VETERANS AFFAIRS

Data Needed to Help Improve Decisions Concerning Veterans’ Access to Burial Options

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VA estimates that approximately 10 percent of the veterans in the United States, or over 2.1 million veterans, did not have reasonable access to burial options in a veterans cemetery at the end of fiscal year 2013. In 2012, VA announced an initiative to improve access to burial options for veterans living in rural areas. Subsequently, in Public Law 113-6, Congress mandated that VA develop a strategy to serve the burial needs of rural veterans. The law also mandated GAO to review VA’s rural burial strategy to ensure that it included all of the elements required by the law.

This report includes, among other things, an evaluation of the extent to which (1) NCA’s methodology identifies whether veterans have reasonable access to burial options and supports future cemetery location decisions, and (2) VA’s rural burial strategy includes the eight elements required by law. GAO reviewed NCA’s methodology for estimating the percentage of veterans who have reasonable access to burial options for fiscal year 2017. GAO also reviewed VA’s rural burial strategy, and spoke with agency officials responsible for developing and implementing the rural burial strategy.

What GAO Found

The Department of Veterans Affairs (VA), through its National Cemetery Administration (NCA), has developed a methodology to identify whether veterans have reasonable access to burial options, as well as to support decisions about future cemetery locations. NCA’s methodology uses county-level population data to determine veterans’ access to cemeteries. Using its methodology, NCA estimates that about 96 percent of veterans will have reasonable access to a burial option—that is, have a veterans cemetery within 75 miles of their residences—by the end of fiscal year 2017. The choice of county-level data for this analysis results in NCA giving up some precision in locating veteran populations relative to cemetery locations. This is because counties can vary significantly in size and population distribution, in contrast to census tracts, which are small statistical subdivisions of counties. Greater precision could improve NCA’s ability to identify unserved veteran populations and also improve decisions regarding whether and where to establish future cemeteries. Indeed, GAO’s analyses—using census tract data—confirmed that over 89 percent of veterans would be served by a veterans cemetery by the end of fiscal year 2017, but also that there are significant numbers of served and unserved veterans who are not identified by NCA’s calculations. For example, in Central California, NCA’s methodology identified about 13,000 unserved veterans, whereas GAO’s analysis identified over 52,000 unserved veterans in that same area. NCA’s software has the capability to estimate veteran populations using census tract data, but officials said that they had not done so because they do not believe that it would make a significant difference in their decisions. However, GAO’s analysis shows that the use of different methodologies can yield significantly different results for both the estimated number and location of the veterans considered unserved. Because NCA policy identifies the estimated number of unserved veterans as a key factor in NCA’s decisions regarding future cemetery locations, as well as for awarding cemetery grants to states and tribal governments, the choice of methodology has the potential to change the priority placed on locating cemeteries. Given this, using census tract data would provide NCA with more precise information on the unserved veteran population, which would better inform NCA’s decisions on where to invest resources.

VA’s rural burial strategy includes four of the eight elements required by the law—for example, it includes a timeline and cost estimates for establishing new burial grounds under the rural initiative. In contrast, another two required elements are only partially included in the strategy, and the two remaining elements are not included at all. For instance, the strategy does not include information on the number or locations of unserved rural veterans, or a national map showing the locations and number of all unserved veterans. In addition, NCA does not have a plan to further address those elements that are only partially included or not included in the strategy, although officials acknowledge the requirement to do so. Were NCA to leverage the use of census tract data in completing the burial strategy, it would be better positioned to fully address these requirements when it provides its strategy to Congress. Having a plan to deal with these remaining requirements would also help VA ensure that it is meeting its goals and objectives, while also being in compliance with applicable laws and regulations.
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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>GPRA</td>
<td>Government Performance and Results Act of 1993</td>
</tr>
<tr>
<td>GPRAMA</td>
<td>Government Performance and Results Act Modernization Act of 2010</td>
</tr>
<tr>
<td>NCA</td>
<td>National Cemetery Administration</td>
</tr>
<tr>
<td>OMB</td>
<td>Office of Management and Budget</td>
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<tr>
<td>VA</td>
<td>Department of Veterans Affairs</td>
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September 9, 2014

The Honorable Tim Johnson  
Chairman  
The Honorable Mark Kirk  
Ranking Member  
Subcommittee on Military Construction, Veterans Affairs and Related Agencies  
Committee on Appropriations  
United States Senate  

The Honorable John Culberson  
Chairman  
The Honorable Sanford Bishop  
Ranking Member  
Subcommittee on Military Construction, Veterans Affairs and Related Agencies  
Committee on Appropriations  
House of Representatives  

The Department of Veterans Affairs (VA) through its National Cemetery Administration (NCA) estimated that, as of the end of fiscal year 2013, approximately 90 percent of the estimated 21.8 million veterans in the United States had reasonable access to burial options in either a national cemetery or a VA-funded state veterans cemetery.\(^1\) VA defines reasonable access as having a veterans cemetery that is open for first interments within 75 miles of the veteran’s residence.\(^2\) The remaining veterans, approximately 10 percent, or slightly over 2.1 million veterans, did not have reasonable access, according to VA estimates. VA expects to reach its strategic goal of providing 96 percent of veterans with reasonable access to burial options by fiscal year 2017 with the planned addition of new national and state cemeteries expected to be open for first interments.

\(^1\) In this report, we use the term “veterans cemetery” to refer to national or VA-funded state veterans cemeteries.

\(^2\) VA policy authorizes one gravesite or columbarium niche for the interment of all eligible members of a veteran’s family. First interment refers to the burial of the veteran or an eligible family member if the family member predeceases the eligible veteran.
In August 2012, VA announced its Rural Initiative, which was aimed at providing reasonable access to burial options to veterans living in rural areas where they do not currently have these options. The Consolidated and Further Continuing Appropriations Act, 2013, mandated that VA submit to Congress a strategy to serve the burial needs of veterans residing in rural areas. The act required that this strategy include eight elements related to providing veterans living in rural areas with access to veterans cemeteries. In addition, it mandated us to review VA’s strategy to ensure that it includes all of these elements. This report evaluates the extent to which (1) NCA has developed a methodology to identify whether veterans have reasonable access to burial options and to support decisions about future cemetery locations, (2) VA’s strategy to serve the burial needs of veterans residing in rural areas includes the eight elements mandated by the law, and (3) NCA’s strategic planning process was consistent with strategic planning leading practices.

To address all of our objectives, we assessed NCA’s estimates of the percentage of the veteran population that would have reasonable access to burial options by the end of fiscal year 2017; we reviewed the Department of Veterans Affairs Response to P.L. 113-6 Rural Veterans Burial Access Strategy, the NCA’s strategic plan for fiscal years 2011 to 2015, relevant guidance and policy documents; and we interviewed agency officials responsible for developing and implementing the rural burial strategy.

To determine the extent to which NCA has developed a methodology to identify whether veterans have reasonable access to burial options and to support decisions about future cemetery locations, we reviewed VA’s policies and existing guidance related to VA’s Burial Program as well as NCA’s methodology for determining the percentage of the veteran population served by a veterans cemetery, in order to understand the

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5We used the end of fiscal year 2017 because eight new national veterans burial grounds, five new national cemeteries, and seven new state cemeteries are projected to be open and NCA expects to reach its strategic goal of providing burial options to 96 percent of the veteran population by this time.
6In this report, we refer to this document as the “rural burial strategy.”
basis for NCA’s estimate. In addition, using estimated veteran population data from VA and demographic data from the Census Bureau, we computed our own estimates of the veteran population that would be served by the end of fiscal year 2017, using several different methodologies. For each of these methodologies, we assessed whether the underlying assumptions were consistent with NCA’s definition of reasonable access. We also reviewed VA’s mapping software capability to determine whether it was compatible with using census tract data to develop estimates of the veteran population served. We assessed the reliability of NCA’s veteran population estimates and Census Bureau estimates of veteran population by reviewing existing documentation and interviewing agency officials, and found that both were sufficiently reliable for the purpose of providing context and information as well as to demonstrate how estimates of served and unserved veteran populations for fiscal year 2017 are developed. Finally, as part of our analysis, we assessed the extent to which a veteran’s burial options are affected if the veteran lives within 75 miles of (1) a veterans cemetery that only offers burial options for cremated remains, or (2) a state veterans cemetery with residency restrictions when the veteran is not a resident of the state in which the cemetery is located. We also assessed the extent to which there are disparities in access to burial options for veterans living in rural areas compared with those living in urban areas. The results of these assessments can be found in appendix I.

To determine the extent to which VA’s rural burial strategy includes the eight elements required by the law, we developed a scorecard methodology based on the law’s requirements, which enabled us to

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7Our report discusses only national or state veterans cemeteries operated or funded by VA in the 50 United States. VA includes veterans cemeteries in Guam, Puerto Rico, and the Northern Mariana Islands when it computes the percentage of veteran population served in the United States. This difference has virtually no effect on our estimates because the estimated veteran population at the end of fiscal year 2017 of the 50 United States is approximately 20.4 million and the veteran population of Guam, Puerto Rico, and the Northern Mariana Islands is approximately 0.1 million.

8For the purpose of our analyses, we used the Census Bureau definition of rural, which states that all territories that are not considered either an urbanized area or an urban cluster are considered to be rural areas. According to the Census Bureau, an urbanized area consists of densely developed territory that contains 50,000 or more people, and an urban cluster consists of densely developed territory that has at least 2,500 people but fewer than 50,000 people.
compare VA’s rural burial strategy to those requirements. We considered an element to be “included” if VA provided evidence that it addressed all aspects of the legislative requirement in its rural burial strategy. We considered the element to be “partially included” if VA provided evidence that it had addressed some aspects of the element, and “not included” if VA did not address any aspect of the element in its rural burial strategy.

To determine the extent to which NCA’s strategic planning process is consistent with leading practices for strategic planning, we analyzed the rural burial strategy, NCA’s strategic plan, and other strategic planning documents used in NCA’s strategic planning process and compared them to leading practices for federal strategic planning. We identified six leading practices by reviewing several sources of information, including the Government Performance and Results Act of 1993 (GPRA) and the GPRA Modernization Act of 2010 (GPRAMA); practices identified in guidance for federal agencies from the Office of Management and Budget (OMB) for implementing GPRA’s requirements; and related leading practices that our prior body of work has identified. Additional information about our scope and methodology is included in appendix II.

We conducted this performance audit from October 2013 to September 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to

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10Pub. L. No. 103-62, 107 Stat. 285 (1993); Pub. L. No. 111-352, 124 Stat. 3866 (2011). GPRAMA provides federal agencies with an approach to focusing on results and improving government performance by, among other things, developing strategic plans. Examples of GPRAMA plan components include a mission statement; general goals and objectives, including outcome-oriented goals; and a description of how the goals and objectives are to be achieved, including the processes and resources required. Although GPRA’s requirements apply at the agency level, based on our review of related GAO products, OMB guidance, and studies by the National Academy of Public Administration and the Urban Institute, we have previously found that these requirements can serve as leading practices in lower levels within an organization, such as with individual programs or initiatives. See GAO, Pipeline Safety: Management of the Office of Pipeline Safety’s Enforcement Program Needs Further Strengthening, GAO-04-801 (Washington, D.C.: July 23, 2004); OMB Circular No. A-11, Preparation, Submission, and Execution of the Budget (August 2012); GAO, Executive Guide: Effectively Implementing the Government Performance and Results Act, GAO/GGD-96-118 (Washington, D.C.: June 1996); GAO, Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures, GAO-03-143 (Washington, D.C.: Nov. 22, 2002); and GAO, Managing for Results: Strengthening Regulatory Agencies’ Performance Management Practices, GAO/GGD-00-10 (Washington, D.C.: Oct. 28, 1999).
National cemeteries were first created during the Civil War when Congress empowered President Lincoln to purchase cemetery grounds to provide a final resting place for the soldiers who had died or would die in the service of the country. Fourteen such cemeteries were established in 1862 and, by 1872, an additional 62 cemeteries were established to provide final resting places for the soldiers who had died during the Civil War. Over the next 100 years, another 42 cemeteries were established. Many of these cemeteries were originally military post cemeteries at frontier forts, and others were established on the grounds of national homes for veterans or on the grounds of VA medical facilities (see fig. 1). The National Cemeteries Act of 1973 created the cemetery system in existence today, and NCA, within VA, has been primarily responsible for the management of the national cemetery program since that time.  

