Access at: <http://www.gpoaccess.gov/nara/index.html>.

Program Authority: 20 U.S.C. 1057-1059d, 1101-1103g, 20 U.S.C. 1059e (PBI), 20 U.S.C. 1069f (NASNTI), 20 U.S.C. 1059g (AANAPISI) and 20 U.S.C. 1067q (HSI-

STEM) including amendments to these sections made by Public Law 110-315 and Public Law 111-152. CFDA Numbers: 84.031C, 84.382A, 84.382B, and 84.382C

Dated: August 10, 2010.

Eduardo M. Ochoa,

Assistant Secretary for Postsecondary Education.

[FR Doc. 2010-20064 Filed 8-12-10; 8:45 am]

BILLING CODE 4000-01-P

DEPARTMENT OF EDUCATION

Office of Postsecondary Education; Overview Information; Jacob K. Javits Fellowship Program; Notice Inviting Applications for New Awards for Fiscal Year (FY) 2011

Catalog of Federal Domestic Assistance (CFDA) Number: 84.170A.

Dates Applications Available: August 13, 2010.

Deadline for Transmittal of Applications: September 30, 2010.

Deadline for Transmittal of the Free Application for Federal Student Aid (FAFSA): January 31, 2011.

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The purpose of the Jacob K. Javits (JKJ) Fellowship Program is to award fellowships to eligible students of superior ability, selected on the basis of demonstrated achievement, financial need, and exceptional promise, to undertake graduate study in specific fields in the arts, humanities, and social sciences leading to a doctoral degree or to a master's degree in those fields in which the master's degree is the terminal highest degree awarded to the selected field of study at accredited institutions of higher education. The selected fields in the arts are: Creative writing, music performance, music theory, music composition, music literature, studio arts (including photography), television, film, cinematography, theater arts, playwriting, screenwriting, acting, and dance. The selected fields in the humanities are: Art history (including architectural history), archeology, area studies, classics, comparative literature, English language and literature, folklore, folk life, foreign languages and literature, history, linguistics, philosophy, religion (excluding study of religious vocation), speech, rhetoric, and debate. The selected fields in the social sciences are: Anthropology, communications and media, economics, ethnic and cultural studies, geography, political science, psychology (excluding clinical psychology), public policy and

APPENDIX B

BIOLOGICAL ASSESSMENT AND OPINION



United States Department of the Interior

Fish and Wildlife Service

105 West Park Drive, Suite D
Athens, Georgia 30606
Phone: (706) 613-9493
Fax: (706) 613-6059

West Georgia Sub-Office
Post Office Box 52560
Fort Benning, Georgia 31995-2560
Phone: (706) 544-6428
Fax: (706) 544-6419

Coastal Sub-Office
4980 Wildlife Drive
Townsend, Georgia 31331
Phone: (912) 832-8739
Fax: (912) 832-8744

June 11, 2010

Colonel Kevin W. Milton
Office of the Garrison Commander
Department of the Army, Installation Management Command
Headquarters, U.S. Army Garrison
954 William H. Wilson Avenue
Fort Stewart, GA 31314

FWS Log No: 2010-0137

Dear Colonel Milton:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion (BO) based on our review of the proposed construction, operation, and maintenance of 12 new ranges and an Unmanned Aerial System (UAS) site on Fort Stewart Military Installation in Liberty, Long, and Bryan Counties, Georgia, and its effects on the 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.*). Your request for formal consultation was received on February 4, 2010.

Based on information available to the Service, we concur with the Army's February 1, 2010, biological assessment (BA) which concludes that the subject action is not likely to adversely affect the federally-endangered wood stork (*Mycteria americana*), the threatened eastern indigo snake (*Drymarchon corais couperi*), and the threatened frosted flatwoods salamander (*Ambystoma cingulatum*). There are no wood stork nests, rookeries, or consistent foraging areas present in the action area. There have been no recent eastern indigo snake sightings and no known frosted flatwoods salamander breeding ponds within the action area. Therefore, these species will not be considered further in this BO.

This BO is based on information provided in the February 1, 2010, BA; the Fort Stewart/Hunter Army Airfield (FSHAA) Integrated Natural Resources Management Plan 2001-2005 (FSHAA 2001); meetings, telephone conversations with DOA staff, field investigations and other sources of information. A complete administrative record of this consultation is on file at our Coastal Georgia Sub-office in Townsend.

Consultation History

February 4, 2010, the Service received Fort Stewart's request for formal consultation and accompanying BA, dated February 1, 2010, for the proposed action. The Army issued a "may affect" determination for the RCW and a determination of "not likely to adversely affect" for the eastern indigo snake, frosted flatwoods salamander, and wood stork.

March 4, 2010, the Service, by letter dated same, acknowledged receipt of a complete initiation package and notified Fort Stewart of the anticipated delivery date of this BO of no later than June 19, 2010.

April 8, 2010, the Service made a site visit to Fort Stewart, meeting with personnel from the Fish and Wildlife Branch of the Army's Environmental Division. Several of the sites that were to be impacted by the proposed project were visited and the project was discussed.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Project Description

As identified in the February 1, 2010, BA, the action being evaluated is the proposed construction, operation, and maintenance of 12 new ranges and an Unmanned Aerial System (UAS) site on Fort Stewart Military Installation in Liberty, Long, and Bryan Counties, Georgia. Each range project is described in detail in the Army's BA and a summary of the proposed actions is as follows:

- **Multipurpose Machine Gun Range (MPMGR)** – A standard automated MPMGR will be constructed that will lie within Training Areas D7, D8, and D11 in Liberty and Long Counties. The range and its associated buildings, electrical service, paving, other site improvements, and 100 foot buffer will require clear cutting and grading of 282.4 acres of which 115.6 of these acres are within a RCW Habitat Management Unit (HMU), as described in Fort Stewart's Multi-Species Endangered Species Management Plan (ESMP) (FSHAA 2001).
- **Infantry Platoon Course (IPBC)** – A standard automated IPBC will be constructed in Training Area C1 in Bryan County. This course will include a Helicopter Landing Zone, targets, power line, staging areas, several buildings, and a buffer zone. This project will require the clearing and grading of 1773.4 acres of which 908.6 are within an existing RCW HMU.
- **Modified Record Fire Range Delta (MRFRD)** – This range will be constructed within Training Area D6 in Liberty County on Fort Stewart and will consist of the range, several buildings, trails, firing positions, electrical service, roads, parking areas, other site improvements, and a buffer around the range. A total of about 34 acres will be cleared and graded, of which 31.5 acres are within an existing RCW HMU.
- **Infantry Squad Battle Course (ISBC)** – This range will be constructed in Training Area B3 in Liberty County and will consist of the range, targets, electrical systems, several

buildings, a vehicle staging area, parking area, and 100 foot buffer. This project totals 300.7 acres of which 153.8 acres are in an existing RCW HMU.

- Qualification Training Range (QTR) – This range will be constructed in Training Area D7 in Liberty County and consists of the range, several buildings, electrical service, utilities, paving, other site improvements, and a 100-foot buffer. This project totals 261.3 acres of which 183.9 acres are in an existing RCW HMU.
- Digital Multipurpose Training Range (DMPTR) – This range will be located in Training Areas B9 and B10 in Liberty County on Fort Stewart. This project involves modernizing and existing range with new targets, replacing existing facilities, and adding new buildings. This project consists of constructing this 1057.4 acre range which includes an 100-foot buffer. Construction of this range will remove 22.4 acres of existing RCW HMU.
- 10/25M Zero Range, – This 3.8 acre proposed range will be constructed in Training Area D5 in Liberty County and it includes a 100-foot buffer. All 3.8 acres are in an existing RCW HMU.
- Combat Pistol/Military Police Firearms Qualification Course (CPMPQC) – This 4.0 acre range will be constructed in Training Area D5 in Liberty County on Fort Stewart. Facilities include the range, several buildings, and a 50-foot buffer. All 4.0 acres are located in an existing RCW HMU.
- Known Distance Range (KDR) – This proposed range will be located within Training Areas D8, D9, and D10 in Liberty and Long Counties. This project will encompass 68.5 acres and include the range, several buildings, electrical services, and a 100-foot buffer. Construction of this range will remove 39.7 acres from an existing RCW HMU.
- Fire and Movement Range (FMR) – This proposed 5.1 acre range will be constructed within Training Area C3 in Bryan County and include the range, several buildings, electrical service, and other site improvements. Construction of this range will not impact the RCW HMU.
- Modified Record Fire Range Bravo (MRFRB) – An existing range in Training Area B4 in Liberty County will be upgraded with new targets, firing positions, several buildings, electrical service, utilities, other site improvements, and a 100-foot buffer. This project will consist of construction on 33 acres which include 22.2 acres of RCW HMU.
- Convoy Live Fire Course (CLFC) – This project consists of seven small ranges connected by a convoy road and includes several new buildings, electrical services, staging area, other site improvements, and a 100-foot buffer around all the ranges. Construction of this course will impact 193 acres of which 150.4 acres occur in an existing RCW HMU.
- Unmanned Aerial System (UAS) – This project will be constructed in Training Area A19 in Liberty County and consists of an Aviation unit Maintenance Hanger with shops and other related facilities including a 100-foot buffer. This project totals 103.5 acres, of which 33.7 acres occur in an existing RCW HMU.

Construction of these projects is scheduled to begin FY 2011 and will consist of clear-cutting most of the timber, stumping, grubbing, and grading on each project site. Complete removal of timber on these areas is not anticipated; however, effective management of endangered and threatened species will be precluded by range development.

Based on the installation's Multi-Species Endangered Species Management Plan (ESMP) (FSHAA 2001), three Habitat Management Units (HMUs) have been designated for RCWs on Fort Stewart. Unit boundaries are delineated based on military land use and compatibility with

RCW conservation and protection requirements. Of the 4,120.1 acres to be impacted by this project, 1,669.6 acres are within an RCW HMU (equal to 1.24% of the 134,000 acres of HMU), and the remainder are considered non-forested or wetlands. Non-forested habitat is habitat with or without standing timber that is considered unsuitable for endangered species management due to an incompatibility with present or projected future military use. Open spaces such as artillery firing points, borrow pits, live fire ranges, or wildlife food plots also fall within this category.

Project construction will impact habitats typical of the Lower Atlantic Coastal Plain to include wetlands, pine flatwoods and sandhill communities. In general, wetlands are dominated by pond cypress (*Taxodium ascendens*), black gum (*Nyssa sylvatica*), and sweetgum (*Liquidambar styraciflua*) while typical upland vegetation includes longleaf (*Pinus palustris*), slash (*Pinus elliottii*) and loblolly pine (*Pinus taeda*). The open understory is characterized by pyrogenic grass species of the genera *Aristida* and *Sporobolus* along with gallberry (*Ilex glabra*) and species of the family Ericaceae (e.g., *Vaccinium* and *Gaylussacia* spp.). Prescribed fire is frequently used in the project area.

Fort Stewart proposes to implement the 2007 revision of the 1996 Management Guidelines for the Red-cockaded woodpecker on Army Installations (Guidelines). The 2007 revision calls for gradual removal of training restrictions as the number of potential breeding groups (PBGs) in the population grows. Installations may remove training restrictions from 1 cluster for each PBG over 250. Restrictions may be removed from 2 clusters for each PBG from 275-300, and from 3 clusters for each PBG over 300. Training restrictions may be removed on all RCW clusters when the Installation's population recovery goal is reached (350 PBGs for Fort Stewart). At the end of the 2009 nesting season, Fort Stewart had 315 PBGs of RCWs, so they are proposing having 75 clusters, plus 3 clusters for every PBG in excess of 300, or an additional 45 clusters, for a total of 120 clusters to be removed from protection. The locations of the clusters to be removed from protection will be determined by Fort Stewart in coordination with the Service. Status and performance of clusters will continue to be monitored under the sampling scheme designated in the 2007 revision of the Guidelines.

For the purpose of consultation under section 7 of the Act, the action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The Service has determined that the action area for this project consultation consists of all of Fort Stewart since the Installation is proposing the use of the 2007 Guidelines.

Conservation measures proposed by Fort Stewart to minimize potential impact of the project on RCWs and considered a part of this action include:

1. capturing and relocating all RCW's residing in clusters 247, and 361, before clear-cutting begins, to suitable habitat elsewhere on Fort Stewart
2. continue the intensive RCW habitat management and monitoring of RCWs on Fort Stewart in accordance with the 2007 Guidelines. Since 1994, the number of active clusters has increased on the installation by 110% (from 157 active clusters in 1994 to 330 in 2009). Fort Stewart will continue intensive RCW management, which includes application of prescribed fire and timber thinning to maintain the longleaf pine/wiregrass-communities.

3. continue the implementation of artificial cavity provisioning as described in the 2001 ESMP.
4. conduct thinning operations in RCW foraging partitions that have excess pine or hardwood according to the RCW Foraging Matrix (Matrix).
5. inspect forest stands downrange from live fire facilities to determine if significant damage if resulting from bullet impacts and if so, construct earthen berms or other protective measures in coordination with the Service.

Fort Stewart promotes conservation of threatened and endangered (T & E) species through several different avenues (pers. comm., Larry Carlile, DOA, 2005). Soldiers new to Fort Stewart receive T & E species identification and awareness training during in-processing and have open access to T & E species information (e.g., T & E posters, etc) at key sites on the installation, such as Range Control. Soldiers are also issued personal T & E cards by the Integrated Training Area Management Section. Cards contain critical information needed by soldiers to avoid impacting sensitive species and their habitats. Environmental Compliance Officers are also designated for each civilian and military unit and are required to take T & E species training once a quarter.

STATUS OF THE SPECIES/CRITICAL HABITAT

Species/critical habitat description

The RCW is a territorial, non-migratory, cooperative breeding species (Lennartz et al. 1987, Walters et al. 1988) and is the only North American woodpecker that exclusively excavates its roost and nest cavities in living pines. In 1970, the Service listed the RCW as endangered (*Federal Register* 35:16047), and in 1973, the RCW was provided protection as an endangered species with the passage of the Endangered Species Act. No critical habitat has been designated for the RCW.

Historically, the RCW occupied a wide range throughout old-growth, fire-maintained pine ecosystems of the southern United States. Although still widely distributed, the range of the RCW is now limited and fragmented as a result of past and present human activities (such as resource extraction activities, fire suppression, and urban development) and natural factors (such as hurricanes and pine beetle outbreaks). The remaining RCW populations exist primarily on Federal lands located in the Coastal Plain from North Carolina to Texas, the Piedmont of Georgia and Alabama, the Sandhills of North Carolina and South Carolina, and the interior highlands of Arkansas, Oklahoma, and until recently, Kentucky (Costa and Walker 1995).

Life history

The RCW has an advanced social system that revolves around family groups. A typical RCW group includes one pair of breeding birds, the current year's offspring (if any), and zero to four helpers. Helpers are usually male offspring from previous breeding seasons that assist the breeding pair by incubating eggs, feeding the young, excavating cavities, and defending the territory (Ligon 1970, Lennartz and Harlow 1979, Lennartz et al. 1987, Walters et al. 1988). The RCW nesting season occurs from April to July. Incubation lasts approximately 10 days, and the young fledge 24 to 26 days after hatching. Some juvenile males disperse from their natal territory prior to the next breeding season in an attempt to find vacant territories, or to establish their own

(Hooper et al. 1980, USFWS 2003). Others may remain and become helpers during subsequent nesting seasons. Most juvenile females disperse after fledging, although some may remain with the group as helpers (Walters et al. 1988). The average dispersal distance of fledgling males and females is about 3 miles (Walters 1991, Letcher et al. 1998).

Each group of RCWs occupies a discrete territory consisting of its cavity trees, called a cluster, and adjacent foraging habitat (Walters 1990). The RCW requires mature (usually 60 or more years old), live pine trees to excavate its nesting and roosting cavities. The cavity trees are essential to the RCW because they provide shelter and a place to nest and raise young (Ligon 1970). A typical cluster contains between one and 20 cavity trees, and the breeding male usually chooses the most recently excavated natural cavity as the nest tree, or selects cavity trees with higher resin yields (Conner and Rudolph 1989). Such cavity trees may enhance the survival of the nestlings by decreasing the parasite load of nestlings and incubating adults, and providing a resin barrier to deter snake predation.

RCW cluster stands are typically less dense than surrounding stands and may be the least dense stands available (USFWS 2003). For clusters, basal areas as low as 40 feet²/acre in longleaf stands and from 40 to 60 feet²/acre in shortleaf/loblolly stands are suitable (Conner et al. 1991). Seedtree and shelterwood cuts with excessive pine or hardwood midstory, however, are not acceptable as nesting habitat. Once established, clusters are often utilized for many consecutive years or even decades (Walters 1990). Hardwood midstory lessens the habitat quality, eventually leading to cavity abandonment when the hardwood midstory reaches cavity height (Conner and O'Halloran 1987, Costa and Escano 1989). Cluster abandonment may also occur as a result of displacement by competing cavity dwellers, or stochastic events such as hurricanes (Conner and O'Halloran 1987).

RCWs scale and probe bark on the trunks and limbs of living pine trees while foraging for insects. The amount of foraging area used by a group is dependent upon the quality of the habitat and population density. Research indicates that birds generally forage within one-half mile of the cluster (USFWS 2003). RCW home ranges may vary seasonally, and encompass 60 to 300 acres. Habitat typically consists of open pine and/or pine/hardwood forests. Although in some habitats RCWs will use smaller pine trees as foraging substrate (DeLotelle et al. 1987), they prefer pines greater than 10 inches in diameter at breast height (dbh) (USFWS 2003). Groups may forage on pines scattered through hardwood stands, but pure hardwood stands are of little value to the RCW (Conner and O'Halloran 1987). The highest populations of the birds occur on areas with active prescribed burning programs that control hardwoods. Many complex and interrelated factors, such as condition of the understory plant community, annual weather fluctuations, forest type, soils, physiographic province, season of the year, fire frequency and intensity, are important in determining foraging habitat quality.

The RCW is territorial and defends its home range from adjacent groups (Hooper et al. 1982, Ligon 1970). Territories tend to be smaller in areas with few hardwoods, presumably because of higher quality habitat. Home range size is related to both habitat and demographic (e.g., group size and population density) variables (Hooper et al. 1982, Lennartz et al. 1987) and has been found to be inversely related to habitat quality (DeLotelle et al. 1987, 1995). Studies by Hardesty et al. (1997) and James et al. (2001) suggested that habitat structure, and not just the quantity of total resources, is an important determinant of home range size, territory quality, and reproductive success. The availability, quantity, and quality of foraging habitat affects RCW cluster status,

group size, home range size, and reproductive success (Conner and Rudolph 1991, DeLotelle et al. 1987, 1995, Hardesty et al. 1997). Low-quality foraging habitat and large reductions in available foraging habitat can cause RCWs to abandon clusters, reduce fledging rates, and disrupt social interactions (Conner and Rudolph 1991, DeLotelle et al. 1995, Jackson and Parris 1995).

Population dynamics

According to the RCW Recovery Plan: *Second Revision* (Recovery Plan), the recovery of the RCW is directly linked to the viability of discrete populations within selected southeastern states. Populations required for recovery are distributed among 11 recovery units based on physiographic region to ensure the representation of broad geographic and genetic variation in the species. Viable populations within each recovery unit, to the extent allowed by habitat limitations, are essential to recovery of the species as a whole. Until recently, most RCW populations were considered stable at best or declining. RCW population trends since the early 1990's are improving, with an estimated 5,627 active RCW clusters range-wide (USFWS 2003). The species can be delisted when five criteria are met that establish a tier of populations within the 11 recovery units that contain sufficient suitable nesting and foraging habitat and are not dependent on the installation of artificial cavities to remain stable.

Long-term viability of an RCW population, in genetic terms, depends on the presence of an adequate number of breeding individuals for the natural processes that increase genetic variability (e.g., mutation and recombination) to offset the natural processes that decrease genetic variability (e.g., genetic drift and inbreeding). Additionally, any prediction of a population's viability should also consider the population's ability to survive population fluctuations due to demographic and environmental fluctuations (Koenig 1988) or natural catastrophes. Reproductive rates, population density, and recolonization rates may influence RCW population variability more than mortality rates, sex ratios, and genetic viability. Therefore, dispersal of adult birds into breeding vacancies is essential for population persistence (Daniels et al. 2000, Schiegg et al. 2002). RCWs exhibit relatively low adult mortality rates; annual survivorship of breeding males and females is high, ranging from 72 to 84 percent and 51 to 81 percent, respectively (Lennartz and Heckel 1987, Walters et al. 1988, DeLotelle and Epting 1992).

Although the relationship between RCW population variability and density is not well understood, recent studies indicate spatial distribution of territories is important in long-term population stability. Conner and Rudolph (1991) found that, in sparse populations, RCW group size and the number of active clusters decreased as fragmentation increased. Hooper and Lennartz (1995) suggested that populations with less than 4.7 active clusters within 1.25 miles on average had critically low densities that inhibited population expansion. Results from a spatially explicit simulation model of RCW population dynamics suggest that population growth rate may depend more on the number and spatial distribution of territories, than on the initial composition of the population (Letcher et al. 1998). Achieving a self-sustaining population required fivefold more territories when territories were randomly spaced than when they were maximally clumped, and populations with as few as 49 territories were stable when those territories were highly aggregated. Populations of more maximally aggregated groups are likely to persist over the short term (i.e., 20 years) (Crowder et al. 1998).

Natural population growth (i.e., without recruitment clusters) occurs at extremely low rates (one to two percent per year) in this species (Walters 1991) and the availability of cavity trees is limiting

(Copeyon 1990, Allen 1991). New groups or new territories arise by two processes, pioneering and budding (Hooper 1983). Pioneering is the occupation of vacant habitat by construction of a new cavity tree cluster and is relatively rare. Budding is the splitting of a territory, and the cavity tree cluster within it, into two. Budding is more common than pioneering in RCWs, since the new territory contains cavities from the outset (USFWS 2003). Inactive clusters are important to maintaining extant populations of RCWs and may provide a short-term opportunity to enhance habitat available to RCWs and, thus, increase the number of groups in populations (Doerr et al. 1989). After a territory is abandoned for two or more years, however, it is almost never reoccupied, typically because cavities are unsuitable due to deterioration or hardwood encroachment (Beckett 1971, Conner and Locke 1982, Copeyon et al. 1991).

However, the technology to create new territories at desired locations exists and management for optimum territory clumping is, therefore, possible (Letcher et al. 1998). Artificial cavities can be installed in unoccupied habitat that is otherwise suitable (Copeyon 1990, Allen 1991), with subsequent occupancy by dispersing birds, typically subadults (Carrie et al. 1999, Conner et al. 1999). Adding artificial cavities to sites already occupied may increase group size (Carrie et al. 1999). Artificial cavities provide additional roosting opportunities for subadult males, encouraging them to remain in their natal clusters and potentially inherit the territory (Carrie et al. 1999). Females may also benefit when additional cavities are provided because they are the most subordinate members of the RCW social group and, therefore, may not always be able to secure adequate roost cavities.

Inducing the formation of RCW groups in restored habitat with artificial cavities is an established and successful technique (Copeyon et al. 1991, Walters et al. 1992, Gaines et al. 1995, Watson et al. 1995). Within 1 year of restoring habitat and providing artificial cavities at 20 unoccupied territories in the Sandhills of North Carolina, 90 percent of the sites were occupied by RCWs (Copeyon et al. 1991). Translocating RCWs is another method successfully used to establish new groups (Rudolph et al. 1992, Allen et al. 1993, Hess and Costa 1995, Costa and Kennedy 1994, Franzreb 1999). Translocation can include augmenting a solitary-bird group or translocating a pair of subadult RCWs [i.e., unrelated male and female (Costa and Kennedy 1994)]. Franzreb (1999) found that 63.2 percent of translocated birds (including adults and juveniles) remained at the release site for at least 30 days and 51.0 percent reproduced.

Status and distribution

The RCW was listed as endangered due to documented declines in local populations and massive reduction in foraging and nesting habitat. The life history of RCWs is closely tied to the occurrence of fire-maintained old growth pine forests that once dominated the southeastern United States. Only three million acres of longleaf pine forest remain of the estimated 60 to 92 million acres once in existence (Frost 1993). Timber clearing for agriculture, short timber rotations and the suppression of fire has reduced the amount and quality of RCW foraging and nesting habitat.

At the time of listing, the total number of individuals had declined to less than 10,000 in widely scattered and isolated populations (USFWS 2003). Most RCW populations (regardless of location or land ownership) were considered stable at best, but more likely declining (Costa 1995). Costa and Escano (1989) documented RCW population declines in at least ten, and perhaps as many as 17, populations on National Forests. James (1995) estimated that the number of active clusters

range-wide declined 23 percent between the early 1980s and 1990. Recently, numerous RCW populations have increased, particularly on Federal lands, as a result of management activities.

Currently, 5,903 active clusters are known across 11 States in the southeast United States. National Forests (NF), military installations, and National Wildlife Refuges (NWR) contain the majority of extant populations and most of the habitat that is potentially suitable for RCWs. Conservation of RCWs as a species will depend on prudent management of habitats on those Federal lands. National Forests support the majority of the core populations required for delisting of the species, and therefore, have a uniquely important role in the species' recovery. Prior to the 1980s, most populations on National Forests were declining, but management efforts during the past decade, especially prescribed burning and cavity management, have stabilized most of those populations and led to increases in some (USFWS 2003).

The Service, in response to the apparent range-wide decline of the species on private lands, developed a private lands conservation strategy that has been aggressively implemented, modified as necessary based on new scientific findings, and regularly evaluated to ensure objectives are being achieved. The RCW recovery objectives of the private lands strategy are to increase the acreage of private land habitat being managed for RCWs, maintain or increase the larger existing RCW population on private lands, rescue RCW groups from private lands that would be lost as a result of demographic and/or genetic uncertainty, foster and develop cooperative partnerships between and among Federal, State, and private parties responsible for and/or interested in, RCW recovery, and increase the size of designated recovery and support populations while pursuing those objectives (Costa 1995). To achieve those strategic objectives, the Service has implemented three types of agreements involving private landowners: Safe Harbor Agreements, Habitat Conservation Plans (HCPs), and "no-take" management plans implemented via Memoranda of Agreement (Costa 1995).

In Georgia, the largest and most stable populations are on Federal lands, including Fort Stewart, Fort Benning, Piedmont NWR and Oconee NF. The Georgia Department of Natural Resources (GDNR) has an active and successful RCW Safe Harbor program for private landowners. To date, 103 baseline groups have been enrolled and the program has assisted in the creation of 22 new RCW groups through the installment of recruitment clusters.

