



Report to the Subcommittee on Airland,  
Committee on Armed Services, United  
States Senate

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December 2013

# DEFENSE INFRASTRUCTURE

## Army Brigade Combat Team Inactivations Informed by Analyses, but Actions Needed to Improve Stationing Process

# GAO Highlights

Highlights of [GAO-14-76](#), a report to the Subcommittee on Airland, Committee on Armed Services, United States Senate

## Why GAO Did This Study

As part of its plan to reduce its active duty force by 80,000 personnel by 2017, the Army will be inactivating 10 BCTs currently stationed in the United States and reorganizing the remaining BCTs. The Army conducted analyses of different stationing options, which included the use of its military value analysis model to compare installations based on their ability to support BCTs. GAO was asked to review the decision making process the Army used for its BCT stationing decision, including its military value analysis model. This report (1) describes the analyses the Army conducted to make its BCT decision and (2) evaluates the extent to which the Army has established guidance and processes related to the use of the military value analysis model as a part of its stationing decisions. GAO reviewed the Army's stationing guidance, current and previous versions of the military value analysis model, documents on the BCT decision, and spoke with cognizant officials.

## What GAO Recommends

GAO recommends the Army develop and implement guidance related to when community input should be obtained for stationing decisions, and related to the use of its military value analysis model, such as when it should be used, the level of approval required for changes to the model, and how certain training areas should be considered, as well as processes for updating and reviewing the model. The Army concurred with GAO's recommendations and explained how they will be implemented.

View [GAO-14-76](#). For more information, contact Brian J. Lepore at (202) 512-4523 or [leporeb@gao.gov](mailto:leporeb@gao.gov)

December 2013

## DEFENSE INFRASTRUCTURE

### Army Brigade Combat Team Inactivations Informed by Analyses, but Actions Needed to Improve Stationing Process

#### What GAO Found

To make decisions regarding the installations at which to inactivate 10 Brigade Combat Teams (BCTs) and reorganize others, the Army conducted quantitative and qualitative analyses and obtained community input. Specifically, in 2012 the Army established a BCT Reorganization Operational Planning Team to assess factors such as strategic considerations, military construction costs, and environmental and socioeconomic impacts, among others, and develop stationing options for decision makers. The Army also considered other factors, or attributes—such as training ranges, geographic distribution, and proximity to embarkation points—in its military value analysis model. In addition, the Army conducted community input sessions at installations with 5,000 or more military and civilian personnel, including the 15 under consideration for inactivation of a BCT. Several Army officials said that the sessions were valuable and could serve as a tool for future stationing decisions. However, the Army's stationing regulation does not include guidance on obtaining community input beyond what may be required in the context of environmental analysis. An Army official said that he is developing proposed guidelines for when such input should be considered, but was uncertain how they will be incorporated into formal guidance. Effective stakeholder involvement includes actively soliciting ongoing stakeholder input and fostering communication between stakeholders and decision makers. Incorporating this type of communication with external stakeholders into its stationing guidance for future decisions could lead to potentially greater buy-in from local communities for Army stationing decisions.

The Army expects to continue using its military value analysis model for major stationing decisions and has taken steps to validate the model, but has not established guidance and consistent formal processes related to its use, including when the model should be used or how it should be reviewed, updated, and approved. Standards for internal control state that control activities, such as established and consistent processes or policies, can help to ensure actions to mitigate risks are carried out. Army officials said that the model has generally been used for large-impact stationing decisions and may not be appropriate for minor decisions. However, the Army's stationing regulation does not discuss the model or provide guidance on the circumstances when the model should be used. Also, the Army has not established consistent processes for reviewing and updating attributes and attribute definitions within the model or for collecting and validating data, nor has it established guidance related to the level of input or approval required for changes to the model or how geographically distant training areas should be treated in the model. For instance, subject matter experts noted that the definitions of a couple of attributes should be updated or reviewed, but GAO found that there is no consistent process in place for addressing such issues. Army officials told GAO that the attributes and weighting of the attributes within the model may also change depending on the type of stationing decision, but there is no guidance on when revisions should be approved by Army leaders. Without consistent formal processes for updating and reviewing the model and data used, and guidance related to the level of approval required for changes to the model, the Army risks potential decline in the rigor and consistency of the model over time.

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**Abbreviations**

BCT            Brigade Combat Team  
DOD           Department of Defense

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December 11, 2013

The Honorable Joe Manchin III  
Chairman  
The Honorable Roger F. Wicker  
Ranking Member  
Subcommittee on Airland  
Committee on Armed Services  
United States Senate

The Army's active component is set to decline from a peak of approximately 570,000 soldiers in 2012 to 490,000 by 2017, in accordance with anticipated reductions in defense spending and with strategic guidance released in January 2012.<sup>1</sup> The Army plans to reduce its forces through a number of different actions, including eliminating temporary personnel allowances related to operations in Iraq and Afghanistan and reducing the number of military personnel at installations around the United States and in Europe. Specifically, the Army will be making reductions of approximately 17,700 personnel from the 15 U.S. installations where at least one brigade combat team (BCT) is stationed.<sup>2</sup> As part of this reduction, the Army announced on June 25, 2013 that it would reduce the number of active duty BCTs from 45 to 33 by inactivating 12 BCTs—2 currently stationed in Europe and 10 currently stationed at installations in the United States.<sup>3</sup> The Army also announced that it would reorganize the remaining BCTs into larger organizations

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<sup>1</sup> Department of Defense, *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense* (Jan. 3, 2012).

<sup>2</sup> A BCT is a modular organization that provides the division, land component commander, or joint task force commander with close combat capabilities. BCTs are the Army's combat power building blocks for maneuver, and the smallest combined arms units that can be committed independently. BCTs can be one of three types—infantry, armor, and Stryker.

<sup>3</sup> According to the Army, it will also likely be announcing the inactivation of an additional BCT in the future, which will bring the number of active component BCTs to 32. See appendix II for the installations where BCT inactivations will be taking place.

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through the addition of more engineering capabilities and a third maneuver battalion to most BCTs.<sup>4</sup>

According to the Army, the magnitude of its force structure reductions necessitated that the reductions be distributed broadly both in terms of the number of installations that would be affected and the types of units that would be inactivated. Decisions by the military services—the Army in this instance—regarding where to base their force structure in the United States can have significant strategic, socioeconomic, and cost implications for both the Department of Defense (DOD) and the communities surrounding the bases. For example, stationing decisions can often result in changes to the numbers of personnel, military families, and defense-related contractors working or living at DOD installations and can have an effect on the off-base infrastructure, community services, businesses, and environmental considerations of local communities.<sup>5</sup> To aid decision making for its current force reductions, the Army conducted a number of different analyses, including the use of a military value analysis model the Army has used to support previous major stationing decisions.

You asked us to conduct a review of the Army's analysis and decision making processes that were used to support the decisions on BCT force structure and stationing changes, including reviewing the Army's military value analysis methodology. Specifically, our objectives were to: (1) describe the analyses that the Army conducted to make determinations regarding which BCTs would be inactivated or reorganized, and at which installations; and (2) evaluate the extent to which the Army has established guidance and processes related to the use of the military value analysis model as a part of its stationing decisions.

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<sup>4</sup> BCTs stationed outside of the continental U.S. in Hawaii, Alaska, and Italy will not receive a third maneuver battalion. Also, Stryker BCTs already have a third maneuver battalion and will not receive an additional battalion.

<sup>5</sup> The purpose of Army Regulation 5-10, *Stationing*, is to assign responsibilities for and prescribe policies and procedures governing the Army stationing process. According to the Regulation, stationing is the process of combining force structure and installation structure at a specific location to satisfy a specific mission requirement. It includes all forms of realignment or relocation and includes actions that determine the authorized population (military and civilian) at a particular installation. Activation and inactivation of force structure components are among the ways to accomplish stationing. See Army Regulation 5-10, *Stationing* at 31 (Aug. 20, 2010) (hereinafter cited as AR 5-10 (Aug. 20, 2010)).

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To address the first objective, we reviewed the Army's stationing regulation, reports, and guidance, examined briefings and documents outlining the key components of the current decision process, such as briefings related to the development and assessment of possible stationing options, and interviewed knowledgeable Army officials about the Army's decision process and the key factors that were considered. Additionally, we reviewed documents related to the Army's environmental analysis, such as environmental regulations and the Army's programmatic environmental assessment of 21 installations,<sup>6</sup> and examined briefings and an order related to the listening sessions held at Army installations to obtain community input. Further, we examined documentation related to the Army's military value analysis model and methodology, such as briefings and reports, to identify key elements of the model and determine how the attributes within the model are defined and weighted to arrive at the results. We also interviewed knowledgeable Army officials to determine how the model's results were considered as part of the broader BCT decision process. The scope of our work was limited to inactivations occurring at installations located within the United States.

To address the second objective, we examined the Army's stationing regulation, 2011 stationing report to Congress, and other applicable reports and guidance to determine the extent to which the Army's military value analysis model is established in guidance. We examined documentation related to prior versions of the model and the current model used for the recent BCT decision to determine how the model has changed over time. We also reviewed key elements of the version of the model used to support the BCT inactivation decision, such as the attributes and weighting of the attributes, and interviewed knowledgeable officials such as Center for Army Analysis personnel to discuss the development of the model and how the key aspects of the model are reviewed and updated for each use of the model. Additionally, we examined documentation related to and interviewed subject matter experts about the processes used by the Army to collect and validate the data used in the model, but we did not review the completeness of the data or validate the data itself.

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<sup>6</sup> The 21 installations included the 15 locations where BCTs are stationed and 6 non-BCT installations that support major training schools or Combat Training Centers with the potential to lose or gain 1,000 or more military members.

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We conducted this performance audit from April 2013 through December 2013 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Appendix I contains additional information about our scope and methodology.

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## Background

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### Army Reorganization of BCTs

In January 2011, the Secretary of Defense announced that the Army's end strength would be reduced by 27,000 active duty military personnel beginning in 2015. According to Army officials, initial discussions regarding how these reductions should be made began as part of the 2014-2018 Total Army Analysis, but no decisions on BCT inactivations in the United States were made in 2011.<sup>7</sup> As part of the early 2012 decision to further reduce its active component end-strength to 490,000, the Army determined that it would inactivate at least 8 of its 45 active component BCTs. According to the Army, it began more extensive analysis of its BCT organizational design, which included a series of vignettes addressing the full range of Army missions, simulated combat that examined multiple organizational options, and a strategic analysis focused on the ability of the Army to support force demands in plausible future campaigns. As a result of this analysis, the Army determined that it would inactivate 12 BCTs and reorganize the remaining BCTs by adding a third maneuver battalion to armor and infantry brigades located in the continental United States, among other additional capabilities.<sup>8</sup> Under the current organization design, the Army has 45 active component BCTs with 98 maneuver battalions.

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<sup>7</sup> The Army describes Total Army Analysis as a process that determines the force structure that is both balanced and affordable to meet guidance issued from the President, Congress, Office of the Secretary of Defense, or Army leadership.