11While NCA manages the majority of cemeteries, the Army is responsible for the operation and management of two national cemeteries (Arlington National Cemetery in Arlington, Virginia, and the United States Soldiers’ and Airmen’s Home National Cemetery in Washington, D.C.) and the Department of the Interior is responsible for the operation and management of 14 cemeteries located on lands that are part of the National Park Service.
Figure 1: Time Line of Establishment of National Cemeteries Prior to Establishment of the National Cemetery Administration (NCA)

Since 1973, NCA has continued to expand the national cemetery system, adding 31 national cemeteries. In addition, NCA has implemented a number of policy changes and initiatives designed to improve veterans’ access to burial options in veterans cemeteries. For example, in its fiscal year 2011 budget request, NCA announced that it was implementing a new policy and changing its threshold for establishing new national cemeteries. Under the modified policy, a location must have at least 80,000 veterans residing within the service area—a 75-mile radius of the proposed national cemetery—who do not currently have reasonable access to burial options. Under the former policy, there would have to have been 170,000 “unserved” veterans in a service area to warrant a new national cemetery.

NCA also has created additional types of facilities to meet the burial needs of veterans. The cemetery program now offers a variety of cemetery configurations that provide burial options to eligible veterans or improve their access to burial options. Some of these are listed here:
• National Cemeteries. The national cemeteries are typically large cemeteries designed to serve areas of the country in which an estimated large concentration of veterans reside. There are currently 90 open national cemeteries and 41 closed national cemeteries in the United States.\(^{12}\) NCA plans to open an additional 5 national cemeteries by the end of fiscal year 2017.

• National Cemetery Annexes. NCA uses these annexes to expand the capacity of existing national cemeteries by acquiring land near to, but not adjacent to or contiguous with, the existing national cemetery. Since annexes are located very close to the original cemetery, often within several miles, and are supported by the staff and equipment of the original cemetery, they are not considered new, stand-alone national cemeteries.

• Columbaria. In areas where acquiring large parcels of land is not feasible to either expand the capacity of an existing national cemetery or create an annex, NCA has employed the use of a columbaria (facilities for cremated remains) to extend the service lives of cemeteries that already provide a burial option for first interments.

• Rural Initiative. Under this initiative, NCA plans to establish National Veterans Burial Grounds,\(^{13}\) which are designed specifically to serve veterans living in rural areas. The initial 8 National Veterans Burial Grounds are designed to be located in states that do not have an open national cemetery and where portions of the veteran population are unserved by state cemeteries or by a national or a state cemetery in a neighboring state within the 75-mile radius. In addition, these cemeteries are designed to serve areas where there is a veteran population of 25,000 or fewer living within the service area of the proposed burial ground. NCA plans to open these initial 8 burial grounds by the end of fiscal year 2017.

• The Urban Initiative. This initiative expands the burial options available to veterans in certain urban areas already within the service

\(^{12}\)NCA defines an open cemetery as a cemetery where gravesites are available for the first interment of either casketed or cremated remains. NCA defines a closed cemetery as a cemetery where no gravesites are available for first interments.

\(^{13}\)According to NCA’s rural burial strategy, National Veterans Burial Grounds will have the same eligibility requirements and standards of maintenance and appearance as VA national cemeteries. Where possible, NCA will establish these burial grounds in public or privately owned cemeteries. If this approach is not feasible, according to NCA, it will purchase small parcels of land (i.e., 5–10 acres) for this initiative.
area of a national cemetery. It provides for the construction of columbaria that are closer to the urban core, in order to provide a more accessible burial option for veterans in those areas. NCA plans to open columbaria in five urban areas by the end of fiscal year 2017. The criteria for establishing an Urban Initiative facility are that the existing national cemetery

- be 50 miles or more from the urban core,
- require travel time of 1 hour or greater from the urban core,
- have documented veteran utilization rates of less than 20 percent for at least 2 of the last 3 years, and
- have documented that clients cited travel time or distance to the cemetery as an access barrier on the Survey of Satisfaction with National Cemeteries at least 5 percent above the national average for at least two of the last three survey administrations.

In addition, VA’s Veterans Cemetery Grant Program provides funding for both new and existing state cemeteries. Specifically, the program can provide funding to establish cemeteries that are owned and operated by a state or tribal governments on trust land. Currently, VA is authorized to provide up to 100 percent funding for the construction costs for a new cemetery—including the initial cost of operating equipment—but not to provide funding to acquire land. According to VA officials, state veterans cemeteries are generally located in areas where fewer than 80,000 veterans reside within the cemetery’s service area. VA officials also stated that tribal government cemeteries, in contrast, do not generally have 75-mile geographic service areas, since these cemeteries serve veterans who are members of the tribe that maintains the cemetery and may reside outside of a 75-mile radius. Cemeteries funded under the grant program are to conform to the standards and guidelines pertaining to site selection, planning, and construction prescribed by VA.

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14 For the purposes of this program, VA defines urban core as the center of the city.

15 The Survey of Satisfaction with National Cemeteries is an annual survey conducted by NCA to gather data from family members and funeral directors who have recently received services from a national cemetery. The data from the survey are used to improve the quality of service provided at national cemeteries.


17 For purposes of the VA’s Veterans Cemetery Grant program, the term state includes territories, possessions of the United States, the District of Columbia, and the Commonwealth of Puerto Rico. 38 C.F.R. § 39.2 (2013).
The program can also be used for the expansion or improvement of existing cemeteries by funding projects such as signage, flagpoles, and parking. While VA provides funding for these cemeteries, the state or tribal governments are responsible for their continued operation. There are currently 84 open state veterans cemeteries and 2 tribal government cemeteries in the United States. Table 1 shows a summary of the number of national, state, and tribal government cemeteries as of April 2014.

Table 1: Existing National, State, and Tribal Government Cemeteries within the United States, by Type, as of April 2014

<table>
<thead>
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<th>Type of cemetery</th>
<th>Number</th>
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<tr>
<td>National cemeteries/annexes</td>
<td></td>
</tr>
<tr>
<td>Open national cemeteries</td>
<td>90</td>
</tr>
<tr>
<td>Closed national cemeteries</td>
<td>41</td>
</tr>
<tr>
<td>State veterans cemeteries</td>
<td>84</td>
</tr>
<tr>
<td>Tribal government veterans cemeteries</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>217</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Notes: Data are from VA cemetery lists available at http://www.cem.va.gov/cems/listcem.asp.

The National Cemetery Administration (NCA) identifies a total of 88 state veterans cemeteries that have received VA funding; 2 of these cemeteries are located outside the 50 United States and 2 others are closed to first interments.

VA anticipates providing funding for an additional 7 state and 4 tribal cemeteries by the end of fiscal year 2017. Table 2 shows a summary of planned cemeteries.

Table 2: Planned National, State, and Tribal Government Cemeteries within the United States, by Type, for Fiscal Year 2017

<table>
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</tr>
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<tbody>
<tr>
<td>New national cemeteries</td>
<td></td>
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<tr>
<td>National cemeteries</td>
<td>5</td>
</tr>
<tr>
<td>Rural initiative locations</td>
<td>8</td>
</tr>
<tr>
<td>Urban initiative locations</td>
<td>5</td>
</tr>
<tr>
<td>State veterans cemeteries</td>
<td>7</td>
</tr>
<tr>
<td>Tribal government veterans cemeteries</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total planned cemeteries</strong></td>
<td><strong>29</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Notes: In addition to the seven planned state veterans cemeteries, the National Cemetery Administration (NCA) anticipates awarding a number of additional grants prior to the end of fiscal year 2017.
NCA has developed a methodology, which uses county-level population data, to determine whether veterans have reasonable access to burial options and to support decisions about future cemetery locations. While NCA estimates that the opening of new national cemeteries, National Veterans Burial Grounds, and state veterans cemeteries will increase the percentage of veterans served from 90 to 96 percent by the end of fiscal year 2017, the choice of county-level data for this analysis results in NCA giving up some precision in locating veteran populations relative to cemetery locations. Precision is lost because counties can vary significantly in size and population distribution, in contrast to census tracts, which are small, relatively permanent statistical subdivisions of counties. Having more precise information on the estimated number and location of unserved veterans could affect NCA’s decisions on where to locate future cemeteries and which states would receive grants to establish cemeteries. Our analysis confirmed that most veterans would be served by a veterans cemetery by the end of fiscal year 2017, but highlighted that the choice of methodology used to estimate the number of served veterans has an effect on the estimated number and the presumed location of the veteran population that does not have reasonable access to burial options. According to NCA policy, the estimated number of unserved veterans is a key factor in its decisions regarding (1) the location of future cemeteries and (2) which states and tribal governments will receive grants under the Veterans Cemetery Grant Program. Because the choice of methodology used to determine the unserved veteran population can yield significant differences in results, it can have an effect on decisions about whether and where to add additional cemeteries.

NCA’s Methodology Does Not Clearly Identify the Location of Veterans Who Would Not Have Reasonable Access to Burial Options

According to VA’s Performance and Accountability Reports, one key measure that NCA has used since 1992 to track the performance of its cemetery program is the percentage of the veteran population that has reasonable access to burial options. Under this measure, veterans are considered to be reasonably served if there is a veterans cemetery that has unoccupied gravesites for first interments within 75 miles of their residence. NCA estimated that, at the end of fiscal year 2013, nearly 90 percent of veterans were reasonably served by either a national or a VA-funded state veterans cemetery and, based on its methodology, NCA estimates that 96 percent of veterans will be reasonably served by the end of fiscal year 2017.

To develop its initial estimate of the veteran population served, NCA first identified the counties that were served by each national and state...
cemetery by creating maps that depicted the 75-mile service area of each
cemetery. NCA considered counties to be served if any one of the
following applied:

1. The entire county was within the 75-mile service area of a cemetery.
2. At least 50 percent of the county’s area was within the service area of
   a cemetery.
3. Less than 50 percent of the county’s area was within the service area
   of a cemetery, but the population center of the county was within the
   service area.
4. The county was intersected by the geographic arcs of two or more
   cemeteries’ service areas and the two service areas covered more
   than 50 percent of the county’s area.

According to NCA officials, NCA relied on the judgment of its personnel to
apply these criteria to service area maps and make appropriate
determinations concerning which counties were served and which
counties were not.

NCA then totaled the estimated veteran population for the counties
determined, according to these criteria, to be served by open veterans
cemeteries. NCA then divided the total served population by the total
estimated veteran population in the United States to calculate the
percentage of the veteran population served. In 1999, the VA Inspector
General validated this methodology and concluded, among other things,
that if NCA’s population estimates were accurate, then the estimate of the
percentage of population served was reasonable. Specifically, the
Inspector General found that, while there were minor inaccuracies in
NCA’s computation of the percentage of population served, the reported
66.8 percent of the veteran population served by a veterans cemetery at
the end of fiscal year 1997 was a reasonable estimate. However, even
though NCA’s methodology may provide a reasonable estimate of the
percentage of the veteran population served it does not clearly identify
where the unserved veteran population resides. In response to VA’s
comment on our draft report that the VA Office of Inspector General has
reviewed its methodology for estimating the percentage of the veteran
population twice, we note that the objective of the 1999 Office of

18Department of Veterans Affairs Inspector General, Accuracy of Data Used to Measure
Inspector General audit was to validate the computations made by NCA and not to evaluate NCA’s approach for measuring the percentage of the veteran population served. In addition, a 2014 Office of Inspector General report focused on VA’s Rural Veterans Burial Initiative and, while the report did not take issue with NCA’s approach, evaluating alternative methodologies for measuring the percentage of the veteran population served was not part of the Inspector General’s report objectives.