Fort Stewart Army Installation provides habitat for 40% of the RCWs in Georgia and is one of 13 Primary Core Recovery Populations identified in the Service's RCW Recovery Plan. The amount of available habitat and delisting criteria or population size determines the designation as a primary or secondary core population (USFWS 2003). As a primary core population, Fort Stewart has two recovery objectives. One objective is the Installation Regional Recovery Goal (IRRG) which, according to the installation's ESMP (FSHAA 2001), is 500 clusters. An estimated 400-500 active clusters is believed to be the cluster equivalent of 350 potential RCW breeding groups, the preferred measure of RCW population size and a number thought highly robust to demographic and environmental stochasticity as well as inbreeding depression (USFWS 2003). This goal is achievable due to the large amount of suitable RCW habitat (136,929 acres) (FSHAA 2001) on Fort Stewart. However, imposition of training restrictions on 500 RCW clusters would have unacceptable adverse impacts to the installation's training mission. Therefore, the Management Guidelines for the Red-cockaded Woodpecker on Army Installations (U.S. Army 1996) provides for a second objective, the Installation Mission Compatible Goal (IMCG). The

IMCG is the number of protected clusters thought compatible with the current military mission, which in the case of Fort Stewart is 411 active clusters (FSHAA 2001). Artificial cavities and other habitat improvements will be used to create 89 SRCs, satisfying the difference between the IMCG and required IRRG. SRCs are not subject to military training restrictions nor are they held to foraging habitat protection requirements (FSHAA 2001).

Fort Stewart currently supports a total of 330 active RCW clusters and the success of their intensive management efforts is reflected in the high growth rate documented for the installation. According to USFWS (2003), RCW growth rates documented during the 1990's on Fort Stewart and Camp Lejeune Marine Corps Base were among the highest yet documented in the absence of translocation. Projected population trends based on a recommended growth rate of at least 5 percent per year are outlined at five-year intervals in USFWS (2003; Table 10). Fort Stewart projects it will reach its IRRG (350 PBGs) in the breeding season of 2013 (February 1, 2010, BA).

ENVIRONMENTAL BASELINE

Status of the species within the Action Area (AA)

RCW populations on Fort Stewart are stable or increasing (February 1, 2010, BA). There are currently 330 active RCW clusters on Fort Stewart, with about 315 of them being potential breeding groups (PBGs). RCW populations on Fort Stewart increased at a rate of about 5% a year from 1994 until 2009. Fort Stewart expects to achieve recovery of its population in 2013, slightly ahead of expected population trends outlined in the RCW Recovery Plan (USFWS 2003). Of the 4,120.1 acres to be impacted by this range construction project, 1,669.6 acres are within an RCW HMU (equal to 1.24% of the 134,000 acres of HMU).

Factors affecting species environment in the AA

Fort Stewart comprises 279,270 acres, the majority of which were acquired during 1941 and 1945 from individual landowners (FSHAA 2001). Although slight boundary adjustments occurred within the first 20 years, there are no past or present State, tribal, local, or private actions affecting the species within the AA.

The installation's ESMP (FSHAA 2001) sets forth conservation goals, management actions and prescriptions needed to effectively manage for the RCW, which consists of commercial thinning, control of hardwood midstory, prescribed burning, native ground cover re-establishment and conservation and regeneration of longleaf pine. Several of these management actions have been implemented in the past within the AA, including prescribed burning, midstory control, and commercial thinning to improve habitat for the RCW. The ESMP designates three Habitat Management Units (HMUs) for RCWs on Fort Stewart, and these HMUs are about 134,000 acres in size.

EFFECTS OF THE ACTION

Because of the environmental due diligence required of major Federal construction projects, the resultant tight construction deadlines, and the critical training need this Congressionally-funded project will satisfy, this review is being performed well in advance of the final construction design. Therefore, this opinion is based on the Army's assessment of a "worst case scenario" relative to the project's potential impact to federally-listed species.

Under Section 7(a)(2) of the ESA, "effects of the action" refers to the direct and indirect effects of an action on the species, together with the effects of other activities that are interrelated or interdependent with that action. The effects of the proposed action are added to the environmental baseline to determine the future baseline, which serves as the basis for the determinations in this document. The Service has determined that there are no interrelated or interdependent actions apart from the action under consideration.

Using the Foraging Matrix (Matrix), a detailed analysis of potential impacts to RCW was performed by Fort Stewart in accordance with the Service's May 5, 2005, memorandum entitled "Implementation Procedures for Use of Foraging Habitat Guidelines and Analysis of Project Impacts under the Red-cockaded Woodpecker (*Picoides borealis*) Recovery plan: *Second revision*." This analysis, which appears in Fort Stewart's BA, examined project impacts at the foraging partition, group, neighborhood and population levels and determined that:

1. The construction, operation and maintenance of the proposed ranges will be a long term, permanent event that will directly impact eight active RCW clusters located within the project area. The proposed ranges will be cleared resulting in the loss of all cavity trees within RCW clusters 69, 105, 247, 256, and 361, and most of the foraging habitat for these clusters. The foraging partitions of three other RCW clusters (18, 34, and 124) will be directly impacted by project construction by not having adequate foraging habitat after construction of the project.
2. Five active clusters (38, 67, 96, 116, and 141) would fail to meet the Managed Stability Standard (MSS) due to inadequate pine stems > 10 inches DBH, but would persist after the range construction because they will have adequate potential foraging acres available.
3. Three clusters (66, 342, and 389) would fail to meet MSS due to an over abundance of pine < 10 inches DBH. However, Fort Stewart will thin this pine during construction of the ranges, and these clusters are expected to persist.
4. Cluster 252 would not meet MSS due to an over-abundant midstory, however, the midstory will be removed during project construction so the cluster will then meet the MSS.
5. Fourteen RCW clusters (5, 22, 70, 103, 130, 154, 179, 268, 300, 322, 334, 339, 356, and 407) will be indirectly affected by the range construction by having some of their foraging areas removed, however all these clusters would meet MSS and are expected to persist.

Presented in Table 1 is a summary of expected cluster impacts due to the proposed project, based on the Army's assessment of a worst case scenario. Opportunities to manage for this species still exist on the installation, and the proposed impacts are not expected to impede recovery of the Fort Stewart RCW population.

Table 1. Summary of RCW cluster impacts

Cluster #	Status	Loss of cluster expected	Impact due to loss of:		
			Cavity Trees	Foraging Habitat	Demographic Isolation
5	Active	no		X	
18	Active	yes		X	
22	Active	no		X	
34	Active	yes		X	
38	Active	no		X	
66	Active	no		X	
67	Active	no		X	
69	Active	yes	X	X	
70	Active	no		X	
96	Active	no		X	
103	Active	no		X	
105	Active	yes	X	X	
116	Active	no		X	
124	Active	yes		X	
130	Active	no		X	
141	Active	no		X	
154	Active	no		X	
179	Active	no		X	
247	Active	yes	X	X	
252	Active	no		X	
256	Active	yes	X	X	
268	Active	no		X	
300	Active	no		X	
322	Active	no		X	
334	Active	no		X	
339	Active	no		X	
342	Active	no		X	
356	Active	no		X	
361	Active	yes	X	X	
389	Active	no		X	
407	Active	no		X	

Clear-cutting cavity trees in active clusters will result in cluster abandonment and the dissolution of the potential breeding group (PBG) occupying that cluster. A PBG, as defined in USFWS (2003), consists of an adult male and adult female that occupy the same cluster, with or without helpers and whether or not the breeding pair attempts to nest or successfully fledges young. Though possible, it is highly unlikely that displaced RCW groups will abandon clusters and disperse to a vacant territory as a group. Therefore, breeding vacancies, where there were none,

could occur post-project. These vacancies could last for several years, lowering reproduction in affected territories until breeding vacancies become filled.

RCWs displaced by the proposed project will be forced to seek out new territories and/or breeding vacancies. In general, RCWs exhibit high survival rates but the costs of dispersal can be high and competition for suitable territories or breeding vacancies is intense. For example, breeding females that disperse suffer higher mortality rates than those who remain in a group (Daniels and Walters 2000). Survival of RCWs during the first year is much lower than in subsequent years and is influenced primarily by the number of birds dispersing and the number of available breeding vacancies (USFWS 2003). Dispersal of young birds and adult breeders occurs naturally within RCW populations, and typically takes place just before or just after the breeding season.

An RCW Neighborhood Level Analysis was completed for several of the individual ranges and this project and is more completely described in the BA.

In an attempt to minimize impacts to birds occupying clusters 69, 105, 247, 256, and 361, Fort Stewart will translocate RCWs to suitable but unoccupied habitat, subject to USFWS concurrence. Techniques and benefits of translocation are discussed in Carrie et al. (1999). Translocated birds can be particularly vulnerable during the transport process. Injury or death can occur from the time birds are placed in transport boxes to the time they are removed and released into the recipient cavity tree. Such death or injury results in a loss of potential breeders or helpers in the vicinity of the proposed release site and the translocation itself reduces the pool of potential breeders and helpers in the vicinity of the donor (impact) site (Franzreb 1999).

It is important to note that the majority of death, if any, is expected to occur post-translocation. Birds may die from exposure or predation if after release they disperse back to their capture territory (where habitat is severely degraded or no longer available) or become floaters [i.e., never establish a new territory or occupy an existing one, being forced to compete for roost cavities]. Dispersal to a population outside the recipient population is also a possibility (Carrie et al. 1999).

Accounting for post translocation death, however, is difficult because dead birds are never found. They simply remain unaccounted for, and are assumed dead unless monitoring efforts at the release site or elsewhere document the bird's presence.

Potential indirect effects (e.g., noise, dust, traffic, etc.) caused by the construction, operation, and maintenance in the action area is not expected to adversely impact RCW populations due to the existence of stable or increasing RCW populations on similar landscapes for many years. A study on the effect of noise on RCW fecundity (Delaney et al. 2002) demonstrated that reproduction of RCWs in or near noisy areas was not statistically different from the reproduction of RCWs in more protected habitats. A study of the effects of military maneuver on the Fort Stewart RCW population (Hayden et al. 2003) was inconclusive.

Fort Stewart also proposes to implement the 2007 revision of the 1996 Management Guidelines for the Red-cockaded woodpecker on Army Installations (Guidelines). The revision calls for removal of training restrictions in RCW clusters based on the number of PBGs in the population with a goal of removing training restrictions on all RCW clusters when the Installation's population recovery goal is reached. Fort Stewart proposes to remove training restrictions on 120 RCW clusters, with the locations of the clusters to be determined by Fort Stewart in coordination

with the Service. Status and performance of clusters will continue to be monitored under the sampling scheme designated in the 2007 revision of the Guidelines. Fort Stewart has had several unprotected supplemental recruitment clusters since 2001 and has not had any clusters damaged or destroyed since then.

Training impacts due to Fort Stewart's ongoing training mission were analyzed in detail in the Service's 2001 biological opinion on Fort Stewart's ESMP and INRMP. Since up to 120 RCW clusters could now be left unprotected, impacts from munitions could kill or injure RCWs that happen to enter into a live-fire area, or damage their habitat by destroying their trees. Accidental detonation of unexploded ordinance could kill or injure individual RCWs or damage their habitat. Vehicle impacts from training could also do the same. Wildfires caused by munition impacts or other training could impact RCW's (harass) or their habitat. Any of these impacts would be rare, but could occur. Fort Stewart has not lost any RCW groups due to training impacts since 1992, however, they have lost individual RCWs (two birds have been known to have died from wildfires) (pers. comm., Tim Beaty, DOA, 2010).

Construction of the ranges and removing training restrictions on 120 RCW clusters are not expected to prevent Fort Stewart from reaching its RCW recovery goal of 350 PBGs.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this BO. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Actions adjacent to Fort Stewart, such as logging and clear-cutting operations, urban development, and associated activities, will all continue to reduce and degrade available habitat for the RCW. However, there is no State or private land within the action area considered in this consultation. Consequently, the Service did not identify any State or private activities that are reasonably certain to occur within the action area that would constitute cumulative effects.

CONCLUSION

After reviewing the current status of the RCW; the environmental baseline for the AA; the effects of the proposed construction, operation, and maintenance of the proposed ranges; and the cumulative effects, it is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of the RCW. Critical habitat for the RCW has not been designated; therefore none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or 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 species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out 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 a 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 the DOA for the exemption in section 7(o)(2) to apply. The DOA has a continuing duty to regulate the activity covered by this incidental take statement. If the DOA 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, Fort Stewart must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

Fort Stewart analyzed the impacts of the proposed range construction projects in accordance with the Service's May 5, 2005, memorandum entitled "Implementation Procedures for Use of Foraging Habitat Guidelines and Analysis of Project Impacts under the Red-cockaded Woodpecker (*Picoides borealis*) Recovery plan: *Second revision*." Based on the results of this analysis, the Service anticipates incidental take in the form of harassment, harm, wound, kill, and/or capture of **eight active RCW groups** (clusters 18, 34, 69, 105, 124, 247, 256, and 361) due to the construction of the ranges. This take will result from one or more of the following:

- harm due to loss of cavity trees and foraging habitat from timber clearing for project construction,
- capture of birds for transport and harassment, harm, wounding, or killing of birds during the transport process,
- harassment of translocated birds due to forced changes in normal behavior patterns such as breeding, feeding and/or sheltering. We anticipate that most, if not all of the take will be associated with post- translocation dispersal. However, because dead birds are never found after translocation, quantifying such take is impossible. Birds are simply assumed dead, if after release, they remain unaccounted for. Therefore, under the worst case scenario, all translocated birds (i.e., 8 RCW groups) will suffer mortality.

For implementing the 2007 Guidelines and removing 120 RCW clusters from protection, the Service anticipates the incidental take in the form of harassment, harm, wound, kill, and or capture of **one additional active RCW group** as a result of training activities, wildfires, or training accidents. This take may be in the form of harass, harm, wound, or kill. This figure equals 1% of the proposed deprotected clusters.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that the anticipated level of incidental take is not likely to result in jeopardy to the species.

REASONABLE AND PRUDENT MEASURES (RPMs)

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the impacts of incidental take.

- (1) Establish 8 additional recruitment clusters established for the purpose of maintaining demographic continuity of the local population, thereby minimizing the adverse impacts of the incidental take.
- (2) Improve habitat conditions in RCW habitat surrounding the proposed construction areas.
- (3) Track incidental take of RCW individuals known to occupy clusters 18, 34, 69, 105, 124, 247, 256, and 361 to facilitate a more accurate assessment of any future environmental baseline.
- (4) Determine the stability of the Fort Stewart RCW population.
- (5) Monitor any damage to the proposed unprotected clusters.

TERMS AND CONDITIONS (TCs)

In order to be exempt from prohibitions of section 9 of the Act, the Army must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

- (1) [RPM(1)] Create eight additional RCW recruitment clusters. Existing unoccupied recruitment clusters within 0.5 mile of the project area can count towards this total. To prevent capture by neighboring groups, place recruitment clusters no closer than 0.25 miles of an existing cluster. To achieve beneficial spatial arrangement and density requirements, strive to locate recruitment clusters within 2 miles and preferably no farther than 1 mile from existing or newly created recruitment clusters (see 8B, USFWS 2003).
- (2) [RPM (2)] Conduct prescribed burns at least once every 3 years, preferably during the growing season; conduct timber thinning operations and conduct monitoring activities in RCW habitat surrounding the project area to determine the effectiveness of habitat management actions. Examples of monitoring activities to be conducted include inspecting cavities to determine

activity status, banding adult and nestling RCWs, and determining group composition in recruitment clusters.

- (3) [RPM (3)] Color band all RCWs occupying clusters identified in RPM #3 prior to impact. Monitor color banded RCWs post translocation. Record movements (e.g., as determined by confirmed presence in other RCW clusters) presence, and breeding status of color banded individuals during annual RCW monitoring. For a period of five years after range construction, provide annual reports to the Service's Coastal Georgia field office.
- (4) [RPM (4)] Conduct a simulation study (e.g., Letcher et al. 1998) of the Fort Stewart RCW population to estimate stability such that the spatial distribution of territories and foraging partitions can be accounted for and perhaps maximized in future management plans and military construction projects.
- (5) [RPM (5)] Visit deprotected cavity trees once a year for 5 years and record any damage or destruction of trees in annual reports to the Service's Coastal Georgia field office.

Upon locating a dead, injured, or sick individual of an endangered or threatened species, initial notification must be made to the Coastal Georgia Fish and Wildlife Service Ecological Services Field Office at 4980 Wildlife Drive, Townsend, Georgia 31331. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.

These reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. The Service believes that no more than **nine RCW groups**, will be incidentally taken. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking, and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes 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 a listed species or critical habitat, to help implement recovery plans, or to develop information. We recommend implementation of the following conservation recommendation: assist private landowners adjacent to Fort Stewart in restoring native longleaf pine habitats for the benefit of wildlife species that utilize these habitats, such as the RCW.

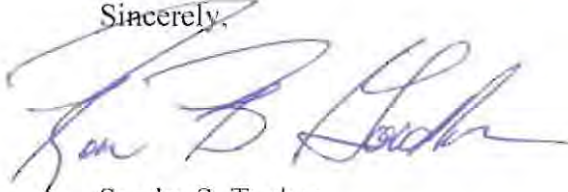
REINITIATION NOTICE

This concludes formal consultation on the action outlined in the February 1, 2010, request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Army involvement or 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 action. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease pending reinitiation of consultation.

The Service appreciates the cooperation of Fort Stewart personnel during this consultation. We would like to continue working with you and your staff regarding this proposed project. For further coordination please contact staff biologist Robert Brooks at (912) 832-8739.

Sincerely,



FOR

Sandra S. Tucker
Field Supervisor

cc: file
FWS, ES, Townsend, GA
FWS, ES, Jackson, MS (RCW Coordinator)
FWS, RO, ES, Atlanta, GA

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United States Department of the Interior

Fish and Wildlife Service

105 West Park Drive, Suite D

Athens, Georgia 30606

Phone: (706) 613-9493

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West Georgia Sub-Office

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Fort Benning, Georgia 31905-2560

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Coastal Sub-Office

4980 Wildlife Drive

Townsend, Georgia 31331

Phone: (912) 832-8739

Fax: (912) 832-8744

March 4, 2010

Colonel Kevin W. Milton
Office of the Garrison Commander
Department of the Army, Installation Management Command
Headquarters, U.S. Army Garrison
954 William H. Wilson Avenue
Fort Stewart, Georgia 31314
Attn: Mr. Tim Beary,
DPW, Fish and Wildlife Branch

Re: FWS Log # 2010-0137

Dear Colonel Milton:

This letter acknowledges the U.S. Fish and Wildlife Service's (Service's) February 4, 2010, receipt of your letter requesting initiation of formal section 7 consultation under the Endangered Species Act. This consultation concerns the possible effects from the proposed construction, operation, and maintenance of 12 new ranges and an Unmanned Aerial System (UAS) site on Fort Stewart, Georgia, on the red-cockaded woodpecker (*Picoides borealis*), frosted flatwoods salamander (*Ambystoma cingulatum*), eastern indigo snake (*Drymarchon corais couperi*), and wood stork (*Mycteria americana*).

The Service has determined that all information required of you to initiate formal consultation has been received or is otherwise accessible for our consideration and reference. We have assigned log number 2010-0137 to this consultation. Please refer to this number in future correspondence on this consultation. Section 7 allows the Service up to 90 calendar days to conclude formal consultation with your agency and an additional 45 calendar days to prepare our biological opinion (unless we mutually agree to an extension). Therefore, we expect to provide you with our biological opinion no later than June 19, 2010.

As a reminder, the Endangered Species Act requires that after initiation of formal consultation, the Federal action agency may not make any irreversible or irretrievable commitment of resources that limits future options. This practice insures agency actions do not preclude the formulation or implementation of reasonable and prudent alternatives that avoid jeopardizing the continued existence of endangered or threatened species or destroying or modifying their critical habitats.

If you have any questions about this consultation or the consultation process in general, please feel free to contact me or staff biologist Robert Brooks of our Coastal office at (912) 832-8739, extension 107.

Sincerely,

A handwritten signature in cursive script that reads "Sandra S. Tucker".

Sandra S. Tucker
Field Supervisor

cc: file
FWS, ES, Townsend, GA



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

FEB 01 2010

Office of the Garrison Commander

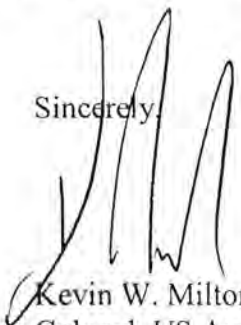
US Department of the Interior
Fish and Wildlife Service
ATTN: Sandra Tucker
4270 Norwich Street
Brunswick, Georgia 31520

Dear Ms. Tucker:

Fort Stewart proposes to construct and operate 12 ranges and an Unmanned Aerial System site. Additionally, Fort Stewart will implement the 2007 Guidelines for the Management of the Red-cockaded Woodpecker (RCW) on Army Installations. A Biological Assessment (BA) has been prepared in accordance with the requirements of the Endangered Species Act. The conclusion reached in this BA is that the proposed action will adversely affect the RCW, will not adversely affect the eastern indigo snake, frosted flatwoods salamander, or wood stork, and will not affect the shortnose sturgeon. The proposed action will not prevent Fort Stewart from achieving its RCW recovery goal of 350 potential breeding groups because Fort Stewart will have enough suitable or potentially suitable RCW habitat to support 665 clusters post-project.

If additional information is needed, please contact Mr. Tim Beaty, Directorate of Public Works, Fish and Wildlife Branch at telephone (912) 767-7261. Your continued cooperation and assistance are appreciated.

Sincerely,



Kevin W. Milton
Colonel, US Army
Commanding

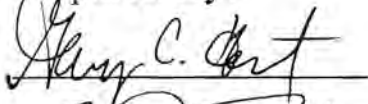

Enclosures

BIOLOGICAL ASSESSMENT

For Range and Infrastructure Construction Projects Associated with the Fort Stewart Mission and Master Planning Environmental Impact Statement

Fort Stewart, Georgia

Prepared By:

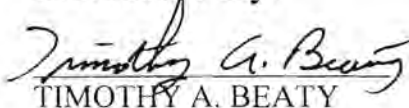
GARY C. HART
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Wildlife Biologists
Wildlife Management Branch
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Fort Stewart, GA

Reviewed By:



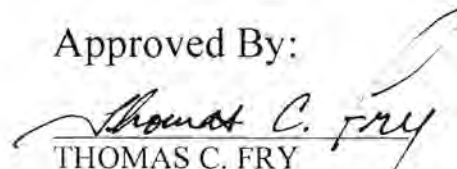
LAWRENCE D. CARLILE
Chief, Planning and Monitoring
Wildlife Management Branch
Environmental Division
Directorate of Public Works
Fort Stewart, GA

Submitted By:



TIMOTHY A. BEATY
Chief, Wildlife Management Branch
Environmental Division
Directorate of Public Works
Fort Stewart, GA

Approved By:



THOMAS C. FRY
Chief, Environmental Division
Directorate of Public Works
Fort Stewart, GA

Biological Assessment for Range and Infrastructure Construction Projects Associated with the Fort Stewart Mission and Master Planning Environmental Impact Statement

Project Descriptions

The action area for each project in this Biological Assessment consists of the proposed range opening plus, at a minimum, a 100-foot buffer.

Multipurpose Machine Gun Range (MPMGR)

The proposed action is to construct a standard design Automated MPMGR that will lie within Fort Stewart Training Areas (FSTA) D7.2, D8.1, and D11.2 (Figure 1). Primary facilities include the MPMGR, site development, classroom building, ammunition breakdown building, bleacher enclosure, range control tower, range operations and storage building, latrine, covered mess and building and information systems. Supporting facilities include electric service, paving, site improvements, storm drainage, and information systems. This action consists of constructing a 302.6-acre range that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing Red-cockaded Woodpecker (RCW) Habitat Management Unit (HMU). The 134,000 acre RCW HMU is defined in Fort Stewart's Integrated Natural Resource Management Plan (INRMP 2001).

Infantry Platoon Battle Course (IPBC)

The proposed action is to construct a standard design Automated IPBC in FSTA C1 (Figure 1). Primary facilities include the Battle Course and the Helicopter Landing Zones. The battle course includes the target emplacements, downrange electrical, vehicle staging area, range operations tower, operations/storage building, classroom building, latrine, covered mess, ammunition breakdown building, bleacher enclosure, and building information systems. Supporting facilities include electrical service, site improvements, and information systems. This action consists of constructing a range that will total 1,761 acres including a buffer where bullet impact may degrade habitat quality. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Modified Record Fire Range Delta (MRFRD)

The proposed action is to construct a MRFRD in FSTA D6.1 and D6.2 (Figure 1). Primary facility includes all construction within the perimeter of the range complex and consists of a control tower, range operations and storage, latrine, instruction building, ammunition breakdown building, covered mess, maintenance trails, firing positions, target emplacements, secondary power, and data distribution systems. Supporting facilities include electric service, storm drainage, subsurface unexploded ordnance, gravel and asphalt roads and parking, signs and barricades, and site improvements. This action consists of constructing a 34-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Infantry Squad Battle Course (ISBC)

The proposed action is to construct an ISBC within FSTA B3 (Figure 1). Primary facilities include: target systems, downrange power and instrumentation, Range Operations Center, operations/storage building, latrine, and General Instruction building, bleacher enclosure, covered mess building, ammunition breakdown building, vehicle staging area, and vehicle parking. This action consists of constructing a 300.7-acre range that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Qualification Training Range (QTR)

The proposed action is to construct a QTR in FSTA D7 (Figure 1). Primary facilities include range control towers, general instruction building, range operations and storage building, ammunition breakdown building, covered mess, bleacher enclosure, and latrine. Supporting facilities include electrical service, storm drainage, paving, utilities, and site improvements. Antiterrorism measures will be provided. This action consists of constructing a 261.3-acre range that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Digital Multipurpose Training Range (DMPTR)

The proposed action is to construct a DMPTR in FSTA B9 and B10 (Figure 1). This proposed action involves modernizing an existing range with additional targets, new target emplacements, automated scoring and scenarios, replacing existing support facilities, and adding needed buildings. This action consists of constructing a 1,057.4-acre range that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

10/25M Zero Range

The proposed action is to construct a 10/25M Zero Range in FS TA D5 (Figure 1). This action consists of constructing a 3.8-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Combat Pistol/Military Police Firearms Qualification Course (CPMPQC)

The proposed action is to construct an Automated CPMPQC within FSTA D5 (Figure 1). Primary facilities include the Automated CP/MPQC, site development, range operations tower, general instruction building, range operations and storage building, ammunition breakdown building, covered mess, bleacher enclosure, and latrine. This action consists of constructing a 4.0-acre range including a 50-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of RCW HMU.

Known Distance Range (KDR)

The proposed action is to construct a KDR within FSTA D8, D9, and D10 (Figure 1). Primary facilities include the KDR, range operations control area, and ammunition breakdown building.

Antiterrorism measures will be provided. Supporting facilities include electric service. This action consists of constructing a 68.5-acre range that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Fire and Movement Range (FMR)

The proposed action is to construct a FMR with target systems within FSTA C3 (Figure 1). Primary facilities include the FMR, range operations center, operations/storage building, bleacher enclosure, ammunition breakdown building, and latrine. Supporting facilities include electrical service, information systems, and site improvements. This action consists of constructing a 5.1-acre range within existing non-forested area.