<sup>8</sup> The Army is inactivating two BCTs in Europe in addition to inactivating the 10 BCTs in the United States.

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Under the new design, the Army will reduce the number of BCTs to 33, but will still maintain 95 maneuver battalions by focusing reductions on headquarters organizations. According to Army officials, this reorganization will allow the Army to maximize its combat power within its reduced end-strength. The Army will conduct these BCT reorganizations concurrently with BCT inactivations and has cited some benefits of doing so, such as cost efficiencies that can be achieved by using inactivating BCTs to provide personnel, equipment, and infrastructure to BCTs that are reorganizing at the same installations. These BCT inactivations and reorganizations will take place within the Army's stationing process.

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### Army Regulation 5-10 Establishes Framework for Stationing Decisions

Stationing includes realignment or relocation, and those actions that determine the population at a particular installation. As such, it may involve activation or establishment, or inactivation or discontinuance, of force structure components at one or more military installations in support of operational requirements. The Army's stationing process incorporates both a force structure component and an installation component. Army Regulation 5-10 on Stationing establishes the policy, procedures, and responsibilities for Army stationing actions that occur outside of the Base Realignment and Closure process.<sup>9</sup> Under the regulation, the Army Deputy Chief of Staff for Operations and Plans serves as the Army Staff principal proponent for directing and monitoring stationing activities, but a range of other Army staff directorates and organizations also have responsibilities within the process. In addition to providing instruction on administrative procedures for obtaining approval of stationing actions, Army Regulation 5-10 provides a framework for planning stationing actions, to include studying and analyzing feasible stationing options. This framework allows for some flexibility in regard to the factors that should be considered as part of stationing decisions. For example, the regulation identifies 28 stationing planning factors, such as operational considerations, for planners to consider as they identify, analyze, and evaluate stationing options, but recognizes that some planning factors may have little relevance for certain stationing actions. In addition, environmental analysis is generally a necessary element of the Army's

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<sup>9</sup> The procedures outlined in Army Regulation 5-10 are not applicable to specified situations. The list of exclusions includes stationing actions specifically mandated by law, such as base realignment and closure-directed stationing actions, although base realignment and closure-discretionary actions are covered. See AR 5-10, paras. 1-5.e, 6-3 (Aug. 20, 2010).

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stationing process and Army Regulation 5-10 directs that stationing proposals are to be evaluated for compliance with the National Environmental Policy Act of 1969.<sup>10</sup>

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## Military Value Analysis

The Army's military value analysis model is a possible input to the Army's stationing process and has been a consideration in a number of prior stationing decisions, including the 2005 Base Realignment and Closure round.<sup>11</sup> Based on tools used to analyze the military value of installations as part of the Base Realignment and Closure process, the Army developed a military value analysis model to support stationing decisions for six new BCTs that were established as part of the 2007 Grow the Army initiative, and has adapted that model for use in a number of other brigade stationing decisions since that time.<sup>12</sup> The Army's military value analysis model was developed by the Center for Army Analysis, which reports to the Army Deputy Chief of Staff for Programs, and is a decision analysis tool that is designed to rank-order installations based on attributes that the Army has identified as being operationally important to the type of unit in question for each stationing decision.

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<sup>10</sup> Pub. L. No. 91-190 (1970) (codified as amended at 42 U.S.C. §§ 4321-4347).

<sup>11</sup> The legislation governing the 2005 Base Realignment and Closure round required the Secretary of Defense to give priority consideration to specific criteria, identified as military value criteria, in making recommendations for the closure or realignment of military installations. See National Defense Authorization Act for Fiscal Year 2002, Pub. L. No. 107-107, § 3002 (2001) (amending the Defense Base Closure and Realignment Act of 1990, Pub. L. No. 101-510, Title XXIX (1990)), *amended by* Ronald Wilson Reagan National Defense Authorization Act for Fiscal Year 2005, Pub. L. No. 108-375, § 2832 (2004) (appended as a note below 10 U.S.C. § 2687).

<sup>12</sup> The Grow the Army initiative increased the size of the active and reserve components of the Army by 74,000, including six new infantry BCTs.

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## The Army's BCT Stationing Decision Was Informed by Quantitative and Qualitative Analyses and Included an Effort to Obtain Community Input, Which May Provide Benefits for Future Stationing Decisions

The Army's BCT stationing decision regarding the installations at which to inactivate BCTs was informed by a number of quantitative and qualitative analyses, including a military value analysis of installations, an environmental assessment, and a qualitative analysis of different stationing options. The Army also obtained community input through listening sessions held at installations around the country, a practice that is not currently required by Army guidance, but which may provide some benefits for future stationing decisions.

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## Army's BCT Stationing Decision Was Informed by Qualitative and Quantitative Analyses of Identified Stationing Factors

In May 2012, the Army established a BCT Reorganization Operational Planning Team for the purpose of conducting, facilitating, and overseeing planning and analysis to determine how to best achieve the targeted BCT reductions. This team was led by the Force Management directorate within the Army Staff and included stakeholders from across the Army Staff and other Army organizations, such as the Office of the Assistant Chief of Staff for Installation Management and Office of the Assistant Secretary of the Army for Installations, Energy, and Environment, among others. Guidance from the Secretary of the Army and Director of Army Force Management identifying a number of specific stationing factors to be considered when assessing stationing options as part of the BCT inactivation decision process was provided to the BCT Reorganization Operational Planning Team.<sup>13</sup> These key stationing factors for the inactivation decision were initially established in an information paper approved by the Secretary of the Army in November 2011 when the Army was planning for the reduction of at least 8 BCTs and then further defined and modified to account for potential BCT reorganizations in 2013. The

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<sup>13</sup> For the purposes of this report, we use the term "stationing options" to refer to the different scenarios that the Army developed and assessed regarding the 15 U.S. installations where the 10 BCTs could potentially be inactivated. We use the term "stationing factors" to refer to the guidance that planners received regarding the elements that they should consider when assessing the merits of the stationing options.

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The Army Considered Some Stationing Factors Through the Use of Its Military Value Analysis Model

stationing factors included some factors to be considered as part of the analysis conducted using the Army's military value analysis model and other stationing factors to be considered as part of analyses occurring outside of the military value analysis model.

To inform its BCT inactivation decision, the Army used its military value analysis model to measure the relative value of installations based on the requirements of BCTs. Stationing factors considered under the model's analysis are specific to an installation's ability to support a BCT, such as maneuver land availability or housing. These factors, also known as model attributes, were quantified as part of the military value analysis model in order to rank order the installations under consideration according to their military value. The 2013 version of the model used to support the recent BCT inactivation decision scored the 15 installations with BCTs based on 16 attributes identified by the Army as being operationally important to a BCT. Each attribute within the model has a formula or categorical definition that measures a certain characteristic (see appendix III for a full list of the attributes used within the current model and their definitions). The results of the formulas and categorical ratings for each attribute are converted to 0-10 scores for each installation. The attributes are weighted within the model based on their operational importance and ease of change relative to each other. For example, maneuver land is an attribute within the model and is considered to be of high operational importance, but additional maneuver land is not easily attainable, so that attribute is weighted more heavily than an attribute such as quality of life facilities, which can be improved through Army investment. Installations receive a score for each attribute based on collected data and then individual attribute scores are weighted and summed to produce the installations' overall military value scores. For the recent decision, the 15 installations were then rank-ordered, with higher rankings indicating greater military value for stationing BCTs. Army officials emphasized that the results of the model were used only as a starting point for further analysis and were useful in comparing installations, but that the model cannot account for all of the factors that need to be considered in a complex decision, such as strategic considerations.

The Army Identified Stationing Factors for Consideration Outside of the Military Value Analysis Model

The Army also identified other stationing factors, which were to be considered outside of the military value analysis model as part of a qualitative assessment of stationing options. These factors address issues beyond a particular installation's capabilities and infrastructure that are not accounted for within the model, such as strategic considerations or immediate impacts on readiness. Table 1 shows the key factors

identified for consideration outside of the military value analysis model as part of the Army decision.

**Table 1: Stationing Factors Identified for Consideration Outside of the Military Value Analysis Model as Part of the Brigade Combat Team (BCT) Inactivation Decision**

<b>Strategic considerations</b>	Stationing options that enhanced the Army's ability to meet the requirements of the Defense Strategic Guidance and to rebalance efforts to the Asia-Pacific region were to be considered preferable to those that did not.
<b>Proximity of subordinate units to parent headquarters</b>	Stationing options that resulted in subordinate units being collocated with, or in very close proximity, to their respective parent headquarters were to be considered preferable to those that did not.
<b>Military construction costs</b>	Stationing options that minimized unprogrammed military construction costs were to be considered preferable to those that did not.
<b>Investment and regeneration</b>	Stationing options that created space for regeneration of force structure in case the Army is required to grow in the future to meet a national emergency were to be considered preferable to those that did not.
<b>Statutory requirements</b>	Stationing options were to be checked for compliance with the provisions of sections 993 and 2687 of Title 10, U.S. Code; section 8018 of the Consolidated and Further Continuing Appropriations Act, 2013; and Department of Defense Instruction 1400.25, volume 351 (Jan. 19, 2011). <sup>14</sup>
<b>Immediate readiness impacts</b>	Stationing options that minimized organizational, equipment, and personnel readiness impacts due to the reorganization of BCTs were to be considered preferable to those that did not.
<b>Environmental and socioeconomic impacts</b>	Stationing options that minimized environmental and socioeconomic impacts, as identified through the programmatic environmental assessment and community listening sessions, were to be considered preferable to those that did not.

Source: GAO analysis of Army data.

While some of the additional factors, such as strategic considerations, were addressed primarily through the qualitative assessment of stationing options, other factors required additional analysis, such as environmental analysis. To comply with environmental regulations and to address one of the stationing factors identified for consideration, the Army conducted a

<sup>14</sup> These statutes and the regulation contain provisions requiring notification or certification prior to taking certain relocation, realignment, installation closure, and personnel reduction actions.