According to NCA officials, since that time, NCA has adjusted its estimate of the percent served on an annual basis to reflect (1) veterans added to the served category when new cemeteries are opened, (2) veterans removed from the served category when cemeteries are closed, and (3) changes to the estimated total veteran population. For example, if a new cemetery opened in fiscal year 1998 and provided service to 40,000 veterans who had not previously been served, and the current estimate of total veteran population was 20 million veterans, the percentage of veterans served as of fiscal year 1998 would be the 1997 estimate increased by 0.2 percent to reflect changes that occurred during fiscal year 1998.

In December 2013, NCA began an effort to develop a database that identifies all of the counties within the United States where NCA considers the veteran population to have reasonable access to a burial option in a veterans cemetery. According to NCA officials, this effort was begun in response to our request for a list of all of the counties that NCA considers served by a veterans cemetery and congressional interest in burial options for rural veterans. While this database would not change the way NCA identifies which counties are served, NCA officials stated that, once it is created, it will serve as the basis for NCA’s calculation of the percentage of the veteran population that is served by a veterans cemetery and will allow NCA to recalculate the percent served on a periodic basis without relying on the annual adjustments described above. However, NCA’s current methodology does not clearly identify the location of unserved veterans because it determines whether a veteran is served or unserved based on the county in which the veteran resides. That is, this methodology uses veterans’ counties of residence as proxies for being within a veterans cemetery’s service area, rather than taking the more precise approach of using a veterans residence. For example, as shown in figure 2, NCA considers some veterans who reside outside the service area of a veterans cemetery to be served because their county is considered served, such as those in Skagit County, Washington. Similarly, some veterans who reside within the service area of a cemetery are considered unserved because their county is considered unserved.
under NCA’s methodology, such as those in Chelan County, Washington. Consequently, by using county-level data for this analysis, NCA gives up some precision in locating veteran populations relative to cemetery locations.

Figure 2: Illustration of the National Cemetery Administration’s (NCA) Methodology for Calculating Estimated Veteran Population Served for Skagit County and Chelan County

The NCA considers the veteran population of Skagit County (over 12,000) to be served because the population center is within the service area of Tahoma National Cemetery.

The NCA considers the veteran population of Chelan County (over 5,400) to be unserved because less than half of the area of Chelan County is within the service area of Tahoma National Cemetery.

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537

Note: The service areas of additional veterans cemeteries are shown on this map to provide context concerning overall access to burial options in this area of the United States.
Our analyses of the percentage of the veteran population that would be served by an open veterans cemetery by the end of fiscal year 2017 showed that alternative methodologies to identify which veterans are served, and the assumptions associated with these methodologies, yield different results for both the estimated number and the location of the veterans considered unserved. We calculated the estimated number of veterans served in three different ways using the national service area map we created.

1. Methodology 1, entire county population served or unserved: Similar to NCA’s methodology, we identified counties as being served if 50 percent or more of their area falls within the service area of a veterans cemetery. To calculate the estimated number of veterans served nationally, we summed the total estimated number of veterans in every county that we determined to be served.

2. Methodology 2, proportional distribution of county populations: We multiplied the veteran population for each county by the percentage of the county’s area that falls within the service area of a veterans cemetery.

3. Methodology 3, proportional distribution of census tract populations: We multiplied the veteran population for each census tract by the percentage of the census tract area that falls within the service area of a veterans cemetery.

19We used the end of fiscal year 2017 because eight new National Veterans Burial Grounds, five new national cemeteries, and seven new state cemeteries are projected to be open and NCA expects to reach its strategic goal of providing burial options to 96 percent of the veteran population by this time.

20We did not apply the NCA criterion that considers a county with less than half of its area inside the service area of a veterans cemetery to be served if the county’s population center falls within the service area because many veterans may reside outside the population center in such counties.

21The Census Bureau defines census tracts as small, relatively permanent statistical subdivisions of a county that generally have a total population size between 1,200 and 8,000 people, with an optimum size of 4,000 people. Census tract boundaries are delineated with the intention of being maintained over a long time so that statistical comparisons can be made from census to census. We used Census Bureau estimates of the veteran population for this analysis because VA does not currently estimate veteran population at the census tract level. Census tract data can be easily downloaded from the Census Bureau website.
As shown in figure 3, the three methodologies we used to determine the number of veterans who would be served by the end of fiscal year 2017 produced estimates ranging from 89.77 percent to 91.17 percent of the veteran population. These estimates are closely grouped; suggesting that more than one methodology for estimating the veteran population served could be used to provide a reasonable estimate. However, NCA estimates that by 2017 the veteran population will be over 20 million; as a result, these small percentages will translate into large numbers. For example, looking at the small percentage difference among our three estimates, approximately 290,000 fewer veterans would be unserved at the 91.17 percent served level than at the 89.77 percent served level. Using NCA’s estimate that 96 percent of veterans will be served by the end of fiscal year 2017, approximately 986,000 fewer veterans would be unserved. Looking at the percentage of unserved veterans at each of these three levels yields even larger numbers. Even at 96 percent served, there would be 817,467 veterans without a reasonable burial option at a veterans cemetery.

Figure 3: Estimated Percentage of Served and Unserved Veterans by the end of Fiscal Year 2017, Calculated Using Different Methodologies

Methodology 1 considers the entire estimated population of a county to be either served or unserved based on whether 50 percent or more of the county’s area falls within the service area of a veterans cemetery.

Methodology 2 multiplies the estimated veteran population of each county by the percentage of the county’s area that falls within the service area of a veterans cemetery.

Methodology 3 multiplies the estimated veteran population of each census tract by the percentage of the census tract’s area that falls within the service area of a veterans cemetery.

Source: GAO analysis of Veterans Affairs (VA) and U.S. Census Bureau data. | GAO-14-537

Notes:
Methodology 1 considers the entire estimated population of a county to be either served or unserved based on whether 50 percent or more of the county’s area falls within the service area of a veterans cemetery.

Methodology 2 multiplies the estimated veteran population of each county by the percentage of the county’s area that falls within the service area of a veterans cemetery.

Methodology 3 multiplies the estimated veteran population of each census tract by the percentage of the census tract’s area that falls within the service area of a veterans cemetery.
The methodology used to determine the veteran population served, because different methodologies sometimes yield very different results, can have an effect on the calculation of number and identification of the location of unserved veterans, as shown in the following examples. The interactive map in figure 4 illustrates the service areas of the existing and planned veterans cemeteries and the effect that the methodology used to determine the veteran population served can have on the number and location of unserved veterans.
Note: Data are from VA cemetery lists, VetPop2011 estimated veterans populations, and Census Bureau geographic information system.
There are limitations associated with each of the methodologies we employed. The primary limitation of the first methodology is that, in some instances, veterans who reside outside the service area of a veterans cemetery are considered served because their county is considered served. Similarly, in some instances, veterans who reside within the service area of a cemetery are considered unserved because, using NCA’s definition, their county is considered unserved. The primary limitation of the second methodology is the assumption that the population within a county is evenly distributed; however, in some counties the majority of the population lives in a relatively small part of the county. For example, in Oklahoma County, Oklahoma, where the veteran population is estimated to be over 55,500 and approximately 40 percent of the county’s area falls within the service area of Fort Sill National Cemetery, this methodology would estimate that over 22,000 veterans were served. However, approximately 73 percent of the veteran population of the county resides within the service area of the cemetery. Consequently, the estimate of 22,000 is understated by about 18,000 veterans, as shown in figure 5.

Figure 5: Comparison of Veteran Population Estimates for Oklahoma County Using Proportional Distribution at the County Level and Census Tract Data

- **Kansas Veterans Cemetery at Fort Dodge**
- **Kansas Veterans’ Cemetery at Winfield**
- **Fort Sill**
- **Fayetteville**
- **Fort Gibson**
- **Fort Smith**
- **Oklahoma County**

- **Total veteran population**: 55,596
- **Percentage of county area within service area of Fort Sill**: 40.37%
- **Estimated veteran population served**: 22,446
- **Percentage of county population within service area of Fort Sill**: 73.10%
- **Estimated veteran population served**: 40,641
- **Estimated understatement of veteran population served**: 18,195

Note: The service areas of additional veterans cemeteries are shown on this map to provide context concerning overall access to burial options in this area of the United States.
There are also areas where this methodology would overstate the veteran population that would be served in a specific area. For example, in Humboldt County, California, where approximately 9,300 veterans reside and nearly 50 percent of the county’s area is within the service area of Northern California Veterans Cemetery, this methodology would estimate that approximately 4,600 veterans were served by this cemetery. However, about 14 percent of the population of the county resides within the service area of the cemetery. Consequently, the estimate of the veteran population that were served in this county would be overstated by approximately 3,200 veterans, as shown in figure 6. Thus, while this methodology attempts to identify the veteran population that resides within the service area of a veterans cemetery, it can result in imprecise estimates of the number of served and unserved veterans, which could, in turn, lead to imprecise estimates about the location of the unserved veteran population.
The primary limitation of the third methodology is that the veteran population within a census tract is assumed to be evenly distributed throughout the tract, which may not always be the case. However, the effect of this limitation on calculations for the estimated number of veterans who would be served is less significant when census tracts are used, instead of entire counties. This is because census tracts are small, relatively permanent statistical subdivisions of a county that generally have a total population size between 1,200 and 8,000. Thus, using

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22By comparison, counties are typically much larger geographical areas and can have estimated veteran populations ranging from 4 to over 259,000.
census tract data provides a more precise measure than using county-level data; these estimates influence decisions concerning the future locations of new veterans cemeteries. For example, in 12 upstate New York counties, NCA estimates that there is a total of 57,500 unserved veterans in 7 of them and considers the remaining 5 counties to be served. Using census tract data, we estimated that there are over 73,500 unserved veterans across all 12 of these counties (see fig. 7).

**Figure 7: Comparison of Veteran Population Estimates for Upstate New York Using National Cemetery Administration’s (NCA) Methodology and Census Tract Data**

<table>
<thead>
<tr>
<th>County</th>
<th>NCA methodology</th>
<th>Census tract methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Served</td>
<td>Unserved</td>
</tr>
<tr>
<td>Clinton</td>
<td>6,125</td>
<td>4,189</td>
</tr>
<tr>
<td>Essex</td>
<td>3,491</td>
<td>3,229</td>
</tr>
<tr>
<td>Franklin</td>
<td>3,672</td>
<td></td>
</tr>
<tr>
<td>Hamilton</td>
<td>567</td>
<td>436</td>
</tr>
<tr>
<td>Herkimer</td>
<td>4,869</td>
<td>3,997</td>
</tr>
<tr>
<td>Jefferson</td>
<td>14,124</td>
<td>14,124</td>
</tr>
<tr>
<td>Lewis</td>
<td>2,124</td>
<td></td>
</tr>
<tr>
<td>Madison</td>
<td>4,766</td>
<td>410</td>
</tr>
<tr>
<td>Oneida</td>
<td>15,384</td>
<td></td>
</tr>
<tr>
<td>Onondaga</td>
<td>25,786</td>
<td>12,661</td>
</tr>
<tr>
<td>Oswego</td>
<td>9,147</td>
<td>46</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>8,445</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>40,838</td>
<td>57,661</td>
</tr>
</tbody>
</table>

Source: GAO analysis of Veterans Affairs (VA) data | GAO-14-537
In addition, in central California, where NCA considers Kings County—estimated population of over 13,000—to be unserved and considers Fresno, Madera, and Tulare counties to be served (see fig. 8), our estimate of the unserved population using census tract data exceeded 52,000 veterans. In addition to the veteran population of Kings County, our estimate includes the populations from census tracts that fall outside the service area of an existing veterans cemetery in Fresno, Madera, and Tulare counties.