Modified Record Fire Range Bravo (MRFRB)

The proposed action is to upgrade the existing range to a MRFRB in FSTA B4 (Figure 1). Primary facilities include: upgrading firing lanes to standard width, target emplacements, downrange power and data, walk-in firing positions, stationary infantry target emplacements, range operation control tower, operations and storage building, classroom building, ammunition breakdown building, covered mess, latrine, covered bleachers, and building information systems. Supporting facilities include electrical service, water, sewer and gas, site improvements, and information systems. This action constructing a range on 10.8 acres of non-forested area and 22.2 acres of RCW HMU, including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Convoy Live Fire Course (CLFC)

The proposed action is to construct a standard CLFC (Figure 1). Primary facilities include the CLFC with multiple training stations, convoy road, range operations and storage building, range operations control area, latrine, and unit staging area. Supporting facilities include electric service and site improvements.

- a. **Task 1 Entry Control Point** - This action consists of constructing a 10.1-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.
- b. **Task 2 Sniper** - This action consists of constructing a 15.6-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.
- c. **Task 3 Rocket-Propelled Grenade (RPG) Team** - This action consists of constructing a 10.9-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.
- d. **Task 4 Ambush Blocked** - This action consists of constructing a 40.9-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

- e. **Task 5 Urban Ambush** - This action consists of constructing a 39.4-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.
- f. **Task 6 Tech Trucks** - This action consists of constructing a 31.0-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.
- g. **Task 7 Near Ambush** - This action consists of constructing a 45.1-acre range including a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Unmanned Aerial System (UAS)

The proposed action is to construct standard design facilities to support an UAS unit in FSTA A19.1 (Figure 1). Primary facilities include a standard design Aviation unit Maintenance hangar with shops and aprons. Also, included are an aircraft tie down area, hangar apron, resurfaced taxiway, aircraft wash rack, oil/water separator and access road, warm-up pads, container storage yard, and an elevated water storage tank. Supporting facilities include electrical distribution, taxiway, lighting, water distribution system, sanitary sewer collection system, natural gas line, parking lot, paving, walks, curbs, gutters, storm drainage system, wetland mitigation, information systems, landscaping, and site improvements. This action consists of constructing a 103.5-acre aerial system that includes a 100-foot buffer around the facility. Construction will require clear cutting, grubbing, and grading of existing RCW HMU.

Implementation of the 2007 Army Guidelines for Management of the RCW

For Stewart will implement the 2007 revision of the Management Guidelines for the Red-cockaded Woodpecker on Army Installations (1996). The 2007 revision calls for removal of training restrictions in RCW clusters based on the number of PBGs in the population with the goal of removing training restrictions on all RCW clusters at the time the Installation's population recovery goal is reached, according to the following schedule (Table 1).

Table 1. Schedule of training restriction removal based on the number of PBGs.

Total PBGs	Restrictions Removed	Cumulative Total*
251-275	25 clusters	25 clusters
276-300	50 clusters	75 clusters
301-350	150 clusters	225 clusters
>350	Restrictions removed on all clusters	

*These are in addition to recruitment clusters established with no training restrictions in accordance with the 1996 or 2007 Army RCW Guidelines (aka supplemental recruitment clusters).

Fort Stewart had 315 PBGs at the end of the 2009 nesting season, so the number of cluster sites to be deprotected will be 75 plus 3 clusters for every PBG in excess of 300, or an additional 45 clusters for a total of 120 clusters to be deprotected. The locations of clusters slated for training restriction removal will be determined by the Fish and Wildlife Branch in coordination with the Directorate of Plans, Training, Mobilization, and Security, and will be coordinated with the USFWS. Locations of clusters with training restrictions will be based on minimizing effects on training operations, risk of disturbance to clusters, and minimizing demographic isolation. Status and performance of clusters, whether protected or unprotected, will continue to be monitored under the sampling scheme designated in the 2007 revision of the 1996 RCW management guidelines.

Site Descriptions

MPMGR

Habitat within the proposed action area is composed of a canopy dominated by slash pine (*Pinus elliotii*), longleaf pine (*P. palustris*), and loblolly pine (*P. taeda*), with a midstory of sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), live oak (*Q. virginiana*), wax myrtle (*Myrica cerifera*), and red bay (*Persea borbonia*). The groundcover is characterized by saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), shiny blueberry (*Vaccinium myrsinites*), huckleberry (*Gaylussacia frondosa*), runner oak (*Q. pumila*), rusty lyonia (*Lyonia ferruginea*), wiregrass (*Aristida stricta*), and switch-cane (*Arundinaria gigantea*). Wetland systems adjacent to the proposed project are dominated by pond cypress (*Taxodium ascendens*), blackgum (*Nyssa sylvatica*), pond pine (*P. serotina*), red maple (*Acer rubrum*), black titi (*Cliftonia monophylla*), and red bay. The dominant soil types within the project area are Lee field loamy sand, Mascotte fine sand, Stilson loamy sand, Ellabelle loamy sand, Pelham loamy sand, and Johnston and Bibb soils.

IPBC

Habitat within the proposed action area is composed of a canopy dominated by slash pine, longleaf pine, and loblolly pine, with a midstory of sweetgum, water oak, live oak, wax myrtle, and red bay. The groundcover is characterized by saw palmetto, gallberry, shiny blueberry, huckleberry, runner oak, rusty lyonia, wiregrass, and switch-cane. Wetland systems adjacent to the proposed project are dominated by pond cypress, blackgum, pond pine, red maple, black titi, and red bay. Dominant soils in the action area are Pelham loamy sand, Stilson loamy sand, Ellabelle loamy sand, Mascotte sand, and Olustee fine sand.

MRFRD

Habitat within the proposed action area consists of a canopy dominated by loblolly pine, slash pine, longleaf pine, and a midstory of sweetgum, water oak, live oak, wax myrtle, and red bay. The groundcover is characterized by saw palmetto, gall berry, shiny blueberry, huckleberry, Virginia chain-fern (*Woodwardia virginica*), oaks, rusty lyonia, wiregrass, cinnamon fern (*Osmunda cinnamomea*), and switch grass. Wetland systems adjacent to the proposed project are dominated by pond cypress, blackgum, red maple, and swamp bay (*Persea palustris*). The

prominent soil types within the project area are Fuquay loamy sand, Mascotte fine sand, Pelham loamy sand, and Stilson loamy sand.

ISBC

Habitat within the proposed action area consists of a mix of loblolly pine and slash pine interspersed with live oak and southern magnolia (*Magnolia grandiflora*). Wetlands in the proposed action area are forested by pond cypress, black gum, red maple, and sweetgum. The groundcover in the action area is sparse and mostly herbaceous. Soils types in and adjacent to the action area are Johnston and Bibb, Echaw and Centenary fine sands, and Chipley sand.

QTR

Habitat within the proposed action area is composed of a canopy dominated by slash pine, longleaf pine, and loblolly pine, with a midstory of sweetgum, water oak, live oak, wax myrtle, and red bay. The groundcover is characterized by saw palmetto, gallberry, shiny blueberry, huckleberry, runner oak, rusty lyonia, wiregrass, and switch-cane). Wetland systems adjacent to the proposed project are dominated by pond cypress, blackgum, pond pine, red maple, black titi, and red bay. The dominant soil types within the project area are Leefield loamy sand, Mascotte fine sand, and Pelham loamy sand.

DMPTR

The proposed action area consists of open areas with low, sparse vegetation with some forested areas. Wetlands on Fort Stewart typically are forested by pond cypress, black gum, and sweetgum, while sandhills and flatwoods communities are dominated by longleaf, slash, and loblolly pine with an open understory dominated by pyrogenic grass species that are characteristic of pine forests in the lower Atlantic coastal plain prior to European settlement (e.g., *Aristida* and *Sporobolus*). Ericaceous species (e.g., *Vaccinium*, *Gaylussacia*) and gallberry also are common in these habitats. Old fields are characterized by an understory of broom-sedge species (*Andropogon*) and leaf litter, and often have heavy hardwood (e.g., water oak) midstory components and an overstory composed primarily of loblolly pine. The proposed project area burns frequently by application of prescribed fire predominately in the dormant season (November-February), or by wildfire in all seasons. Soil types in the action areas include Albany loamy fine sand, Blanton sand, Chipley sand, Echaw and Centenary fine sand, Johnston and Bibb soils, Leefield loamy sand, Mandarin fine sand, Mascotte fine sand, and Pelham loamy sand.

10/25M Zero Range

Habitat within the proposed action area is composed of a canopy dominated by longleaf pine and slash pine. Wetlands in the proposed action area are forested by pond cypress, black gum, and sweetgum. The groundcover in flatwoods systems is dominated by pyrogenic grass species (*Aristida* and *Sporobolus*) that are characteristic of pine forests in the lower Atlantic coastal plain prior to European settlement. Ericaceous species (*Vaccinium*, *Gaylussacia*) and gallberry also are common in these habitats. Soils types in and adjacent to the action area are Ellabelle loamy sand, Johnston and Bibb soils, and Mascotte fine sand.

CPMPQC

Habitat within the proposed action area is dominated by longleaf pine and slash pine. Wetlands in the proposed action area are forested by pond cypress, black gum, and sweetgum. The groundcover in flatwoods systems is dominated by pyrogenic grass species (*Aristida* and *Sporobolus*) that are characteristic of pine forests in the lower Atlantic coastal plain prior to European settlement. Ericaceous species (*Vaccinium*, *Gaylussacia*) and gallberry also are common in these habitats. Soils types in and adjacent to the action area are Ellabelle loamy sand and Mascotte fine sand.

KDR

Habitat within the proposed action area is a mix of loblolly pine and slash pine interspersed with live oak and southern magnolia. Wetlands in the proposed action area are forested by pond cypress, black gum, red maple and sweetgum. The groundcover in the action area is sparse and, where present, mostly herbaceous. Soils types in and adjacent to the action area are Lee field loamy sand, Pelham loamy sand, and Mascotte fine sand.

FMR

This is an open area with regions of sparse vegetation that includes slash pine. The groundcover in the action area is sparse and includes gallberry and saw palmetto. Soils types in and adjacent to the action area are Olustee fine sand, Chipley fine sand, and Mascotte sand.

MRFRB

This area is primarily composed of open areas that are currently used as a small arms firing range. Within the forested areas the overstory is a mixed pine flatwoods with a canopy composed of loblolly, slash, and longleaf pine with a groundcover of saw palmetto, gallberry, shiny blueberry, huckleberries, bracken fern (*Pteridium aquilinum*), rusty lyonia, and wiregrass. Soil types in the action areas include Echaw and Centenary fine sand and Mandarin fine sand.

CLFC

Habitat within the entire proposed action area is composed of forested areas of a canopy dominated by slash pine, longleaf pine, and loblolly pine, with a midstory of sweetgum, water oak, live oak, wax myrtle, and red bay. The groundcover is characterized by saw palmetto, gallberry, shiny blueberry, huckleberry, runner oak, rusty lyonia, wiregrass, and switch-cane. Wetland systems adjacent to the proposed project are dominated by pond cypress, blackgum, pond pine, red maple, black titi, and red bay. Dominant soil types in action area are Mascotte sand, Albany fine sand, Ellabelle loamy sand, Chipley fine sand, Olustee fine sand, and Leon fine sand.

UAS

The proposed action area consists of forested habitat and open areas including an airstrip. Forested habitat with the proposed action area is composed of a canopy dominated by slash pine, pond pine and loblolly pine, with a midstory of sweetgum, water oak, live oak, wax myrtle, and red bay. The groundcover in the action area is dominated by saw palmetto, gallberry, shiny blueberry, huckleberry, rusty lyonia, and switch-cane. Soil types in the action area consists of Ocilla loamy fine sand, Mandarin fine sand, Rutlege fine sand, and Stilson loamy sand.

SPECIES CONSIDERED

The following species occur or may occur in the proposed action area and were considered in this assessment:

Red-cockaded Woodpecker (*Picoides borealis*) - Endangered

Eastern Indigo Snake (*Drymarchon corais couperi*) -Threatened

Frosted Flatwoods Salamander (*Ambystoma cingulatum*) – Threatened

Wood Stork (*Mycteria americana*) – Endangered

Shortnose Sturgeon (*Acipenser brevirostrum*) – Endangered

Life history, habitat, distribution, status, and threats that may affect listed species survival are discussed in Fort Stewart's Endangered Species Management Plan (2001).

EFFECTS OF THE ACTIONS

Red- Cockaded Woodpecker

Fort Stewart has an active management and monitoring program for the RCW (Integrated Natural Resource Management Plan [INRMP], Directorate of Public Works [DPW] 2001). Much research has been conducted on the RCW and the results of this research were compiled in the Red-cockaded Woodpecker (*Picoides borealis*) Recovery Plan: *Second Revision* (USFWS 2003). Fort Stewart abides by the most current research and management recommendations contained in the RCW Recovery Plan.

A May 2005 memorandum from Noreen Walsh, Assistant Regional Director, Ecological Services, USFWS, Atlanta, GA entitled "Implementation Procedures for Use of Foraging Habitat Guidelines and Analysis of Project Impacts under the Red-cockaded Woodpecker (RCW) Recovery Plan: Second Revision" describes parameters and concepts to be considered when federal properties analyze projects that may affect RCWs. There are potentially 5 levels of analysis to consider in the preparation of biological assessments, with the analyses conducted in the following order: 1) foraging partition, 2) group, 3) neighborhood, 4) population, and 5) recovery unit. The results of each level of analysis predicate the necessity to conduct subsequent analyses.

Foraging Partition Level Analysis

The RCW Recovery Plan requires that a foraging analysis be performed using the Foraging Matrix (hereafter, Matrix) analysis tool for all active RCW clusters that may be impacted by a project. Federal agencies must perform an analysis of all affected foraging partitions to determine if they meet the RCW Recovery Standard (RS) of Good Quality Foraging Habitat (GQFH). If foraging partitions fail to meet the RS, then the foraging partition must be analyzed to determine if it meets the Managed Stability Standard (MSS) that is applicable on private lands. All active partitions within the project areas were analyzed using the Matrix for the RS and for the MSS. No stands within any foraging partition met the RS (i.e., there were no acres of GQFH) for pre-project analyses, therefore we analyzed the pre and post-project stands of all active clusters receiving indirect impacts (i.e., loss of a portion of their foraging partition) using the MSS requirements (Table 3).

RCW Group Level Analysis

Since 1995, RCW population demographics have been intensively monitored in a 25% randomly selected sample of clusters as well as in RCW recruitment clusters that have been active for < 5 years. Additionally, we band many chicks opportunistically in order to provide juvenile birds for translocations. Specifically, Fish and Wildlife Branch biologists and interns account for the number of RCW adults, eggs, chicks, fledglings, and helpers in each of the clusters either by capture, or by colored leg band identification with a spotting scope. Also included in the Group Analyses are the numbers of active clusters within 1.25 miles of affected clusters (Density Analyses, Table 1). Conner and Rudolph (1991) determined that an active cluster that has < 2.5 active clusters within 1.25 miles has a low probability of persistence due to critically low density of neighboring RCWs. They also implied that an active cluster with > 4.7 active clusters within 1.25 miles has a high probability of persistence due to a high density of neighboring RCWs. We created another category (moderate density) for active clusters that have between 2.5 and 4.7 active clusters within 1.25 miles and would be expected to have a moderate probability of persistence.

RCW Neighborhood Level Analysis

The neighborhood analysis requires knowledge of RCW dispersals that may have crossed the project area. Once dispersals are accounted for and dispersal distances are calculated, a mean action area dispersal rate (AADR) is defined. The intent of the neighborhood analysis is to account for the potential negative impacts to which RCWs are vulnerable when landscapes are fragmented. Not only can this condition negatively affect the ability of adjacent RCWs to occupy a cluster when breeding vacancies occur, it also has the potential for significant impacts to foraging behavior and efficiency (Conner and Rudolph 1991).

Population Level Analysis

The Population Level Analysis requires estimates of the percent of: 1) inactive clusters, 2) solitary bird groups, and 3) captured clusters at the time when the habitat-based population goal is likely to be achieved such that values for these parameters can be subtracted from the population goal (measured in active clusters), along with the number of groups predicted to be

lost due to project-related impacts. Analysis of Fort Stewart data determined on average, 41% of clusters sites are inactive (n=15 years of data), 7% of active clusters are occupied by a solitary RCW (n=12), and 2% of active clusters are captured by adjacent clusters (n=9). However, we do not believe that subtracting these estimates from the Regional Recovery Goal of 500 active clusters is illustrative for the Fort Stewart RCW population for the following reasons:

1) The percent of inactive clusters is unnaturally high because of Fort Stewart's aggressive recruitment cluster program. Per the Fort Stewart INRMP, we provide new recruitment sites or maintain existing unoccupied recruitment sites at a rate of 15% of active clusters every year. At the end of the 2009 RCW breeding season there were 416 RCW cluster sites, 403 of which were under active management. Of the 403 managed clusters, 330 (82%) were active. Therefore, we are required to maintain at least 50 (15% of 330) vacant recruitment clusters going into the 2010 RCW breeding season. We consistently exceed the 15% vacant recruitment cluster requirement and will do so again for the breeding season of 2010 by having 73 (22% of active clusters) managed recruitment clusters for dispersing RCWs. There are another 13 inactive, unmanaged clusters that eventually will be relocated geographically to more suitable locations.

The effect of having a large number of unoccupied recruitment clusters is that it diminishes the percentage of overall managed clusters identified as active. Regardless of appearances, we believe our aggressive recruitment cluster program enhances the RCW population growth rate on the installation.

There are an additional 322 sites that Fish and Wildlife Branch personnel have located on the landscape that will serve as future recruitment sites. In any given year, the decision as to which of these 322 sites, or which of the existing unoccupied recruitment sites, will be provisioned with artificial cavities and count toward the 15% goal is determined by the performance of RCW groups adjacent to the recruitment sites. As the performance of RCW groups changes from year to year based on stochastic events (e.g., cluster activation or abandonment, loss or gain of a PBG, etc.), our plans for recruitment cluster establishment may change, resulting in an "excess" of inactive clusters.

2) As described in the RCW Recovery Plan (USFWS 2003), an increasing proportion of solitary RCW groups or captured clusters within a population are indicators of population decline. Percent of solitary RCW groups at Fort Stewart has fluctuated, ranging from as low as 7% to as high as 15% (it was 7% during the 2009 breeding season). Likewise, the percent of captured clusters has fluctuated, ranging from 1% to 5% (2% during the 2009 breeding season). For Fort Stewart's RCW population, both the percent solitary individuals and percent captured clusters exhibit declining trend lines ($R^2 = 0.53$ and 0.66 , respectively), indicating a robust and increasing population. However, "excess" recruitment clusters on the landscape could confound the actual population parameters by providing ample sites for dispersing RCWs that, on a landscape with fewer recruitment clusters, would perish for lack of a roosting cavity or would be undetectable floaters in the population with a low probability of detection. Because of the equivocal nature of these 3 population parameters in the Fort Stewart population, we believe percent of active clusters with a PBG (91% as of the 2009 breeding season), in conjunction with the amount of suitable or potentially suitable RCW habitat, are better predictors of our ability to achieve population recovery, which would be achieved at 385 active clusters. Assuming a 15% inactive

cluster rate, 453 clusters would be required. Fort Stewart will have enough suitable or potentially suitable RCW habitat to support 665 clusters post-project.

Impacts to RCWs arising from each individual project are summarized below. Some clusters are impacted by > 1 project. A summary of impacts to each cluster is provided at Table 3.

MPMGR

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and no new RCW cavity trees were found. The proposed project lies within the foraging partitions of clusters 124, 247, 300, 356, and 381. Construction of the project will remove 130.7 acres of existing RCW HMU as identified in Fort Stewart's INRMP (DPW 2001) (Figure 3).

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the action area will impact 5 active RCW clusters (Figure 2). Clusters 124 and 247 will receive direct impacts from the MPMGR and the QTR that will result in incidental take. Cluster 247 will be directly impacted by the removal of all RCW cavity trees. After action, Cluster 124 will be directly impacted by the removal of 1 RCW cavity tree and will fail to meet MSS due to having only 28.4 acres of foraging habitat remaining. Three clusters (300, 356, and 381) will lose a portion of their foraging habitat, but will continue to meet MSS and are expected to persist after range construction because they will have adequate foraging resources available and will have > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

RCW Group Level Analysis

Cluster 124: This cluster has been active every year since 1994. This group nested in 1994, and from 1997-2005. However, this cluster was monitored for activity only for 2008-09 breeding seasons. It successfully fledged chicks from 1997-2002. One helper was present during the breeding seasons of 2000-2002.

Cluster 247: This cluster has been active every year since 1995. This group nested from 1995-1996 and in 2008. It fledged young from 1999-2005. There was 1 helper present in 1999-2000, 2003, and 2006-2008.

Cluster 300: This cluster was initiated in the winter of 2000. Since then it has been active every year except 2005. It nested every year from 2003 to 2007 except for 2005. It has not fledged any chicks.

Cluster 356: This cluster was created in the winter of 2003. It has been active and has nested every year except 2007. It successfully fledged chicks in 2003, 2006, and 2008. It had a helper for the 2003-2004 and 2006-2007 breeding seasons.

Cluster 381: This cluster was initiated in the fall of 2004. It has been active every year since 2006. It nested in 2008-2009 and it fledged 2 birds in 2008.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented, including 5 that crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 32,667 acres, 18,685 acres of which lie within RCW HMU. Currently, there are 45 active RCW clusters within the dispersal neighborhood (excluding the affected clusters analyzed in the Group Level Analysis). Although 45 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the MPMGR is less than the 45 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of clusters in the project neighborhood will persist after construction because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the MPMGR is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the MPMGR to RCWs, we expect that 2 RCW groups will be lost (Cluster 247 due to clear-cutting of the cluster site and Cluster 124 due to lack of adequate foraging habitat). Three other clusters (300, 356, and 381) will lose some portion of their foraging habitat but will continue to meet MSS.

IPBC

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for other RCW cavity and start trees and no new RCW cavity trees were found. The proposed project area lies within the foraging partitions of Clusters 18, 38, 67, 69, 70, 105, 179, 256, 342, and 361. Construction and operation of the IPBC will remove 900 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 7).

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the IPBC and the building of berms for habitat protection will impact 10 active RCW clusters (Figure 6). Five clusters (18, 69, 105, 256, and 361) will receive direct impacts from the IPBC that will result in incidental take. Clusters 69, 105, 256, and 361 will be directly impacted by the removal of all trees from the clusters. Cluster 18 will not meet MSS post-construction because of inadequate acreage (< 75 acres) in its foraging partition. Cluster 38 will lose 1 inactive RCW tree (808) and does not meet MSS. However, Cluster 38 will have 108.2 acres of habitat remaining after construction and should persist long-term. Currently, Cluster 67 does not meet MSS due to a paucity of pines >10 inches diameter breast high (DBH). However, Cluster 67 should persist long-term because it will exceed 75 acres of habitat. Currently, Cluster 342 does not meet MSS but would pass if pines <

10 inches DBH were thinned. Pines < 10 inches DBH will be thinned to bring this cluster to MSS. Clusters 70 and 179 meet MSS and will lose a portion of their foraging partition but are expected to persist after construction of the proposed action because they will have adequate foraging resources remaining post-construction. Clusters 38, 67, 70, 179, and 342 will have > 4.7 active clusters within 1.25 miles post-construction and should persist long term (Table 2 and RCW Group Level Analysis, below).

To summarize the Foraging Partition Level Analysis, direct impacts from construction will result in the incidental take of Clusters 18, 69, 105, 256, and 361. Clusters 38, 67, and 342 failed MSS, but will have adequate foraging acres post-project and we expect them to persist long-term. Indirect impacts from construction (loss of foraging habitat) will affect clusters 70 and 179 but they should persist post-construction.

RCW Group Level Analysis

Cluster 18: This cluster has been active every year since 1996. It nested in 2002, 2004, 2006, and 2009. It has not fledged any juveniles.

Cluster 38: This cluster has been active every year since 1994. It has nested every year since 1995 except for 2008. It has fledged juveniles every year since 1995 except for 1998, 2008, and 2009. It has had helpers for the 1997, and 1999-2008 breeding seasons.

Cluster 67: This cluster has been active and nested since 1994. It has fledged juveniles every year except the 2009 breeding season. It has had helpers every year except the 2009 breeding season.

Cluster 69: This cluster has been active every year since 2003 except for 2004. It nested in 2006, 2007, and 2009. It has not fledged any juveniles and has no helpers.

Cluster 70: This cluster has been active every year since 1996. It nested in 1997, 1999-2001, 2003-2005, 2007 and 2009. It fledged juveniles in 1997, 1999-2000, and 2003. It had a helper for the 2009 breeding season.

Cluster 105: Cluster was relocated from FSTA C1.1 in 2005. It was active in 2007 -2009. It nested in 2009. It had helpers for the 2008 breeding season.

Cluster 179: This cluster has been active every year since 1994. It has nested in 1996-2002, 2004-2005, and 2007-2009. It fledged juveniles in 1996-1999, 2001-2002, and 2009. It had helpers for the 2000 breeding season.

Cluster 256: This cluster was provisioned during the fall of 1997. This cluster has been active every year since 2001. It has nested every year since 2001 except for 2006 and 2008 breeding season. It has fledged juveniles for 2001, and 2003-2004. It had helpers for the 2002, 2005, and 2008-2009 breeding seasons.

Cluster 342: This cluster was provisioned during the fall of 2002. It was active during the 2003, 2005-2007, and the 2009 breeding season and nested 2005-2007. It fledged juveniles in 2005-2007. It had helpers during the 2006 and 2009 breeding seasons.

Cluster 361: This cluster was provisioned in the fall of 2003. It has been active every year since 2005 and has nested every year except for 2008 breeding season. It fledged juveniles in 2006-2007. It had helpers for the 2006-2007 breeding seasons.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented, including 11 that crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 36,276.2 acres, 16,407 acres of which lie within RCW HMU. Currently, there are 70 active RCW clusters within the dispersal neighborhood (excluding the affected clusters analyzed in the Group Level Analysis). Although 70 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the IPBC is less than the 70 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the IPBC is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the IPBC to the RCW, 6 RCW groups will be lost (18, 69, 105, 256, and 361) due to inadequate foraging habitat or removal of trees. One RCW tree will be lost from Cluster 38. Two foraging partitions (Clusters 38 and 67) do not meet MSS due to inadequate pine BA > 10 inches, but we expect them to persist long-term because they have been active since 1994 and will have adequate foraging resources remaining post-construction. One foraging partition (Cluster 342) does not meet MSS due to an over abundance of pine BA < 10 inches. However, during construction of the IPBC stand 1453 will be thinned of pine BA < 10 inches and this partition will meet MSS. Two RCW groups currently meet MSS (Clusters 70 and 179) and will lose a portion of their foraging habitat, but will continue to meet MSS (Table 3).

MRFRD

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The proposed project lies within the foraging partition of Cluster 407. The project will remove 31.5 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 1).