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programmatic environmental assessment of the 21 installations and their associated maneuver training areas with the potential to gain or lose 1,000 or more military and civilian personnel due to the planned force reductions and force structure changes—the 15 installations where BCTs are currently stationed and 6 other installations that support major training schools or Combat Training Centers—to identify potential environmental and socioeconomic impacts of planned force reductions. The Army found that no significant environmental impacts were expected as the result of its proposed actions and, as a result, does not anticipate preparing a more detailed programmatic environmental impact statement related to its decisions.<sup>15</sup>

Army officials said that additional site-specific environmental analysis may be necessary once the force structure changes at affected installations have been finalized, particularly in instances where installations may experience some growth or where the types of units stationed at an installation may change, but this has not yet been determined. In particular, the Army did not assess the environmental impacts at Fort Benning of restructuring under the alternative that could lead to some degree of force growth as part of the programmatic environmental assessment because, as the assessment stated, there would not be a situation where Fort Benning would see a net increase in soldiers overall due to its lack of sufficient unrestricted maneuver land at that time to support the training needs of additional maneuver units. The Army has since announced that it will be retaining the BCT at Fort Benning, and reorganizing it by adding an additional maneuver battalion and other capabilities. An Army official said that Fort Benning had taken steps to acquire additional maneuver land to mitigate the installation's training land limitations and in response to a Jeopardy Biological Opinion from U.S. Fish and Wildlife Services prior to the BCT inactivation decision process and related programmatic environmental assessment, but the acquisition was put on hold pending Army force structure and budgetary decisions. Army officials said that the Army still has some decisions to make in regard to the BCT stationed at Fort Benning and the extent that

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<sup>15</sup> The Army documented the results of the assessment in a document referred to as a Finding of No Significant Impact. See *Finding of No Significant Impact and Final Programmatic Environmental Assessment for Army 2020 Force Structure Realignment*, 78 Fed. Reg. 21,919 (Apr. 12, 2013); see also Department of the Army, U.S. Army Environmental Command, *Programmatic Environmental Assessment for Army 2020 Force Structure Realignment: Finding of No Significant Impact* (Apr. 2013).

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additional environmental analysis or other actions will be required at the installation to mitigate challenges related to the lack of maneuver land.

The programmatic environmental assessment found that potentially significant socioeconomic impacts could result at some installations due to the proposed force reductions. In estimating these impacts, the programmatic environmental assessment looked at the socioeconomic impacts of the maximum possible reductions that could occur at the installations, with an estimated loss of up to 8,000 military and civilian personnel at some installations. However, because the Army will be using units and personnel from inactivating BCTs to reorganize the remaining BCTs at installations where possible, the Army projects that the population losses at the installations that are losing BCTs, and thus the projected socioeconomic impacts, will not be as large as the estimates analyzed by the programmatic environmental assessment.

Prior to finalizing its analysis related to the environment, the Army provided opportunity for public comment on the draft Finding of No Significant Impact and the programmatic environmental assessment.<sup>16</sup> A 30-day comment period is required by Army regulation,<sup>17</sup> but the Army then voluntarily extended it for an additional 30 days<sup>18</sup> at the request of some communities in order to encourage maximum stakeholder participation.

### The Army Assessed Potential BCT Stationing Options against Identified Stationing Factors

Incorporating the results of the aforementioned programmatic environmental assessment and the military value analysis, as well as other stationing factors considered outside of the military value analysis as described above, the BCT Reorganization Operational Planning Team

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<sup>16</sup> See *Availability of the Draft Finding of No Significant Impact and Final Programmatic Environmental Assessment for Army 2020 Force Structure Realignment*, 78 Fed. Reg. 4134 (Jan. 18, 2013).

<sup>17</sup> See 32 C.F.R. § 651.14(b)(2)(i).

<sup>18</sup> See *Notice of Availability for the Draft Finding of No Significant Impact and Final Programmatic Environmental Assessment for Army 2020 Force Structure Realignment*, 78 Fed. Reg. 11,632 (Feb. 19, 2013).

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developed and assessed 10 potential stationing options.<sup>19</sup> Each option was developed to focus on a particular consideration, some of which were identified as key stationing factors, some related to other considerations such as impacts on training, and some options were directly related to the outcomes of the programmatic environmental analysis and the military value analysis.<sup>20</sup> For example, two of the potential stationing options the Army assessed in its qualitative analysis of options were developed to identify those installations where BCT inactivation would result in minimal environmental and socioeconomic impacts, respectively, as identified through the programmatic environmental assessment. In addition, one of the potential stationing options the Army assessed considered inactivating BCTs solely according to the rank order of installations where they are currently stationed based on the results of the military value analysis (i.e., the BCTs would be identified for inactivation at the ten installations with the lowest military value scores under this option) prior to the consideration of other stationing factors.

Other options the planning team considered placed primary emphasis on different stationing factors and then incorporated the results of the military value analysis model as a secondary consideration. For example, one option selected installations for BCT inactivation that would result in the lowest overall military construction costs and then, once costs no longer distinguished between the remaining installations, inactivated BCTs at installations based on their military value analysis training rankings. Another option was based on retaining BCTs at installations that would best support the strategic realignment of forces to the Pacific and then, once those strategic considerations were addressed, inactivated BCTs at installations based on their military value analysis rankings.

Once the BCT Reorganization Operational Planning Team developed the 10 different options, the team analyzed each option and identified

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<sup>19</sup> According to Army officials, when they developed the stationing option based on minimizing the environmental impacts of BCT inactivations and reorganizations, and the stationing option that inactivated BCTs based on installation military value analysis model scores, the two options resulted in BCTs being inactivated at the same 10 installations (i.e., installations with lower military value scores also faced potentially adverse environmental impacts from inactivations and reorganizations).

<sup>20</sup> One assumption throughout the development and assessment of these stationing options was that the options could include adjustments of BCT types (e.g., infantry, armor, or Stryker) at installations; according to the Army, the final BCT mix at each of the installations is still being determined.

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advantages and disadvantages based on the Army's stationing factors and other considerations, such as impacts to training.<sup>21</sup> For instance, the team found that the stationing option that inactivated BCTs at installations based on the results of the military value analysis would incur an estimated \$684 million in military construction costs<sup>22</sup> and did not appear to support the Defense Strategic Guidance regarding a realignment of forces toward the Pacific because it would inactivate one BCT each at installations in Hawaii, Alaska, and Washington. In general, the analysis of the advantages and disadvantages of the various stationing options found that reorganizing BCTs (i.e., adding additional units and personnel) at installations with multiple BCTs without first inactivating a BCT resulted in higher military construction costs because each BCT on the installation would experience growth with no loss of population to offset that growth. For example, according to the Army's analysis, Fort Hood currently has five BCTs and increasing the size of those BCTs without first inactivating a BCT would have resulted in approximately \$243 million in military construction costs, whereas inactivating BCTs at installations with multiple BCTs creates excess facilities capacity to allow for the reorganization of the remaining units on the installation while incurring lower estimated military construction costs. Further, according to the Army, using inactivating BCTs at these locations as the initial source of equipment and personnel for the remaining BCTs where possible is expected to reduce costs related to transportation of equipment and to mitigate some equipment and personnel readiness impacts. Additionally, an official from the office of the Assistant Secretary of the Army for Installations, Energy, and Environment said that inactivating BCTs at single-BCT installations is less efficient because it creates excess capacity without a readily available reutilization or disposal strategy for those facilities.

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<sup>21</sup> The stationing factor related to investment and regeneration (see table 1) is not clearly considered as part of the Army's summarized stationing options. Army Force Management officials said that the factor was considered based on the concept that by maintaining as many installations as possible that still have a BCT, the Army retains maneuver land and allows for the possibility for future expansion at those locations. Additionally, the officials said that inactivating at installations where there are already several BCTs reduces crowding and allows room for the potential for future growth at those installations.

<sup>22</sup> We did not review the Army's military construction cost estimates or other cost analyses.

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Army officials involved in developing and assessing the stationing options said that minimizing military construction costs became a major emphasis of the analysis because it would be difficult to justify significant increases in military construction costs while reducing the size of the force. The Army's military construction estimates were developed based primarily on data available from the Real Property Planning and Analysis System, which is an Army database that provides information on excess capacity at installations by aggregated gross square footage and facility type. An Army official said that these estimates are only rough order of magnitude estimates. Other Army officials involved in developing the estimates said that more accurate military construction cost estimates along with estimates of other potential base support costs, such as those relating to information technology or facilities sustainment, could have been provided had they been able to gather data directly from the installations, but non-disclosure agreements limited them to using data from the Real Property Planning and Analysis System.<sup>23</sup>

Military construction costs were the only costs specifically estimated for each stationing option, although the stationing options did include measures related to socioeconomic factors and basic allowance for housing.<sup>24</sup> Officials said that some other costs, such as those related to equipment transportation for unit reorganization and for the training of certain units, were considered during the development and assessment of stationing options. According to Army officials, the Army is now developing detailed cost estimates for its selected stationing option as it completes the stationing documentation required under Army Regulation 5-10.<sup>25</sup>

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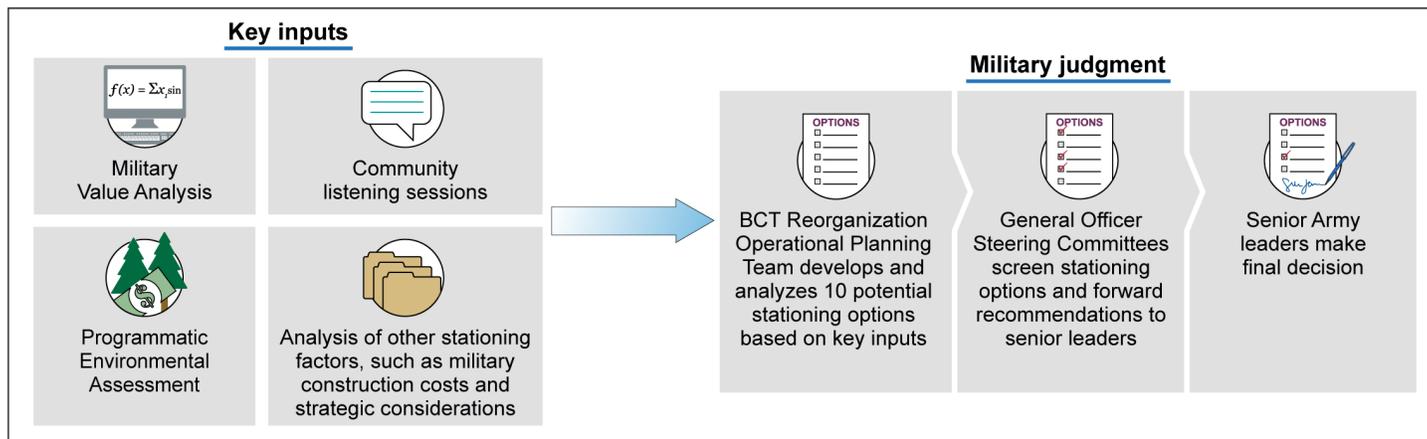
<sup>23</sup> According to Army officials, those closely involved in the BCT inactivation and reorganization decision were required to sign non-disclosure agreements that prohibited them from coordinating with those not covered by similar agreements due to the sensitivity of the stationing decisions.

<sup>24</sup> Basic allowance for housing is a U.S. based allowance prescribed by geographic duty location, pay grade, and dependency status. It provides uniformed Service members equitable housing compensation based on housing costs in local civilian housing markets within the United States when government quarters are not provided.

<sup>25</sup> According to an Army official, this stationing documentation is preferably completed prior to information on stationing actions being released to Congress and the general public. However, this official said that Army Regulation 5-10 allows for announcement earlier in the planning process for politically sensitive stationing actions.