Figure 8: Comparison of Veteran Population Estimates for Central California Using National Cemetery Administration’s (NCA) Methodology and Census Tract Data

<table>
<thead>
<tr>
<th>County</th>
<th>NCA methodology</th>
<th>Census tract methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Served</td>
<td>Unserved</td>
</tr>
<tr>
<td>Fresno</td>
<td>39,997</td>
<td>13,559</td>
</tr>
<tr>
<td>Kings</td>
<td>13,199</td>
<td>1,122</td>
</tr>
<tr>
<td>Madera</td>
<td>7,717</td>
<td>5,572</td>
</tr>
<tr>
<td>Tulare</td>
<td>16,637</td>
<td>4,725</td>
</tr>
<tr>
<td>Total</td>
<td>64,350</td>
<td>13,199</td>
</tr>
</tbody>
</table>

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
NCA’s Methodology Did Not Use Census Tract Data, Although Census Tract Data Would Be More Consistent with Its Definition of Reasonable Access

NCA policy defines reasonable access as having a veterans cemetery that is open for first interments within 75 miles of the veteran’s residence. Stated another way, reasonable access means that a veteran resides within the service area—a 75-mile radius—of a veterans cemetery. Census tract data would allow NCA to identify more precisely the number and location of veterans both with and without reasonable access to burial options, which is critical information for implementing NCA’s criteria for establishing veterans cemeteries. Specifically, in comparison to NCA’s current methodology, census tract data provide a more concise picture of where the veterans without reasonable access to burial options reside. For example, because NCA’s methodology includes some veterans in the served population who actually reside outside the service area of a veterans cemetery and excludes some veterans who reside inside the service area of a veterans cemetery, it does not capture the location of the unserved population with a great degree of precision. As described above, there are areas within the country where NCA’s methodology underestimates the unserved population. In response to VA’s comment that our draft report indicates that NCA’s current approach identifies the number and location of served and unserved veterans with an acceptable degree of precision, we note that use of census tract data is more consistent with NCA’s definition of reasonable access and can have a significant effect on the location of the veteran population that is considered unserved. For example, in Riverside County, California, NCA considers all veterans within the county to be served, including the veterans in the city of Blythe, who are located approximately 165 miles (more than twice the NCA-defined reasonable service distance) from the cemetery in Riverside, California (see fig. 9). On a larger scale, NCA estimates that more than 88,500 veterans in California reside in counties that are considered unserved. However, using census tract data, we found that approximately 156,500 veterans were unserved—more than 75 percent more than the number of unserved veterans identified by NCA (see fig. 9).
Figure 9: Comparison of Unserved Veteran Population Estimates for California Using National Cemetery Administration’s (NCA) Methodology and Census Tract Data

<table>
<thead>
<tr>
<th>County</th>
<th>Unserved veteran population using NCA methodology</th>
<th>Unserved veteran population using census tract methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpine</td>
<td>147</td>
<td>147</td>
</tr>
<tr>
<td>Amador</td>
<td>263</td>
<td></td>
</tr>
<tr>
<td>Butte</td>
<td>4,258</td>
<td></td>
</tr>
<tr>
<td>Calaveras</td>
<td>1,604</td>
<td></td>
</tr>
<tr>
<td>Colusa</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>Del Norte</td>
<td>2,229</td>
<td></td>
</tr>
<tr>
<td>El Dorado</td>
<td>761</td>
<td></td>
</tr>
<tr>
<td>Fresno</td>
<td>26,438</td>
<td></td>
</tr>
<tr>
<td>Humboldt</td>
<td>9,296</td>
<td>8,004</td>
</tr>
<tr>
<td>Imperial</td>
<td>7,411</td>
<td>7,226</td>
</tr>
<tr>
<td>Inyo</td>
<td>1,314</td>
<td>1,285</td>
</tr>
<tr>
<td>Kings</td>
<td>13,199</td>
<td>12,077</td>
</tr>
<tr>
<td>Lake</td>
<td>183</td>
<td></td>
</tr>
<tr>
<td>Lassen</td>
<td>3,381</td>
<td>2,894</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>6,487</td>
<td></td>
</tr>
<tr>
<td>Madera</td>
<td>2,145</td>
<td></td>
</tr>
<tr>
<td>Mariposa</td>
<td>371</td>
<td></td>
</tr>
<tr>
<td>Mendocino</td>
<td>5,808</td>
<td>5,396</td>
</tr>
<tr>
<td>Modoc</td>
<td>859</td>
<td>859</td>
</tr>
<tr>
<td>Mono</td>
<td>1,239</td>
<td>1,239</td>
</tr>
<tr>
<td>Monterey</td>
<td>579</td>
<td></td>
</tr>
<tr>
<td>Nevada</td>
<td>1,037</td>
<td></td>
</tr>
<tr>
<td>Placer</td>
<td>532</td>
<td></td>
</tr>
<tr>
<td>Plumas</td>
<td>1,775</td>
<td>964</td>
</tr>
<tr>
<td>Riverside</td>
<td>1,759</td>
<td></td>
</tr>
<tr>
<td>San Bernardino</td>
<td>3,376</td>
<td></td>
</tr>
<tr>
<td>San Francisco</td>
<td>770</td>
<td></td>
</tr>
<tr>
<td>San Luis Obispo</td>
<td>18,643</td>
<td>18,214</td>
</tr>
<tr>
<td>Santa Barbara</td>
<td>19,886</td>
<td>19,071</td>
</tr>
<tr>
<td>Shasta</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Sierra</td>
<td>350</td>
<td></td>
</tr>
<tr>
<td>Siskiyou</td>
<td>187</td>
<td></td>
</tr>
<tr>
<td>Sonoma</td>
<td>295</td>
<td></td>
</tr>
<tr>
<td>Tulare</td>
<td>11,912</td>
<td></td>
</tr>
<tr>
<td>Tuolumne</td>
<td>5,701</td>
<td>2,554</td>
</tr>
<tr>
<td>Ventura</td>
<td>10,567</td>
<td></td>
</tr>
<tr>
<td>Yuba</td>
<td>424</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>88,859</strong></td>
<td><strong>156,524</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of Veterans Affairs (VA) data.  | GAO-14-537
In addition, in comparison to our methodology, which estimated the served veteran population by proportionally distributing the county population based on the percentage of the county that fell inside the service area of a veterans cemetery, census tract data offer a more precise estimate, because census tracts are the smallest territorial unit for which population data are available. In particular, census tract data allow for more detailed analysis of population data than do county data, while still aggregating to the county level, because census tracts never overlap county boundaries. For example, in counties that are partially within the service area of a veterans cemetery, our methodology using county data estimates the served population of these counties based on the percentage of the counties’ area that falls within the service area. Census tract data, on the other hand, would allow us to identify the number of veterans who reside in census tracts that fall entirely within the service area and then estimate the number of veterans who reside in census tracts that fall within the service area based on the percentage of the census tract that falls within the service area. Consequently, using census tract data would provide a more precise picture of the number and location of unserved veterans.

In 2008, an independent study of VA’s Burial Benefits Program (1) evaluated whether the program was achieving its expected outcomes (e.g., meeting the burial needs of veterans and their family members) and (2) identified the program’s impact on veterans and their families. The study’s report, Evaluation of the VA Burial Benefits Program, recommended that NCA revise its methodology for calculating the percentage of veterans served to a method that utilized census tracts rather than counties—similar to our methodology 3 above.23 In addition, the report recommended that NCA replace its decision rules with a proportional overlay method.24 NCA officials stated that they have not adopted these recommendations because they believed that the use of census tract data would not make a significant difference in identifying potential locations for future cemeteries and determining the percentage of veterans served. While using census tract data may not significantly

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24Under proportional overlay, the proportion of the census tract population counted as served is equal to the area of the tract falling within the service area.
change the estimate of the veteran population served, its use could more precisely identify the location of the unserved veteran population as illustrated in figures 7 and 8. In response to VA’s comment on our draft report that, while the use of census tracts may yield more precise information on the number of veterans who live within the service areas of individual cemeteries, our analysis did not demonstrate that the use of census tract data would result in different outcomes regarding the location of national or state cemeteries or National Veterans Burial Grounds, we note that the size of the unserved veteran population that we identified in Central California—more than 52,000—is larger than the unserved veteran population found within 75 miles of any of the new state cemeteries on VA’s priority list of pending state and tribal government cemetery construction grants for fiscal years 2013 and 2014, including the six state cemeteries that are planned to be open by the end of fiscal year 2017. This is significant because, according to NCA policy, the estimated number of unserved veterans is a key factor in NCA’s decisions regarding (1) the location of future cemeteries and (2) which states and tribal governments will receive grants under the Veterans Cemetery Grant Program. In addition, we also note that, while NCA is in the process of establishing 5 new national cemeteries by the end of fiscal year 2017 in areas of the country where it considered 80,000 or more veterans to be unserved, according to data from an independent study of VA’s Burial Benefits Program in 2008 based on census tract data, only two of these areas had an unserved veteran population of 80,000 or more. Further, in May 2014, we discussed the use of census tract data with NCA officials and explained that the mapping software program that NCA currently uses is compatible with census tract data and could be used to identify the served veteran population at the census tract level. NCA officials stated that they have not used their software in combination with census tract data because they have, thus far, focused their national analyses on determining the percentage of veterans served. However, in discussions with us, officials stated they recognized the effect that using census tract data would have on the estimated number and location of unserved veterans. By using the existing capability of its current software, NCA could use census tract data to produce more precise estimates of the served veteran population as well as more comprehensive information concerning the number and location of unserved veterans. Such

25VA uses ArcGIS ArcMap 10, a commercially available software package, to analyze the service areas of existing cemeteries on a state-by-state basis.
information would help to better position NCA to manage the national cemeteries program by allowing it to make better informed decisions about the locations of future cemeteries, based on the funding available to establish new cemeteries and its policy of reasonable access. In response to VA’s comments on our draft report that it would have to acquire new software, we note that we believe that VA’s current mapping software, ArcGIS, has the capability to perform analyses of census tract data because (1) Census Bureau geographic data is in ArcGIS format, (2) the Census Bureau has published instructions on its website on how to use ArcGIS to analyze census data at the census tract level, and (3) the software company that developed ArcGIS confirmed that ArcGIS could be used to perform the census tract analysis.

Our analysis of the VA rural burial strategy found that it includes four of the eight elements required by the law and partially includes two others, but does not include the remaining two. According to VA, its rural burial strategy was developed to provide reasonable access to burial options to rural veterans, in addition to including information related to the eight required elements. Table 3 describes our assessment of the extent to which VA includes these elements in its rural burial strategy.