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the MRFRD will impact 1 active RCW cluster (407) (Figure 10), which will lose a portion of its foraging partition. Pre- and post-project foraging habitat for Cluster 407 meets the threshold for MSS (Table 3) and is expected to persist after construction of the MRFRD because it will all have adequate foraging resources available and will have a moderate density of active RCW clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

To summarize the Foraging Partition Level Analysis, indirect impacts from construction (loss of foraging habitat) will affect cluster 407 but it is expected to persist post-construction of the MRFRD.

RCW Group Level Analysis

Cluster 407: This cluster was provisioned in the fall of 2006. It was active 2008 and 2009. It has not nested since it was provisioned.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented; however none crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 32,670 acres, 16,520 acres of which lie within the RCW HMUs. There currently are 27 active RCW clusters within the dispersal neighborhood (excluding the affected cluster analyzed in the Group Level Analysis). Although 27 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the MRFRD is less than the 27 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the MRFRD is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the MRFRD to RCWs: Cluster 407 will lose a portion of its foraging habitat but will continue to meet MSS and is expected to persist.

ISBC

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. A portion of the proposed project lies within the foraging partitions of Clusters 103 and 268. Construction of the project will remove 153.8 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 15).

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the ISBC will impact the foraging partitions of 2 RCW groups (103 and 268) (Figure 14). Clusters 103 and 268 will receive indirect impacts from construction due to the loss of foraging habitat. Pre- and post-project foraging habitat meets the threshold for MSS (Table 3) and are expected to persist after construction of the ISBC because they will all have adequate foraging resources available and will have > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

RCW Group Level Analysis

Cluster 103: This cluster has been active since 1994 and has nested every year since 1999, except 2008 and had a helper during the breeding seasons of 1999-2000, 2003, and 2005-2007.

Cluster 268: This cluster was provisioned in 1998 and has been active since 2000. This cluster has nested every year since activation except 2006 and 2007, and had 1 helper in the 2009 breeding season.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented, including 5 that crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 38,674 acres, 12,991 acres of which lie within the RCW HMUs. There currently are 33 active RCW clusters within the dispersal neighborhood (excluding the affected cluster analyzed in the Group Level Analysis). Although 33 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the ISBC is less than the 33 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the ISBC is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the ISBC to RCWs, Clusters 103 and 268 will lose a portion of their foraging habitat but will continue to meet the MSS threshold. They are expected to persist long-term.

QTR

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and no new trees were found. The proposed project lies within the foraging partitions of clusters 124, 154, 247, 252, 322, and 356. The project will remove 183.9 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 3). A portion of the QTR overlaps the MPMR.

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the action area will impact 6 active RCW clusters (124, 154, 247, 252, 322, and 356) (Figure 2). Direct impacts from construction of the QTR and the MPMGR will result in the incidental take of Cluster 124 (only 28.4 acres of foraging habitat remaining post-construction), and Cluster 247 (removal of all RCW trees). Cluster 154 will be directly impacted by the removal of 2 RCW cavity trees, but will continue to meet MSS and is expected to persist long-term. Cluster 252 does not meet MSS due to excessive hardwood midstory, but removal of excessive hardwood midstory will cause this cluster to pass MSS. It is expected to persist with management. Cluster 322 and 356 will continue to meet MSS.

To summarize the Foraging Partition Level Analysis, direct impacts from construction (clear-cutting of cluster sites) will result in the incidental take of 1 RCW Cluster (247). Post construction, RCW Cluster 124 will no longer have adequate foraging habitat and will result in an incidental take. Indirect impacts from construction (loss of foraging habitat) will affect 4 additional RCW clusters (154, 252, 322, and 356), but they are expected to persist post-construction of the QTR with management.

RCW Group Level Analysis

Cluster 124: See previous group level analysis.

Cluster 154: This cluster has been active every year since 1994. This group has nested every year except 2000, when no nest was initiated. The group successfully fledged chicks from 1998-2002. This cluster was only monitored for nest initiation from 2003-2007, and 2009. It is unknown whether the group initiated a nest in 2008 because this cluster was only monitored for activity in that year. One helper was present during the breeding season of 2003.

Cluster 247: See previous group level analysis.

Cluster 252: This cluster was created in the winter of 1997. This cluster was active from 1997 till 2003, and then in 2009. The group nested from 1998-2002 and successfully fledged chicks from 1998-2000. One helper was present during the breeding season of 2001.

Cluster 322: This cluster was created in the winter of 2002. This cluster became active in 2005 with a potential breeding group that did not initiate a nest. The cluster nested from 2006-2009 and fledged 2 juveniles each year.

Cluster 356: See previous group level analysis.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented, including 22 that crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 33,938 acres, 19,105 acres of which lie within the RCW HMUs. There currently are 44 active RCW clusters within the dispersal neighborhood (excluding the affected cluster analyzed in the Group Level Analysis). Although 44 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the QTR is less than the 22 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the QTR is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the QTR to RCWs, 2 RCW groups will have direct impacts that will result in an incidental take (Cluster 247 will be lost due to clear-cutting of the cluster site and Cluster 124 falls below the acreage requirement for MSS). One RCW cluster (252) will have an indirect impact due to the loss of a portion of its foraging habitat but with management will meet MSS. Three RCW clusters (154, 322, and 356) will have a direct impact due to the loss of a portion of their foraging habitat but will continue to meet MSS (Table 3).

DMPTR

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW cluster (90) is approximately 0.4 miles southwest of the proposed action area in FSTA B9, but the project will not affect the foraging partition of this or any other active cluster. Construction of the DMPTR will remove 22.4 acres of existing RCW HMU as identified in the Installation's INRMP (Figure 17). Because of the project's proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs.

10/25M Zero Range

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW cluster (214) is approximately 0.9 miles northwest of the proposed action area in FSTA D5, but the project will not affect the foraging partition of this or any other active cluster. Construction of the project will remove 3.8 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 19). Because of the small acreage required for this project and its proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs. The proposed project will not prevent the Installation from achieving its RCW population recovery goal of 350 potential breeding groups.

CPMPQC

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW cluster (214) is approximately 0.8 miles northwest of the proposed action area in FSTA D5, but the project will not affect the foraging partition of this or any other active cluster. Construction of the project will remove 4.0 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 19). Because of the small acreage required for this project and its proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs.

KDR

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW cluster (263) is approximately 0.8 miles northwest of the proposed action area in FSTA D10.1, but the project will not affect the foraging partition of this or any other active cluster. Construction of the project will remove 39.7 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 3). Because of the relatively small acreage required for this project and its proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs.

FMR

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW foraging partition (cluster 142) is approximately 0.1 miles north of the proposed action area in FSTA D12.1, but the project will not affect the foraging partition of this or any other active cluster. No RCW HMU acreage will be removed from the action area. This area was designated as non-forested habitat in Fort Stewart's INRMP. Because of the relatively small acreage required for this project and its proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs.

MRFRB

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and no new RCW cavity trees were found. The proposed project lies within

the foraging partition of Cluster 66. Construction of the project will remove 22.2 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 23).

Foraging Partition Level Analysis

Clear-cutting to facilitate construction of the MRFRB will impact 1 RCW partition (Cluster 66) (Figure 22). Cluster 66 fails to meet MSS because of an over abundance of pine BA <10 inches (Table 3). However, this cluster is expected to persist after construction of the MRFRB because it will have adequate foraging resources available and will have > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

To summarize the Foraging Partition Level Analysis, indirect impacts from construction (loss of foraging habitat) will affect Cluster 66. This cluster does not meet MSS because of an over abundance of pines <10 inches DBH, but it is expected to persist post-construction of the MRFRB because it will have an adequate acreage of foraging habitat.

RCW Group Level Analysis

Cluster 66: This cluster has been active every year since 1994. It nested every year except 2001, 2006, and 2008. It had helpers for 2000-2002 breeding season.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented; however, none crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 32,844 acres, 13,089 acres of which lie within the RCW HMUs. There currently are 34 active RCW clusters within the dispersal neighborhood (excluding the affected cluster analyzed in the Group Level Analysis). Although 34 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the MRFRB B4 is less than the 34 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction. Additionally, the MRFRB is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the MRFRB to RCWs, Cluster 66 fails to meet MSS, but during construction pine < 10 inch DBH in stand 400021 will be thinned and this cluster will meet MSS. This cluster is expected to persist long term due to adequate foraging habitat acreage remaining post-project (Table 3).

CLFC

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and no new RCW cavity trees were found.

- a. **Task 1 Entry Control Point** - The proposed project lies within the foraging partition of cluster 334. A total of 1.1 acres will be removed from RCW HMU as identified in Fort Stewart's INRMP (Figure 27).
- b. **Task 2 Sniper** – Construction of the project will remove 12.7 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27). The action area is not within an RCW partition. The nearest active cluster (96) and is 0.1 miles south of action area.
- c. **Task 3 Rocket-propelled Grenade Team** – The proposed project lies within the foraging partitions of Clusters 34 and 96. Construction of the project will remove 9.2 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27).
- d. **Task 4 Ambush Blocked** – The proposed project lies within the foraging partitions of Clusters 96 and 116. Construction of the project will remove 25.7 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27).
- e. **Task 5 Urban Ambush** – The proposed project lies within the foraging partitions of Clusters 34, 141, and 339. Construction of the project will remove 37.4 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27).
- f. **Task 6 Tech Trucks** – The proposed project lies within the foraging partitions of Clusters 22 and 130. Construction of the project will remove 24.3 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27).
- g. **Task 7 Near Ambush** – The proposed project lies within the foraging partitions of clusters 5 and 22. Construction of the project will remove 40.0 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 27).

Foraging Partition Level Analysis

a. Task 1 Entry Control Point

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will impact 1 active RCW Cluster (334) (Figure 26). No other active clusters will be affected as a result of this range. Cluster 334 meets MSS pre- and post-construction and is expected to persist after range construction due to having adequate foraging resources available and having > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

b. Task 2 Sniper

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will not impact any active cluster partition.

c. Task 3 Rocket-propelled Grenade Team

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will impact 2 RCW foraging partitions (34 and 96) and 2 RCW trees in cluster 34 (Figure 26). No other active clusters will be affected as a result of this action. Impacts from range construction will result in the incidental take of Cluster 34 due to inadequate acres of foraging habitat (68.7 acres remaining post-construction). Cluster 96 failed to meet the MSS (inadequate number of pines >10 inches DBH), but is expected to persist long-term due to adequate foraging resources available and > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

d. Task 4 Ambush Blocked

Clear-cutting to facilitate construction of the range and the building of berms for habitat protection will impact 2 RCW foraging partitions (96 and 116) (Figure 26). No other active clusters will be affected as a result of this action. Direct impacts from this action will result in the loss of 1 RCW tree in Cluster 96. Cluster 96 and 116 failed MSS due to an inadequate number of pines >10 inches DBH. Despite failing MSS, these clusters are expected to persist after construction of the Task 4 Ambush Blocked due to having adequate foraging resources available and > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

e. Task 5 Urban Ambush

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will impact 3 RCW foraging partitions (34, 141, and 339) (Figure 26, Table 3). No other active clusters will be affected as a result of this action. Direct impacts from this action will result in the incidental take of Cluster 34 (fails MSS due to inadequate foraging habitat acreage). Cluster 141 also failed MSS due to an inadequate number of pines >10 inches DBH. However, Cluster 141 is expected to persist after construction of the Task 5 Urban Ambush range due to adequate foraging resources and > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below). Cluster 339 meets MSS and is expected to persist after construction of the Task 5 Urban Ambush range and will have > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

f. Task 6 Tech Trucks

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will impact 2 active RCW foraging partitions (Clusters 22 and 130) (Figure 26). No other active clusters will be affected as a result of this action. Both clusters meet MSS, and will have > 4.7 active clusters within 1.25 miles and are expected to persist long term (Tables 2 and 3).

g. Task 7 Near Ambush

Clear-cutting to facilitate construction of the action area and the building of berms for habitat protection will impact 2 RCW foraging partitions (Clusters 5 and 22) (Figure 26). No other active clusters will be affected as a result of this action. These clusters will lose a portion of their foraging partitions. Direct impacts from this action will result in the loss of 2 RCW trees in Cluster 22. Both clusters meet MSS. These clusters are expected to persist after construction of the Near Ambush because they will have adequate foraging resources available and will have > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

To summarize the Foraging Partition Level Analysis for the CLFC, direct impacts from construction will result in the loss of 5 RCW trees in Clusters 22, 34, and Cluster 96. Habitat loss in Cluster 34 will result in an incidental take due to insufficient foraging habitat (68.7 acres) remaining post-construction. Clusters 96, 116, and 141 (inadequate pines >10 inches DBH), failed to meet MSS, but we expect them to persist long-term because they will have adequate foraging partition acreage. Clusters 5, 22, 130, 334, and 339 meet MSS and are expected to persist. Indirect impacts from construction (loss of foraging habitat) will affect 9 RCW clusters (Clusters 5, 22, 96, 116, 130, 141, 334, and 339). An additional 12.7 acres will be removed from RCW HMU that does not impact any foraging partition. All clusters except Cluster 34 are expected to persist after construction of the Convoy Live Fire range due to adequate foraging resources available and having > 4.7 active clusters within 1.25 miles (Table 2 and RCW Group Level Analysis, below).

RCW Group Level Analysis

Cluster 5: This cluster has been active since 1994 and has nested every year since 1995. It has fledged juveniles every year except 1994, 1997, 2007, and 2009. It had helpers during the 2003 and 2008-2009 breeding seasons.

Cluster 22: This cluster has been active since 1997 except for 2002. It nested in 2001 and 2005-2009. It fledged juveniles in 2005-2008. It had helpers for the 2001 and 2009 breeding season.

Cluster 34: This cluster has been active since 1994 and has nested in 1995-1996, 1998-2005, 2007 and 2009. It fledged juveniles in 1996, 1998-2001, and 2003-2004. It had helpers for the 2000-2001 and 2004-2007 breeding season.

Cluster 96: This cluster has been active since 1994 and has nested in 1995-1999, 2001-2002, 2004-2005, and 2009. It fledged juveniles in 1996-1997, 1999, and 2001-2002. It had helpers in 1999, 2001-2002 and 2007.

Cluster 116: This cluster has been active since 1994 and nested in 1998-1999, 2001-2005 and 2007. It fledged juveniles in 2001-2004. It had helpers in 2002, 2007 and 2009.

Cluster 130: This cluster has been active since 1995 and has nested in 1996-1999 and 2001-2008. It fledged juveniles in 1998 and 2001-2006. It had helpers in 2002 and 2008.

Cluster 141: This cluster has been active since 1994 and has nested in 1996-2005 and 2007-2008. It fledged juveniles in 1999-2002 and 2007-2008. It had helpers in 1999.

Cluster334: This cluster was provisioned in the fall of 2001. It has been active since 2002 and has nested every year except 2005 and 2007. It fledged juveniles in 2003-2004 and 2006-2008. It had helpers in 2003-2004 and 2006-2008.

Cluster 339: This cluster was provisioned in the winter of 2003. It has been active since 2003 and has nested every year except 2008. It fledged juveniles in 2003-2004. It had helpers in 2005 and 2009.

RCW Neighborhood Level Analysis

Since 1994, 712 Fort Stewart RCW dispersals have been documented, including 40 that crossed the proposed action area. The mean dispersal distance for Fort Stewart's RCW population is 3.96 miles (range 0.20 – 24.11 miles). Therefore, the neighborhood for this project area is 3.96 miles from the boundary of the proposed action area and encompasses 40,748.2 acres, 20,028.9 acres of which lie within the RCW HMUs. There currently are 58 active RCW clusters within the dispersal neighborhood (excluding the affected cluster analyzed in the Group Level Analysis). Although 58 active clusters fall within the average dispersal distance, it is unlikely that these clusters will receive a direct or indirect effect. In addition to dispersal events that crossed the proposed action area, we documented 52 other dispersal events (range 5.98 – 23.45 miles) "across" existing Red Cloud Range openings and the Artillery Impact Area (AIA), a much larger forest opening (5 miles x 5 miles). It is unlikely that RCWs actually crossed these large blocks of unsuitable habitat, but rather went around the existing openings in suitable forested habitat. Consequently, the number of groups estimated to be affected due to construction of the CLFC is less than the 58 groups occurring in the project neighborhood. Clusters that are considered to be most vulnerable to the effects of habitat fragmentation are those lying within 0.5 miles (Rudolph and Conner 1991), however, we expect that all of the clusters in the project neighborhood will persist, because there will be sufficient habitat remaining after construction to support all RCW groups indirectly affected by construction (See Foraging Partition Level Analysis). Additionally, the CLFC is relatively small compared to the AIA and dispersal events of RCWs should be only minimally impacted.

To summarize the impacts of construction, operation, and maintenance of the CLFC to RCWs, direct impacts will result in the incidental take of 1 RCW group (Cluster 34) due to inadequate acres of foraging habitat (68.7 acres), the loss of 5 RCW trees (Clusters 22, 34, and 96). Clusters 96, 116, and 141 failed to meet the MSS, but are expected to persist long-term. Five other clusters (5, 22, 130, 334, and 339) will continue to meet MSS post-construction.

UAS

Fort Stewart Fish and Wildlife Branch personnel surveyed the proposed action area for RCW cavity and start trees and none were found. The nearest active RCW cluster (10) is approximately 0.5 miles northwest of the proposed action area in FSTA A18, but the project will not affect the foraging partition of this or any other active cluster. Construction of the UAS will remove 33.7 acres of existing RCW HMU as identified in Fort Stewart's INRMP (Figure 30). Because of the relatively small acreage required for this project and its proximity to existing military infrastructure, the proposed project may affect, but is unlikely to adversely affect RCWs.

Population Level Analysis

Range and infrastructure construction will result in the incidental take of 8 RCW clusters (18, 34, 69, 105, 124, 247, 256, and 361) and the loss of an additional 9 RCW trees (Table 3). Eight clusters (38, 66, 67, 96, 116, 141, 252, and 342) fail to meet MSS due to insufficient pine stems > 10 inches DBH or excessive midstory. However, we expect these clusters to persist because we intend to remove the midstory and/or because they have persisted for many years despite having < 40 sq. ft. of basal area of pines > 10 inches DBH (Tables 2 and 3). Fifteen clusters (5, 22, 70, 103, 130, 154, 179, 268, 300, 322, 334, 339, 356, 381, and 407) meet MSS and are expected to persist long-term (Table 3). Though the proposed action will result in the loss of 1,676 acres of existing RCW HMU, it will not prevent Fort Stewart from achieving its recovery goal of 350 PBGs. After these projects are complete, Fort Stewart will have approximately 133,000 acres of suitable or potentially suitable RCW habitat. This acreage should be capable of supporting 665 groups. Demographic data from the past 5 years demonstrate that approximately 91% of active clusters on Fort Stewart have a PBG in residence. Applying historic demographic data to current RCW population growth rates and accounting for the take of 8 RCW groups indicates that the Fort Stewart population will still achieve 350 potential breeding groups (the recovery benchmark) in the breeding season of 2013. Ongoing management and monitoring programs at the Installation have resulted in a well-documented population increase with ample habitat to support continued growth to achieve recovery.

Eastern Indigo Snake

MPMGR

The proposed MPMGR does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 6.2 miles west of the action area in FSTA E21 (Figure 5). Eastern indigo snakes often use gopher tortoise burrows as winter refugia. The proposed action area does not lie within gopher tortoise habitat. The nearest gopher tortoise habitat is located 1.5 miles west in FSTA D10 (Figure 5). The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

IPBC

The proposed action area does not lie within eastern indigo snake HMU. There are 23.2 acres of gopher tortoise habitat that lie within the proposed action area that eastern indigo snakes may use as winter refugia (Figure 9). Prior to construction, the area will be surveyed for gopher tortoises and any found will be re-located to appropriate habitat. The nearest known occurrence of an eastern indigo snake is 0.3 miles south of the proposed action area in FSTA B17 (Figure 9). The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

MRFRD

The proposed action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the action area. The nearest known occurrence of an eastern indigo snake is 5.4 miles east of the action area in FSTA B4 (Figure 13). The

action area lies within gopher tortoise HMU (6.4 acres) (Figure 13). However, prior to any construction, gopher tortoises that are found in action area will be captured, burrows collapsed, and tortoises translocated to suitable habitat. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

ISBC

The entire action area lies within the Fort Stewart eastern indigo snake HMU. An eastern indigo snake has been detected within the project area. This individual was seen on 1 October 2003 and was a small adult (Figure 16). Eastern indigo snakes often use gopher tortoise burrows as winter refugia. The proposed action area lies within gopher tortoise habitat (Figure 16). The ISBC lies within gopher tortoise habitat. Prior to construction, area will be surveyed for gopher tortoises and eastern indigo snakes, burrows will be scoped, collapsed, and individuals will be relocated to appropriate habitat. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

QTR

The proposed action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the action area. The nearest known occurrence of an eastern indigo snake is 6.8 miles west northwest of the action area in FSTA E21 (Figure 5). The nearest gopher tortoise habitat that eastern indigo snakes may use as winter refugia is 1.5 miles north located in FSTA E6 (Figure 5). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

DMPTR

The majority of this project lies within non-forested area as described in Fort Stewarts INRMP (DPW 2001). There have been 7 sightings within the proposed action area (Figure 18). Prior to construction, area will be surveyed for gopher tortoises and eastern indigo snakes, burrows will be scoped, collapsed, and individuals will be relocated to appropriate habitat. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

10/25M Zero Range

The action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 5.8 miles northeast of the action area in FSTA B4 (Figure 20). The nearest gopher tortoise colony that eastern indigo snakes may use as winter refuge lies approximately 2.3 miles west northwest of the action area in FSTA D5 (Figure 20). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

CPMPQC

The action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 5.9 miles northeast of the action area in FSTA B4 (Figure 20). The nearest gopher tortoise colony that eastern indigo snakes may use as winter refuge lies approximately 2.2 miles west of the action area in FSTA D5 (Figure 20). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

KDR

The action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 5.9 miles west of the action area in FSTA E21 (Figure 5). The nearest gopher tortoise colony that eastern indigo snakes may use as winter refuge lies approximately 1.1 miles northwest of the action area in FSTA D10 (Figure 5). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

FMR

The action area does not lie within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 1.7 miles north of the action area in FSTA C4 (Figure 21). The nearest gopher tortoise colony that eastern indigo snakes may use as winter refuge lies approximately 1.3 miles east of the action area in FSTA C6 (Figure 21). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

MRFRB

The proposed action area does not lie within the Fort Stewart eastern indigo snake HMU. The nearest known sighting of an eastern indigo snake is approximately 1.2 miles to the northwest of the action area in FSTA B4 (Figure 25). The nearest gopher tortoise colony that eastern indigo snakes may use as a winter refuge is 1.0 miles east-southeast of the action area in FSTA A16 (Figure 25). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

CLFC

- a. Task 1 Entry Control Point** – The entire action area (10.1 acres) lies within the Fort Stewart eastern indigo snake HMU. No eastern indigo snakes have ever been detected in the project area. The nearest known occurrence of an eastern indigo snake is 2.7 miles west of the action area in FSTA C4 (Figure 29). The nearest gopher tortoise colony that eastern indigo snakes may use as winter refuge lies approximately 0.1 miles northwest of the action area in FSTA C5 (Figure 29). This project will not impact any gopher tortoise

burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

- b. **Task 2 Sniper** – A portion (5.6 acres) of the action area lies within the Fort Stewart eastern indigo snake HMU. The nearest known occurrence of an eastern indigo snake is 2.3 miles north northwest of action area in FSTA C4 (Figure 29). The nearest gopher tortoise HMU that eastern indigo snakes may use as winter refuge is located 0.3 miles northeast of action area in FSTA C6 (Figure 29). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.
- c. **Task 3 Rocket-propelled Grenade Team** – The entire action area lies within the Fort Stewart eastern indigo snake HMU (10.9 acres). The nearest known occurrence of an eastern indigo snake is 2.6 miles north of action area in FSTA C4 (Figure 29). The nearest gopher tortoise habitat that eastern indigo snakes may use as winter refuge is located 0.5 miles northeast of action area in FSTA C6 (Figure 29). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.
- d. **Task 4 Ambush Blocked** – A portion (12.1 acres) of the action area lies within the Fort Stewart eastern indigo snake HMU. The nearest known occurrence of an eastern indigo snake is 2.2 miles west-southwest of the action area in FSTA B17 (Figure 29). The nearest gopher tortoise HMU that eastern indigo snakes may use as winter refuge is located 1.2 miles northeast of action area in FSTA C6 (Figure 29). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.
- e. **Task 5 Urban Ambush** – The entire action area lies within the Fort Stewart eastern indigo snake HMU (39.4 acres). The nearest known occurrence of an eastern indigo snake is 3.0 miles north northwest of action area in FSTA C4 (Figure 29). The nearest gopher tortoise HMU that eastern indigo snakes may use as winter refuge is located 0.3 miles northeast of action area in FSTA C6 (Figure 29). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.
- f. **Task 6 Tech Trucks** – The entire action area lies within the Fort Stewart eastern indigo snake HMU (31.0 acres). The nearest known occurrence of an eastern indigo snake is 2.5 miles north northwest of action area in FSTA C4 (Figure 29). The action area lies within gopher tortoise HMU that eastern indigo snakes may use as winter refuge. The action area lies within 2.0 acres of gopher tortoise HMU (Figure 29). Prior to construction, area will be surveyed for gopher tortoises and relocated to appropriate habitat. This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

- g. Task 7 Near Ambush** – The entire action area lies within the Fort Stewart eastern indigo snake HMU (45.1 acres). The nearest known occurrence of an eastern indigo snake is 2.3 miles north northwest of action area in FSTA C4 (Figure 29). The nearest gopher tortoise HMU that eastern indigo snakes may use as winter refuge is located 0.2 miles southeast of action area in FSTA C7 (Figure 29). This project will not impact any gopher tortoise burrows that eastern indigo snakes might use as winter refugia. The proposed project may affect, but is not likely to adversely affect the eastern indigo snake.

UAS

The proposed action area does not lie within the Fort Stewart eastern indigo snake HMU as identified in the Installation's INRMP. The nearest known sighting of an eastern indigo snake is approximately 2.9 miles north of the action area in FSTA B4 (Figure 31). The nearest gopher tortoise colony that eastern indigo snakes may use as a winter refuge is 0.3 miles northwest of the action area in FSTA A18 (Figure 31). The proposed action may affect, but is unlikely to adversely affect the eastern indigo snake.

Frosted Flatwoods Salamander

A comprehensive threatened and endangered species survey, including surveys for FFS and their habitat, was performed on Fort Stewart by The Nature Conservancy (1995). Additionally, Palis (2002) surveyed and ranked 1427 isolated wetlands for their suitability as FFS breeding sites. The 6 categories for Fort Stewart FFS ponds in descending order of suitability are: 1) confirmed breeding site; 2) highly likely breeding site; 3) potential breeding site (mesic); 4) potential breeding site (dry); 5) unlikely breeding site; and 6) unsuitable. The Fish and Wildlife Branch also conducts in-house surveys of potential FFS breeding sites in a continuing effort to gather presence/absence data in 500 potentially suitable FFS ponds identified in the Palis (2002) survey. The Fort Stewart Fish and Wildlife Branch continue to add newly discovered potential breeding ponds and to rank them in accordance with the Palis (2002) protocol.