The BCT Reorganization Operational Planning Team, which transitioned to a Council of Colonels,<sup>26</sup> developed summaries of each of the stationing options with the identified advantages and disadvantages based on the stationing factors, military value analysis results, military construction cost estimates, and projected socioeconomic impacts. The stationing options were then briefed to a 1- and 2-star general officer steering committee, which voted on and screened out five of the stationing options. The remaining five stationing options were then briefed to a 3-star general officer steering committee, which screened out two more stationing options. According to Army officials, the three recommended stationing options that emerged from the general officer steering committees were then submitted to Army senior leaders for a final determination. According to Army officials, all of the stationing options that were considered by the general officer steering committees were presented to senior leaders in case they wanted to revisit a stationing option that was previously screened out and senior leaders also had the ability to adjust the recommended stationing options based on their judgment. Figure 1 shows the key elements of the Army's BCT inactivation decision process.

**Figure 1: The Army's BCT Inactivation Decision Process**



Source: GAO analysis of Army decision process.

<sup>26</sup> A Council of Colonels is a group of officers or civilian equivalents that is formed when a study or issue involves multiple Army organizations or staffs. Army officials said that the BCT Reorganization Operational Planning Team transitioned into the Council of Colonels and the same individuals were part of both groups.

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Officials characterized the final decision by the Secretary of the Army as a hybrid of a couple of the stationing options and the Army stated that principal considerations in the inactivations were the Army's ability to meet the requirements of the defense strategy, including a rebalancing of forces to the Pacific, minimizing military construction costs, and minimizing immediate readiness impacts. The military value of installations also played a role in the Army's decision. While the various analyses conducted by the Army played an important role in informing decision makers about the implications of stationing options, according to Army officials, decision makers also utilized military judgment in making the final determination about where to inactivate BCTs.

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### The Army's Efforts to Obtain Community Input Related to Force Structure Reductions May Provide Benefits for Future Stationing Decisions

The Army's BCT stationing decision regarding the installations at which to inactivate BCTs included steps to obtain community input, a practice that may provide benefits for future stationing decisions. The Army conducted listening sessions at installations that had more than 5,000 civilian and military personnel—the 15 installations considered as part of the BCT inactivation decision and 15 non-BCT installations—to give communities an opportunity to provide input to the Army's force structure reduction decisions. These sessions had a range of attendees, such as local, state, and federal elected officials and civic and business leaders from across the individual communities. The primary focus of the listening sessions was to capture community input for Army leaders to consider as part of the Army's overall analysis before any decisions were made, as well as to explain the process that the Army would be using to make its decisions.

Army Force Management officials described holding community listening sessions as an atypical part of the stationing process. They added that the number and scope of public comments received as part of the programmatic environmental assessment indicated the depth and breadth of the public's interest in the decision. Additionally, many installation communities specifically requested a public forum to discuss their concerns. An official from the Office of the Assistant Secretary of the Army for Installations, Energy, and Environment said that local communities might see the stationing decision as a potential loss of force structure similar to what could occur during the Base Realignment and Closure process and that it was important for the communities to have a public forum. This Army official stated that the listening sessions provided the communities with an opportunity to express their concerns about the projected socioeconomic impacts of the potential stationing decisions and inform the Army about local community investments made to support the installation and its military personnel. Input from the listening sessions

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was provided to the general officer steering committees and Army senior leaders as part of their consideration of potential stationing options during the BCT inactivation determination. For instance, Army officials said that officials participating in the general officer steering committees were briefed at a high level on the communities' primary concerns and given in-depth reports and data the communities provided as the officials assessed the options to help them make informed decisions. In addition, senior leaders were provided with daily and weekly summaries of the listening sessions as they were taking place. These reports included information on the community concerns, media coverage, and key individuals attending each listening session, such as elected officials. Additionally, an Army official involved in developing a stationing option related to minimizing the socioeconomic impacts at installations said that he considered the input from the listening sessions as he developed the stationing option.

Several Army officials told us that they believed that the listening sessions were a valuable tool to support the Army's overall BCT inactivation decision process and could serve as good precedent for future stationing decisions. The stationing decision framework presented in Army Regulation 5-10 includes local community impact as one of the stationing factors that should be considered and requires a community impact analysis for stationing proposals with a strength change of 200 or more personnel unless a substantially similar analysis was already completed in the context of analyses under the National Environmental Policy Act.<sup>27</sup> Analysis conducted under the National Environmental Policy Act and implementing regulations often includes opportunity for public comment. The community impact analysis required under Army Regulation 5-10 addresses the impacts of changes in population, personal income, tax base, and employment, and may include an examination of the effects on local businesses, schools, housing, and other public services and economic factors. It is based on analysis generated from an economic forecasting model. However, Army Regulation 5-10 does not provide guidance for or discuss obtaining community input in the stationing context as part of developing community impact analyses, such as when community listening sessions or similar efforts to obtain community input that are beyond the scope of environmental analyses should be considered as part of a particular stationing decision. An Army Force

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<sup>27</sup> See AR 5-10, paras. 2-3.b(14), 5-2.b(16) (Aug. 20, 2010).

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Management official said that he is currently developing proposed guidelines for when community listening sessions should be proposed for consideration by Army senior leaders in making stationing decisions, but was uncertain how such guidelines would be incorporated into the stationing process and related guidance. Principles for effective stakeholder participation have shown that effective stakeholder involvement includes actively soliciting stakeholder input from those potentially affected by a decision, involving stakeholders early and throughout the decision-making process, and fostering responsive, interactive communication between stakeholders and decision makers.<sup>28</sup> Incorporating this type of communication with external stakeholders into its stationing process could help to ensure that the Army takes into account the views of external stakeholders and lead to potentially greater buy-in from local communities for Army stationing decisions.

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## The Army Expects the Military Value Analysis Model Will Be an Enduring Tool but Has Not Established Guidance or Consistent Processes Related to the Use of the Model within Its Stationing Process

The Army has used its military value analysis model to inform several recent stationing decisions and Army officials expect that the model will be an enduring tool in stationing decisions. While the Army has taken steps to validate the model, it has not yet formalized the use of the military value analysis model within its stationing process by establishing guidance related to the use of the model, including guidance related to when the model should be used for stationing decisions or the processes through which key aspects of the model are reviewed, updated, and approved for each use of the model, and data collected and validated. Internal control standards state that appropriate policies and procedures are needed for an agency's activities, and that relevant objectives and associated risks for each activity should be identified along with the control activities needed to address those risks.<sup>29</sup> Key practices for successful transformations state that stakeholders in public sector transformations are concerned not only with the decisions made but also the process used to make those decisions.<sup>30</sup>

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<sup>28</sup> GAO, *Fisheries Management: Core Principles and a Strategic Approach Would Enhance Stakeholder Participation in Developing Quota-Based Programs*, [GAO-06-289](#) (Washington, D.C.: Feb. 23, 2006).

<sup>29</sup> GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: November 1999); GAO, *Internal Control Management and Evaluation Tool*, [GAO-01-1008G](#) (Washington, D.C.: August 2001).

<sup>30</sup> GAO, *Results-Oriented Cultures: Implementation Steps to Assist Mergers and Organizational Transformations*, [GAO-03-669](#) (Washington, D.C.: July 2, 2003).

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## The Army Has Not Established Guidance Related to When and How the Model Should Be Used within Its Stationing Process

The military value analysis model has been used to inform several stationing decisions since 2005, such as the stationing of additional BCTs related to the Grow the Army initiative in 2007 and the stationing of an aviation brigade in 2009. However, Army officials said that the Army has not formally established in guidance the circumstances under which the model would be used or how the model should be considered as a factor within the stationing process. Army Force Management officials said that the Army generally has used the model in stationing decisions with a large impact, potentially greater risk, and requirement for more rigorous analytical underpinning, such as in stationing decisions involving brigade combat teams. One official added that the Army will likely continue to utilize the model in future stationing decisions of a similar nature. Conversely, Army officials said that for stationing decisions related to smaller units, using the military value analysis model may be too labor intensive and thus may not be an appropriate use of resources. In 2010, as part of a prior review GAO conducted of the military services' stationing processes, Army Force Management officials told GAO that the Army would incorporate military value analysis into Army Regulation 5-10. However, as of our current review, it has not yet done so. The Army has documented its use of the military value analysis model in reports and briefings, but has not incorporated in its stationing regulation or other guidance any discussions of when the use of the model would be warranted and how the model should be used in stationing decisions.

According to Army Force Management officials, the Army plans to include a discussion of the military value analysis model in a pamphlet it has been developing to supplement Army Regulation 5-10. Officials said that the pamphlet may include when a military value analysis versus other types of analyses should be conducted within the stationing process, but they have not yet determined what other information related to the model will be included.<sup>31</sup> Further, the pamphlet has been in draft form for more than two years, and the timeframe for its approval and release has not yet been determined. Without formalizing the model within the Army's stationing process, such as documenting in guidance the circumstances

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<sup>31</sup> The two basic types of Army pamphlets are standard and informational. Standard pamphlets are used to publish information (such as how-to procedures) needed to carry out policies and mandated procedures prescribed in Army Regulations. Informational pamphlets are used to publish information or guidance on subjects in support of Army missions. See Army Regulation 25-30, *The Army Publishing Program* (Mar. 27, 2006). Army officials noted that the stationing pamphlet will be used to document day to day actions for how to accomplish the policies laid out in Army Regulation 5-10.

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under which the model would be used to support stationing decisions and how the results of the model are considered as part of the broader stationing process, the model's role within the stationing process may not be transparent and it may not be clearly known how the results of the model are used to inform decisions.

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**The Army Has Taken Steps to Validate the Model, but Has Not Established Consistent Formal Processes and Guidance Related to How the Model Is Reviewed, Updated, and Approved for Each Use**

The Army has taken steps to ensure the validity of the military value analysis model and its results, but has not established consistent formal processes to guide how (a) the attributes of the model should be reviewed and selected for use in the model, (b) attribute definitions should be reviewed to determine if they are still relevant for a particular decision and updated, and (c) data should be collected and validated. The Army also lacks guidance related to the level of input or approval that is necessary for changes to key elements of the model, and how non-contiguous training areas should be treated within the model. Internal control standards state that control activities, such as consistent processes or policies, can help to ensure that actions to mitigate risks are carried out. In addition, control activities are essential for achieving effective and efficient program results, and include the clear assignment of stakeholder responsibilities.<sup>32</sup>

**The Army Has Taken Steps to Validate the Model**

The Army has taken steps to validate the military value analysis model and its results, such as involving key stakeholders and reviewing the relevancy of key elements of the model for specific stationing decisions. According to Center for Army Analysis officials, the military value analysis models used in the 2005 Base Realignment and Closure round and the 2007 Grow the Army initiative stationing decisions were thoroughly vetted within the Army and reviewed and approved by senior leaders. In addition, Center for Army Analysis officials said that the model used for the 2007 Grow the Army decisions was validated by the Naval Post Graduate School, and that each version of the model is briefed to an analytical review board within the Center for Army Analysis. In general, each use of the military value analysis model begins with an examination of the most recently used model. For example, for 2007 Grow the Army initiative stationing decisions, the Army began by reviewing the attributes used in the model that supported the 2005 Base Realignment and Closure round and selected and developed attributes that were specific to the requirements of stationing a BCT. The military value analysis models

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<sup>32</sup> [GAO/AIMD-00-21.3.1](#) ; [GAO-01-1008G](#).