Table 3: GAO Assessment of the Extent to Which VA’s Rural Burial Strategy Includes Required Elements

<table>
<thead>
<tr>
<th>Required elements</th>
<th>What the strategy does and does not include</th>
</tr>
</thead>
</table>
| An assessment of the adequacy of the National Cemetery Administration’s (NCA) policy on establishing new cemeteries (proposed in the fiscal year 2013 budget request) | • Illustrates how NCA’s plans and initiatives will establish additional burial options for veterans in many areas of the country, including how five new national cemeteries will serve an estimated 550,000 veterans not previously served.  
  • Illustrates that the Rural Initiative complements other policies for locating new national and state cemeteries. |
| Recommendations for an appropriate policy on new national cemeteries to serve rural or highly rural areas | • Illustrates that the Rural Initiative complements other policies for locating new national and state cemeteries and endorses the combination of policies as appropriate for meeting the burial needs of veterans in all areas of the country. |

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<table>
<thead>
<tr>
<th>Required elements</th>
<th>What the strategy does and does not include</th>
</tr>
</thead>
<tbody>
<tr>
<td>A timeline for implementing such a strategy and cost estimates for using the</td>
<td>• Includes a timeline for establishing eight National Veterans Burial Grounds with space for first</td>
</tr>
<tr>
<td>strategy to establish new burial sites in at least five rural or highly rural</td>
<td>interments under the Rural Initiative by fiscal year 2017, at an estimated cost of about $8.6 million.</td>
</tr>
<tr>
<td>locations</td>
<td></td>
</tr>
<tr>
<td>A review of previous NCA policies regarding establishment of new national</td>
<td>• Reviews previous NCA policies regarding the establishment of new national cemeteries and modifies the</td>
</tr>
<tr>
<td>cemeteries, including whether NCA’s guidelines for establishing national</td>
<td>criteria for establishing national cemeteries in order to better meet the burial needs of veterans.</td>
</tr>
<tr>
<td>cemetery annexes remain valid</td>
<td>• Identifies the various NCA initiatives or strategies—such as the National Cemetery Annex, Urban</td>
</tr>
<tr>
<td></td>
<td>Initiative, and Rural Initiative—and the specific veteran population that each is designed to serve.</td>
</tr>
<tr>
<td></td>
<td>• Endorses the concept of national cemetery annexes as being important to meeting the burial needs of</td>
</tr>
<tr>
<td>Identification of the number of veterans who reside within the 75-mile radius</td>
<td>veterans.</td>
</tr>
<tr>
<td>of a cemetery that is limited to cremations, or who reside within a 75-mile</td>
<td></td>
</tr>
<tr>
<td>radius of a state cemetery that has residency restrictions, and an examination of</td>
<td>• Provides NCA’s rationale for considering veterans who live within 75 miles of a veterans cemetery to</td>
</tr>
<tr>
<td>how many communities that fall within a 75-mile radius have an actual driving</td>
<td>be reasonably served if that cemetery has unoccupied gravesites available for first interments, whether</td>
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<td>distance greater than 75 miles</td>
<td>for casketed or cremated remains.</td>
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<td>• Does not provide statistics on veterans who are served solely by a cremation-only cemetery, veterans</td>
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<td>who are considered reasonably served by state veterans’ cemeteries that have residency requirements, or</td>
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<td>communities within a 75-mile service area that have an actual driving distance greater than 75 miles.</td>
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<td>NCA estimates that the cost to obtain a contractor to perform the requirements for this type of analysis</td>
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<td>would be about $200,000.</td>
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<td>A reassessment of the gaps in service that limit rural and highly rural veteran</td>
<td>• Identifies actions taken to eliminate some gaps in service.</td>
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<td>burial options</td>
<td>• Does not include an analysis of the gaps in service after the current plans for new veterans cemeteries</td>
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<td>and burial grounds are completed.</td>
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<tr>
<td>Data identifying the number of and geographic areas where rural veterans are not</td>
<td>• Does not provide the estimated number of and identify the geographical areas where rural veterans are</td>
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<td>currently served by national or existing state cemeteries and identifying areas</td>
<td>not currently served.</td>
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<td>with the largest unserved populations, broken down into urban, rural, and highly</td>
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<td>rural areas</td>
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<td>Development of a national map showing the locations and number of all unserved</td>
<td>• Does not include a national map showing the locations and estimated number of all unserved veterans.</td>
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<tr>
<td>veterans</td>
<td>• States that, while NCA’s current software would support the development of such a map, its usefulness</td>
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<td>would be extremely limited.</td>
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Source: GAO analysis of Veterans Affairs (VA) data | GAO-14-537

Legend

● = Includes—strategy includes all aspects of the reporting requirement
Θ = Partially includes—strategy includes some aspects of the reporting requirement
○ = Does not include—strategy does not include any aspects of the reporting requirement

*NCA’s criterion for establishing new national cemeteries is that at least 80,000 unserved veterans reside within the service area of the proposed cemetery.
NCA defines a rural area as 25,000 or fewer veterans residing within a 75-mile service area. VA defines highly rural areas as a county or counties with a population of fewer than seven persons per square mile.

VA’s Rural Burial Strategy Includes Four of the Eight Required Elements.

The rural burial strategy includes (1) an assessment of the adequacy of NCA’s policy on establishing new cemeteries; (2) recommendations for an appropriate policy on new national cemeteries to serve rural or highly rural areas; (3) a timeline for the implementation of such a strategy and cost estimates for using the strategy to establish new burial sites in at least five rural or highly rural locations; and (4) a review of previous NCA policies regarding establishment of new national cemeteries, including whether the guidelines of NCA for establishing national cemetery annexes remain valid. For example, the rural burial strategy provides an assessment of the adequacy of NCA’s policy on establishing new cemeteries by:

- illustrating that NCA’s plans and initiatives will establish additional burial options for veterans in many areas of the country, including rural areas;
- illustrating that the five new national cemeteries—based on the criteria of serving areas of the country where at least 80,000 unserved veterans live in the service area of one of the new cemeteries—will serve an estimated 550,000 veterans who lack reasonable access to a burial option; and
- illustrating that the Rural Initiative complements other policies for locating new national and state cemeteries by targeting areas that would not be candidates for a national cemetery and had not yet been addressed by the states: it also includes its timeline for establishing eight National Veterans Burial Grounds under this initiative that will be available for first interments by fiscal year 2017, at an estimated cost of about $8.6 million.27

In addition, the rural burial strategy reviews previous NCA policies for establishing new national cemeteries and states that establishing annexes remains an important strategy for ensuring continued service at cemeteries in which adjacent or contiguous land may not be available in the future. Specifically, the rural burial strategy discusses various policies

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27The $8.6 million includes estimated costs for construction and initial operation and maintenance.
used to determine the conditions under which a new national cemetery will be established. It also discusses various initiatives or strategies—such as the National Cemetery Annex, Urban Initiative, and Rural Initiative. The rural burial strategy does not specifically mention plans for future annexes or whether guidelines for establishing annexes remain valid. However, according to NCA officials, they would consider the establishment of an annex as a potential step to continuing service at currently operational national cemeteries.

VA's Rural Burial Strategy Partially Includes Two of the Eight Required Elements.

The rural burial strategy partially includes (1) an identification of the number of veterans who reside within the 75-mile radius of a cemetery that is limited to cremations or within a 75-mile radius of a state cemetery that has residency restrictions, and an examination of how many communities that fall under a 75-mile radius have an actual driving distance greater than 75 miles; and (2) a reassessment of the gaps in service that limit rural and highly rural veteran burial options. According to the rural burial strategy, NCA considers all veterans who are served by a burial option in a veterans cemetery to be equally served and views them to have equal opportunity for the delivery of all burial benefits administered by NCA. Thus, NCA does not currently maintain separate statistics on those veterans served solely by a cremation-only cemetery, nor does it plan to do so in the future. In addition, NCA does not maintain or plan to maintain separate statistics on veterans who are considered reasonably served by state veterans cemeteries that have residency requirements or communities within a 75-mile service area that have an actual driving distance greater than 75 miles. According to the rural burial strategy, NCA takes these restrictions into account in analyzing unserved areas of the country as potential sites for new national or state veterans cemeteries. Similarly, while NCA has addressed a gap in service by identifying eight communities that are not currently considered reasonably served through the Rural Initiative, VA’s rural burial strategy does not include an analysis of the gaps in service that would remain after the current plans for new veterans cemeteries and burial grounds are completed. While NCA does not have a specific plan to conduct such an analysis, officials told us that, as part of their larger mission to provide

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28The service area of a veterans cemetery is defined as the 75-mile geographic radius around the cemetery’s location. There are, however, factors such as geographic barriers or the lack of connecting highway systems that can result in longer driving distances to the cemetery.
burial access to veterans, regardless of where they reside, they continually reexamine the availability of burial options and whether changes are necessary. Still, standards for internal controls emphasize the need for federal agencies to establish plans to help ensure that goals and objectives can be met, including compliance with applicable laws and regulations.

<table>
<thead>
<tr>
<th>VA's Rural Burial Strategy Does Not Include Two of the Eight Required Elements.</th>
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<td>The rural burial strategy does not include (1) data identifying the number of unserved rural veterans, the geographic areas where they reside, and the geographic areas with the largest unserved populations, broken down by veterans residing in urban versus rural and highly rural areas; or (2) a national map showing the locations and number of all unserved veterans. Here again, as with the two elements that were partially included in the strategy, NCA officials stated that NCA does not have plans to address these requirements.</td>
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The rural burial strategy does not identify the estimated number of and geographic areas where rural veterans are not currently served or the geographic areas where unserved rural veterans reside. For the purposes of establishing a policy specifically designed to serve rural veterans, NCA determines areas of the country to be either rural or not rural based on the estimated number of veterans that reside within the service area of a veterans cemetery. Consequently, according to the VA’s rural burial strategy, an unlimited number of potentially rural service areas could be constructed simply by moving the focal point of a circle with a 75-mile radius from one town to another. However, according to the rural burial strategy, NCA currently does not have the capacity to conduct this type of analysis without engaging the services of a contractor, which it estimates would cost $200,000. According to NCA officials, in December 2013, NCA started to develop a database that identifies all of the counties within the United States that NCA considers to have reasonable access to a burial option in a veterans cemetery. NCA officials stated that once this database is created, it will serve as the basis for NCA’s calculation of the percentage of the veteran population that is served by a veterans cemetery.

In addition, the rural burial strategy explains that, while VA’s current software would support the development of a national map indicating the location and service areas of national and state cemeteries, the
usefulness of such a map would be limited. Specifically, according to VA, while the map would show broad areas of the country in which veterans may not have reasonable access to a burial option, it would not provide information on whether those areas are urban or rural. The rural burial strategy concludes that a national map would not enhance NCA’s ability to identify unserved rural areas as potential sites for increased access to burial options beyond the county- and state-level analyses NCA currently performs. Furthermore, NCA officials told us they believed that creating a national map would be difficult and time consuming. However, a national map would show broad areas of the country in which veterans may not have reasonable access to a burial option.

While VA has demonstrated some progress in addressing the legislative requirements related to its rural burial strategy, two reporting requirements were partially included and two reporting elements were not included. Without first developing more precise data on the number of unserved veterans and their geographical location, NCA cannot perform the analyses necessary to determine the effect on veterans of being served solely by a cremation-only cemetery, residing within the service area of a state veterans cemetery with residency restrictions, having actual driving distances of greater than 75 miles from their residence to a veterans cemetery, or identify gaps in service. Consequently, NCA does not have precise information to inform its decisions related to the placement of new veterans cemeteries. In addition, NCA does not plan further actions in these areas. That is, it does not plan to further develop data on the number of unserved rural veterans, or to create a national map, citing the challenges that these efforts would present. Without addressing all legislative requirements from Public Law 113-6, VA will not be able to provide Congress with a more comprehensive picture to inform budget, policy, and planning decisions concerning burial benefits for veterans residing in both urban and rural areas.

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29. VA uses ArcGIS ArcMap 10, a commercially available software package, to analyze the service areas of existing cemeteries on a state-by-state basis.
We found that NCA’s strategic planning process generally follows leading practices for federal strategic planning (see table 4).30 Our prior work has shown that strategic planning is the foundation for defining what an agency seeks to accomplish, identifying the strategies it will use to achieve desired results, and determining how well it will succeed in reaching results-oriented goals and achieving objectives. See appendix IV for a description of the six leading practices.