Project design will incorporate protection measures as required by the Clean Water Act and the Georgia Erosion and Sedimentation Control Act to ensure appropriate wetland protection. Therefore, the proposed actions will not result in significant erosion, run-off, or other off-site impacts that might affect FFS habitat.

MPMGR

The entire proposed action area lies within the Fort Stewart FFS HMU. A portion of the proposed action area lies within a highly likely breeding site (0.7 acres) and a potential breeding site (0.4 acres). The area lies within their associated primary (25.2 acres) and secondary (49.5 acres) buffers (Figure 4). No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 1.6 miles northeast of the action area in FSTA D7 (Figure 5). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

IPBC

The proposed action area lies within 17.0 acres of FFS HMU. Also, 2 ponds that account for 5.3 acres, are potential breeding sites and lie completely within the proposed action area. The action area lies within 67.7 acres of primary FFS pond buffers and 272.6 acres of secondary FFS pond buffers (Figure 8). No FFS have ever been detected in the action area. The nearest recent sighting of a FFS is approximately 6.1 miles southeast of the action area in FSTA B19 (Figure 9). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

MRFRD

The entire proposed project area lies within the Fort Stewart FFS HMU. A portion of the project area (1.6 acres) lies within a mesic potential breeding pond site for the FFS and intersects both a primary (19.7 acres) and secondary (12.6 acres) buffers of 2 potential mesic breeding ponds (Figure 12). No records of FFS have ever been identified in the action area. The nearest historical sighting of a FFS is approximately 1.3 miles northwest of the proposed action area in FSTA D7 (Figure 13). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect, FFS or the landscape's ability to support FFS.

ISBC

The proposed action area does not lie within the Fort Stewart FFS HMU and will not impact any FFS ponds or their associated buffers. No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 0.9 miles south of the action area in FSTA B4 (Figure 16). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect, FFS or the landscape's ability to support FFS.

QTR

The entire proposed project area lies within the Fort Stewart FFS HMU. A portion of the action area lies within unlikely breeding ponds (7.3 acres), 2 mesic potential breeding ponds (4.3 acres) and 2 unsuitable breeding ponds (5.7 acres). A portion of the project area intersects primary pond buffers (40.6 acres) and secondary pond buffers (121.6 acres) of potential FFS breeding ponds (Figure 4). No records of FFS have ever been identified in the action area. The nearest historical sighting of a FFS is approximately 1.2 miles east of the proposed action area in FSTA D7 (Figure 5). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

DMPTR

A portion of the proposed action area lies within FFS HMU (56 acres). This proposed action does not affect any known FFS breeding ponds or their buffers. The nearest historical sighting of a FFS is 5.4 miles southeast of the proposed action area in FSTA B4.10 (Figure 18). The proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

10/25M Zero Range

The entire proposed action area lies within the Fort Stewart FFS HMU but will not impact any FFS ponds or their associated buffers. No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 2.9 miles northeast of the action area in FSTA B6 (Figure 20). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

CPMPQC

The entire proposed action area lies within the Fort Stewart FFS HMU but will not impact any FFS ponds or their associated buffers. No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 3.0 miles northeast of the action area in FSTA B6 (Figure 20). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

KDR

A portion of the proposed action area (8.9 acres) lies within the Fort Stewart FFS HMU but will not impact any FFS ponds or buffers. No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 2.7 miles northwest of the action area in FSTA E7 (Figure 5). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

FMR

The proposed action area does not lie within the Fort Stewart FFS HMU and will not impact any FFS ponds or their associated buffers. No FFS have ever been detected in the action area. The nearest recent sighting of a FFS is approximately 5.3 miles southeast of the proposed action area in FSTA B19 (Figure 21). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect, FFS or the landscape's ability to support FFS.

MRFRB

The entire proposed action area lies within the Fort Stewart FFS HMU. The proposed project lies within both FFS primary (6.1 acres) and secondary (28.2 acres) buffers of a potential breeding site (Dry) (Figure 24). No records of FFS have ever been identified in the action area. The nearest known historic sighting is approximately 0.8 miles northeast of the action area in FSTA B4 (Figure 25). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect, FFS or the landscape's ability to support FFS.

CLFC

- a. Task 1 Entry Control Point** - The proposed project area does not lie within the Fort Stewart FFS HMU. All of the action area (10.1 acres) lies within a secondary buffer of a

potential breeding site (dry) (Figure 28). No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 5.4 miles south of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

- b. **Task 2 Sniper** – The proposed project area lies within the Fort Stewart FFS HMU (15.6 acres). The project does not affect any ponds or buffers for the FFS. No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 4.1 miles southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.
- c. **Task 3 Rocket-propelled Grenade Team** – The entire proposed project area lies within the Fort Stewart FFS HMU. The project does not affect any ponds or buffers for the FFS. No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 3.9 miles southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.
- d. **Task 4 Ambush Blocked** – A portion of the proposed project area lies within the Fort Stewart FFS HMU (13 acres). A portion of the action area (2.0 acres) lies within the secondary buffers of 3 potential breeding sites (Figure 28). No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 3.6 miles southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.
- e. **Task 5 Urban Ambush** – The entire proposed project area lies within the Fort Stewart FFS HMU. The project lies within a potential breeding site (1.6 acres) and 1 unsuitable site (0.3 acres) for the FFS. It also lies within the primary (17.4 acres) and secondary (20.2 acres) pond buffers for the FFS (Figure 28). No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 3.2 miles southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.
- f. **Task 6 Tech Trucks** – The entire proposed project area lies within the Fort Stewart FFS HMU. The project does not affect any ponds or buffers for the FFS. No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 3.7 miles south southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

- g. Task 7 Near Ambush** – The whole proposed project area lies within the Fort Stewart FFS HMU. The portion of the proposed action area (11.2 acres) lies within a secondary buffer of a potentially breeding site (Dry) (Figure 28). No records of FFS have ever been identified in the action area. The nearest recent sighting of a FFS is approximately 4.0 miles south southeast of the proposed action area in FSTA B19 (Figure 29). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

UAS

A portion of the proposed action area lies within the Fort Stewart FFS HMU (37.7 acres). The area is not within FFS ponds or their associated primary or secondary buffers. No FFS have ever been detected in the action area. The nearest historical sighting of a FFS is approximately 1.5 miles northwest of the action area in FSTA A18 (Figure 31). Because of its distance from confirmed FFS sightings, the proposed action may affect, but is not likely to adversely affect the FFS or the landscape's ability to support FFS.

Wood Stork

While wood storks often exploit wetland habitats for foraging, there are no known nesting areas on Fort Stewart.

MPMGR

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 5 miles east of the action area in FSTA E1 at Pond 34 (Figure 5). The proposed project may affect, but is not likely to adversely affect the wood stork.

IPBC

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest sighting of a wood stork from the proposed action area is approximately 3.6 miles west of action area in FSTA F20 (Figure 9). The proposed project may affect, but is not likely to adversely affect the wood stork.

MRFRD

No wood storks were observed in the action area, nor have they ever been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 2.2 miles east of the action area in FSTA E1 (Pond 34) (Figure 13). The proposed project may affect, but is not likely to adversely affect the wood stork.

ISBC

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 2.4 miles south of the action area in FSTA A16 (Figure 16). The proposed project may affect, but is not likely to adversely affect the wood stork.

QTR

No wood storks were observed in the action area, nor have they ever been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 4.7 miles east of the action area in FSTA E1 at Pond 34 (Figure 5). The proposed project may affect, but is not likely to adversely affect the wood stork.

DMPTR

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 1.9 miles northwest of the action area in FSTA F17 (Figure 18). The proposed project may affect, but is not likely to adversely affect the wood stork.

10/25M Zero Range

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 2.8 miles east southeast of the action area in FSTA D2 (Figure 20). The proposed project may affect, but is not likely to adversely affect the wood stork.

CPMPQC

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 2.8 miles east southeast of the action area in FSTA D2 (Figure 20). The proposed project may affect, but is not likely to adversely affect the wood stork.

KDR

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 6.2 miles east northeast of the action area in Pond 34 (Figure 5). The proposed project may affect, but is not likely to adversely affect the wood stork.

FMR

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 6.7 miles west of the action area in FSTA F20 (Figure 21). The proposed project may affect, but is not likely to adversely affect the wood stork.

MRFRB

No wood storks were observed in the proposed action area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 1.0 miles southeast of the action area in FSTA A16 (Figure 25). The proposed project may affect, but is unlikely to adversely affect the wood stork.

Convoy Live Fire Range Tasks 1-7

No wood storks have been observed within the proposed convoy live fire complex area, nor have they been observed foraging within the action area. The nearest area where foraging wood storks have been observed is approximately 7.7 miles south southeast of the complex area in FSTA A2(Figure 29). The proposed project may affect, but is not likely to adversely affect the wood stork.

UAS

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 1.4 miles northeast of the action area in FSTA A16 (Figure 31). The proposed project may affect, but is not likely to adversely affect the wood stork.

Shortnose Sturgeon

Telemetry and capture data, which was collected as part of Fort Stewart's ongoing shortnose sturgeon monitoring program, indicate these fish do not travel > 2 miles up the Canoochee River or 20 miles up the Ogeechee River from the Canoochee/Ogeechee River confluence. The Canoochee River flows diagonally through the Installation while the Ogeechee River forms much of the Installation's eastern boundary.

MPMGR

The action area lies approximately 25.3 miles west northeast from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Due to the distance between the proposed project area and documented sturgeon sightings, erosion runoff into the river is not expected and will have no affect on the shortnose sturgeon.

IPBC

The action area lies approximately 14.4 miles northwest from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Due to the distance between the proposed project area and documented sturgeon sightings, erosion runoff into the river is not expected and will have no affect on the shortnose sturgeon.

MRFRD

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 22 miles northeast of the project area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project will not affect shortnose sturgeons.

ISBC

The proposed action area lies approximately 14.5 miles east northeast from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Due to the distance between

the proposed project area and documented sturgeon sightings, erosion runoff into the river is not expected and is expected to have no affect on the shortnose sturgeon.

QTR

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 24.7 miles east of the project area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project will not affect the shortnose sturgeon.

DMPTR

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 17.5 miles east of the project area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

10/25M Zero Range

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 22.9 miles west of the project area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

CPMPQC

The proposed action area lies approximately 22.5 miles west from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

KDR

The proposed action area lies approximately 26.1 miles east northeast from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

FMR

The action area lies approximately 13.1 miles northwest from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

MRFRB

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 16 miles east-northeast of the proposed action

area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the proposed action area and therefore, the proposed project is not expected to affect the shortnose sturgeon.

CLFC

The entire CLFC complex lies approximately 10.8 miles northwest from the nearest shortnose sturgeon occurrence on the Canoochee River (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

UAS

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 16.3 miles east of the project area (Figure 39). Suitable habitat for shortnose sturgeons does not occur in or near the action areas and therefore, the proposed project is not expected to affect the shortnose sturgeon.

Cumulative Effects

There are no foreseeable state, local, tribal, or private actions that would have a cumulative effect when combined with the impacts of the proposed actions. No adverse cumulative effects are anticipated.

Conservation Measures

The following conservation actions will be undertaken or continued as a part of the proposed action and will have a beneficial effect on listed species.

- All RCWs in clusters to be clearcut (69, 105, 247, 256, and 361) will be captured and relocated to suitable habitat elsewhere on Fort Stewart.
- Fort Stewart will continue to conduct prescribed burning, stand improvement thinning, and artificial RCW cavity provisioning IAW the INRMP.
- Selective thinning will be conducted in RCW foraging partitions that fail to meet the MSS due to excess pine or hardwood midstory or overstory so that they meet MSS criteria.
- Fort Stewart, in coordination with USFWS, will annually inspect stands downrange from live fire facilities to determine if significant damage is resulting from bullet impacts. If significant damage (i.e. tree mortality rate threatens to reduce stand density below threshold for RCW foraging habitat), construction of earthen berms or other effective protective measures will be implemented. Acreage required for berm construction is included in the figures for total acres impacted by each facility in this BA.
- Fort Stewart will continue to manage and monitor its RCW population IAW the 2007 Guidelines for Management of RCWs on Army Installations.
- Fort Stewart will continue to conduct a mark-release monitoring program for indigo snakes IAW the INRMP.

- Fort Stewart will continue to monitor known and potential FFS breeding ponds IAW the INRMP.
- Fort Stewart will capture gopher tortoises and eastern indigo snakes from facilities where they are threatened by construction activities (IPBC, MRFRD, ISBC, DMPTR, and CLFC) and relocate them to suitable habitat elsewhere on Fort Stewart.
- Fort Stewart will manage and monitor the installation's gopher tortoise population IAW the Management Guidelines for the Gopher Tortoise on Army Installations (2008).

Conclusion

Potential injury to wood storks resulting from the Range and Infrastructure Construction is unlikely to occur, virtually impossible to detect, and consequently the impacts of the projects on this species is discountable. The proposed action is not likely to adversely affect wood storks because there are no rookeries on Fort Stewart. Wood storks occasionally forage on the Installation, and construction after the proposed projects, suitable wetland foraging habitat will remain for the wood stork. The projects will not affect the shortnose sturgeon because habitat in the project areas is not suitable. Critical habitat has been proposed for the FFS, but no FFS critical habitat was proposed for designation on Fort Stewart. Burning and thinning to improve FFS habitat will continue. The Range and Infrastructure Construction will impact 895.4 acres of FFS HMU, 0.7 acres of highly likely breeding ponds, 13.2 acres of potential breeding ponds, 180.8 acres of primary buffers, and 529 acres of secondary buffers for the FFS. However, due to Fort Stewart's ongoing monitoring efforts for the FFS, no FFS have been observed in the project areas, and project design will incorporate protection measures as required by the Clean Water Act and the Georgia Erosion and Sedimentation Control Act to ensure appropriate wetland protection. The proposed projects may affect but is not likely to adversely affect the FFS. Eastern indigo snake sightings have been detected within some of the proposed project areas. Gopher tortoise habitat will be impacted by the proposed actions. However, prior to construction all gopher tortoise habitat will be inspected for their presence and any that are found will be captured, burrows will be collapsed, and relocated to suitable habitat. Construction of the Range and Infrastructure Construction may affect, but is not likely to adversely affect the eastern indigo snake.

Due to clear cutting of the cluster sites or falling below the minimum acreage needed per partition, the proposed projects will result in the incidental take of 8 active RCW clusters (18, 34, 69, 105, 124, 247, 256, and 361) and the loss of 9 RCW trees. Five clusters (38, 67, 96, 116, and 141) fail to meet MSS due to inadequate pine >10 inches DBH, but these clusters are expected to persist after the construction of the Ranges and Infrastructure because they will have adequate potential foraging acres available. Two clusters (66 and 342) fail to meet MSS due to an over abundance of pine <10 inches DBH. However, during the construction of the Ranges and Infrastructure, this pine will be removed and the clusters will meet MSS and are expected to persist. One cluster (252) fails to meet MSS due to an over abundant midstory. However, with mechanical removal of this midstory, this cluster will meet MSS and is expected to persist. Fifteen clusters (5, 22, 70, 103, 130, 154, 179, 268, 300, 322, 334, 339, 356, 381, and 407) meet MSS and are expected to persist. Additionally, the Ranges and Infrastructure Construction will remove 1,676 acres of RCW HMU. Construction of the Ranges and Infrastructure will not

prevent the Installation from achieving its RCW recovery goal, and Fort Stewart's aggressive monitoring and management activities for the benefit of listed species will continue to maintain and improve endangered species populations and their habitats on other parts of the Installation.

Potential indirect effects (e.g., noise, dust, traffic, etc.) on listed species caused by expansion, construction, operation, and maintenance in the action areas are not likely to adversely affect listed species' populations based on the existence of stable or increasing populations on similar landscapes where listed species have existed for many years. Scientific studies on the effects of noise (Delaney et al. 2002) on RCW fecundity demonstrate that reproductive parameters of RCWs in or near noise areas are not statistically different from the reproductive parameters of RCWs in more protected habitats. A study on the effects of military maneuvers on the Fort Stewart RCW population (Hayden et al. 2002) detected a difference in the mean number fledglings produced per successful nest between RCW clusters that experienced "high activity" and those that experienced "low-activity", but the sample size of the "high activity" treatment was low (n=3) when compared to the "low activity" sample size (n=19) and these observed differences were considered inconclusive. We expect the RCW population to persist near the Ranges and Infrastructure as they have historically persisted adjacent to existing developed areas.

In summary, the proposed action will adversely affect the RCW. It will not affect the shortnose sturgeon, and it is not likely to adversely affect the FFS, wood stork, or eastern indigo snake. No critical habitat will be adversely modified by this action. The Army did not draw on the regulatory definition of destruction or adverse modifications of critical habitat at 50 CFR 402.02 with respect to the conclusions and analysis made in this BA. Instead, the Army has incorporated into the critical habitat effects analysis the conservation of species principals found in the statutory provisions of the ESA.

Figure 1. Location of proposed MCA Projects, Fort Stewart, GA.

Figure Redacted

Figure 2. RCW forage partitions and trees affected by the MPMGR, QTR, and KDR, Fort Stewart, GA.

Figure Redacted

Figure 3. RCW HMU affected by the MPMGR, QTR, and KDR, Fort Stewart, GA.

Figure Redacted

Figure 4. FFS affected by the MPMG, QTR, and KDR, Fort Stewart, GA.

Figure Redacted

Figure 5. TES near the MPMGR, QTR, and KDR, Fort Stewart, GA.

Figure Redacted

Figure 6. RCW forage partitions and trees affected by the IPBC, Fort Stewart, GA.

Figure Redacted

Figure 7. RCW HMU affected by the IPBC, Fort Stewart, GA.

Figure Redacted

Figure 8. FFS affected by the IPBC, Fort Stewart, GA.

Figure Redacted

Figure 9. TES near the IPBC, Fort Stewart, GA.

Figure Redacted

Figure 10. RCW partitions affected by the MRFRD, Fort Stewart, GA.

Figure Redacted

Figure 11. RCW HMU affected by the MRFRD, Fort Stewart, GA.

Figure Redacted

Figure 12. FFS affected by the MRFRD, Fort Stewart, GA.

Figure Redacted

Figure 13. TES near the MRFRD, Fort Stewart, GA.

Figure Redacted

Figure 14. RCW partitions affected by the ISBC, Fort Stewart, GA.

Figure Redacted

Figure 15. RCW HMU affected by the ISBC, Fort Stewart, GA.

Figure Redacted

Figure 16. TES near the ISBC, Fort Stewart, GA.

Figure Redacted

Figure 17. RCW HMU affected by the DMPTR, Fort Stewart, GA.

Figure Redacted

Figure 18. TES near the DMPTR, Fort Stewart, GA.

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Figure 19. RCW HMU affected by the CPMPQC and Zero Range, Fort Stewart, GA.

Figure Redacted

Figure 20. TES near the CPMPQC and Zero Range, Fort Stewart, GA.

Figure Redacted

Figure 21. TES near the FMR, Fort Stewart, GA.

Figure Redacted

Figure 22. RCW partitions affected by the MRFRB, Fort Stewart, GA.

Figure Redacted

Figure 23. RCW HMU affected by the MRFRB, Fort Stewart, GA.

Figure Redacted

Figure 24. FFS affected by the MRFRB, Fort Stewart, GA.

Figure Redacted

Figure 25. TES near the MRFRB, Fort Stewart, GA.

Figure Redacted

Figure 26. RCW partitions and trees affected by the CLFC, Fort Stewart, GA.

Figure Redacted

Figure 27. RCW HMU affected by the CLFC, Fort Stewart, GA.

Figure Redacted

Figure 28. FFS affected by the CLFC, Fort Stewart, GA.

Figure Redacted

Figure 29. TES near the CLFC, Fort Stewart, GA.

Figure Redacted

Figure 30. RCW HMU affected by the UAS, Fort Stewart, GA.

Figure Redacted

Figure 31. TES near the UAS, Fort Stewart, GA.

Figure Redacted

Figure 39. Shortnose Sturgeon locations relative to the MCA Projects, Fort Stewart, GA.

Figure Redacted

Table 2. Density analyses of active RCW clusters within 0.5 miles of proposed ranges and infrastructure construction, Fort Stewart, Georgia.

Range or Construction Project	Cluster w/in 0.5 miles of Project Area (impacted clusters)	Number of pre-project active clusters w/in 1.25 miles of impacted cluster	Number of post-project active clusters w/in 1.25 miles of impacted cluster	Post-Project Density Rating: Dense - >4.7 Clusters w/in 1.25miles Moderate - 2.5-4.7 w/in 1.25 miles Low - <2.5 w/in 1.25 miles
MPMGR	124	7	6	Dense
	247	6	5	Dense
	300	4	2	Low
	356	11	10	Dense
	381	8	8	Dense
IPBC	18	12	12	Dense
	38	9	9	Dense
	69	4	4	Moderate
	70	4	4	Moderate
	105	7	7	Dense
	256	4	4	Moderate
	361	4	4	Moderate
MRFRD	407	3	3	Moderate
ISBC	103	6	6	Dense
	268	8	8	Dense
QTR	124	7	5	Dense
	154	8	6	Dense
	247	6	4	Moderate
	252	7	5	Dense
	322	8	6	Dense
MRFRB	66	9	9	Dense
CLF	5	14	14	Dense
	22	12	12	Dense
	34	9	9	Dense
	96	10	10	Dense
	116	10	10	Dense
	130	13	13	Dense
	141	6	6	Dense
	334	8	8	Dense
	339	10	10	Dense

Table 3. Acreage impacts to the RCW. Highlighted clusters are not expected to persist and incidental take is requested for these RCW groups.

RCW Cavity Tree Impacts		Meets MSS		Incidental Take Requested	Acreage Impacts		
RCW Cluster #	# Cavity Trees Impacted	Pre-project	Post-project		Total RCW Partition Acres Impacted	Pre-Project	Post-Project
5	0	Yes	Yes	No	7.8	95.0	87.2
18	0	No	No	Yes	35.7	100.5	64.9
22	2	Yes	Yes	No	35.7	121.2	85.5
34	2	No	No	Yes	31.6	100.3	68.7
38	1	No	No	No	67.6	175.9	108.2
66	0	No	No	No	22.2	294.9	272.7
67	0	No	No	No	5.9	123.7	117.8
69	7 (All)	No	No	Yes	105.6	217.1	111.5
70	0	Yes	Yes	No	3.1	169.6	166.5
96	1	No	No	No	25.0	204.0	179.0
103	0	Yes	Yes	No	39.6	242.8	203.2
105	5 (All)	No	No	Yes	141.1	165.7	24.7
116	0	No	No	No	2.3	226.3	224.0
124	1	Yes	No	Yes	108.7	137.1	28.4
130	0	Yes	Yes	No	20.8	182.3	161.5
141	0	No	No	No	1.3	77.2	76.1
154	2	Yes	Yes	No	39.4	117.9	78.5
179	0	Yes	Yes	No	18.9	204.1	185.2
247	11 (All)	Yes	No	Yes	41.8	97.7	55.9
252	0	No	No	No	9.0	117.9	108.9
256	7 (All)	No	No	Yes	34.3	67.4	33.1
268	0	Yes	Yes	No	0.02	141.4	141.4
300	0	Yes	Yes	No	27.4	188.3	160.9
322	0	Yes	Yes	No	54.3	185.0	130.8
334	0	Yes	Yes	No	1.1	130.6	129.5
339	0	Yes	Yes	No	8.6	140.9	132.4
342	0	No	No	No	28.1	192.2	164.2
356	0	Yes	Yes	No	9.4	202.3	192.8
361	5 (All)	No	No	Yes	137.5	170.8	33.3
381	0	Yes	Yes	No	10.7	155.4	144.8
407	0	Yes	Yes	No	32.3	261.9	229.6
Totals	44	17	15	8	1106.8	5007.4	3901.2

Table 4. Project impacts to frosted flatwoods salamander, eastern indigo snake, and gopher tortoise, Fort Stewart, GA.

Project	Frosted Flatwoods Salamander				Eastern Indigo Snake	Gopher Tortoise
	Highly Likely Pond Acres	Potential Breeding Pond Acres	Primary Buffer Acres	Secondary Buffer Acres	Sightings	Habitat Acres
MPMGR	0.7	0.4	25.2	49.5	No	0
IPBC	0	5.3	67.7	272.6	No	23.2
MRFRD	0	1.6	19.7	12.6	No	6.4
ISBC	0	0	0	0	Yes (1)	277.2
QTR	0	4.3	40.6	121.6	No	0
DMPTR	0	0	0	0	Yes (7)	0
Zero	0	0	0	0	No	0
CPMPQC	0	0	0	0	No	0
KDR	0	0	0	0	No	0
FMR	0	0	0	0	No	0
MRFRB	0	0	6.1	28.2	No	0
CLFC	0	1.6	17.4	43.5	No	2.0
UAS	0	0	0	0	No	0

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IPBC Power Line ROW

The power line construction and corresponding right-of-way (ROW) for the Infantry Platoon Battle Course (IPBC) in FSTA C-1 (Figure 1) will occupy 12.4 acres and will require clear cutting, grubbing, grading, and future maintenance for the ROW. The total acreage consists of 0.4 acres of wetland, 8.6 acres of RCW HMU, and 3.4 acres of non-forested area. Habitat within the proposed action area is composed of a canopy dominated by slash pine (*Pinus elliottii*), longleaf pine (*P. palustris*), and loblolly pine (*P. taeda*), with a midstory of sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), live oak (*Q. virginiana*), wax myrtle (*Myrica cerifera*), and red bay (*Persea borbonia*). The groundcover is characterized by saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), shiny blueberry (*Vaccinium myrsinites*), huckleberry (*Gaylussacia frondosa*), runner oak (*Q. pumila.*), rusty lyonia (*Lyonia ferruginea*), wiregrass (*Aristida stricta*), and switch-cane (*Arundinaria gigantea*). Wetland systems adjacent to the proposed project are dominated by pond cypress (*Taxodium ascendens*), blackgum (*Nyssa sylvatica*), pond pine (*P. serotina*), red maple (*Acer rubrum*), black titi (*Cliftonia monophylla*), and red bay. Soils in the action area consist of Ellabelle loamy sand, Mascotte sand, Olustee fine sand, Pelham loamy sand, and Stilson loamy sand.

RCW

Of the 8.6 acres of RCW HMU being removed, 4.1 acres will impact partition 70 and 1.3 acres will impact partition 389. The remaining 3.2 acres of RCW HMU do not affect any RCW partition. Fort Stewart still expects to achieve 350 potential breeding groups (the recovery benchmark) in the breeding season of 2013. The RCW Matrix was previously run on partition 70 with 166.5 acres of PGQFH passing. The new total for partition 70 is 162.4 acres of PGQFH and still passes.