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used in several BCT stationing decisions in recent years have been adapted from the model used for the 2007 Grow the Army initiative stationing decisions.

In addition, each time the model has been used, the Center for Army Analysis has conducted a sensitivity analysis to determine the extent to which the weighting of the attributes changes the resulting military value rankings of the installations. According to Center for Army Analysis officials, this allows them to test the impact that any one attribute has on the results of the model and thus be able to identify how any potential flaws in the attribute definitions or data could affect the model and look for opportunities to mitigate them. In the most recent version of the model, the sensitivity analysis did not affect the 6 top-ranked installations or the bottom-ranked installation, which, according to Center for Army Analysis officials, indicates that the ranking of those installations within the model were not affected by any one attribute. Center for Army Analysis officials explained that rankings did change for certain installations during the sensitivity analysis because there was little deviation in the model's scores for those installations. For example, 7 installations scored within .11 points of one another on a 10-point scale. Overall, for the 2013 version of the model used to support the BCT inactivation decision, only 1.27 points separated the top-ranked installation from the bottom-ranked installation, which, according to Army officials, indicates that all of the installations considered within the model have fairly comparable military value for supporting a BCT.

#### Different Factors Affect the Need to Review the Model for Each Use

Several factors affect the need to review the model each time it is used. According to Center for Army Analysis officials, a new stationing decision may require different attributes to be included in the model because it may involve different types of units and installations or seek to address a different stationing scenario. The weighting of the attributes within the model may require review because the relative importance of specific attributes may change depending on those attributes' importance to the new stationing decision. The definitions for existing attributes can also change over time depending on a number of factors, such as updates to Army policy, availability of data, technological advances, or the question the model seeks to address. While the model utilizes quantitative comparison, some aspects of the model are subjective. For example, decisions about which attributes to include within the model and the weight of those attributes are determined by stakeholders who utilize military judgment in deciding what attributes are important for the specific decision and their relative importance within the model. Additionally, the attribute definitions, including associated formulas and categorical ratings,

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The Army Does Not Have Consistent Formal Processes for Reviewing and Updating the Attributes and Attribute Definitions, and Collecting Data for Use in the Model

are developed based upon subject matter expertise. Because of the subjectivity of some aspects of the model, its continued validity is largely dependent on the involvement of key stakeholders, such as subject matter experts and Army leaders.<sup>33</sup> Additionally, due to the potential for changing uses of the model, Center for Army Analysis officials said that the model is reviewed by subject matter experts at the beginning of each use to determine if the attributes are still relevant for the stationing decision and if any aspects of the model should be changed, such as how the attributes are defined.

The Army has not established consistent formal processes for (a) reviewing the attributes to determine which attributes should be used in the model, (b) reviewing and updating attribute definitions to determine if they are still relevant for a particular decision, and (c) collecting and validating the data for use in the model. We found that the Army took steps to review the relevancy of the attributes in developing the version of the model used to support the BCT inactivation decision, but we identified a couple of instances where further review and updates to the attribute definitions could have been beneficial. Also, although Army Force Management issued direction related to data collection and validation for the version of the model used to support the BCT inactivations, we found some instances of inconsistency related to how data were updated that indicate that a consistent process formalized through established guidance could better ensure that expectations for stakeholders involved in data collection are clear and that the data is current.

When force reductions were first announced in 2011, Army Force Management officials met with subject matter experts to identify attributes to be used in a new version of the military value analysis model to support stationing decisions related to these force reductions. The working group used the 14 attributes used in the 2010 version of the model as a baseline and began an initial effort to review the 40 attributes used in the 2005 Base Realignment and Closure round for additions.<sup>34</sup> According to Army Force Management officials, some of the additional attributes that

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<sup>33</sup> We use the term “subject matter expert” in this report to refer to Army officials with knowledge of relevant subject areas who provide input to the model, such as in relation to how attributes are defined or collecting data for attributes.

<sup>34</sup> Some of the 14 attributes used in the 2010 version were among the 40 attributes used in the 2005 Base Realignment and Closure round.

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were considered for the model were rejected because the characteristics were accounted for in other analyses or existing attributes, the data was not readily available, or did not clearly distinguish between the installations. Additionally, the 14 attributes used in the 2010 version of the model already represented attributes that were important to a BCT. While the Army considered alternatives, Army Force Management officials said that time constraints and a desire to maintain consistency with the attributes used in prior BCT stationing models diffused enthusiasm for including new attributes or removing attributes from the model. Ultimately, for the 2011 model, Army Force Management decided to include the 14 attributes used in the 2010 model and added one attribute previously used as a screening measure within the model.<sup>35</sup> The Army collected data for these 15 attributes and the preliminary results of the 2011 model were briefed to senior leaders. However, the Army did not make any decisions on force reductions or BCT inactivations in 2011.

According to an Army Force Management official, with the public release of the programmatic environmental assessment in January 2013, a decision on BCT reorganization and inactivation appeared imminent and the Army focused on updating and validating the data used in the 2011 model. Army officials viewed the 2013 model as a continuation of the 2011 model with the assumption that the attributes in the 2011 model were still valid. Army officials said that they added one attribute, geographic distribution, to the 2013 model based on guidance from the Secretary of the Army to include it in the Army's decision making process. While some Army officials raised concerns about the applicability of the buildable acres attribute in a force reduction scenario, an Army Force Management official told us that the attribute was kept in order to preserve potential for growth regeneration in the Army. The official additionally said that there was potential for growth at certain installations resulting from the BCT inactivation and subsequent reorganization.

Further, Army officials said that the Army does not have a formal process for reviewing and updating the attribute definitions in coordination with subject matter experts to determine if they are still the best way to measure a particular attribute and we found a couple of instances where further review of and updates to the definitions could have been

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<sup>35</sup> A screening measure is a binary (yes or no) measure that establishes a threshold to determine whether an installation should be included within the model.

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beneficial. For the 2013 model, an Army Force Management official said that the Army did not deliberately engage subject matter experts in discussions regarding the attribute definitions. The Army focused on updating and validating the data collected in 2011 for use for the 2013 model, which Army officials viewed as a continuation of the 2011 model. Further, these officials told us that they generally rely on subject matter experts to suggest proposed changes or updates to the attribute definitions when necessary and noted that some subject matter experts are more assertive in this regard than others. Officials at the Center for Army Analysis and Army Force Management said that suggestions from subject matter experts are addressed if they are compelling. For instance, the attribute definition for the connectivity attribute was updated for the 2010 model that supported the stationing of a heavy BCT based on a suggestion made by the subject matter expert.<sup>36</sup> Subject matter experts for many of the attributes we spoke with said that they were comfortable with the attribute definitions related to their areas of expertise. However, we did find a couple instances where subject matter experts identified the need to update or review attribute definitions. For example, the subject matter expert for the connectivity attribute said that technological advances in cellular coverage had rendered one of the three sub-factors within the attribute's definition moot as all installations would receive the same score for that sub-factor. This subject matter expert said that he informed Army Force Management that the attribute definition needed to be examined for future uses of the model as there was no time to effectively address the issue for the current model.

Additionally, the subject matter expert for the family housing attribute noted that it may be a good idea to revisit the definition for the attribute for future uses of the model for a couple of reasons, including the attribute's data source. As the attribute is currently defined, it utilizes data from a housing study that is conducted in various years for individual installations and, as a result, it is possible that the data may not reflect the current housing situation at some installations. For example, housing data used in the model came from housing studies that were published between 2009 and 2012. Further, we found that the formula for the family housing attribute was calibrated to prior force growth scenarios at installations in

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<sup>36</sup> Heavy BCTs—now referred to as armor BCTs by the Army—are balanced combined arms units that utilize battle tanks, self-propelled artillery, and fighting vehicle-mounted Infantry to provide striking power. The military value analysis model was used to support the stationing of a heavy BCT in 2010.

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that it included the specific addition of a heavy BCT as part of the calculation of the availability of housing and was not updated for the current version of the model. Center for Army Analysis officials told us that they were unclear as to why the attribute definition would include the addition of a BCT for this particular scenario, but said that they did not believe this would affect the relative scores of the installations because the same factor was added for all installations.

It is unclear whether reviews and updates to the attribute definitions in these instances would have affected the relative scores of the installations or whether, after review, the Center for Army Analysis and subject matter experts would have determined that changes were indeed necessary. However, these examples indicate that it may be beneficial to have an established process in place to review attribute definitions to determine whether adjustments are needed.

Moreover, the Army has not established a consistent formal process for collecting and validating the data used in the model each time the model is used. In lieu of such a process, to update the data for the model used to support the BCT inactivation decision, Army Force Management instructed the subject matter experts for each of the attributes to update and validate the data that was used in the 2011 version of the model and directed them to, among other things, coordinate at the installation level to ensure accuracy with the installation-level data. An Army Force Management official said that the 2011 data sheets for the attributes were also sent to the installations through the senior maneuver commander at the installation, but the official said that the process for distributing the data sheets may have varied by installation. In communications to both the organizations providing data and the installation commanders, Army Force Management officials emphasized the importance of ensuring that the data used in the model was consistent with that at the installation level. Despite this direction, we found some inconsistencies in the process that was used to update and validate the data for the 2013 model.

We found that the subject matter experts responsible for updating and validating the data underlying each attribute in the model that we spoke with were generally confident with the accuracy of the data that they provided, but subject matter experts differed in the extent to which they coordinated with installations to update and validate the data. While subject matter experts for a few of the attributes said that they coordinated directly with the installations to validate data, some subject matter experts said that they did not coordinate with the installations

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because they had other sources for obtaining data, such as Army databases, program records, or the use of mapping tools that they believed to be sufficient. Given how some of these attributes are formulated and the data sources used, these data sources may have been the best sources for providing the most consistent and reliable data across installations. Subject matter experts who utilized Army databases for one of the attributes said that different factors may affect the quality of some of the data in the systems at a given time, but noted that these systems have annual validation processes in place that are meant to keep the data accurate and up-to-date. The subject matter expert for another attribute said that he obtained data from studies and a database that are kept up to date with information, gathered from the installations, that he believes to be fair and objective. He additionally said that he did not coordinate directly with the installations to collect data in prior stationing decisions but did so for this stationing decision in response to instruction from Army Force Management. In doing so, he said that he had to exercise judgment in determining which inputs to accept from installations because installations may not always be objective given their interest in receiving the best rating possible.

Additionally, the subject matter expert for three of the attributes said that he expected the installations to contact him in response to the data sheets from 2011 that Army Force Management had sent to the installations if the data needed to be updated. While some installations did respond and the subject matter expert said he updated data for those installations and validated it using other data sources to ensure consistency, he said that he did not review or update the data for these attributes using available data systems for, or coordinate directly with, other installations that did not respond. This official noted that the data for one of these attributes is fairly static and, in general, most changes in the data set for the model made by the installations are related to actions that his office would be aware of and thus are not surprising. An Army Force Management official said that some installations could have been proactive and provided data updates in certain instances, but that it was incumbent upon the subject matter experts to update and validate the data in coordination with the installations. Ultimately, this official said that the data's accuracy and the decision about whether coordination with the installations was needed on the individual attributes were decided by the subject matter experts.