<table>
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<tr>
<th>Leading practices for federal strategic planning</th>
<th>Aspects of NCA’s process</th>
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<tr>
<td>Define the mission and goals</td>
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<tr>
<td>• NCA’s strategic plan defines its mission of ensuring that the burial needs of veterans and their eligible family members are met through the strategies identified to provide burial options, including the Rural Initiative. It also identifies the strategic goal associated with providing reasonable access to burial options.</td>
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<td>Define strategies that address management challenges and identify resources needed to achieve goals</td>
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<td>• NCA’s strategic plan identifies the approaches that NCA uses to (1) ensure that viable burial options continue to exist in areas where options currently exist and (2) increase the percentage of the veteran population that has reasonable access to a burial option.</td>
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<td>• NCA’s budget submission provides detailed cost information related to construction costs for new national cemeteries and columbaria as well as general cost information for the establishment of National Veterans Burial Grounds. More detailed cost information on the burial grounds is presented in the rural burial strategy.</td>
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<td>Ensure leadership involvement and accountability</td>
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<td>• NCA’s strategic plan states that overall responsibility for implementing the strategy rests with NCA.</td>
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<td>• NCA’s progress report identifies the specific organizations that are responsible for major initiatives. For example, it notes that the Deputy Under Secretary for Management is responsible for implementing the rural veterans policy by establishing eight burial locations.</td>
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30 We identified these six practices by reviewing several sources of information, including GPRA requirements, OMB guidance, and our prior body of work.
### Leading practices for federal strategic planning

#### Aspects of NCA’s process

<table>
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<tr>
<th>Practice</th>
<th>Description</th>
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<td><strong>Involving stakeholders</strong></td>
<td>- NCA’s strategic plan and rural burial strategy discuss the involvement of both internal and external stakeholders. For example, the plan was developed with input from all levels of NCA, including representatives from the Central Office, the Memorial Service Networks, and the national cemeteries. Similarly, the strategic plan recognizes the role of states in increasing access to burial options and of funeral directors in helping to increase awareness of benefits to veterans for VA’s Burial Program.</td>
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<td><strong>Coordinate with other federal agencies</strong></td>
<td>- NCA’s strategic plan incorporates DOD and the military departments as part of their list of stakeholders for its burial program. - VA and the Army have a Joint Working Group that provides for senior leaders at VA’s National Cemetery Administration and the Army National Military Cemeteries to meet and collectively identify potential improvements, share lessons learned, avoid potential duplication, and develop solutions to common problems.</td>
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<tr>
<td><strong>Develop and use performance measures</strong></td>
<td>- NCA’s strategic plan includes a variety of performance measures to improve burial access as well as specific strategies to improve burial access such as establishing five new urban satellite facilities. - VA’s Performance and Accountability Report includes measures on NCA’s burial benefits such as the percentage of veterans served by a burial option within a reasonable distance (75 miles) of their residence.</td>
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Source: GAO analysis of National Cemetery Administration (NCA) data. | GAO-14-537

Legend
- ● = Follows—strategy follows all aspects of the leading practice
- Θ = Partially follows—strategy follows some aspects of the leading practice
- ○ = Does not follow—strategy does not follow aspects of the leading practice

*Twelve of the 14 cemeteries managed by the Department of the Interior are closed, and, according to NCA officials, the officials do not coordinate with the Department of the Interior because they believe the 2 open cemeteries would not affect their decisions regarding the locations of veterans cemeteries.

### Conclusions

VA has demonstrated its commitment to providing veterans with a final resting place through the expansion of the national cemetery system, the Veterans Cemetery Grant Program, and changes to its policies concerning the establishment of new national cemeteries. When making decisions on where to locate new veterans cemeteries, it is important for NCA to have the most precise information possible concerning the estimated number and location of veterans who do not reside within the service area of an existing cemetery. Such information is critical to ensure that NCA’s investment in cemeteries provides benefits to the greatest number of veterans possible and to help NCA manage the resources available to establish new cemeteries or provide grants to state cemeteries. With advances in mapping software and the ready availability...
of population data at the census tract level, using this information would enhance NCA’s management of the national cemetery program by enabling NCA to make better-informed decisions concerning where to locate new national cemeteries and what awards to grant to state and tribal government veterans cemeteries. Further, while NCA has demonstrated some progress in addressing the legislative requirements, several requirements still need attention. Specifically, two of the requirements were partially included in the strategy and two were not included. Still, VA does not have a plan in place to address these omissions, although federal internal control standards state that agencies should establish plans to help ensure that goals and objectives can be met, including compliance with applicable laws and regulations. Without addressing all the legislative requirements from Public Law 113-6, VA will be unable to provide Congress with a more comprehensive picture to inform budget, policy, and planning decisions concerning burial benefits for veterans residing in both urban and rural areas. Developing the capability to utilize census tract data would better position NCA to address these requirements and provide Congress with the necessary data to inform key oversight decisions.

To better enable NCA to meet its mission of providing reasonable access to burial options at veterans cemeteries, we recommend that the Secretary of Veterans Affairs direct the Under Secretary for Memorial Affairs to take the following two actions:

- Use the capability of NCA’s existing software to estimate the served and unserved veteran populations using census tract data.
- Develop and implement a plan to fully address all the elements required by the Consolidated and Further Continuing Appropriations Act, 2013, in VA’s Rural Veteran Burial Access Strategy, including the estimated number and location of unserved veterans and a national map of cemeteries.

We provided a draft of this report to VA for review and comment. In written comments, VA did not concur with the first recommendation and concurred with the report’s second recommendation. VA’s comments are summarized below and reprinted in appendix V.

In its comments, VA non-concurred with the recommendation to use census tract data when estimating the number and location of served and unserved veteran populations citing, among other reasons, that
1) statements in the report indicate that NCA already identifies the number and location of served and unserved veterans with an acceptable degree of precision using its county-level approach;

2) the analysis did not demonstrate that the census tract approach would result in different outcomes regarding the location of national or state cemeteries or National Veterans Burial Grounds;

3) its county-level methodology is a proven approach for identifying the best areas for new veterans cemeteries, and noted that its methodology has twice been reviewed by VA’s Office of Inspector General; and

4) implementing the use of census tract data would be difficult, more labor intensive, and require acquisition of new software.

We disagree with VA's assessment. With respect to VA’s statement that the report indicates that NCA’s current approach identifies the number and location of served and unserved veterans with an acceptable degree of precision, we agree that VA’s current methodology provides a reasonable estimate of the percentage of the served veteran population (i.e., the percentage of the population of veterans who have reasonable access to a burial option at a veterans cemetery). However, as the report outlines, NCA’s current methodology does not reasonably estimate the number and location of unserved veterans, because VA’s use of a county-level methodology is inconsistent with NCA’s definition of reasonable access. Specifically, NCA’s policy states that veterans have reasonable access when there is a veterans cemetery within 75 miles of their residence. Under VA’s current methodology, though, NCA considers some veterans to be served who do not reside within the service area of a veterans cemetery, because NCA considers the entire county in which they reside to be served—regardless of how many veterans may reside outside of a cemetery’s service area. Conversely, NCA considers some veterans who reside within the service area of a veterans cemetery to be unserved because NCA, in certain circumstances, considers the entire county in which they reside to be unserved—regardless of whether any veterans in those counties actually live within a cemetery’s service area. As noted in our report, in response to VA’s comments, we added an additional example illustrating the inconsistencies between NCA’s methodology and NCA’s definition of reasonable access as well as an example of the effect that using census tract data can have at the state level. For example, in Riverside County, California, NCA considers all veterans within the county to be served, including the veterans in the city of Blythe, who are located approximately 165 miles (more than twice the
NCA-defined reasonable service distance) from the cemetery in Riverside, California (see fig. 9). On a larger scale, NCA estimates that more than 88,500 veterans in California reside in counties that are considered unserved. However, using census tract data, we found that approximately 156,500 veterans are unserved—more than 75 percent more than the number of unserved veterans identified by NCA (see fig. 9).

With respect to VA’s comment that the use of census tract data would not result in different locations being recommended for establishing new veterans cemeteries, our analysis showed that using census tract data had a significant effect on the location of the veteran population considered unserved. As stated in the report, the unserved veteran population within the 75-mile service area of a proposed veterans cemetery is a key factor in the selection process for the location of future veterans cemeteries. Accordingly, we recommended that VA use census tract data, which would allow VA to develop better estimates of the number and locations of unserved veterans and more fully inform its decisions about the placement of new veterans cemeteries. For example, as we reported, in Central California, the census tract analysis identifies more than 52,000 veterans who are unserved by a burial option, as opposed to the approximately 13,000 veterans that VA identified as unserved. In response to VA’s comment, we have added additional information to illustrate how the use of census tract data could influence decisions related to the location of future veterans cemeteries. Specifically, we note that the size of the unserved veteran population that we identified in Central California—more than 52,000—is larger than the unserved veteran population found within 75 miles of any of the new state cemeteries on VA’s priority list of pending state and tribal government cemetery construction grants for fiscal years 2013 and 2014, including the six state cemeteries that are planned to be open by the end of fiscal year 2017. In addition, we also note that while NCA is in the process of establishing 5 new national cemeteries by the end of fiscal year 2017 in areas of the country where it considered 80,000 or more veterans to be unserved, according to data from an independent study of VA’s Burial Benefits Program in 2008, based on census tract data, only two of these areas had an unserved veteran population of 80,000 or more.

With respect to VA’s comment that its county-level methodology is a proven approach that has twice been reviewed by VA’s Office of Inspector General, our report illustrates the progress that NCA has made in providing burial options to an increasing number of veterans throughout the United States and describes the approach that NCA uses to estimate
the percentage of the veteran population that is served. However, the report also identified concerns with the location of the veteran population that VA’s county-level methodology considers unserved. We also discussed the findings from the 1999 Office of the Inspector General report and reiterate that while, the Inspector General’s report did conclude that NCA personnel generally made sound decisions and accurate calculations, as we discuss in our report, the Inspector General’s report also noted some errors and questionable decisions that had been made during the computation of the percentage of veteran population served. In response to VA’s comment, we have added additional information concerning the objectives of the 1999 Office of Inspector General report and the 2014 Office of Inspector General report. Specifically, we note that the objective of the 1999 Office of Inspector General audit was to validate the computations made by NCA and not to evaluate NCA’s approach for measuring the percentage of the veteran population served. In addition, a 2014 Office of Inspector General report focused on VA’s Rural Veterans Burial Initiative and, while the report did not take issue with NCA’s approach, evaluating alternative methodologies for measuring the percentage of the veteran population served was not part of the Inspector General’s report objectives. As we discussed in our report, a 2008 report on an independent study of VA’s Burial Benefits Program concluded that VA should adopt the use of census tracts for identifying the number and location of served and unserved veterans.

With respect to VA’s comment that NCA staff are familiar with the current county-level methodology and this approach is understood by NCA stakeholders, we were able to perform the census tract data analysis with minimal effort once the basic information concerning cemetery location was entered into the mapping software. In addition, as VA points out in its comments, there are considerably more census tracts in the United States than there are counties. As we discuss in the report, the larger number of census tracts is partially responsible for the increased precision that the use of census tract data offers. Further, while VA expressed concerns that census tracts continue to evolve and will require regular recalculation of data, VA provided no evidence that recalculations will have to be done more frequently than under its current approach. In response to VA’s comment, we added additional information detailing our reasons for concluding that VA’s current mapping software, ArcGIS, has the capability to perform analyses of census tract data. Specifically, we note that (1) Census Bureau geographic data is in ArcGIS format, (2) the Census Bureau has published instructions on its website on how to use ArcGIS to analyze census data at the census tract level and (3) the software company that developed ArcGIS confirmed that ArcGIS could be
used to perform the census tract analysis. Therefore, we believe that VA would not have to acquire new software to implement the recommendation provided that NCA obtains the appropriate geographic information system data to identify the location of each census tract and Census Bureau data concerning veteran populations at the census tract level. Consequently, we continue to believe that our recommendation that NCA use the capability of its existing software to estimate the served and unserved veteran populations using census tract data remains valid.

Finally, VA concurred with the recommendation to develop and implement a plan to fully address all the elements required by the Consolidated and Furthing Continuing Appropriations Act, 2013, in VA’s Rural Veteran Burial Access Strategy when it is delivered to Congress and stated that it will address the required elements that the report identified as either partially or completely not addressed. Specifically, NCA is currently developing a methodology to identify veterans living in rural areas as well as creating a database, which will identify each county in the country as either served or unserved by a veterans cemetery and enable analysis of veteran demographics at the county, state, regional, and national levels. VA expects to complete this work and meet these remaining reporting elements by the end of the second quarter of fiscal year 2015. We believe that the steps VA outlines, if completed as described, would meet the intent of the recommendation.

We are sending copies of this report to interested congressional committees and the Secretary of Veterans Affairs. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-4523 or 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 members who made key contributions to this report are listed in appendix VI.

Brian J. Lepore
Director
Defense Capabilities and Management
Appendix I: Assessments of Additional Factors

In addition to its interest in the VA's rural burial strategy, in report language accompanying the Military Construction, Veterans Affairs, and Related Agencies Appropriations Bill, 2013, the House Committee on Appropriations had expressed interest in several other areas related to national cemeteries. This appendix presents the results of analyses we conducted related to the topics of (1) the effect of cremation-only cemeteries on access to burial options, (2) the effect of state veterans cemeteries with residency restrictions on access to burial options, and (3) differences in access to burial options for veterans living in urban and rural areas.