Partition 389 was not previously impacted. Partition 389 does not pass the RCW Matrix due to too much pine basal area (PBA) < 10 inches in stands 15793, 16598, and 18239 and too much PBA > 10 inches in stand 16598 (see table below). This PBA will be thinned at the start of the project and all four stands will pass the RCW Recovery Standard with 220.2 acres of GQFH. Furthermore, 23 acres of stand 15793 was mowed during January and February 2009 to remove excessive mid-story (Figure 1).

Partition 389 - Stand Values (MS) 4/1/2010									
Stand ID	Age	PBA >10	PBA <10	Hdwd Midstory	Total BA	% Groundcover	Burn Interval	Burn Season	Total Acres
15793	75	46	39.8	2	88	14.7	4	2	149.21
16598	75	80	20	3	102.5	14.8	4	2	14.09
16599	75	18	1.6	1	22	0	4	2	69.11
18239	75	47.4	56.3	1	107.4	11.8	1	2	58.15

Cluster 389 was provisioned 12/06/2005 and was inactive until the 2009 breeding season where it had 1 active RCW tree with 1 adult. At the start of the 2010 breeding season the cluster has 3 active trees and 2 adults were heard.

FFS

No FFS HMU or ponds will be affected by the IPBC Power Line ROW construction. However, 1.0 acres of the primary buffer and 4.3 acres of the secondary buffer for a potential breeding of the FFS will be impacted (Figure 2). Project design will incorporate protection measures as required by the Clean Water Act and the Georgia Erosion and Sedimentation Control Act to ensure appropriate wetland protection. Therefore, the proposed actions will not result in significant erosion, run-off, or other off-site impacts that might affect FFS habitat. The nearest recent occurrence of a FFS was 8.5 miles southeast of the proposed project area in FSTA B-19.4 (Figure 3).

Eastern Indigo Snake

No eastern indigo snake HMU or gopher tortoise habitat will be impacted by the Power Line ROW. The nearest sighting for an eastern indigo snake was 2.5 miles west of the action area in FSTA C-1.4 and the nearest gopher tortoise habitat is located 1.7 miles southeast of the action area in FSTA C-1.2 (Figure 3).

Wood Stork

No wood storks were observed in the proposed project area, nor have they been observed foraging in the action area. The nearest area where foraging wood storks have been observed is approximately 2.7 miles west of the action area in FSTA F-20.4 (Figure 3).

Shortnose Sturgeon

The only records for shortnose sturgeons on Fort Stewart occur in or near the confluence of the Ogeechee and Canoochee Rivers, approximately 16.9 miles southeast of the project area. Suitable habitat for shortnose sturgeons does not occur in or near the action area.

Conclusion

The inclusion of the IPBC Power Line ROW into the Mission and Master Planning EIS BA does not affect our initial findings which are the proposed actions will adversely affect the RCW, will not affect the shortnose sturgeon, and it is not likely to adversely affect the FFS, wood stork, or eastern indigo snake. No critical habitat will be adversely modified by this action.

Figure 1. IPBC Power Line ROW location and RCW HMU and partitions affected.

Figure Redacted

Figure 2. FFS Buffers affected by the IPBC Power Line ROW.

Figure Redacted

Figure 3. TES affected by the IPBC Power Line ROW.

Figure Redacted

MPMGR MOD

A design change for the Multi-Purpose Machine Gun Range (MPMGR) will require a modification in the Mission and Master Planning EIS BA. The original design footprint was 302.6 acres and the new design footprint will encompass 282.4 acres (Figure 1). The new footprint acreage consists of 82.8 acres of wetland, 115.6 acres of RCW HMU, 9.5 acres of hardwood management area, and 74.5 acres of non-forested area. Habitat within the proposed action area is composed of a canopy dominated by slash pine (*Pinus elliottii*), longleaf pine (*P. palustris*), and loblolly pine (*P. taeda*), with a midstory of sweetgum (*Liquidambar styraciflua*), water oak (*Quercus nigra*), live oak (*Q. virginiana*), wax myrtle (*Myrica cerifera*), and red bay (*Persea borbonia*). The groundcover is characterized by saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), shiny blueberry (*Vaccinium myrsinites*), huckleberry (*Gaylussacia frondosa*), runner oak (*Q. pumila*), rusty lyonia (*Lyonia ferruginea*), wiregrass (*Aristida stricta*), and switch-cane (*Arundinaria gigantea*). Wetland systems adjacent to the proposed project are dominated by pond cypress (*Taxodium ascendens*), blackgum (*Nyssa sylvatica*), pond pine (*P. serotina*), red maple (*Acer rubrum*), black titi (*Cliftonia monophylla*), and red bay. The dominant soil types within the project area are Leefield loamy sand, Mascotte fine sand, Stilson loamy sand, Ellabelle loamy sand, Pelham loamy sand, and Johnston and Bibb soils.

RCW

The original MPMGR design was removing 130.7 acres of RCW HMU. The current design will remove 115.6 acres of RCW HMU. RCW Partition 381 will no longer be impacted by the MPMGR or any other project in the BA and should be removed from consultation. Partition 356 will no longer be impacted by the MPMGR but will still be affected by the Qualification Training Range. This partition will gain 4.1 acres of PGQFH (195.5 to 199.6 acres) and still passes the RCW Matrix for Managed Stability Standard (MSS). Partition 124 will gain 8.9 acres of PGQFH (28.4 to 37.3 acres), 1 RCW tree will still be removed, and still fails to meet MSS. Partition 247 will lose an additional 1.2 acres of PGQFH (55.9 to 54.7 acres), all RCW trees will still be removed, and it still fails MSS. Partition 300 will gain 1.9 acres of PGQFH (160.9 to 162.8 acres) and still passes MSS (Figure 2) (Table 1).

FFS

The entire proposed action area still lies within the Fort Stewart FFS HMU. The new project design will not impact any FFS ponds. This design will impact 7.6 acres of the primary buffer and 24.1 acres of the secondary buffer of a highly likely breeding pond and 22.7 acres of the secondary buffer for potential breeding pond for the FFS. Project design will incorporate protection measures as required by the Clean Water Act and the Georgia Erosion and Sedimentation Control Act to ensure appropriate wetland protection. Therefore, the proposed actions will not result in significant erosion, run-off, or other off-site impacts that might affect FFS habitat (Figure 3) (Table 2).

Eastern Indigo Snake

No changes.

Wood Stork

No changes.

Shortnose Sturgeon

No changes.

Conclusion

The design change to the MPMGR for the Mission and Master Planning EIS BA does not affect our initial findings which are the proposed actions will adversely affect the RCW, will not affect the shortnose sturgeon, and it is not likely to adversely affect the FFS, wood stork, or eastern indigo snake. No critical habitat will be adversely modified by this action.

Figure 1. Design changes for the MPMGR.

Figure Redacted

Figure 2. RCW HMU and Partition impacts.

Figure Redacted

Figure 3. FFS Buffers affected by the MPMGR design change.

Figure Redacted

Table 1. Acreage impacts to the RCW for the design changes in the MPMGR.

RCW Cavity Tree Impacts			Forage Partition Impacts				
MPMGR			MPMGR		RCW HMU Partition Acres		
RCW Cluster #	# Cavity Trees Impacted	Meets MS	Original	Re-design	Original Pre-Project	Original Post-Project	Re-Design Post-Project
124	0	No	87.0	99.8	137.1	50.1	37.3
247	11 (All)	No	33.9	43.0	97.7	63.9	54.7
300	0	Yes	27.4	25.5	188.3	160.9	162.8
356	0	Yes	6.8	2.7	202.3	195.5	199.6
381	0	Yes	10.7	0	155.4	144.8	155.4

Table 2. Impacts to the FFS, eastern indigo snake, and gopher tortoise for the design changes in the MPMGR.

	Frosted Flatwoods Salamander				E. Indigo Snake	Gopher Tortoise
Project	Highly Likely Pond Acres	Potential Breeding Pond Acres	Primary Buffer Acres	Secondary Buffer Acres	Sightings	Habitat Acres
MPMGR Original	0.7	0.4	25.2	49.5	No	0
MPMGR Redesign	0	0	7.6	22.7	No	0

APPENDIX C

CULTURAL RESOURCES



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
DIRECTORATE OF PUBLIC WORKS
1587 FRANK COCHRAN DRIVE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Director

DEC 21 2009

Dr. David Crass
Acting State Historic Preservation Officer
Historic Preservation Division
Georgia Department of Natural Resources
254 Washington Street SW
Ground Level
Atlanta, Georgia 30334

Dear Dr. Crass,

The purpose of this letter is to consult with your office regarding the *Fort Stewart Range and Garrison Development Environmental Impact Statement (EIS)* and the proposed actions outlined within the document. The EIS identifies 15 projects that are proposed for Fiscal Year 2011 through 2014 (referred to as Projects A through O in the attached assessment of effects). The proposed actions include a variety of cantonment area construction projects and range construction projects. In order to take into account the effects to historic properties, the Installation has analyzed the potential effects to cultural resources for the preferred course of action (COA) for each of the proposed actions.

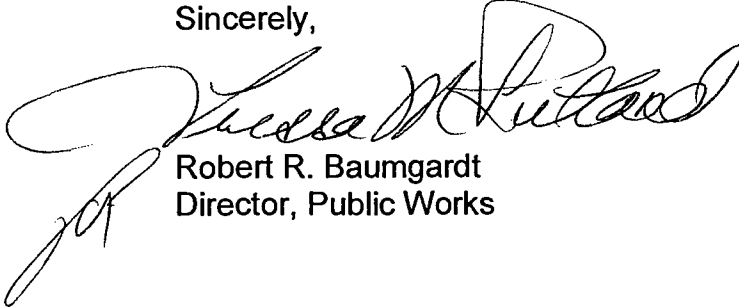
In addition to the consideration of cultural resources under the National Historic Preservation Act (NHPA), an EIS, as required under the National Environmental Policy Act, is currently in draft and will be forwarded to your office for review with an anticipated submittal date of February 2010. Cultural resource impact evaluations have been included as part of the EIS and include known and predicted impacts to cultural resources. Furthermore, the EIS outlining the impacts to cultural resources provides an opportunity for the public to comment on the proposed actions and their effects to cultural resources.

The purpose of this letter is to provide your office with additional detail regarding the potential impacts to cultural resources, which are otherwise excluded from an EIS's public format due to sensitivity of site location. Comments received from your office and the public will be considered before any decision is made to implement the proposed actions under this review. Areas of specific concern to your office will be addressed and your input will assist us in preparing this environmental document. As such, the findings discussed within the enclosure have been outlined within the forthcoming *Fort Stewart Range and Garrison Development EIS* and it is requested that you review the enclosed summary of effects to cultural resources, maps, and description of work proposed. Per 36 CFR 800, the Installation requests that you furnish this office with your comments within 30 days of receiving this letter. Should you have any questions or need further information, please contact Mr. Brian Greer, M.A. Consulting Archaeologist, and this

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director at telephone (912) 767-0992/2010. Email correspondence can be directed to brian.greer@us.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert R. Baumgardt". The signature is written in a cursive style with a large, prominent initial "R".

Robert R. Baumgardt
Director, Public Works

Enclosure

Potential Impacts to Cultural Resources Affected by the Proposed Actions Analyzed within the Fort Stewart Mission and Master Plan Environmental Impact Statement

Project A: Construct Multipurpose Machine Gun Range (MPMGR)

The proposed action is to construct, operate, and maintain a MPMGR range which will train tenant and reserve Soldiers in basic machine gun live-fire training tasks required to sustain combat proficiency; specifically, to identify, engage with a machine gun, and defeat stationary infantry targets. Weapons used on this range include the M249 squad automatic weapon (SAW) (5.56mm), the M60 machine gun (7.62mm), the M240B machine gun, the MK19 automatic grenade launcher, the M42 sniper weapon and the M2 machine gun (.50 caliber).

Primary features of this range include 180 stationary infantry targets, 20 moving infantry targets, 20 stationary armor targets, and 10 firing lanes. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. The actual range will be 320 meters in width by 300 meters in depth. Site disturbance would total approximately 250 acres.

The preferred COA has been identified as affecting Natural Resource Management Unit (NRMU) D7.2 and D8.1 (see Figure A-1). NRMU D7.2 has been previously surveyed for cultural resources (Trinkley & Hacker 2000) and no cultural resources were identified within the proposed footprint in NRMU D7.2. NRMU D8.1 was previously surveyed for cultural resources (Trinkley et al. 1998). Three sites were identified within the proposed footprint in NRMU D8.1 and included the following: 9LI494, a 19th/20th century historic scatter; 9LI490, an undifferentiated prehistoric scatter; and 9LI491, a prehistoric Deptford component scatter. All three sites were determined ineligible for the National Register of Historic Places (NRHP).

Project B: Construct Infantry Platoon Battle Course (IPBC)

The proposed action is to construct, operate, and maintain an IPBC at Fort Stewart. The IPBC supports infantry platoon live-fire collective training to test infantry platoons (mounted or dismounted) on the skills necessary to conduct tactical movement techniques, and detect, identify, engage, and defeat stationary and moving infantry and armor targets in a tactical array. In addition to live fire, this range can also be used for training with sub-caliber and/or laser training devices.

The IPBC includes 6 stationary armor targets, 1 moving armor target, 43 stationary infantry targets, 14 moving infantry targets, 1 trench obstacle, 9 machine-gun bunkers (with sound effects simulator), 2 landing zones and 1 assault/defend house. Target locations are site adapted to meet established training requirements. All trenches, bunkers, and target emplacements must simulate typical threat scenarios. Eight mortar simulation device emplacements are located in areas from which unfriendly mortar fire is to be simulated. Each emplacement will contain one battle/sound effects simulator each. The IPBC footprint totals approximately 1000 acres. The entire footprint would undergo selective tree removal to enhance training realism and for target placement. The site would not be completely cleared. Landing and drop zone areas would be completely cleared. If necessary, an unexploded ordnance survey will be conducted prior to range construction.

Primary facility structures at the range include large two 800-square-foot buildings, an air-vaulted latrine facility, ammo breakdown area, a range tower, enclosed bleachers, and a covered mess facility.

The Preferred COA has been identified as affecting NRMUs C1.2, C1.3, C1.4, and C1.6 (see figure B-1). All areas available for cultural resource survey of the proposed IPBC under the preferred COA have been previously surveyed for cultural resources (Cain et al. 2009; Kennedy et al. 2004). Portions of NRMU C1.2, C1.3, and C1.4 are considered unavailable to be surveyed due to the elevated risk of unexploded ordnance (UXO) associated with the former Aerial Gunnery Range impact area. One ineligible

archaeological site BN1138 (an historic surface scatter) was identified within the proposed footprint. No direct impacts will occur as a result of the Preferred COA.

Indirect impacts from the range construction may include potential for small arms fire damage to historic period cemeteries within the Safety Danger Zones (SDZs) associated with the engagement boxes. Little Creek Cemetery, located in Training Area B13 and is 1.1km away from the proposed range. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. Bonnet Bay Cemetery, located in Training Area B13, is 3.5km away from the proposed range. There is extremely low potential to affect this cemetery due to the fact that the Bonnet Bay Cemetery has only been identified as the remnants of a single broken headstone displaced from an unknown location. Shuman Cemetery, located in B12, is 4.7km away from the proposed range. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage.

Project C: FY11 Modified Record Fire Range (FY11 MRF)

The proposed action is to construct, operate, and maintain a MRF range on Fort Stewart. The MRF range will be designed to train individual Soldiers in the basic live-fire training tasks they require to sustain combat proficiency. Primary features of this range include 144 stationary infantry targets and 16 foxholes. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. The actual range will be 320 meters in width by 300 meters in depth. This project will require 25 acres of site clearing.

The Preferred COA has identified as affecting NRMU B4.20 and Small Arms Delta Range which have been previously surveyed for cultural resources (Ross 2004b) (see figure C-1). No cultural resources were identified within the proposed footprint in B4.20. Therefore, no direct impacts to historic properties will occur under the Preferred COA. Examination of adjacent areas to the proposed location of Alternative B did not indicate any historic properties in proximity. The project is within the viewshed of Buildings 8178, a range/target house built in 1982 along with its associated bleachers and ammunition supply point were determined ineligible for the NRHP (Fortune & Maggioni 2002). Therefore, no direct or indirect impacts to historic properties are anticipated from the Preferred COA.

Project D: FY13 Digital Multi-Purpose Training Range (DMPTR)

The proposed action is to construct, operate, and maintain a standard DMPTR at Fort Stewart. The DMPTR is necessary to support the crew qualification tasks of M1A1 tank crews, M2 and M3 Bradley vehicle crews, and Stryker vehicle crews. This range is used to train and evaluate vehicle crews on the skills necessary to detect, identify, engage, and defeat an enemy doctrinal tactical array of stationary and moving infantry and armor targets. Command and control of the vehicles firing is done in a digital manner replicating how the vehicle crew would actually operate in a combat situation. The range can also be used to train weapons crews operating in HMMWVs in the same tasks outlined above. In addition to live-fire, this range can also be used for training with sub-caliber and/or laser training devices.

The range supports dismounted infantry squad tactical live-fire operations either independently of, or simultaneously with, supporting vehicles. The DMPTR accommodates the full range of target practice munitions employed by the armor, Bradley, and Stryker vehicles. The range would consist of a standard one lane DMPTR with four roads with midpoint cross over capability and five battle positions per road. The DMPTR would contain 105 stationary infantry targets (SITs), 35 stationary armor targets (SATs), 6 moving armor targets (MATs), 6 Moving infantry Targets (MITs), 4 facades to replicate urban targets, and five firing positions per road on the range. The range would provide the digital interface needed by digitally equipped forces to properly exercise command and control on the modern battlefield. The range

would have television cameras strategically placed on the range to aid in the after-action review (AAR) process.

Primary facility structures at the range include large Range Operations Control Area (ROCA) facility, a small AAR facility, an air-vaulted latrine facility, ammo breakdown area, an ops storage building, an instrumentation loading dock, a general instruction building, and a surfaced staging area. The project would include a Screening Range that is required to support the armor and infantry fighting vehicle systems alignment and synchronization of their weapons systems, weapons sights, and computer systems. The screening range would be capable of functioning simultaneously with the DMPTR and will have the minimum required targetry and instrumentation.

The Preferred COA for the DMPTR has been identified as affecting NRMUs B10.3, B9.5, B10.1, and B9.1 (see figure D-1). NRMU B10.3 has been previously surveyed for cultural resources (Cain et al. 2005, 2009). NRMU B9.5 has been previously surveyed for cultural resources (Ross 2004a). The existing range floor was excluded from cultural resource survey in accordance with the categorical exclusion of survey requirements for previously disturbed special use facilities (such as range floors) in accordance with the Installation's Programmatic Agreement with the Georgia SHPO. NRMU B9.1 was previously surveyed for cultural resources (Morehead et al. 2008b). NRMU B10.1 was previously surveyed for cultural resources (Cain et al. 2009).

From these surveys, a total of 12 cultural resources were identified within the proposed footprint and included the following: 9LI1656, an early 20th century historic scatter; 9LI1652, an early 20th century Historic subsurface scatter; 9LI1657, an early 20th century Historic find; 9LI1653, an early 20th century Historic find; 9LI1621, a prehistoric lithic scatter; 9LI1622, a prehistoric and historic artifact scatter; 9BN145, a historic artifact find; 9LI1593, a historic isolated find; 9LI1610, a prehistoric isolated find; 9LI1611, a late 19th/early 20th century historic isolated find; 9LI1612, a prehistoric isolated find; and 9LI1592, a late 19th/early 20th century historic site. All sites were determined ineligible for the NRHP. Therefore, no direct impacts to historic properties are anticipated under the Preferred COA.

Buildings 18508 and 18510 are within the footprint of the Preferred COA. Bldg 18508 (built 1975) was assessed by the 2002 building survey, and determined ineligible for the NRHP (Fortune & Maggioni 2002). Bldg 18510 was constructed in 1999 and is not historic. Also within the footprint are bleachers, and ammunition supply point, and another tower associated with these buildings.

Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Not all areas outside of the proposed footprint of Preferred COA have been previously surveyed for cultural resources. Areas not surveyed outside the proposed footprint predominately have a low potential for cultural resources. Should the project be altered to impact the areas not surveyed for cultural resources, additional cultural resource surveys would be conducted and impacts to historic properties would be assessed in accordance with the NHPA and other applicable laws. Therefore, no indirect impacts are anticipated from Preferred COA.

Project E: FY13 Qualification Training Range (QTR)

The proposed action is to construct, operate, and maintain a QTR at Fort Stewart. The QTR would be designed to train individual Soldiers in the basic live-fire training tasks they require to sustain combat proficiency. This range is used to train Soldiers on the skills necessary to detect, identify, engage, and defeat stationary and moving infantry targets in a tactical array with their prescribed weapons. This range enhances throughput capability for units with multiple weapons densities by consolidating unit efforts to operating one live-fire training facility. This range combines the capabilities of a MRF range, an Automated Sniper Field Fire (SFF) range, a combat pistol qualification Course (CPQC) range, and the Multipurpose Machine Gun (MPMG) range. Primary features of this range include 429 stationary infantry targets (SITs), 20 stationary armor targets (SATs), 20 moving infantry targets (MITs), and 10 stationary infantry target emplacements with multiple targets. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure.

The Preferred COA for the QTR has been identified as affecting NRMU D7.2 and D7.3 (see figure E-1). NRMUs D7.2 and D7.3 have been previously surveyed for cultural resources (Trinkley & Hacker 2000). From these surveys, no cultural resources were identified within the proposed footprint. Therefore, no direct impacts to historic properties will occur under the Preferred COA. Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Therefore, no indirect impacts are anticipated from the Preferred COA.

Project F: FY13 Known Distance Range (KDR)

The proposed action is to construct, operate, and maintain a KDR at Fort Stewart. The KD range would be designed to train and test individual Soldiers in the small arms weapons systems live-fire training tasks they require to sustain combat proficiency. This range is designed for training advanced rifle marksmanship and target engagement techniques with immediate downrange feedback and competition. This range is used to train and familiarize Soldiers on the skills necessary to identify, calculate distance, engage, and hit targets in a static array with small arms weapons systems out to 1,000 meters. It is also used for Squad Designated Marksmanship (SDM) training and certification. The range firing points are graduated in 100-meter increments from 100 to 1,000 meters. Additionally, the KD range can be used for automatic rifle practice; basic and advance rifle marksmanship, designated marksman; and sniper training. The ARRM shows that Fort Stewart requires one KD range to meet its training requirements.

Primary features of this range include 32 target-lifting devices and 32 firing lanes. All targets are sliding target frames, paraleg carrier or fully automated based on Installation Army Command and the Installation senior mission commander. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. The actual range is 1,000 meters in depth.

The Preferred COA has identified as affecting NRMU D8.1 and D9.1 (see figure F-1). NRMU D8.1 and D9.1 have been previously surveyed for cultural resources (Trinkley et al. 1998). One cultural resource was identified within the proposed footprint and was identified as 9LI486, an early/mid 20th century artifact scatter. This site was determined ineligible for the NRHP. Therefore no direct impacts to historic properties will occur under the Preferred COA.

Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. However, one historic period cemetery, Golden Family Cemetery, is located within the SDZ of the proposed range. Golden Family Cemetery is located in Training Area D5 and is 4.9km away from the proposed range. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage. In summary, there is a low potential for indirect impacts to nearby cultural resources and can be avoided or minimized for the Preferred COA.

Project G: FY13 Fire and Movement Range (FMR)

The proposed action is to construct, operate, and maintain a FMR at Fort Stewart. The range would be used to train individual Soldiers and buddy teams on basic fire and movement techniques against stationary infantry targets replicating enemy soldiers on the battlefield. Soldiers show their ability to select covered and concealed positions, move while under fire, apply principles of teamwork, and use suppressive fire on enemy soldier targets.

Primary features of this range include four lanes, six stationary infantry targets per lane, and 3-meter-high berms along each side of each lane. All lanes would have natural vegetation and features that offer the Soldier covered or concealed positions from which he can select to move from one to the other while

under enemy fire. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. Site disturbance would total 10 acres.

The Preferred COA has been identified as affecting NRMU C3.2 and is off-limits to cultural resource survey due to elevated risk of unexploded ordnance associated with the former Aerial Gunnery Range IV. No previously discovered cultural resources have been identified within the proposed footprint. Therefore, no direct impacts to historic properties will occur under the Preferred COA. Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. A watchtower and unknown structure are within the viewshed of the proposed construction. These structures will require evaluation but are anticipated to be circa 1970s era or later range support structures. Therefore, a low potential for indirect impacts are anticipated from the Preferred COA.

Project H: FY11 Infantry Squad Battle Course (ISBC)

The proposed action is to construct, operate, and maintain a live-fire ISBC at Fort Stewart. This complex is used to train and test infantry squads on the skills necessary to conduct tactical movement techniques, detect, identify, engage, and defeat an enemy doctrinal tactical array of stationary and moving infantry and armor targets.

In addition to live-fire, this range can also be used for training with sub-caliber and/or laser training devices. All targets are fully automated and the event specific target scenarios are computer driven and scored from the range operations center on the range. The range operating system is fully capable of providing immediate performance feedback to the using units. The ISBC includes 6 different objective areas and will contain a total of 20 stationary infantry targets (SITs), 6 stationary armor targets (SATs), 1 moving armor targets (MATs), 6 Moving infantry Targets (MITs), 2 trench obstacles, and 5 machinegun/observation bunkers with sound effects simulators.

Primary facility structures at the range include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. To produce a realistic training environment, this range uses thermal targets, night illumination devices, and visual flash simulators.

The Preferred COA has been identified as affecting NRMU B3.1, B3.2, and the Artillery Impact Area West (AIAW) (see figure H-1). NRMU B3.1 and B3.2 has been previously surveyed for cultural resources (Ambrosino and Reginier 2003). The AIAW is off limits to cultural resource surveys due to the elevated risk of unexploded ordnance. 11 sites have been identified within the proposed footprint of the ISBC and are as follows: 9L706, an historic 19th/20th century isolated find; 9L1707, a prehistoric undifferentiated find; 9L1680, a prehistoric undifferentiated find; 9L1703, a historic 19th/20th century find; 9L1687, a historic 19th/20th century find; 9L1718, a prehistoric undifferentiated find; 9L1719, a Late Paleo Prehistoric find; 9L1720, a 19th century historic find; 9L1710, a historic 19th/20th century find; 9L1717, a 19th century historic find; and 9L1897, a historic ceramic scatter. All 11 sites were determined ineligible for the NRHP. Therefore, no direct impacts to historic properties are anticipated under the Preferred COA.

Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Large portions of the adjacent training areas have been previously surveyed for cultural resources. Architectural evaluations of buildings associated with the Small Arms Range Mike to the south of NRMU B3.1 indicate a typical Small Arms range support building common to the various Small Arms Ranges across the Installation. Building 8556, constructed in 1975, is less than 50 years old and is not considered exceptionally significant under Criterion Consideration G. Associated with Building 8556 are bleachers and an ammunition supply point which are also considered ineligible for the NRHP.

Project I: Modified Record Fire Range (MRFR)

The proposed action is to construct, operate, and maintain an additional MRFR at Fort Stewart. The MRF range would be designed to meet the same requirements previously detailed in the FY11 MRF range description. Primary features would include the same target and supporting facility layout as with the proposed FY11 MRF range. The FY13 MRF range would total 320 meters in width by 300 meters in depth.