Data collection may be more challenging in some instances because the Army does not routinely collect and maintain the data used for certain attributes, such as buildable acres or indirect fire. For example, the

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subject matter expert for one attribute said that he was not able to update or validate the data for the attribute because the level of analysis that would have had to be conducted in coordination with the installations could not be completed within the timeframes of the request. Thus, he informed Army Force Management that the existing data was the best data available within the timeframes identified to update the data. However, the subject matter expert told us that the data may not be reflective of the current status at the installations because of Army facilities planning policy changes and military construction that may have occurred at the installations since the data was last updated.

It is unclear whether data obtained based on additional coordination with the installations in these instances would have been significantly different than the data that was obtained under the current approach. While Army Force Management did issue direction related to the data collection effort for the 2013 model in the absence of an existing process, an Army Force Management official said that the model would benefit from a consistent process for updating data so that guidance and expectations are clear for all of the stakeholders involved in the process. A process would also help to ensure that data is reviewed and updated for each use of the model. For example, one subject matter expert who updated data for an attribute for the 2013 model said that the data for this attribute had not been updated since 2004 when it was used to support the Base Realignment and Closure decisions, even though the attribute has been used in more recent stationing decisions. This subject matter expert said that the data does not change much from year to year, although his data collection effort did result in changes to the prior data.

An Army Force Management official who oversaw the use of the model in the BCT inactivation decision said that it would be valuable for the Army to have formal processes that allow for time to review and update the attributes within the model when the model is used, including a more deliberative analysis of the attributes in terms of how they are defined and measured and a process for updating data. The official also noted that the lack of a process for periodic review and updates to the model puts subject matter experts in the difficult position of raising issues when the pressure to update data is at its greatest. A couple of the subject matter experts we spoke with noted that potential upcoming changes in their areas of responsibility would likely result in the need to make changes to the attributes in the future. Without deliberate processes that allow for time to review attributes and attribute definitions in coordination with subject matter experts and consider necessary updates to the model, potential issues could remain unaddressed throughout each use of the

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The Army Has Not Established Clear Guidance Identifying the Level of Review Required for Changes to the Model

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model, and necessary changes to the model might not be made, leading to a reduced relevance of the model to the current environment and in future uses. Further, without a consistent formal process for collecting and validating data each time the model is used that ensures consistency with data at the installation level and allows for time to update the data, the Army risks not having the most current and accurate data for use in the military value analysis model.

One of the model's assumptions is that the attributes and weighting within the model reflect current senior Army leader priorities. However, the Army has not established clear guidance for when review of the key elements of the model or changes to the model require higher-level input or approval. Center for Army Analysis officials said that, in general, removing or adding model attributes should be approved by higher level officials, such as a general officer steering committee, because they provide a broader perspective on the Army's priorities. For example, in discussions with a subject matter expert about whether an attribute should be removed, an official from the Center for Army Analysis suggested that a general officer steering committee should be convened in order to drop the attribute from the model. Also, for the recent BCT inactivation decision, the Army held a three-star general officer steering committee specifically to review and update the weighting of the attributes within the model, which the Secretary of the Army then approved.<sup>37</sup>

However, Center for Army Analysis officials said that, while prior versions of the model were approved by various chains of command, there is no specific threshold for holding a general officer steering committee and holding one may not always be feasible if the model is being used under constrained timeframes. Further, Army officials indicated that whether a general officer steering committee is needed is based on the risks and potential impacts related to the decision. For example, Center for Army Analysis officials said that they recommended using a general officer steering committee for the 2013 use of the model because of the sensitivity of the BCT inactivation decision and because the model was being used in a reduction scenario, in contrast to a growth scenario as in

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<sup>37</sup> The Center for Army Analysis provided the general officer steering committee with a value matrix to evaluate the attributes along two scales: operational importance and how easily the attributes could be changed. The matrix assigns basis points to the attributes depending on their positioning along these two scales. The basis points are then calculated into percentage weights by the Center for Army Analysis for each attribute. Center for Army Analysis officials said that this basis point matrix is important in preventing the arbitrary assignment of weights to attributes.

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previous models. By contrast, the same officials said that a general officer steering committee may not be needed for smaller scale decisions.

During our review, an Army Force Management official expressed concern about making any significant changes to the model, such as removing any of the attributes within the model, without a compelling reason. The official explained that because the Army had only recently described the attributes used within the model to Congress in its March 2011 *Report to Congress, Army Stationing Decisions*, they believed that external stakeholders might perceive any changes to the model so close to a significant stationing decision as being arbitrary or as if the Army was attempting to manipulate the results of the model to influence a desired outcome. Key practices for successful transformations state that the demand for transparency and accountability needs to be accepted in any public sector transformation and stakeholders are concerned not only with the decisions made but also the process used to make those decisions.<sup>38</sup> Caution related to making changes to the key elements of the model for such a sensitive decision is understandable, but without establishing transparent and consistent policies and guidance around the model, Army concerns about how changes to the model may appear to external stakeholders are likely to continue. Further, without consistent formal processes through which key aspects of the model are reviewed and updated, and guidance that establishes the circumstances under which changes to the model require input or approval from Army leaders, the Army risks potential decline in the rigor and consistency of the model over time.

### The Army's Approach to the Treatment of Non-Contiguous Training Areas within the Military Value Analysis Model Lacks Clarity

The Army's approach to the treatment of non-contiguous training areas (i.e., training areas that are geographically distant from the installation) within the model lacks clarity and, in some cases, appears to be inconsistent because the Army has not issued clear guidance establishing how these areas should be considered, particularly for attributes related to training.<sup>39</sup> Several of the installations examined within the model utilize non-contiguous training areas for their units, also referred to as sub-installations. Army training officials told us that whether certain non-contiguous areas should be considered separately or together with their

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<sup>38</sup> [GAO-03-669](#).

<sup>39</sup> There are five attributes related to training within the military value analysis model—airspace, maneuver land, range sustainability, training facilities, and indirect fire.

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associated installations depends on the stationing decision. For example, in the model used to support the 2007 Grow the Army initiative stationing decisions, the Army identified Yakima Training Center, located in Washington state, as a stand-alone installation because it was considering stationing a BCT at Yakima. In contrast, in the 2013 version of the model supporting the BCT inactivation decisions, Army training officials told us that Yakima should be considered as part of Joint Base Lewis McChord because Yakima's primary purpose is to support the training of units assigned to the installation.

Despite the potential for different treatment of these non-contiguous areas in different stationing decisions, the Army has not established a clear and consistent policy in this regard. Army training officials said that subject matter experts that provide data for the installations do not have a holistic view of the model and their individual views on whether to include non-contiguous areas may differ depending on their area of expertise. Additionally, communication between Army officials indicated that subject matter experts raised questions about whether certain non-contiguous training areas should be combined with the installation for some of the attributes, such as indirect fire, within the 2013 model. Without a consistent policy, the Army has wavered in how to deal with this issue. For example, there has been a lack of clarity regarding the extent to which Joint Base Lewis McChord and Yakima should be aggregated and for what attributes within the military value analysis model. In a 2010 version of the model used to determine where to station a heavy BCT and a fires brigade, as well as the 2011 interim model, the two locations were aggregated for the airspace attribute. However, a 2012 interim version of the model that was prepared for senior Army leaders did not aggregate Yakima with Joint Base Lewis McChord for this attribute. As a result, Joint Base Lewis McChord received a lower military value score relative to other installations in this 2012 interim version of the model than it had in prior versions of the model. After reviewing the results of the interim model, an Army Force Management official said that the goal was to maintain consistency with how non-contiguous training areas were treated in the past and to treat all installations with non-contiguous training land the same. However, a lack of clarity still remained for the airspace attribute leading up to the BCT inactivation decision and the Center for Army Analysis ran two different versions of the model, one that aggregated airspace data for the two locations and one that excluded airspace data for Yakima. The two versions of the model produced different military value scores and rankings for Joint Base Lewis McChord. Ultimately, the version of the model used to support the BCT

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inactivation stationing decision did not aggregate the two locations for the airspace attribute.

Army training officials said that the Army has long struggled with how to treat non-contiguous training areas in models to best simulate reality. These officials said that clear guidance prior to data collection is needed to ensure that non-contiguous training areas are treated consistently within the military value analysis model. Without establishing a clear policy and communicating it to subject matter experts regarding how non-contiguous training areas should be treated in the model for specific attributes, the Army risks inconsistent consideration of these non-contiguous training areas across installations and attributes, which could influence the results of the model.

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## Conclusions

The Army recognizes that its decision to meet part of its planned active component force reductions through the inactivation of 10 BCTs currently stationed in the United States, coupled with the reorganization of the remaining BCTs in the continental United States, will have strategic, operational, and cost implications. The decision will also alter existing demands on the infrastructure, services, businesses and other aspects of communities surrounding the affected installations. Thus, the Army carried out a variety of analyses in order to inform its decision, emphasizing key considerations such as supporting the strategic focus on the Pacific, minimizing additional military construction costs, and minimizing immediate readiness impacts. In addition, concerns about the implications for local communities led to the Army obtaining input through open meetings with communities around installations being considered for stationing changes, which could provide useful lessons for obtaining stakeholder support in future stationing decisions. The Army has indicated it may use such meetings prior to future force structure changes, but without assessing and establishing in guidance when it is appropriate to obtain community input and how such efforts should be conducted, the Army may miss opportunities to obtain input from communities, and the installations themselves and their surrounding communities may lack insight into the Army's decisions on force structure and stationing. Similarly, the Army's use of its military value analysis model is consistent with its use of the model for making previous major stationing decisions. However, other actions the Army could take would improve the model's analytical rigor, credibility, and transparency, and mitigate risk. For instance, without formalizing the military value analysis model in its stationing process guidance or as part of other guidance, including when it should be used and how it should be considered within

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the stationing process, the transparency of the model's role in stationing decisions may be limited. Further, without established processes through which key aspects of the model are reviewed and updated, and data collected and validated, as well as guidance related to the level of approval required for changes to the key elements of the model and how non-contiguous training areas should be considered within the model, the Army and external stakeholders may lack certainty as to the model's analytic rigor and stakeholder buy-in could be limited. Taking action now could help the Army balance the need to ensure a methodologically sound and rigorous process while considering both resources and risk to ensure that stakeholders, including affected communities and installations, can provide input into and understand the basis for its stationing decisions.

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## Recommendations for Executive Action

We recommend that the Secretary of the Army take the following five actions to improve the stationing process:

To obtain input from communities and installations affected by significant stationing decisions, we recommend that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans to develop and implement guidance related to when community listening sessions or other similar efforts to obtain community input should be conducted and incorporated as part of the Army's process for making future stationing decisions.