Cremation-only Cemeteries Do Not Currently Limit Burial Options

Our analysis of the service areas of the 20 national cemeteries that currently offer cremation as their only option for first interments shows that other burial options are generally available at other nearby national and state cemeteries. Specifically, we found that for 14 of the 20 cremation-only cemeteries, veterans living within their service areas had casketed burial available at another nearby cemetery. For example, in the case of Fort Leavenworth National Cemetery, which is open for cremation only, Leavenworth National Cemetery is located approximately 5 miles away and is open for casketed burials. In addition, we found that for another 5 of the cremation-only cemeteries, more than 50 percent of their service areas also fell within the service area of other veterans cemeteries that offered casketed burials. For example, in the case of Woodlawn National Cemetery, New York, the service area of Bath National Cemetery covers approximately 75 percent of its service area and offer burials for casketed remains.

There was however, one instance where there were no other veterans cemeteries that offered casketed burial options to at least half of the service area of a cremation only cemetery. Specifically, Eagle Point National Cemetery, Oregon, which is open for both casketed and cremated remains, is the only other veterans cemetery located near the service area of Roseburg National Cemetery, which is open for cremation only and offers casketed burials to approximately 40 percent of Roseburg National Cemetery’s service area.

Our analysis of the service areas of the 32 VA-funded state veterans cemeteries, located in the 15 states that have residency restrictions, shows that residency restrictions do not generally result in veterans in neighboring states being deprived of burial options or incorrectly counted as being served by a state cemetery with residency restrictions.
Specifically, we found that the service areas for 10 of these cemeteries did not extend into neighboring states. Similarly, there were 17 cemeteries where the service area extends into neighboring states and the portions of the service area that were in neighboring states were also within the service areas of other national or state cemeteries. Consequently the residency restrictions at these 27 cemeteries neither limited the burial options of veterans living in neighboring states nor had the potential for incorrectly including veterans from other states as served. We did, however, identify 5 cemeteries where the service areas would extend into neighboring states and those portions of the service areas in the neighboring states were not within the service area of another veterans cemetery. Consequently, there were approximately 60,000 veterans living in neighboring states that were potentially excluded from burial services by the residency restrictions. Additionally, National Cemetery Administration (NCA) officials told us that residency restrictions are considered when VA estimates the percentage of veterans served; therefore these veterans would not be counted as served for purposes of estimating the percentage of veterans served.

**Veterans Not Living within 75 Miles of a Cemetery Reside in both Urban and Rural Areas**

Although the Census Bureau and NCA use different definitions for what constitutes a rural area, the basis of both definitions focuses on population density. Specifically, the Census Bureau identifies two types of urban areas. Urbanized areas are defined as densely developed territory that contains 50,000 or more people, and urban clusters are defined as densely developed territory that has at least 2,500 people but fewer than 50,000 people. All territories that are not considered either an urbanized area or an urban cluster are considered to be rural areas. NCA, on the other hand, defined rural as it relates to the service area—a 75-mile radius around a proposed cemetery location and the estimated veteran population within that area. Specifically, NCA considers an area rural if the service area of a proposed cemetery has 25,000 or fewer veterans residing in that service area that do not currently reside within the service area of an existing cemetery. For the purposes of this report, when we discuss veterans living in rural areas, we are using the Census Bureau definition of rural because it provides a consistent designation based on population rather than being dependent on the location of a veterans cemetery and the unserved population within 75 miles of that cemetery.

The population of veterans not residing within 75 miles of a veterans cemetery includes veterans in both urban areas and rural areas. Specifically, we analyzed Census Bureau data to identify the percentage of the population living in urban areas and the percentage of the
population living in rural areas by county. We also used NCA information on the location of open national and state veterans cemeteries to identify the percentage of each county that lies within the service areas of these cemeteries. Finally, we used VA’s estimates of veteran population by county for fiscal year 2017 to estimate the number of veterans not living within the 75-mile service area of a veterans cemetery. As shown in figure 11, while the percentage of veterans residing in rural areas that are not served by a veterans cemetery is higher than the percentage of veterans residing in urban areas that are not served by a veterans cemetery (15.00% versus 7.90%), the total estimated number of veterans living in urban areas that are not served by a veterans cemetery is higher (1,239,797 versus 722,768).

Figure 11: Distribution in Rural and Urban Areas of Veteran Population

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Appendix II: Objectives, Scope, and Methodology

To evaluate the Department of Veterans Affairs’ (VA) strategy for providing veterans that live in rural areas with access to burial services in national and state veterans cemeteries, we determined to what extent (1) the National Cemetery Administration (NCA) has developed a methodology to identify whether veterans have reasonable access to burial options and to support decisions about future cemetery locations,¹ (2) VA’s strategy to serve the burial needs of veterans residing in rural areas (rural burial strategy) included the eight elements mandated by the law,² and (3) NCA’s strategic planning process was consistent with strategic planning leading practices.

To determine the extent to which NCA’s methodology for identifying whether veterans have reasonable access to burial options provides appropriate information to support decisions, we reviewed VA’s policies and existing guidance related to VA’s Burial Program as well as VA’s methodology for determining the percentage of the veteran population served by a veterans cemetery, to understand the basis for VA’s estimate. In addition, using mapping software, estimated veteran population data from VA, and estimated veteran population data from the Census Bureau we computed our own estimates of the veteran population served at the end of fiscal year 2017, using VA’s methodology as well as considering three alternative methodologies. Specifically, we used mapping software to create a national map showing the service areas of all open veterans cemeteries as well as the percentage of each county and the percentage of each census tract that fell within the service area of an open cemetery. We then used the percentage of each county’s area that fell within the service area of an open cemetery in conjunction with VA’s estimated veteran population to estimate the percentage of veteran population served in the United States in two separate estimates. First, as in NCA’s methodology, we estimated the percentage of veterans served by identifying all of the counties in the United States where our analysis showed that 50 percent or more of the county’s area fell within the service area of an open veterans cemetery. Then we totaled NCA’s estimated veteran population for those counties and divided that number by NCA’s estimated veteran population for the United States to calculate the estimated percentage of veterans served in the United States.

¹Within VA, NCA is the organization that is responsible for managing the National Cemetery Program.

Second, we estimated the percentage of veterans served by multiplying the percentage of the area of each county in the United States that fell within the service area of an open veterans cemetery by NCA’s estimated veteran population for each county to produce an estimate of the veteran population served in each county. The results for each county were then totaled to provide an estimate of the veteran population served for the United States and divided by NCA’s estimated veteran population for the United States to calculate the estimated percentage of veterans served in the United States. Third, we also estimated the veteran population served by multiplying the statewide percentage of the area of each census tract within the United States that fell within the service area of an open cemetery by the NCA estimated veteran population for each state to produce an estimate of the veteran population served in each census tract. The results for each census tract were then totaled to provide an estimate of the veteran population served for the United States, and that number was divided by NCA’s estimated veteran population for the United States to calculate the estimated percentage of veterans served in the United States. We then compared the county estimates from these three estimates to identify examples of counties and areas of the country where methodologies yielded different results on both the estimated number and location of the veterans considered unserved.

To assess the reliability of NCA’s estimated veteran population data, we (1) reviewed existing information about the system that generated the data and (2) interviewed agency officials knowledgeable about the systems and information. We found that NCA’s data were sufficiently reliable for the purpose of providing context and information as well as demonstrating how NCA estimates the number of served and unserved veterans as well as their location. To assess the reliability of the Census Bureau’s estimated veteran population data and estimated percentage of population residing in urbanized areas and urban clusters, we reviewed existing documentation about the system that generated these data. We found the Census Bureau data to be sufficiently reliable for the purposes of providing context and information as well as demonstrating how alternative methods for estimating the number and location of served and unserved veterans could be developed.

To determine the extent to which VA’s rural burial strategy included the eight elements mandated by the law, we obtained and reviewed VA’s rural burial strategy and compared it to the eight elements in the law. We developed a scorecard methodology based on the Consolidated and Continuing Appropriations Act of Fiscal Year 2013 legislative requirements, which enabled us to compare the requirements to VA’s
rural burial strategy. Two analysts independently assessed the VA rural burial strategy using the scorecard and assigned a rating to each of the elements from one of three potential ratings: “included,” “partially included,” or “does not include.” We considered an element to be “included” if VA provided evidence that it addressed all aspects of the legislative requirement in its rural burial strategy. We considered the element to be “partially included” if VA provided evidence that it addressed some, but not all aspects of the element, and “not included” if VA did not address any aspect of the element in its rural burial strategy. The independent assessments completed by the two analysts were in agreement in the majority of the cases. When different initial ratings were given by the analysts, the analysts discussed and resolved differences in their respective scorecard analyses. The senior analyst also validated the results. On the basis of those discussions, a consolidated final scorecard was developed.

To determine the extent to which NCA’s strategic planning process was consistent with strategic planning leading practices, we analyzed the rural burial strategy and NCA’s strategic plan and compared them to leading practices that we had previously identified as being relevant to federal strategic planning. We identified the leading practices by reviewing several sources of information, such as the Government Performance and Results Act of 1993 (GPRA) and the GPRA Modernization Act of 2010; and guidance from the Office of Management and Budget (OMB).

Additionally, we reviewed our past reports for information related to

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3GAO, Veteran-Owned Small Businesses: Planning and Data System for VA’s Verification Program Need Improvement, GAO-13-95 (Washington, D.C.: Jan. 14, 2013). These six practices were selected from among GPRA and OMB guidance related to developing department or agency-wide strategic plans, which we have found can serve as leading practices for strategic planning at lower levels within federal agencies.

4Pub. L. No. 103-62, 107 Stat. 285 (1993); Pub. L. No. 111-352, 124 Stat. 3866 (2011). GPRAMA provides federal agencies with an approach to focusing on results and improving government performance by, among other things, developing strategic plans. Examples of GPRAMA plan components include a mission statement; general goals and objectives, including outcome-oriented goals; and a description of how the goals and objectives are to be achieved, including the processes and resources required. Although GPRA’s requirements apply at the agency level, based on our review of related GAO products, OMB guidance, and studies by the National Academy of Public Administration and the Urban Institute, we have previously found that these requirements can serve as leading practices in lower levels within an organization, such as with individual programs or initiatives. OMB Circular No. A-11, Preparation, Submission, and Execution of the Budget, August 2012.
leading practices for strategic planning. These leading practices were used in consultation with GAO’s Applied Research and Methods Team and Strategic Issues Teams. We considered a leading practice to be “followed” if the rural burial strategy or NCA’s strategic plan provided evidence concerning the key characteristics of the leading practice. We considered the element to be “partially followed” if the rural burial strategy or NCA’s strategic plan provided evidence concerning some of the key characteristics of the leading practice, and “not followed” if the rural burial strategy or NCA’s strategic plan did not provide evidence concerning the key characteristics of the leading practice.

Finally, as part of our analysis, we assessed the effect on veterans’ access to burial options of having access to cemeteries that are only open for cremated remains or state cemeteries with residency restrictions. Specifically, we compared the service area of each cemetery that is open only for cremated remains to the service areas of nearby veterans cemeteries to identify the extent to which the service areas overlap. Similarly, we compared the service areas of state cemeteries with residency restrictions to the service areas of nearby veterans cemeteries in adjacent states to determine the extent to which the service areas overlapped. In addition, to assess whether there were disparities in access to burial options for veterans living in rural areas compared with those living in urban areas, we obtained Census Bureau data concerning the percentage of the population of each county that resides in urbanized areas and urban clusters and multiplied these percentages by the estimated veteran population for each county. The results of these assessments can be found in appendix I.