The Preferred COA for the MRFR has been identified as affecting NRMU D6.1 and D6.2 (see figure H-1). NRMU D6.1 has been previously surveyed for cultural resources (Kennedy et al. 2004). A portion of NRMU D6.2 has been previously surveyed for cultural resources (Cain et al. 2009) and approximately 10 acres remain to be surveyed. No cultural resources have yet to be identified within the proposed footprint in D6.1 and D6.2. Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Not all areas outside of the proposed footprint of the Preferred COA have been previously surveyed for cultural resources. Areas not surveyed outside the proposed footprint predominately have a low potential for cultural resources. Should the project be altered to impact the areas not surveyed for cultural resources, additional cultural resource surveys would be conducted and impacts to historic properties would be assessed in accordance with the NHPA and other applicable laws. Therefore, no indirect impacts are anticipated from the Preferred COA.

Project J: FY13 Automatic Combat Pistol Qualification Course (CPQC)

The proposed action is to construct, operate, and maintain a CPQC at Fort Stewart. The CPQC would be designed to train individual Soldiers and military police in the basic live-fire training tasks they require to sustain combat proficiency. Primary features of this range include 105 stationary infantry targets, 15 firing lanes and 15 stationary silhouette targets. In addition, the range will include two 800-square-foot buildings, one ammunition breakdown building, one air-vaulted latrine, one covered mess facility, one 248-square-foot range operations tower, and covered bleachers with enclosure. The actual range would be 120 meters in width by 31 meters in depth.

The preferred COA for the CPQC has been identified as affecting NRMU D5.4 (see figure I-1). NRMU D5.4 has not been previously surveyed for cultural resources. 13 acres require cultural resource surveys and have been identified as predominately having a low potential for cultural resources. If historic properties are encountered, efforts to avoid the resource or minimization and mitigation efforts will be conducted in accordance with the NHPA. All cultural resource surveys and evaluation of impacts will be conducted prior to project execution.

Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Not all areas outside of the proposed footprint of the Preferred COA have been previously surveyed for cultural resources. Areas not surveyed outside the proposed footprint predominately have a low potential for cultural resources. Should the project be altered to impact the areas not surveyed for cultural resources, additional cultural resource surveys would be conducted and impacts to historic properties would be assessed in accordance with the NHPA and other applicable laws. Therefore, little to no indirect impacts is anticipated from the Preferred COA.

Project K: FY 13 Basic 10-meter/25-meter Firing Range (10/25 FR)

The proposed action is to construct, operate, and maintain a Basic 10/25 FR at Fort Stewart. It would be designed to train individual Soldiers and zero weapons in the basic M-16 and M-4 rifle live-fire training tasks and crew served machine guns they require to sustain combat proficiency. Primary features of this range include 32 frames at 25 meters, 16 target frames at 10 meters, and 32 foxholes. This range requires no automation. All targets are fixed at 25 meters from the firing line for M16/M4 and fixed at 10 meters for machine gun. In addition, the range will include one ammunition breakdown building (120-square-feet), one air-vaulted latrine (120-square-feet), one covered mess facility (800-square-feet), one range operations tower (248-square-foot), and covered bleachers with enclosure (800-square-feet). The actual range footprint is 25 meters in depth.

The Preferred COA for the 10/25 FR has been identified as affecting NRMU D5.4 (see figure J-1). NRMU D5.4 has been previously surveyed for cultural resources (Cain et al. 2009). From these surveys no cultural resources were identified within the proposed footprint. Therefore, no direct impacts to historic properties will occur under the Preferred COA.

Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any historic properties in proximity. Approximately 40 acres in proximity of the proposed footprint of the Preferred COA have not been previously surveyed for cultural resources. Areas not surveyed outside the proposed footprint predominately have a low potential for cultural resources. Should the project be altered to impact the areas not surveyed for cultural resources, additional cultural resource surveys would be conducted and impacts to historic properties would be assessed in accordance with the NHPA and other applicable laws. Therefore, there is a low potential for indirect impacts anticipated from the Preferred COA.

Project L: FY14 Convoy Live Fire Range (CLFR)

The proposed action is to construct, operate, and maintain a CLFR at Fort Stewart. The CLF range would be designed to train individual Soldiers, crews, platoons, and companies in the basic live-fire training tasks they require to sustain combat proficiency during convoy operations. These include the skills necessary to detect, identify, engage, and defeat stationary and moving vehicle and infantry targets from a stationary or moving vehicle using all assigned weapons and weapons systems. The range also trains Soldiers and units to identify Improvised Explosive Devices (IED) and procedures for dealing with IEDs. This complex is also used to train and test Soldiers to engage and defeat vehicle and infantry targets from multiple firing points as part of an entry control point (ECP).

Engagement boxes would be constructed along the CLF route for target placement. These entry points will not require complete site clearing. Selective tree thinning will be conducted for target placement and to increase training realism. During training, firing would occur from both sides of the military vehicle. To also enhance a realistic training environment, this range uses thermal targets, night illumination devices, and visual flash simulators. This simulation technology provides Soldiers with the best realistic training environment. This range will incorporate state-of-the-art technology to support all phases of training, from ground maneuver and target engagement to the critical after-action review (training feedback) phase. This support and timely feedback are critical to effective training. Because of the training on this proposed range, Soldiers will go into battle with the best possible training for threats the Army expects to encounter during combat operations.

Primary features of this range include 5 stationary armor targets, 4 moving armor target, 43 stationary infantry targets, 3 moving infantry targets, 6 facades, 1 entry control point (ECP), and 1 course road. The ECP targets are fully automated, and the event-specific target scenario is computer-driven and scored from the range operations center. The range operating system is fully capable of providing immediate performance feedback to the using participants. All other targets are reconfigurable/RF and controlled with a hand-held device.

Primary facility structures at the range include one 800-square-foot building, an air-vaulted latrine facility, and ammo breakdown area. Primary facility force protection measures consist of laminated and safety glass. Supporting facilities include electric service, transformers and lighting, surfaced roads and tank trails, parking, drainage ditch, and latrine facility. Supporting facility force protection includes security fencing and gates. If necessary, an unexploded ordnance survey will be conducted prior to range construction.

The Preferred COA for the CLFR has been identified as affecting NRMUs C4.1, C4.2, C5.1, C5.2, C6.1 and C7.1 (see figure K-1). NRMU C5.1 has been partially surveyed for cultural resources (Maggioni et al. 2009a). No cultural resources were identified within the proposed footprint in NRMU C5.1 thus far. 121 acres of high probability and 227 acres of low probability to encounter cultural resources require subsurface investigations within the proposed footprint. 129 acres of high probability and 132 acres of

low probability to encounter cultural resources require surface investigations (due to elevated risk of unexploded ordnance). This NRMU is scheduled for survey in February 2010.

NRMU C5.3 has been partially surveyed for cultural resources (Morehead et al. 2008a). Two historic period sites (9BN678 & 9BN679) were identified within the proposed footprint in NRMU C5.3. Both sites were determined ineligible for the NRHP. The remainder to be surveyed include: 43 acres high probability shovel test survey; 221 acres of low probability shovel test survey; and 18 acres low probability walkover survey. This area is scheduled for survey in February 2010.

NRMU C6.1 has been partially surveyed for cultural resources (Mallory et al. 2006; Maggioni et al. 2009a). 11 sites that were determined ineligible for the National Register of Historic Places were identified during survey and include: 9BN629, a late Archaic to early Woodland hunting station and a late 19th/early 20th century homestead; 9BN630, a 20th century isolated find; 9BN669, a prehistoric hunting camp and an early 20th century historic refuse dump; 9BN670, a 20th century artifact scatter; 9BN671, a prehistoric artifact scatter and a 20th century artifact scatter; 9BN672, a 20th century artifact scatter; 9BN673, a prehistoric collection area; 9BN674, a historic isolated find; 9BN675, a historic isolated find; 9BN676, a prehistoric hunting station; and 9BN677, a 20th century military occurrence. One potentially eligible site is also located within NRMU C6.1. 9BN628, a moderate sized 19th-20th century homestead is located along the proposed route and will likely be affected by the proposed action. Therefore, the site is scheduled for further NRHP evaluation in FY10.

The Task 2 Sniper engagement box is located within NRMUs C4.1 and C6.1. Neither locations have been surveyed for cultural resources and will require 8.5 acres of low probability walkover survey. Based upon the low potential for encountering historic properties within this engagement box, direct impacts to historic properties are not anticipated. Little Creek Cemetery is within the Safety Danger Zone (SDZ) of the proposed engagement box. The cemetery is located in Training Area B13 and is 5.6km from the engagement box. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage. In summary, there is a low potential for indirect impacts to nearby cultural resources and can be avoided or minimized.

The Task 3 RPG Team engagement box is located within NRMUs C4.1 and C6.1. Neither locations have been surveyed for cultural resources and will require 5 acres of low probability walkover survey. This area is scheduled for survey in February 2010. Based upon the low potential for encountering historic properties within this engagement box, direct impacts to historic properties are not anticipated.

The Task 4 Ambush Blocked engagement box is located within NRMUs C4.1 and C6.1. Neither locations have been surveyed for cultural resources and will require 6 acres of high probability walkover survey and 22 acres of low probability walkover survey. This area is scheduled for survey in February 2010. Little Creek Cemetery is within the Safety Danger Zone (SDZ) of the proposed engagement box. The cemetery is located in Training Area B13 and is 4.6km from the engagement box. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage. In summary, there is a low potential for indirect impacts to nearby cultural resources and can be avoided or minimized.

The Task 5 Urban Ambush engagement box is located within NRMUs C6.1 and C7.1. NRMU C6.1 has not been surveyed for cultural resources and will require 4 acres of high probability walkover survey and 6 acres of low probability walkover survey. This area is scheduled for survey in February 2010. NRMU C7.1 has been previously surveyed for cultural resources (Ambrosino et al. 2001). No historic properties have been identified within this engagement box. Based upon the low potential for encountering historic properties within this engagement box, direct impacts to historic properties are not anticipated.

The Task 6 Tech Trucks engagement box is located within NRMUs C6.1 and C7.1. NRMU C6.1 has not been surveyed for cultural resources and will require 7 acres of high probability walkover survey and 11 acres of low probability walkover survey. This area is scheduled for survey in February 2010. NRMU C7.1 has been surveyed for cultural resources (Ambrosino et al. 2001). No historic properties have been identified within this engagement box. Based upon the low potential for encountering historic properties within this engagement box, direct impacts to historic properties are not anticipated.

The Task 7 Near Ambush engagement box NRMUs C6.1 and C7.1. NRMU C6.1 has not been surveyed for cultural resources and will require 8 acres of low probability walkover survey. This area is scheduled for survey in February 2010. NRMU C7.1 has been surveyed for cultural resources (Ambrosino et al. 2001). Two sites were identified within the engagement box and were early 20th century artifact scatters (9BN218 and 9BN219). Both sites were determined ineligible for the NRHP. Liberty Chapel Cemetery (located in Training Area C7 and is 2km away) and W.H. Strickland Cemetery (located in Training Area C9 and is 3km away) are located within the SDZ. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage. In summary, there is a low potential for indirect impacts to nearby cultural resources and can be avoided or minimized.

AGR 1 is located within NRMUs C5.2 and C7.1. These NRMUs have not been surveyed for cultural resources but are considered off limits for survey due to their elevated risk of unexploded ordnance associated with the AGR. No previously discovered sites have been documented within the AGR 1. Liberty Chapel Cemetery is within the SDZ for AGR 1. Due to the large amount of vegetation between the proposed range and the cemetery, it is very unlikely that a protective berm is necessary. During the design phase of the proposed range, if it is determined that there will likely be an impact to the cemeteries from live fire, protective berms or redesigns to the engagement boxes will be considered. As with all cemeteries, the Installation routinely monitors the cemeteries on the Installation for any damage. In summary, there is a low potential for indirect impacts to nearby cultural resources and can be avoided or minimized.

Examination of adjacent areas to the proposed location of the Preferred Alternative did not indicate any historic properties in proximity. Other than previous reference to down-range potential impacts to cemeteries, little to no indirect impacts are anticipated from the Preferred Course of Action.

Project M: FY11 Unmanned Aerial System (UAS) Facilities

The proposed action is to construct, operate, and maintain facilities to support the Sky Warrior Company that will activate to Fort Stewart in FY 2013. The Sky Warrior Company's mission will be to provide dedicated UAS support to the Combat Aviation Brigade (CAB). Construction would entail building Company Operations Facilities (COFs), a maintenance hangar, barracks, and associated parking. The project would also require an access control point, vehicle washrack, oil/water separator, and elevated water storage tank.

The Preferred COA for the UAS Facilities have been identified as affecting NRMU A18.3 and Wright Army Airfield (WAAF) (see figure L-1). NRMU A18.3 and the survey-able portions of WAAF have been previously surveyed for cultural resources (Morehead et al. 2008). Two cultural resources were identified within the proposed footprint in NRMU A18.3 and included 9LI1372, a 19th/20th century isolated find and 9LI1533, an isolated lithic scatter. Both sites were determined ineligible for the NRHP. Five cultural resources were identified within the proposed footprint in NRMU AWAFF and included the following: 9LI1520, an isolated prehistoric lithic flake; 9LI1522, a historic period ceramic scatter; 9LI1525, an isolated historic scatter; 9LI1528, a mid-20th century military debris scatter; and 9LI1531, a prehistoric and historic artifact scatter. All sites were determined ineligible for the NRHP. No direct impacts to historic

properties will occur under the Preferred COA. Examination of adjacent areas to the proposed location of the Preferred COA did not indicate any archaeological historic properties in proximity.

Construction of the UAS will affect the viewsheds of thirteen buildings southeast of the project footprint: 7703, 7704, 7706, 7707, 7727, 7728, 7730, 77732, 7733, 7734, 7754, 7778, and 7781. The majority of these buildings were assessed as ineligible by the 2002 architectural survey or subsequent survey codicils (Fortune and Maggioni 2002; Maggioni 2007:4; Cain et al. 2008; Cain et al. 2009).

Buildings 7704 (built in 1967) and 7754 (built 1968) were assessed as ineligible by the 2002 historic building survey. However, because the buildings were less than fifty years old at the time (2002), they could only be assessed for exceptional historic significance, which it did not possess. Buildings 7704 and 7754 are now nearly fifty years old and in accordance with Department of the Interior standards must be reassessed again for NRHP-eligibility once they reach the fifty-year mark. The buildings will require reassessment once they reach 45 years of age (i.e. 2011 and 2012 respectively), so there is a possibility of indirect impacts from the Preferred COA, dependent on the NRHP reassessment of Buildings 7704 and 7754.

Project N: FY11 10th Engineers Battalion Facilities (10th ENG BN)

The proposed action is to station the 40th Engineering Battalion (ENG BN) at Fort Stewart. The 40th ENG BN will then be re-designated as the 10th ENG BN. The 10th ENG BN's mission will be to increase the combat effectiveness of a Heavy Brigade by providing mobility and general engineering tasks. The 10th ENG BN will activate to Fort Stewart in 2010 and will temporarily occupy existing company operations facilities until the proposed battalion complex is constructed. Fort Stewart is proposing to construct the 10th ENG BN to fully support this incoming unit. The proposed complex would include company operations facilities with covered hardstand, headquarters building with classrooms, and organizational vehicle and POV parking. Approximately 25 to 50 acres of disturbance would be necessary to construct the proposed complex.

The Preferred COA has been identified as affecting NRMU B5.1 (see figure M-1). NRMU B5.1 has been previously surveyed for cultural resources (Morehead et al. 2008). Seven cultural resources were identified within the proposed footprint in B5.1 and included the following: 9LI1549, a Late Archaic and Middle to Late Woodland short term camp; LI1555, a Late Archaic to Mississippian lithic and sherd scatter; 9LI1556, a Late Archaic to Early Woodland hunting station or collection station; 9LI1558, a Mississippian-Savannah Phase component site; 9LI1560, a single tar kiln site; 9LI1562, a small lithic scatter; and 9LI1563, a lithic isolated find. All seven sites were determined ineligible for the NRHP. No historic buildings will be affected by the project. No direct impacts to historic properties will occur under the Preferred COA.

Project O: FY12 Highway 144 Bypass

The proposed action is to construct a bypass to Georgia Highway 144 at Fort Stewart, Georgia. The bypass is necessary to incorporate the newly constructed 4th Infantry Brigade Combat Team (IBCT) facilities in Training Area B-5 and proposed 10th Engineering Battalion Complex within the cantonment area. The bypass would include access control points, similar to the force protection measures surrounding the existing cantonment area's main road network. Bridges would be constructed where needed.

Highway 144 is a well-traveled civilian and military east-west connector between the cities of Richmond Hill and Glennville, which passes through Fort Stewart. The highway is currently routed along the northern perimeter of the Installation's cantonment area. Access to the existing cantonment area from Highway 144 is protected by secure access control pints. The 4IBCT complex in the B-5 training area separated from the existing secure cantonment area.

The Preferred COA for the Highway 144 Bypass has been identified as affecting Training Lands adjacent to Fort Stewart Roads 47, Old 144, 38, and an unnamed tank trail connecting Old 144 and Highway 144 (see figure N-1). Natural Resource Management Units (NRMU) affected by the proposed action include: B4.13, B5.2, B4.15, B7.3, B4.16, B7.2, B8.1, B7.1, E1.1, E4.4, E2.1, and E3.3.

Within the proposed footprint, the following NRMUs have been previously surveyed for cultural resources: B4.13 (Cain et al. 2009); B5.2 (Morehead et al. 2008); B4.14 (Maggioni et al. 2009); B7.3 (Campo et al. 1999a); B7.2 (Campo et al. 1999a); B8.1 (Little et al. 2000); B7.1 (Cain et al. 2008); E1.1 (Trinkley et al. 1996); E4.4 (Trinkley et al. 1996); E2.1 (Trinkley et al. 1996); and E3.3 (Ambrosino et al. 2001). 15 cultural resources were encountered within the proposed footprint and include the following: 9LI1650, a historic artifact scatter; 9LI337, a late 19th/early 20th century artifact scatter; 9LI375, a Woodland/Mississippian site with a 19th/20th century historic component; 9LI508, an undifferentiated prehistoric scatter and a 19th/20th century historic scatter; 9LI585, a 19th century farmstead; 9LI1244, a mid 19th-20th century historic scatter; 9LI1245, a mid 19th-20th century historic scatter; 9LI1247, an 18th – 20th century historic scatter; 9LI1569, a prehistoric scatter; 9LI1570, a prehistoric scatter; 9LI1578, an isolated historic ceramic; 9LI1579, a prehistoric artifact scatter; 9LI1581, an isolated historic find; 9LI1583, a prehistoric lithic scatter; and 9LI931, a prehistoric scatter.

All sites were determined ineligible for the NRHP with the exception of 9LI585 which has been determined eligible for the NRHP (Matthews et al. 2005a). This 19th through early 20th century farmstead is located north of the existing Fort Stewart Road Old 144. If the proposed Highway 144 Bypass is constructed south of Fort Stewart Road Old 144 and no modifications are required to Fort Stewart Road Old 144, there is a moderately low to low potential for adverse impacts to 9LI583. If the bypass is required to be constructed north of the Fort Stewart Road Old 144 or modifications will require alterations to Old 144, there will be a direct impact to 9LI583. During the Phase II NRHP evaluation of 9LI583, a mitigation plan was proposed based upon unknown future impacts. This mitigation plan will be updated to take into account the proposed action and if 9LI583 will be adversely affected, the Installation will seek methods to avoid, minimize or mitigate the adverse effects in accordance with the NHPA.

Small portions of the proposed Highway Bypass have not been previously surveyed. NRMU B4.15 and B4.16 have not been formally surveyed and is scheduled for completion in FY10. Approximately 2.5 kilometers remain to be surveyed and have been identified as having a high potential for cultural resources. However, these locations are within the Small Arms Impact area and have an elevated risk of unexploded ordnance and increased likelihood of previous disturbance. Therefore, there is a decreased likelihood of encountering historic properties within these areas. As a result of the surveys and the need for additional surveys, there is a moderate potential to directly impact historic properties under the Preferred COA.

Although not within the proposed footprint of the Highway Bypass, the Taylors Creek Cemetery located in NRMU E1.1 is immediately adjacent. The Taylors Creek Cemetery, an early 19th century cemetery, has been determined eligible for the NRHP as a Traditional Cultural Property. Construction of the Highway 144 Bypass within the proposed location will have an adverse effect to this historic property. Although the Traditional Cultural Property's boundaries are confined to the cemetery property, the setting, feeling, and association will be adversely affected (in accordance with applying the criteria for adverse effect per 36 CFR 800).

The Taylors Creek Association meets annually in October to celebrate their traditional homecoming in a manner consistent with the original Taylors Creek Campground meetings since 1804. Construction of a highway within 30 meters of the existing cemetery will substantially impact the characteristics of this Traditional Cultural Resource. In order to take into account how the proposed action will affect the resource, the Installation will consult with the Taylors Creek Association and the Pleasant Grove Church in accordance with the NHPA and NEPA in order to explore methods to avoid, minimize, or mitigate the adverse effects.

Shifting the proposed path to either the north or the south of the cemetery is one alternative to resolve adverse effects. Currently, the cemetery is located approximately 300 meters west of the existing

Georgia Highway 119. Sufficient vegetation between the cemetery and Georgia Highway 119 allows the Traditional Cultural Property to maintain the maximum amount of original setting, feeling, and association under current conditions. If it is determined that avoidance of adverse impacts by shifting the road significantly to the north or south of the cemetery, the Installation would seek means to maximize the amount of vegetation to reduce the cumulative visual and noise impacts associated with the existing Georgia Highway 119 and the proposed Georgia Highway 144 Bypass.

If avoidance is not a viable alternative, efforts to minimize the impacts will require further consultation with the appropriate stakeholders. Due to the proximity of this resource, minimization efforts may be limited. Since the Taylors Creek Campground meeting is only held one Sunday a year, alternatives to minimize the impacts during the ceremony could be employed (e.g. re-routing traffic, placement of signs to slow traffic to an acceptable noise level similar to church zones, etc...).

If avoidance or minimization efforts are not viable alternatives, then the Installation will seek methods to mitigate the adverse effects in accordance with the NHPA. Due to the nature of the resource type, typical data recovery or HABS/HAER documentation are not applicable. Only through consultation with the appropriate stakeholders will mitigation alternatives be adequately developed. One possible alternative mitigation effort would be to re-establish the original Taylors Creek Campground (located approximately 1.7 kilometers to the east in NRMU B8.1) as an alternative area to meet. The original Taylors Creek Campground was utilized from 1804 to 1940. When the Installation acquired the land, there was a hiatus for 5 years. After World War II, the Taylors Creek Association continued to meet but changed their location to the Taylors Creek Cemetery. This was necessary due to the structures being removed from the original site and the cemetery remaining as the only visual reminder of their former community. Furthermore, access to the cemeteries on the Installation was granted to citizens as part of the original land acquisition agreements. No live fire training occurs within this location and therefore impacts from training or to training would be moderate to low.

If mitigation efforts required movement of the meetings to the original campground, additional mitigation may be required to the existing grounds of the Taylors Creek Campground (9LI267). This site was determined eligible for the NRHP, however only based upon its prehistoric component (the original historic component's integrity was compromised). The prehistoric component would likely require data recovery in order to avoid adverse effects unless the activities of the new location could be integrated into the long term preservation of the site. If this could not be avoided, a data recovery plan developed through the Phase II NRHP evaluation of 9LI267 could be implemented.

Similar to the Taylors Creek Traditional Cultural Property, the Pleasant Grove Cemetery has been determined eligible for the NRHP as a Traditional Cultural Property. Pleasant Grove Cemetery is located in NRMU E21.1 and approximately 115 meters south of the proposed Highway 144 Bypass. Similar impacts to this historic property are likely to occur, however on a slightly lesser degree due to the existing vegetation between the cemetery and the proposed highway. If efforts to avoid adverse impacts to this cemetery require shifting the highway to the north, consideration of shifting requirements potentially associated with the Taylors Creek Cemetery must also be taken into account. Examination of the surrounding area indicates no other historic properties in the vicinity.

If avoidance is not feasible, consultation with the Pleasant Grove Church and the Taylors Creek Association would be required to seek methods of minimizing impacts. Alternatives explored for the Taylors Creek Cemetery would likely be applicable to the Pleasant Grove Cemetery. If minimization could not be adequately accomplished, mitigation measures would be required in accordance with the NHPA. Similar to the Taylors Creek Cemetery, alternative mitigation strategies would be required due to the resource type. The Pleasant Grove Camp Meetings originated in the late 1800s and have continued on a bi-annual basis since that time. Initially, the Camp Meetings were held at the Strumbay Cemetery and were eventually moved to the present location of Pleasant Grove Cemetery. Although there is an association with the Strumbay Cemetery, that historical tie has diminished over time. Consequently, the Strumbay Cemetery was evaluated for its eligibility as a Traditional Cultural Property and was determined ineligible for the NRHP. Similar to the mitigation strategies of the Taylors Creek Cemetery, one alternative would be to establish another location for the bi-annual meeting. Only through consultation

with both the Taylors Creek Association and the Pleasant Grove Church can alternative mitigation strategies be developed.

This project will not affect historic buildings. All buildings within the viewshed of the project are ineligible for the NRHP: new family housing development (2004), 7901 (1940), 7917 (2008), 8073 (built 1999), 8074 (built 2001), 8076 (built 2002), 8081 (built 1940), 8084 (built 1984), 8085, 8086 (built 1987). Buildings 7901, 8081, 8084, 8085, and 8086 were determined ineligible for the NRHP by the 2002 building survey (Fortune & Maggioni 2002). The balance was constructed after 1990 and is ineligible for the NRHP.

Examination of adjacent areas to the proposed location of Alternative B did not indicate any other historic properties in proximity. Other than the previous areas mentioned that require cultural resource surveys to address direct impacts, all other areas have been previously surveyed in proximity the proposed bypass. Including the impacts to the Taylors Creek Cemetery, the Pleasant Grove Cemetery, and site 9LI585, there is a high potential for indirect impacts anticipated from the Preferred COA.

Project P: FY12 Georgia Highway 144 East Road Widening

Georgia Highway 144 serves as the primary deployment route for the 3rd Infantry Division, as well as the primary route for personal vehicle traffic traveling between Fort Stewart and Savannah or Richmond Hill. The construction of the 4th Brigade Combat Team (BCT) facilities off Highway 144 is expected to increase traffic on the road by 50 percent. The current speed limit for the existing two-lane road is 55 miles per hour (MPH). In a normal calendar year, there are approximately six training exercises with duration of thirty to sixty days each. During these exercises, the speed limit on Highway 144 is reduced to 45 MPH for safety due to the large number of military vehicle convoys on the road. Consequently, non-military vehicles are stacked behind the convoys during morning and evening rush hour. The large line of vehicles reduces the line of sight ahead and around the convoys, creating dangerous passing conditions. Vehicles passing a convoy must travel in the opposite lane, which causes non-military traffic to become intermingled with the convoy. During these training periods, there is an overall increase in the amount of frustration and aggressive driving on Highway 144. Therefore, Fort Stewart proposes to widen Highway 144 East, within the Installation boundary.