To better ensure the Army military value analysis model's analytical rigor and credibility, minimize risk, and further enhance the transparency of the process used to make stationing decisions, we recommend that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans, in coordination with the Center for Army Analysis, to take the following four actions to formalize the model as part of its stationing process:

- Develop and implement guidance that establishes the circumstances under which
  - the model should be used in stationing decisions and update stationing regulations or related documents accordingly;
  - key elements of the model or changes to the model require input or approval from Army leaders, such as through the use of a general officer steering committee; and,

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- non-contiguous training areas should be considered within the model that are specific to the stationing decision under consideration and communicate those policies to subject matter experts.
  - Establish and implement through guidance consistent formal processes through which attributes and attribute definitions will be deliberately reviewed and updated for use in the model, in coordination with subject matter experts, and data will be collected and validated for these attributes.

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## Agency Comments and Our Evaluation

We provided a draft of this report to the Department of Defense for review and comment. The Department of the Army provided written comments. The Army concurred with all five of our recommendations and cited plans to issue guidance through Army Pamphlet 5-10, which is currently being developed to supplement Army Regulation 5-10, to address our recommendations. The Army's comments are reprinted in their entirety in appendix IV. In addition, the Army provided technical comments, which we have incorporated into the report as appropriate.

The Army concurred with our recommendation to develop and implement guidance related to when community listening sessions or other similar efforts to obtain community input should be conducted as part of the Army's process for making future stationing decisions. The Army stated that it values community input into important decisions that impact soldiers, civilians, families and local communities, and is planning to issue guidance directing that stationing actions that meet a specific threshold will include a staff recommendation for the Secretary of the Army on the use of community meetings as a means to gather public input. We believe that this is a positive step that will position the Army to take advantage of opportunities to obtain community input for relevant future stationing decisions.

The Army also concurred with our recommendations related to the military value analysis model. Specifically, the Army concurred with our recommendation to develop and implement guidance that establishes the circumstances under which the model should be used in stationing decisions. It noted that the military value analysis model is an important decision support tool that it has used to inform all significant stationing actions since the Base Realignment and Closure round in 2005. The Army stated that it will issue guidance directing that the model will be

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used to inform stationing decisions involving the activation, inactivation, or relocation of a brigade size unit or other units that meet a certain threshold. The Army additionally concurred with our recommendation to develop and implement guidance that establishes the circumstances under which key elements of the model or changes to the model require input or approval from Army leaders, stating that it would issue guidance directing that significant changes to the military value analysis model will be reviewed by a general officer steering committee, chaired by the Director of Force Management, prior to approval. We believe these actions will enhance the transparency of the model's role within the stationing process and, to the extent that the guidance defines what constitutes significant changes to the model, the process used to make changes to the model, as well as better ensure the model's rigor and mitigate risk related to key decisions.

Further, the Army concurred with our recommendation to develop and implement guidance that establishes the circumstances under which non-contiguous training areas should be considered within the model that are specific to the stationing decision under consideration and communicate those policies to subject matter experts. The Army stated that the quality and quantity of training resources are important considerations in stationing decisions, although not all training areas are equally accessible, and that when non-contiguous training areas are included in the military value analysis model, the assigned attribute score should reflect all relevant aspects of the training area. In this regard, the Army stated that it will issue guidance directing that the military value analysis model attribute scores for installations with non-contiguous training areas include a statement explaining the manner in which the non-contiguous nature of the training area was given due consideration in the applicable attribute scores. This planned action will provide greater transparency with regard to how non-contiguous training areas are considered for specific attributes.

Additionally, the Army concurred with our recommendation to establish and implement through guidance consistent formal processes through which attributes and attribute definitions will be deliberately reviewed and updated for use in the model, in coordination with subject matter experts, and data will be collected and validated for these attributes. The Army noted that technology, tactics, and business practices are constantly changing and improving and that, therefore, the military value analysis model attributes should be regularly reviewed and, when appropriate, updated. Along these lines, the Army stated that it will issue guidance directing a regular review and update of the military value analysis model

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attribute definitions and data, with reviews and updates occurring a minimum of every two years. We believe that the Army's plan to establish regular reviews will better ensure that the model attribute definitions and data used in the military value analysis model remain relevant and up-to-date for a changing environment while balancing the Army's concerns about time constraints surrounding certain stationing decisions.

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As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution of this report until 30 days from the report date. At that time, we will distribute this report to the Secretaries of Defense and the Army; the Director, Office of Management and Budget; and appropriate congressional committees. The report also will be available at no charge on GAO's Web site at <http://www.gao.gov>.

Should you or your staffs have any questions about this report, please contact me at (202) 512-4523 or [leporeb@gao.gov](mailto:leporeb@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.



Brian J. Lepore, Director  
Defense Capabilities and Management

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# Appendix I: Objectives, Scope, and Methodology

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To describe the analyses that the Army conducted to make determinations regarding which brigade combat teams (BCTs) would be inactivated or reorganized and at which U.S. installations, we identified and examined regulations, briefings and other relevant documents outlining the Army's decision process and interviewed knowledgeable Army officials about the Army's decision process and the key factors that were considered. Specifically, we reviewed the Army stationing regulation, Army Regulation 5-10 on *Stationing*—the document that establishes policies, procedures, and responsibilities for Army stationing actions. We also examined documents related to the Army's environmental analysis, such as environmental regulations and the Army's programmatic environmental assessment of 21 installations, and discussed this analysis with Army officials. Further, we examined documentation related to the Army's military value analysis model, such as briefings and reports on the model, and interviewed Army officials to determine how the model was used to inform the recent stationing decision. In addition, we reviewed documents and briefings related to the development and assessment of the stationing options the Army considered as part of its decision process and interviewed Army officials to discuss how the stationing options were analyzed in light of the identified stationing factors and the process used to screen the stationing options prior to the final Army decision. We also met Army officials to discuss the methodology used to develop the military construction cost estimates that were considered as part of the stationing options and how other costs were considered as part of the Army's analysis, but did not review these cost estimates or analyses as they did not materially affect our findings, recommendations, or conclusions. Further, we examined briefings, orders, and other documentation related to the listening sessions held at Army installations, such as summaries from the meetings and information provided by installations, to obtain information on community input used to inform these decisions and spoke with Army officials regarding the extent to which they considered such information as part of the stationing decision.

To evaluate the extent to which the Army has established guidance and processes related to the use of the military value analysis model as a part of its stationing decisions, including the recent BCT decision, we examined the Army's stationing guidance, stationing report to Congress, and reports and briefings that documented previous uses of the model. We examined and compared prior versions of the model and the current model used for the recent BCT decision to determine if and how the process for conducting the model, including the key elements of the model, such as the attributes used within the model, and the review and

approval process for key elements of the model, has changed over time. We reviewed documentation related to key elements of the current model, such as the attributes that were included, weighting of the attributes, and scoring of the attributes for each installation. We interviewed knowledgeable officials at the Center for Army Analysis and Army Force Management to discuss the development of the model, including how attributes were identified, the factors that determine if an attribute would be included in the model, and how weights for the attributes were determined. Additionally, we interviewed knowledgeable officials about how the key aspects of the model are reviewed, updated and if relevant, approved, for each use of the model. We obtained and reviewed the spreadsheet-based military value analysis model to examine the technical components of the tool and how the tool is used to calculate the scores. This included some general checks for basic internal consistency and coherence of key elements in the tool as well as a general check of the consistency of the tool with key documents, such as briefings and reports related to the model. We also examined documents related to collecting and validating the data used in the model, and interviewed subject matter experts from various Army organizations who provided the data about their role in developing the attributes' definition and their methods and processes used to collect and validate the data, but we did not validate the data itself.

During the course of our review, we interviewed officials from the following Army organizations:

- Deputy Chief of Staff for Manpower and Personnel G-1
- Deputy Chief of Staff for Operations G-3/5/7 (Force Management, Training Support)
- Deputy Chief of Staff for Logistics G-4 (Strategic Mobility Division and Surface Deployment and Distribution Command Transportation Engineering Agency)
- Chief Information Officer G-6 (Installation Infrastructure Division)
- Deputy Chief of Staff for Financial Management G-8 (Program Analysis and Evaluation)
- Office of the Assistant Secretary of the Army for Installations, Energy, and Environment

- Office of the Assistant Chief of Staff for Installation Management
- U.S. Army Installation Management Command
- U.S. Army Environmental Command
- Center for Army Analysis
- Office of the Surgeon General/U.S. Army Medical Command
- U.S. Army Aeronautical Services Agency

We conducted this performance audit from April 2013 through December 2013 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# Appendix II: Brigade Combat Team Inactivations and Projected Installation Population Changes

On June 25, 2013, the Army announced that it will be inactivating one brigade combat team (BCT) from each of 10 different U.S. installations. An additional 5 installations were considered as part of the Army's decision process, but these installations will not have a BCT inactivated at this time. Table 2 shows the BCT inactivations by installation as well as changes to the number of BCTs and projected population as a result of these inactivations and other force structure changes.

**Table 2: Brigade Combat Team (BCT) Inactivations by U.S. Army Installation**

BCT Installations	Number of BCTs prior to inactivations	Number of BCTs after inactivations	2012 Army active component installation end strength	Projected 2017 Army active component installation end strength	Projected 2012 - 2017 Army active component installation population change by percentage
<b>Installations with a BCT inactivation</b>					
Fort Bliss, TX	4	3	27,479	26,729	- 2.73%
Fort Bragg, NC	4	3	42,735	40,186	- 5.96 %
Fort Campbell, KY	4	3	29,222	28,902	- 1.10%
Fort Carson, CO	4	3	22,667	24,484	+ 8.02%
Fort Drum, NY	3	2	16,643	15,060	- 9.51%
Fort Hood, TX	5	4	40,899	37,959	- 7.19%
Fort Knox, KY	1	0	7,667	4,354	- 43.21%
Fort Riley, KS	3	2	17,226	15,497	- 10.04%
Fort Stewart, GA	3	2	21,157	19,785	- 6.48%
Joint Base Lewis McChord, WA	3	2	31,029	26,488	- 14.63%
<b>Installations without a BCT inactivation</b>					
Fort Benning, GA	1	1	13,029	13,105	+ 0.58%
Fort Polk, LA	1	1	9,327	9,084	- 2.61%
Fort Wainwright, AK	1	1	6,254	6,806	+ 8.83%
Joint Base Elmendorf-Richardson, AK	1	1	5,659	4,765	- 15.80%
Schofield Barracks, HI	2	2	15,730	15,840	+ 0.70%

Source: GAO analysis of Army data.

Note: Modifications to non-BCT formations are also being made and the changes in installation population are reflective of all planned Army force structure adjustments to date, not just BCT inactivations and reorganizations. For example, while Fort Carson, CO is losing a BCT, the Army plans to station a Combat Aviation Brigade at the installation, resulting in an increase to the projected installation population.

We did not assess the reliability of these data as they are included for informational purposes only and do not affect our findings, recommendations, or conclusions.

# Appendix III: Army's Military Value Analysis Model Attributes

Table 3 identifies the 16 attributes used in the Army's military value analysis model that supported the Army's brigade combat team (BCT) inactivation decision and the definitions of each attribute.

**Table 3: Definitions for Attributes within the Army's Military Value Analysis Model**

Attribute	Definition
Maneuver land	Formula calculates the ratio of available land and required maneuver land.
Range sustainability	Formula calculates the ratio of land with future restricted use to required land.
Training facilities	Formula weights and sums categorical ratings for ranges, battle command centers, and training support centers.
Airspace	Categorical rating based on the largest single restricted area and total of all restricted areas.
Indirect fire	Categorical rating based on largest indirect fire weapons fired and distance from firing point to impact area.
Deployment infrastructure	Categorical rating based on rail cars per day, railhead on or off post, and aircraft parking, among other factors.
Seaport of embarkation	Categorical rating based on proximity to seaport.
Aerial port of embarkation	Categorical rating based on proximity to airport.
Access to medical care	Formula weights and sums categorical ratings for the capacity of medical facilities on and off the installation.
Quality of life facilities	Sum of scores for presence and capacity of chapels, fitness centers, Army community services, child development centers, and youth services.
Family housing	Formula weights and sums the projected housing deficit or surplus both on and off the installation.
Brigade complex	Formula averages categorical ratings for condition and quantity of brigade combat team facilities.
Buildable acres	Sum of all the buildable acreage on the installation not counting training land.
Urban sprawl	Formula calculates the expected density of people in 10-mile zone outside the installation.
Connectivity	Formula weights and sums categorical ratings of network infrastructure and commercial cell phone coverage on and off the installation.
Geographic distribution	Formula calculates the average distance between installations.

Source: GAO analysis of Army data.

# Appendix IV: Comments from the Department of the Army



SECRETARY OF THE ARMY  
WASHINGTON

INFO MEMO

11-19-13 17:20 OUT

FOR: DIRECTOR, DEFENSE CAPABILITIES AND MANAGEMENT, U.S.  
GOVERNMENT ACCOUNTABILITY OFFICE  
DEPARTMENT OF DEFENSE INSPECTOR GENERAL

FROM: John M. McHugh, Secretary of the Army

SUBJECT: Army Comments on GAO Draft Report, "DEFENSE INFRASTRUCTURE:  
Army Unit Inactivations Informed by Analyses, but Actions Needed to Improve  
Stationing Process (GAO-14-76) (351818)"

I am pleased to provide the attached approved comments on the subject GAO draft report. Should you have additional questions regarding the Army's position on this matter, please contact the undersigned action officer.

COORDINATION: NONE

Attachment:  
As stated

Prepared By: COL Thomas O'Donoghue, (703) 693-3130

**Appendix IV: Comments from the Department  
of the Army**



**DEPARTMENT OF THE ARMY**  
OFFICE OF THE DEPUTY CHIEF OF STAFF, G-3/5/7  
400 ARMY PENTAGON  
WASHINGTON, DC 20310-0400

DAMO-FMO

19 November 2013

MEMORANDUM FOR Mr. Brian Lepore, Director, Defense Capabilities and Management, U.S. Government Accountability Office, 441 G Street, NW, Washington, D.C. 20548

SUBJECT: GAO Draft Report, GAO-14-76 (GAO Project Code 351818), DEFENSE INFRASTRUCTURE: Army Unit Inactivations Informed by Analyses, but Actions Needed to Improve Stationing Process.

1. This is the Department of Defense (DoD) response to the GAO Draft Report, GAO-14-16, 'DEFENSE INFRASTRUCTURE: BCT Unit Inactivations Informed by Analyses, but Actions Needed to Improve Stationing Process,' dated October 25, 2013 (GAO Code 351818).
2. The Army has reviewed the report and appreciates GAO's support identifying areas for improvement. Overall, we concur with the GAO's recommendations.
3. Enclosed is our specific response to the report's recommendations. Please extend our appreciation to your auditors for their fine work.
4. The point of contact for this action is COL Thomas O'Donoghue, (703) 693-3130, or email: [thomas.m.odonoghue.mil@mail.mil](mailto:thomas.m.odonoghue.mil@mail.mil).

Encl

  
JOHN P. MCLAURIN  
Deputy Director, Force Management

GAO DRAFT REPORT DATED OCTOBER 25, 2013  
GAO-14-76 (GAO CODE 351818)

“DEFENSE INFRASTRUCTURE: BCT UNIT INACTIVATIONS  
INFORMED BY ANALYSES, BUT ACTIONS NEEDED TO  
IMPROVE STATIONING PROCESS”

DEPARTMENT OF DEFENSE COMMENTS  
TO THE GAO RECOMMENDATIONS

**RECOMMENDATION 1:** To obtain input from communities and installations affected by significant stationing decisions, GAO recommends that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans to develop and implement guidance related to when community listening sessions or other similar efforts to obtain community input should be conducted and incorporated as part of the Army's process for making future stationing decisions.

**DoD RESPONSE:** *Concur. The decision to hold community meetings rests ultimately with the Army's senior leadership. The Army values community input into important decisions that impact Soldiers, Civilians, Families and local communities. In order to ensure the decision to hold community meetings is appropriately considered and thoroughly evaluated, the Army will issue guidance through Department of the Army Pamphlet 5-10 directing that stationing actions involving the loss or relocation of a brigade size unit or other units at an installation that exceed the Congressional notification threshold established in 10 U.S.C. §993(a) will include a staff recommendation for the Secretary of the Army on the use of community meetings as a means to gather public input.*

**RECOMMENDATION 2:** To better ensure the Army military value analysis model's analytical rigor and credibility, minimize risk, and further enhance the transparency of the process used to make stationing decisions, GAO recommends that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans, in coordination with the Center for Army Analysis, take the following action to formalize the model as part of its stationing process: Develop and implement guidance that establishes the circumstances under which the model should be used in stationing decisions and update stationing regulations or related documents accordingly.

**DoD RESPONSE:** *Concur. The military value analysis (MVA) model is an important decision support tool. The Army has used it to inform all significant stationing actions since it was developed to inform decisions during Base Realignment and Closure (BRAC) 2005. The Army will issue guidance through Department of the Army Pamphlet 5-10 directing that the MVA model will be used to inform the stationing decisions related to the activation, inactivation or relocation of a brigade size unit or other units at an installation that exceed the Congressional notification threshold established in 10 U.S.C. §993(a).*

UNCLASSIFIED

**RECOMMENDATION 3:** To better ensure the Army military value analysis model's analytical rigor and credibility, minimize risk, and further enhance the transparency of the process used to make stationing decisions, GAO recommends that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans, in coordination with the Center for Army Analysis, take the following action to formalize the model as part of its stationing process: Develop and implement guidance that establishes the circumstances under which key elements of the model or changes to the model require input or approval from Army leaders, such as through the use of a general officer steering committee.

**DoD RESPONSE:** *Concur. The Army will issue guidance through Department of the Army Pamphlet 5-10 directing that significant changes to the military value analysis (MVA) model will be reviewed by a general officer steering committee (GOSC) chaired by the Director of Force Management prior to approval.*

**RECOMMENDATION 4:** To better ensure the Army military value analysis model's analytical rigor and credibility, minimize risk, and further enhance the transparency of the process used to make stationing decisions, GAO recommends that the Secretary of the Army direct the Deputy Chief of Staff for Operations and Plans, in coordination with the Center for Army Analysis, take the following action to formalize the model as part of its stationing process: Develop and implement guidance that establishes the circumstances under which non-contiguous training areas should be considered within the model that are specific to the stationing decision under consideration and communicate those policies to subject matter experts.

**DoD RESPONSE:** *Concur. The quality and quantity of training resources are important considerations in stationing decisions; however, not all training areas are equally accessible. Noncontiguous training areas often require additional time and money to access. When non-contiguous training areas are included in the military value analysis (MVA) model, the assigned attribute score should reflect all relevant aspects of the training area. The Army will issue guidance through Department of the Army Pamphlet 5-10 directing that MVA model attribute scores for installations with non-contiguous training areas will include a statement explaining the manner in which the non-contiguous nature of the training area was given due consideration in the applicable attribute scores.*

**RECOMMENDATION 5:** Establish and implement through guidance consistent formal processes through which attributes and attribute definitions will be deliberately reviewed and updated for use in the model, in coordination with subject matter experts, and data will be collected and validated for these attributes.

**DoD RESPONSE:** *Concur. Technology, tactics and business practices are constantly changing and improving, therefore the military value analysis (MVA) model attributes should be regularly reviewed and, when appropriate, updated. The Army will issue guidance through Department of the Army Pamphlet 5-10 directing a regular review and update of the MVA model attributes definitions and data. At a minimum, reviews and updates will occur every two years.*

UNCLASSIFIED

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# Appendix V: GAO Contact and Staff Acknowledgments

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## GAO Contact:

Brian J. Lepore, (202) 512-4523 or [leporeb@gao.gov](mailto:leporeb@gao.gov)

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## Staff

## Acknowledgments:

In addition to the contact named above, Mark J. Wielgoszynski, Assistant Director; Bonita P. Anderson; David Dornisch; Kasea Hamar; Michael Shaughnessy; Erik Wilkins-McKee; and Weifei Zheng made key contributions to this report.

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# Related GAO Products

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*Defense Headquarters: DOD Needs to Reassess Options for Permanent Location of U.S. Africa Command*, [GAO-13-646](#). (Washington, D.C.: September 9, 2013).

*Military Bases: DOD Has Processes to Comply with Statutory Requirements for Closing or Realigning Installations*, [GAO-13-645](#). (Washington, D.C.: June 27, 2013).

*Defense Infrastructure: Communities Need Additional Guidance and Information to Improve Their Ability to Adjust to DOD Installation Closure or Growth*, [GAO-13-436](#). (Washington, D.C.: May 14, 2013).

*Defense Infrastructure: Improved Guidance Needed for Estimating Alternatively Financed Project Liabilities*. [GAO-13-337](#). (Washington, D.C.: April 18, 2013).

*Military Base Realignments and Closures: Updated Costs and Savings Estimates from BRAC 2005*. [GAO-12-709R](#). (Washington, D.C.: June 29, 2012).

*Defense Infrastructure: Opportunities Exist to Improve the Navy's Basing Decision Process and DOD Oversight*, [GAO-10-482](#). (Washington, D.C.: May 10, 2010).

*Military Base Realignments and Closures: Observations Related to the 2005 Round*. [GAO-07-1203R](#). (Washington, D.C.: September 6, 2007).

*Military Bases: Observations on DOD's 2005 Base Realignment and Closure Selection Process and Recommendations*. [GAO-05-905](#). (Washington, D.C.: July 18, 2005).

*Military Bases: Analysis of DOD's 2005 Selection Process and Recommendations for Base Closures and Realignments*. [GAO-05-785](#). (Washington, D.C.: July 1, 2005).

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