The Preferred COA for the Highway 144 Widening has been identified as affecting Natural Resource Management Units (NRMU): D4.3, B6.2, A20.1, Cantonment, B5.1, B5.2, B4.13, A18.1, B4.18, B4.19, B4.11, A17.1, B2.1, A15.1, B2.2, A14.1, BEQA2, A12.1, A12.4, B1.1, A9.1, B1.4, A9.2, B1.3, A8.1, B24.4, B24.1, A6.1, A6.2, A4.1, A3.1, A2.1, B24.2, B24.3, A2.4, A12, A1.4, A1.6, C18.5, C18.6, C18.4, C18.3, and A1.1 (see figure O-1).

The following NRMUs have been previously surveyed for cultural resources: D4.3 (Morehead et al. 2008a); B6.2 (Morehead et al. 2008a; Maggioni and Grover 2002, 2003); A20.1 (Morehead et al. 2008a); B5.1 (Morehead et al. 2008a); B5.2 (Kennedy et al. 2004); B4.12 (Maggioni and Grover 2002, 2003); A18.1 (Little et al. 2000); A18.4 (Mallory et al. 2006); B4.11 (Ross 2004b); A17.1 (Kennedy et al. 2004); A15.1 (Morehead 2009); B2.2 (Little et al. 2000); A12.1 (Campo et al. 1999); A12.4 (Campo et al. 1999); A9.1 (Campo et al. 1999); A9.2 (FSCRM 2002, 2003); A8.1 (Campo et al. 1999b); B.12 (Maggioni and Grover 2002, 2003); B1.2 (Maggioni and Grover 2002, 2003); A6.1 (Holland 1998); B24.4 (FSCRM 2002, 2003); B24.1 (Ross 2004a); A6.2 (Holland 1998); A4.1 (Maggioni and Grover 2002, 2003); B24.2 (Campo 1999b); A3.1 (Maggioni and Grover 2002, 2003); B24.3 (Ross 2004a); A2.1 (Ross 2004a); A2.4 (Ross 2004a); A1.2 (Morehead et al. 2008b); A1.4 (Morehead et al. 2008b); C18.5 (Maggioni and Grover 2002, 2003); C18.6 (Maggioni and Grover 2002, 2003); A1.6 (Morehead et al. 2008b); C18.4 (Maggioni and Grover 2002, 2003); A1.1 (Morehead et al. 2008b); and C18.3 (Morehead et al. 2008b). The following NRMUs have been partially surveyed for cultural resources B2.1 (Little et al. 2000); B4.13 (Maggioni and Grover 2002, 2003); and B1.1 (Morehead et al. 2009). The following NRMUs have not been surveyed for cultural resources: B4.17; B4.18; A14.1; BEQA2;

From these surveys, a total of 47 cultural resources were identified within the proposed footprint and included the following: 9LI643, a late 19th/early 20th century historic and an undifferentiated prehistoric

site; 9LI1132, a early 20th century historic scatter; 9LI1133, an early 20th century historic and an undifferentiated prehistoric isolated find; 9LI644, an undifferentiated prehistoric find; 9LI645, a late 19th early 20th century historic site; 9LI1347, a historic artifact scatter; 9LI1189, a late 19th early 20th century historic site; 9LI1185, a late 19th early 20th century historic find; 9LI1376, a late 19th early 20th century historic site; 9LI577, a late 18th early 19th century historic site; 9LI519, a late 19th early 20th century historic site; 9LI521, a late 19th early 20th century historic site; 9LI520, a late 19th century early 20th century site; Evans BPL-1, a historic artifact scatter; 9LI349, a historic artifact scatter; 9LI525, an early 20th century historic site; 9LI526, an early 20th century historic site; 9LI613, a historic home site; 9LI1350, a prehistoric camp and artifact scatter; 9LI271, a Late Archaic/Early Woodland prehistoric site; 9LI422, an early 20th century historic site; 9BN476, a historic artifact scatter; 9BN479, a historic artifact scatter; 9BN117, a historic site; 9BN136, a historic site; 9BN408, a historic artifact scatter; 9BN186, a World War II era historic site; 9BN537, a 19th/20th century isolated historic find; 9BN400, a 20th century isolated historic find; 9BN536, a 20th century isolated historic find; 9BN381, a prehistoric isolated find; 9BN538, a 19th/20th century isolated historic scatter; 9BN503, a 20th century historic site; B24.4-3, a historic/prehistoric site; 9BN418, a prehistoric and historic artifact scatter; 9BN508, a domestic historic site; 9BN916, a prehistoric artifact scatter; 9BN999, a isolated prehistoric find; 9BN929, a isolated prehistoric find; 9BN1078, a historic isolated find; 9BN934, a prehistoric artifact scatter; 9BN995, a isolated historic find; 9BN930, a historic artifact scatter; 9BN931, a historic artifact scatter; and 9BN518, a prehistoric and historic artifact scatter. All sites were determined ineligible for the NRHP. Therefore, no direct impacts to historic properties will occur under the Preferred COA.

The following sites fall into the footprint and are currently pending analysis to determine eligibility for the NRHP: A15.1-15, historic site, A15.1-4, historic site possibly associated with Abraham Chapel and A15.1-9, a historic site (Morehead et al 2009 [Draft]).

Site 9LI1350, located in NRMU B1.4 was initially assessed as potentially eligible for the NRHP during Phase I evaluation. Accordingly, a Phase II NRHP evaluation was conducted and was recommended ineligible by (Morehead et al. 2005). However, the SHPO review of the initial Phase II draft report of investigation resulted in a recommendation of eligible which was based upon the draft recommendations by Prentice Thomas & Associates, Inc (Bellew 8 JUL 2004). Upon further review and analysis, Prentice Thomas & Associates, Inc. recommended the site ineligible. In 2005, the Installation concurred with the contractor's recommendation that 9LI1350 was ineligible. Therefore, the Installation has determined that there will be no known adverse effect to historic properties.

Regarding architectural resources, two buildings are potentially within the footprint, Buildings 8091 and 8094 both built in 2007. This project will be within the viewsheds of much of the new family housing development at Fort Stewart. These buildings were constructed in 2004. COA1 will also be within the viewsheds of the following buildings, all of which are ineligible for the NRHP, either as a result of the 2002 historic building survey (Fortune & Maggioni 2002), or due to their age (less than fifty years old): 7901 (1940), 7917 (2008) 8011, 8021, 8031 (built in 1940), 8064, 8065, 8066 (built 2001), 8073 (built 1999), 8074 (built 2001), 8076 (built 2002), 8081 (built 1940), 8082 (built 1998), 8083 (built 1994), 8085, 8086 (built 1987), 8089 (built 2000), 8093 (built 2007), 8099 (built 1970), Buildings 8120, 8122, 8123, 8124, (built 1993), 8126 (built 1999), 8153 (built 1980) and associated bleachers and ammunition storage point.

Examination of adjacent areas to the proposed location of the Preferred Course of Action did not indicate any historic properties in proximity. Areas not surveyed outside the proposed footprint predominately have a low potential for cultural resources. Should the project be altered to impact the areas not surveyed for cultural resources, additional cultural resource surveys would be conducted and impacts to historic properties would be assessed in accordance with the NHPA and other applicable laws. Cultural resource surveys are scheduled to be conducted in FY10. Therefore, a low potential for indirect impacts is anticipated from the Preferred COA.

Enclosures [Maps omitted from public format to protect sensitive cultural resources]

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2004b Archaeological Investigations at Fort Stewart: An Intensive Archaeological Survey of 10,000 Acres (NRMUs A3.1, A3.2, A4.1, A4.2, A9.1, A9.2, A9.3, A19.1, A20.2, A20.3, B4.11, B19.1, C11.1, C15.1, C17.1, C17.2, C17.3, D2.2, E8.2, A18.1, F5.1, and F12.2 in Bryan, Evans, Liberty and Long Counties) at Fort Stewart, Georgia. Panamerican Consultants, Inc. Submitted to the National Park Service, Southeast Archeological Center, Tallahassee, and the Directorate of Public Works, Environmental Branch, Fort Stewart, Georgia.

Trinkley, Michael, William B. Barr, and Debi Hacker

1996 An Archaeological Survey of the 522 Ha JAECK Drop Zone and 241 Ha Taylors Creek Tract, Fort Stewart, Long and Liberty Counties, Georgia. Chicora Research Contribution 186. Chicora Foundation, Columbia, South Carolina. Prepared for the National Park Service, Southeast Regional Office, Atlanta, Georgia with funds by the United States Army under Contract Number: 1443CX500095044.

1997 Fort Stewart 2 and 3: An Archaeological Survey of the 809 Ha Survey Tract "A" (Portions of Training Areas E-16 and E-20) and the 804 Ha Survey Tract "B" (Portions of Training Areas E-14 and E-15), Brigade Maneuver Area, Fort Stewart, Long and Tattnall Counties, Georgia. Chicora Research Contribution

208. Chicora Foundation, Inc., Columbia, South Carolina. Prepared for the National Park Service, Southeast Regional Office, Atlanta, Georgia with funds by Fort Stewart, United States Army under Contract Number: 1443CX500095044. [CHI 2]; [CHI 3]

Trinkley, Michael, Debi Hacker, and William B. Barr

1998 Fort Stewart 4, 5, 6, and 7: An Archaeological Survey of 3,078.27 Ha Survey Tracts "A" Through "N" (Portions of Training Areas A-11, B-9, D-8, D-9, D-11, D-14, E-7, E-8, E-11, E-13, E-14, E-15, E-19, E-20, and E-21), Fort Stewart, Liberty, Long and Tattnall Counties, Georgia. Chicora Research Contribution 242. Chicora Foundation, Inc., Columbia, South Carolina. Prepared for the National Park Service, Southeast Regional Office, Atlanta, Georgia with funds by Fort Stewart, United States Army under Contract Number: 1443CX500095043.

Trinkley, Michael, and Debi Hacker

2000 Fort Stewart 12: A Survey of a Portion of Natural Resource Management Unit D7.2, Fort Stewart, Liberty County, Georgia. Chicora Research Contribution 300. Chicora Foundation, Columbia, South Carolina. Submitted to the Southeast Archeological Center, National Park Service, Tallahassee.



HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
ACTING DIVISION DIRECTOR

January 20, 2010

Robert R. Baumgardt
Director, Public Works
US Army Installation Management Command
HQ, US Army Garrison, Fort Stewart/ Hunter Army Airfield
Directorate of Public Works
1587 Frank Cochran Drive
Fort Stewart, Georgia 31314
Attn: Brian Greer, brian.greer@us.army.mil

RE: Fort Stewart: Range & Garrison Development, 15 Projects, 2011-2014
Liberty County, Georgia
HP-091222-001

Dear Mr. Baumgardt:

The Historic Preservation Division (HPD) has reviewed the information provided concerning the above-referenced projects at Fort Stewart. Our comments are offered to assist the U.S. Army and Fort Stewart in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended.

Based on the provided information, HPD concurs with the findings and recommendations concerning archaeological resources located within the 15 projects' areas of potential effect. In regards to historic structures located within the multiple areas of potential effect, HPD concurs that Projects A, C, D, E, H, I, J, K, M, and N will result in **no effect** to historic structures that are listed in or eligible for listing the National Register of Historic Places (NRHP), as defined in 36 CFR Part 800.4(d)(1). HPD notes that Projects B, F, and L may have concerns for effects to historic cemeteries, but Fort Stewart will be closely monitoring the project plans as they develop and minimize any potential effects to cemeteries that may be eligible for listing in the NRHP, as appropriate. HPD should be consulted if plans evolve to include minimization efforts, such as the construction of berms, so that we may be able to comment on cemetery eligibility and effects of the projects, as well as the efforts to minimize effects. Additionally, the description of potential effects resulting from Project G was inconclusive, as an examination of a few structures in the viewshed of the project has not been completed. However, it is stated that there will likely be no concern to historic properties in the APE; once this is confirmed, please let us know so that we will be able to provide conclusive comments for this project.

Please refer to project number **HP-091222-001** in any future correspondence regarding this undertaking. If we may be of further assistance, please do not hesitate to contact Elizabeth Shirk, Environmental Review Coordinator at (404) 651-6624, or Jackie Tyson, Environmental Review Historian, at (404) 651-6777.

Sincerely,

Karen Anderson-Cordova
Manager, Planning & Local Assistance Unit

KAC:jht

cc: Jason Kotarski, Coastal Regional Commission of Georgia
254 WASHINGTON STREET, SW | GROUND LEVEL | ATLANTA, GEORGIA 30334
404.656.2840 | FAX 404.657.1368 | WWW.GASHPO.ORG



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

FEB 05 2010

Office of the Garrison Commander

The Honorable Tarpie Yargee
Alabama-Quassarte Tribal Town
101 East Broadway
Wetumka, Oklahoma 74880

Dear Chief Tarpie Yargee:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Alabama-Quassarte Tribal Town is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Alabama-Quassarte Tribal Town, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Alabama-Quassarte Tribal Town. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Alabama-Quassarte Tribal Town requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is written over a large, stylized "X" mark.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

FEB 05 2010

REPLY TO
ATTENTION OF

Office of the Garrison Commander

The Honorable Billy Cypress
Miccosukee Tribe of Indians of Florida
Mile Marker 70, U.S. 41 Tamiami Trail
Miami, Florida 33144

Dear Chairman Cypress:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Miccosukee Tribe of Indians of Florida is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Miccosukee Tribe of Indians of Florida, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Miccosukee Tribe of Indians of Florida. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Miccosukee Tribe of Indians of Florida requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is written over the typed name.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

FEB 05 2010

Office of the Garrison Commander

The Honorable A.D. Ellis
Muscogee Creek Nation of Oklahoma
1008 East Eufaula
Okmulgee, Oklahoma 74447

Dear Chief Ellis:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Muscogee Creek Nation of Oklahoma is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Muscogee Creek Nation of Oklahoma, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Muscogee Creek Nation of Oklahoma. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Muscogee Creek Nation of Oklahoma requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is written over the word "Sincerely,".

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

FEB 05 2010

REPLY TO
ATTENTION OF

Office of the Garrison Commander

The Honorable Buford L. Rolin
Poarch Band of Creek Indians
5811 Jack Springs Road
Atmore, Alabama 36502

Dear Chairman Rolin:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Poarch Band of Creek Indians is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Poarch Band of Creek Indians, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Poarch Band of Creek Indians. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Poarch Band of Creek Indians requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is written over a large, stylized "M" that serves as a background for the signature.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

FEB 05 2010

REPLY TO
ATTENTION OF

Office of the Garrison Commander

The Honorable Mitchell Cypress
Seminole Tribe of Florida
34725 West Boundary Road
Clewiston, Florida 33440

Dear Chairman Cypress:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Seminole Tribe of Florida is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Seminole Tribe of Florida, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Seminole Tribe of Florida. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Seminole Tribe of Florida requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is positioned above the printed name.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

FEB 03 2010

REPLY TO
ATTENTION OF

Office of the Garrison Commander

The Honorable Enoch Kelly Haney
Seminole Nation of Oklahoma
Junction 270 and 56 Highway, ¼ Mile East on 270
Wewoka, Oklahoma 74884

Dear Chief Haney:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Seminole Nation of Oklahoma is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Seminole Nation of Oklahoma, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Seminole Nation of Oklahoma. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Seminole Nation of Oklahoma requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

FEB 05 2010

Office of the Garrison Commander

The Honorable Vernon Yarholar
Thlopthlocco Tribal Town
Clairview Road Exit 227, Building 103
Okemah, Oklahoma 74859

Dear Town King Yarholar:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Thlopthlocco Tribal Town is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Thlopthlocco Tribal Town, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Thlopthlocco Tribal Town. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Thlopthlocco Tribal Town requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is positioned above the printed name.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
954 WILLIAM H. WILSON AVENUE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

FEB 05 2010

Office of the Garrison Commander

The Honorable Tiger Harjo
Kialegee Tribal Town
108 North Main Street
Wetumka, Oklahoma 74883

Dear Mekko Harjo:

In accordance with the National Environmental Policy Act, the National Historic Preservation Act, and the American Indian Religious Freedom Act, the Kialegee Tribal Town is requested to review and provide comments regarding 14 projects currently proposed by Fort Stewart. The enclosed work summary describes the proposed and alternative action for each project as well their potential effects to cultural resources.

The analysis of the potential environmental impacts of the 14 projects is under development and will be documented in the *Fort Stewart Range and Garrison Support Facilities Environmental Impact Statement* (EIS). In order to ensure your comments are included in the EIS, comments must be received within thirty days of the receipt of this letter.

A copy of the draft EIS will be sent to the Kialegee Tribal Town, and other stakeholders, around February 2010. As more completely described in the draft EIS, additional comments will be requested from the Kialegee Tribal Town. Please note that the enclosure includes sensitive site location information that will not be published in the EIS. We request that this information be treated with confidentiality.

If the Kialegee Tribal Town requires further information, please contact Mr. Brian K. Greer, M.A., Cultural Resource Management Specialist, or Mr. Kurt Flynn, Land Management Section Leader, Environmental Division, Directorate of Public Works at (912) 767-2010. We look forward to your response.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin W. Milton", is positioned above the printed name.

Kevin W. Milton
Colonel, US Army
Commanding

Enclosure



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
DIRECTORATE OF PUBLIC WORKS
1587 FRANK COCHRAN DRIVE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Directorate

MAR 25 2010

Georgia DNR Office of
Historic Preservation Division

MAR 26 2010

RECEIVED

Dr. David Crass
Deputy State Historic Preservation Officer
Historic Preservation Division
Georgia Department of Natural Resources
254 Washington Street SW
Ground Level
Atlanta, Georgia 30334

Dear Dr. Crass,

The purpose of this letter is to continue consultation with your office regarding the *Fort Stewart Range and Garrison Environmental Impact Statement* and the proposed actions outlined within the document (Reference: Fort Stewart: Range & Garrison Development, 15 Projects, 2011-2014; Liberty County, Georgia; HP-091222-001).

Per your office's letter dated January 20, 2010, the Historic Preservation Division concurred with the Installation's findings and recommendations regarding archaeological resources located within the 15 project areas of potential effect. As described in our submittal "Fort Stewart Range and Garrison Support Facilities Cultural Resource Analysis Report", the Installation identified an additional need for cultural resource surveys associated with the following Projects: Project I (FY13 Modified Record Fire Range); Project J (FY13 Automatic Combat Pistol Qualification Course); and Project L (FY14 Convoy Live Fire Range). Since our last letter, the area of potential effect for these projects has been further refined and all cultural resource surveys have been completed (see enclosure). As a result of these surveys, the Installation has determined that construction and utilization of Project I, Project J, and Project L would not adversely affect archaeological resources eligible for listing on the National Register of Historic Places (NRHP) as defined in 36 CFR 800.

Your office identified Project G's (FY13 Fire and Movement Range) potential effects as inconclusive based upon the information provided. Specifically, there was a need to evaluate a few structures in the viewshed of the project area. Since our last letter, these structures have been evaluated and are described in the enclosed Report of Findings. The

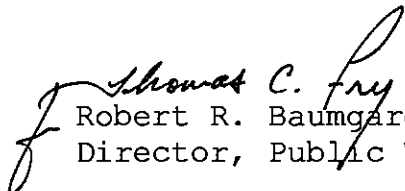
Installation has confirmed construction and use of Project G would not result in an adverse effect to historic structures eligible for listing on the NRHP.

Regarding Project B (Infantry Platoon Battle Course), Project F (FY13 Known Distance Range), and Project L (FY14 Convoy Live Fire Route), your office expressed a desire to further consult should the Installation determine it would be necessary to minimize potential effects to cemeteries that may be eligible for listing in the NRHP. The Installation will continue to monitor project plans for the ranges as they develop and will consult with your office as appropriate. At this time, cemeteries that may be eligible for listing in the NRHP are not anticipated to be affected by the construction and utilization of the proposed ranges.

Please note, the original project design was modified since our previous submittal. In addition to the features already described, the project now includes the proposed construction and operation of three Range Operations and Control Areas (ROCAs) and a new access road. Project A (FY11 Multipurpose Machine Gun Range), Project B (FY11 Infantry Platoon Battle Course), and Project I (FY11 Modified Record Fire Range) would include ROCAs and Project N (FY11 10th Engineers Battalion) would include an access road. The area of potential effect of these modifications was surveyed for cultural resources and the Installation has confirmed that these modifications would not result in an adverse effect to historic properties (see enclosed Report of Findings).

Per 36 CFR 800, the Installation requests your comments within 30 days of receiving this letter. Should you have questions or need further information, please contact Mr. Brian Greer, Cultural Resource Program Manager, or Mr. Kurt Flynn, Land Management Section Leader at (912) 767-2010. Email correspondence can be directed to brian.greer@us.army.mil.

Sincerely,


Robert R. Baumgardt
Director, Public Works

Enclosure



HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

April 22, 2010

Robert R. Baumgardt
Director, Public Works
Department of the Army
Fort Stewart/ Hunter Army Airfield
1587 Frank Cochran Drive
Fort Stewart, Georgia 31314
Attn: Brian Greer, brian.greer@us.army.mil

RE: Ft. Stewart: Range & Garrison Development, 15 Projects, 2011-2014
Liberty County, Georgia
HP-091222-001

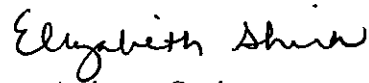

Dear Mr. Baumgardt:

The Historic Preservation Division (HPD) has reviewed the additional information provided regarding the above-referenced project. Our comments are offered to assist the U.S. Department of the Army and Fort Stewart/ Hunter Army Airfield (HAAF) in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended.

Thank you for the additional information further clarifying the proposed project. HPD understands that the project has been modified to include the construction and operation of three Range Operations and Control Areas and a new access road. Based on the information provided, HPD concurs that no archaeological sites or historic structures that are listed in or eligible for listing in the National Register of Historic Places (NRHP) will be affected by the proposed Range Operations and Control Areas and access road project, as defined in 36 CFR Part 800.4(d)(1). In addition, HPD concurs that no archaeological resources or historic structures that are listed in or eligible for listing in the NRHP will be affected by proposed Projects A, G, I, J, and N, as defined in 36 CFR Part 800.4(d)(1). HPD also agrees that, at this time and in conjunction with routine monitoring, Projects B, F, and L will result in **no adverse effect** to potentially eligible historic cemeteries, as defined in 36 CFR Part 800.5(d)(1).

Please refer to project number **HP-091222-001** in any future correspondence regarding this undertaking. If we may be of further assistance, please do not hesitate to contact Elizabeth Shirk, Environmental Review Coordinator at (404) 651-6624.

Sincerely,


 Karen Anderson-Cordova
Program Manager
Environmental Review & Preservation Planning

KAC:jht

cc: Jason Kotarski, Coastal Regional Commission of Georgia



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, US ARMY GARRISON, FORT STEWART / HUNTER ARMY AIRFIELD
DIRECTORATE OF PUBLIC WORKS
1587 FRANK COCHRAN DRIVE
FORT STEWART, GEORGIA 31314

REPLY TO
ATTENTION OF

Office of the Directorate

Dr. David Crass
Deputy State Historic Preservation Officer
Historic Preservation Division
Georgia Department of Natural Resources
254 Washington Street SW
Ground Level
Atlanta, Georgia 30334

Dear Dr. Crass,

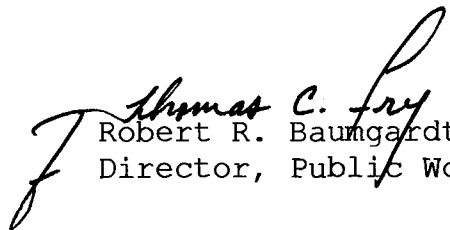
The purpose of this letter is to consult with your office regarding an additional action to the proposed activities in the *Fort Stewart Range and Garrison Draft Environmental Impact Statement* (Reference HP-091222-001). In letters dated January 20 and April 22, 2010, the Historic Preservation Division concurred with the Installation's findings and recommendations regarding archaeological resources located within the 15 project areas of potential effect. Subsequent to our last consultation, the area of potential effect has expanded for Project H (FY11 Infantry Squad Battle Course) to include an electrical right-of-way from the Installation boundary to the proposed range facility.

The electrical right-of-way will be established north of the proposed range along portions of Fort Stewart Roads 43 and 44 (see map). The right-of-way will include the placement of overhead power poles and timber harvesting along the route. The right of way is anticipated to be approximately 2.5 kilometers long and approximately 30 meters wide. The area of potential effect was surveyed for cultural resources on April 5, 2010 utilizing subsurface investigations at 30 meter intervals for high probability areas and 45 meter intervals for low probability areas.

No cultural resources were previously discovered within the area of potential effect and no cultural resources were encountered during the investigation. As a result, the Installation has determined that construction and utilization of the electrical right-of way would not adversely affect archaeological resources eligible for listing on the National Register of Historic Places. Per 36 CFR 800, the Installation requests your comments within 30 days of receiving this letter.

If you have any questions or require further information, please contact the following individuals at the Fort Stewart Directorate of Public Works Prevention and Compliance Branch: Mr. Brian Greer, Cultural Resource Program Manager, at (912) 767-0992 or Mr. Kurt Flynn, Land Management Section Leader, at (912) 767-2010. Email correspondence can be directed to brian.greer@us.army.mil.

Sincerely,


Robert R. Baumgardt
Director, Public Works

Enclosure



HISTORIC PRESERVATION DIVISION

CHRIS CLARK
COMMISSIONER

DR. DAVID CRASS
DIVISION DIRECTOR

June 10, 2010

Robert R. Baumgardt
Director, Public Works
Department of the Army
Fort Stewart/Hunter Army Airfield
1587 Frank Cochran Drive
Fort Stewart, Georgia 31314
Attention: Brian Greer
brian.greer@us.army.mil

RE: Ft. Stewart: Range & Garrison Development, 15 Projects, 2011-2014
Liberty County, Georgia
HP-091222-001

Dear Mr. Baumgardt:

The Historic Preservation Division (HPD) has reviewed the additional information provided regarding the above-referenced project. Our comments are offered to assist the U.S. Department of the Army and Fort Stewart/Hunter Army Airfield in complying with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Thank you for the additional information further clarifying the proposed project. HPD understands that the area of potential effect has expanded for Project H to include an electrical right-of-way from the Installation boundary to the proposed range facility. Based on the information provided, HPD concurs that no historic properties that are listed in or eligible for listing in the NRHP will be affected by the proposed expansion of Project H, as defined in 36 CFR Part 800.4(d)(1).

Please refer to project number **HP-091222-001** in any future correspondence regarding this undertaking. If we may be of further assistance, please do not hesitate to contact Bob Entorf, Review Archeologist at (404) 651-6433.

Sincerely,

Karen Anderson-Cordova
Program Manager
Environmental Review and Preservation Planning

KAC:mn