We conducted this performance audit from October 2013 to September 2014 in accordance with generally accepted government auditing

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6For the purpose of our analyses, we used the Census Bureau Definition of rural which states all territories that are not considered either an urbanized area or an urban cluster are considered to be rural areas.
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 provides a reasonable basis for our findings and conclusions based on our audit objectives.
Appendix III: Printer Friendly Version of National Service Area Map

Interactivity instructions: Click on a bulleted area to see more information. See appendix for the non-interactive, printer-friendly version.

Source: GAO analysis of Veterans Affairs (VA) cemetery lists, VetPop2011 estimated veteran populations, and United States Census Bureau geographic information system data | GAO-14-537
The NCA considers the veteran population of Skagit County (over 12,000) to be served because the population center is within the service area of Tahoma National Cemetery.

The NCA considers the veteran population of Chelan County (over 5,400) to be unserved because less than half of the area of Chelan County is within the service area of Tahoma National Cemetery.

Oklahoma County
- Total veteran population: 55,596
- Percentage of county area within service area of Fort Sill: 40.37%
- Estimated veteran population served: 22,446
- Percentage of county population within service area of Fort Sill: 73.10%
- Estimated veteran population served: 40,641
- Estimated understatement of veteran population served: 18,195

Source: GAO analysis of Veterans Affairs (VA) data | GAO-14-537
Appendix III: Printer Friendly Version of National Service Area Map

Humboldt County
- Total veteran population: 9,296
- Percentage of county area within service area of Northern California Veterans Cemetery: 49.27%
- Estimated veteran population served: 4,580
- Percentage of county population within service area of Northern California Veterans Cemetery: 13.90%
- Estimated veteran population served: 1,292
- Estimated overstatement of veteran population served: 3,288

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Appendix III: Printer Friendly Version of National Service Area Map

<table>
<thead>
<tr>
<th>County</th>
<th>NCA methodology</th>
<th>Census tract methodology</th>
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<td>Unserved</td>
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<tr>
<td>Oswego</td>
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<td>St. Lawrence</td>
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<td><strong>Total</strong></td>
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<td><strong>57,661</strong></td>
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Source: GAO analysis of Veterans Affairs (VA) data | GAO-14-537
Appendix III: Printer Friendly Version of National Service Area Map

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<th>County</th>
<th>NCA methodology</th>
<th>Census tract methodology</th>
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<td>Served</td>
<td>Unserved</td>
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<tr>
<td>Fresno</td>
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<td>Kings</td>
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<td>Madera</td>
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<td>Tulare</td>
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<tr>
<td>Total</td>
<td>64,350</td>
<td>13,199</td>
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</table>

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Appendix III: Printer Friendly Version of National Service Area Map

Western New York
Woodlawn National Cemetery, which is open for first interments of cremated remains only, is located approximately 30 to 35 miles from Bath National Cemetery, which is open for first interments of both casked and cremated remains.

Source: GAO analysis of Veterans Affairs (VA) data. | GAO-14-537
Appendix IV: Leading Practices for Federal Strategic Planning

In 1993, Congress enacted Government Performance and Results Act of 1993 (GPRA) to improve the efficiency and accountability of federal programs, among other purposes, and established a system for agencies to set goals for program performance and to measure results. GPRA, as amended by the GPRA Modernization Act of 2010 (GPRAMA), requires, among other things, that federal agencies develop long-term strategic plans.¹ The Office of Management and Budget (OMB) provides guidance to federal executive-branch agencies on how to prepare their strategic plans in accordance with GPRA requirements.² Federal departments and agencies must comply with GPRA requirements and are to follow associated OMB guidance in developing their department- or agency-wide strategic plans. Although GPRA’s requirements apply at the agency level, based on our review of related GAO products, OMB guidance, and studies by the National Academy of Public Administration and the Urban Institute, we have previously found that these requirements can serve as leading practices in lower levels within an organization, such as with individual programs or initiatives.³ Our prior body of work has also identified six leading practices to enhance agencies’ strategic plans.⁴ Taken together, the strategic planning elements established under GPRA and associated OMB guidance, and practices that we have identified, provide a framework of leading practices for federal strategic planning. See table 5 for selected leading practices for federal strategic planning.⁵

⁵GAO-13-95, GAO-12-77.
## Table 5: Leading Practices for Federal Strategic Planning

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<thead>
<tr>
<th>Leading practice</th>
<th>Characteristics</th>
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<tr>
<td>Define the mission and goals</td>
<td>A mission statement explains why the agency—or a specific program—exists, what it does, and how it does it. Strategic goals explain the purpose of agency programs and the results—including outcomes—that they intend to achieve.</td>
</tr>
<tr>
<td>Define strategies that address management challenges and identify resources needed to achieve goals</td>
<td>Strategies should address management challenges that threaten an agency’s ability to meet its long-term strategic goals. Strategies should include a description of the resources needed to meet established goals.</td>
</tr>
<tr>
<td>Ensure leadership involvement and accountability</td>
<td>Only an agency’s senior leadership can ensure that strategic planning becomes the basis for day-to-day operations. Successful organizations use formal and informal practices to hold managers accountable and create incentives for working to achieve the agency’s goals.</td>
</tr>
<tr>
<td>Involve stakeholders</td>
<td>Successful organizations involve stakeholders in developing the organization’s mission, goals, and strategies to help ensure that the organization targets the highest priorities.</td>
</tr>
<tr>
<td>Coordinate with other federal agencies</td>
<td>Agencies can coordinate in defining their mission, goals, and strategies to ensure that programs contributing to similar results are mutually reinforcing and that they employ federal funds efficiently.</td>
</tr>
<tr>
<td>Develop and use performance measures</td>
<td>Performance measures allow an agency to track the progress it is making toward its mission and goals, provide managers information on which to base their organizational and management decisions, and create powerful incentives to influence organizational and individual behavior.</td>
</tr>
</tbody>
</table>

Source: GAO. | GAO-14-537
Appendix V: Comments from the Department of Veterans Affairs

DEPARTMENT OF VETERANS AFFAIRS
Washington DC 20420

August 21, 2014

Mr. Brian J. Lepore
Director, Defense Capabilities and Management
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Lepore:

The Department of Veterans Affairs (VA) has reviewed the Government Accountability Office’s (GAO) draft report, "VETERANS AFFAIRS: Data Needed to Help Improve Decisions Concerning Veterans’ Access to Burial Options" (GAO-14-537). VA generally agrees with GAO’s conclusions and concurs with Recommendation 2, and non-concurs with Recommendation 1 to the Department.

The enclosure specifically addresses GAO’s recommendations in the draft report. VA appreciates the opportunity to comment on your draft report.

Sincerely,

Jose D. Rios
Chief of Staff
Appendix V: Comments from the Department of Veterans Affairs

Department of Veterans Affairs (VA) Response to
“VETERANS AFFAIRS: DATA NEEDED TO HELP IMPROVE DECISIONS CONCERNING VETERANS’ ACCESS TO BURIAL OPTIONS”
(GAO-14-537)

GAO Recommendation: GAO recommends that the Secretary of Veterans Affairs direct the Under Secretary for Memorial Affairs to take the following two actions:

Recommendation 1: Use the capability of its existing software to estimate the served and unserved veteran populations using census tract data.

VA Comment: Non-concur. GAO states that use of census tract data “would allow NCA to identify the number and location of both veterans with and without reasonable access to burial options more precisely” (emphasis added), which is critical information for implementing NCA’s criteria for establishing veterans cemeteries.” GAO’s report also presents three different methodologies, including NCA’s current methodology, for estimating the percent of Veterans served by a burial option. As noted in the report, “these estimates are closely grouped, suggesting that more than one methodology for estimating the veteran population served could be used to provide a reasonable estimate...” Each of the three approaches requires judgment calls regarding the portion of a county or tract covered by a cemetery’s service area; consequently, there is a degree of discretion in population calculations derived from any of the methodologies. GAO’s comments indicate that NCA already identifies the number and location of served and unserved Veterans with an acceptable degree of precision using its county-level approach.

When comparing the use of census tracts to counties in percentage terms, GAO’s estimate of the percent of the Veteran population served by a burial option is slightly higher than the estimate prepared using NCA’s methodology (a difference of 0.77 percent). While the use of census tracts may yield more precise information on the number of Veterans who live within the service areas of individual cemeteries, GAO’s analysis does not demonstrate that this approach would result in different outcomes regarding the location of national or state cemeteries or National Veterans Burial Grounds (NVBG).

VA’s county-level methodology is a proven approach for identifying the best areas for new national and state Veterans cemeteries and National Veterans Burial Grounds (NVBG). Including the thirteen new national cemeteries and NVBGs currently in

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1 GAO-14-537, Page 20.
2 GAO-14-537, Page 13.
3 GAO partially applied NCA’s methodology. As noted in the report, GAO “did not apply the NCA criterion that considers a county with less than half of its geographic area inside the service area of a veterans cemetery to be served if the county’s population center falls within the geographic service area...” (page 13). As such, the report does not provide an accurate comparison of the two methodologies. If NCA’s methodology had been fully applied by GAO, the percent of the Veteran population served by a burial option would be higher than the percentage shown in Figure 3, Methodology 1 (page 14).
development, VA has established a burial option for approximately 5.3 million unserved Veterans at 80 locations over the last 20 years using the county level approach. This approach was included in several budget requests and approved by Congress each time as the underlying methodology for determining the location of new national cemeteries and measuring the progress toward a consistently defined access goal. In addition, VA’s Office of Inspector General (OIG) has twice reviewed NCA’s county-level approach. In 1999, OIG concluded that “NCA personnel generally made sound decisions and accurate calculations when preparing their estimate” of the percent of the Veteran population served by a burial option within a reasonable distance of the Veterans' place of residence. In 2014, OIG duplicated NCA’s methodology and expressed no concerns with the county level approach.

NCA’s county-level approach is easily applied by NCA staff and easily understood by NCA stakeholders. County boundaries have been an accepted unit of geographic measurement throughout US history, while the census tract approach is still relatively new. The Census Bureau describes census tracts as “relatively stable” permanent geographic entities within counties, yet the size and number of census tracts is subject to change. The rules for defining census tract and block number boundaries, as well as the numbering scheme for census tracts and block numbers, have continued to evolve with the 2000 and 2010 censuses. Furthermore, changes in population with counties may result in either the splitting or merging of census tracts and changes to the corresponding numbering scheme, necessitating the regular recalculation of the percent of Veterans served.

Implementing the census tract methodology would present other challenges. The Census Bureau currently tallies over 74,000 census tracts in the United States compared to approximately 3,140 counties, making the application of a census tract approach demonstrably more labor intensive on a national scale for less than a 1-percent increase in the precision of an estimate. County level Veteran population data is supported by VA’s Office of the Actuary while census tract information would have to be obtained and supported directly from the Census Bureau. NCA currently uses ArcGIS mapping software that is commonly used and supported throughout VA. The change in methodology would require that NCA adopt new mapping software more suitable to implement GAO’s recommendation. The purchase, implementation, and

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4VA OIG Report SRS-04-103, Accuracy of Data Used to Measure Percent of Veterans with a VA Burial Option.
5U.S. Census Bureau, “Geographic Terms and Concepts – Census Tract.”
6U.S. Census Bureau, “Geographic Terms and Concepts – Census Tract.”
7U.S. Census Bureau, “2010 Tallies of Census Tracts, Block Groups, and Blocks.”
sustainability of this software would need to be considered among the competing priorities of VA’s overall information technology budget.

Adopting the use of census tracts would require NCA to replace its current cost-effective, well-accepted methodology that renders consistent and accurate planning, performance and decision making data with one that is potentially less cost effective and would not result in better outcomes for Veterans.

**Recommendation 2:** Develop and implement a plan to fully address all the elements required by the Consolidated and Continuing Appropriations Act 2013, including the estimated number and location of unserved veterans and a national map of cemeteries, in VA’s Rural Veteran Burial Access Strategy when it is delivered to Congress.

**VA Comment:** Concur. NCA will address the elements required by the Consolidated and Continuing Appropriations Act 2013 that GAO has identified as either partially or completely not addressed in VA’s rural burial strategy. As previously reported in its response to VA’s OIG recommendations, NCA is developing a methodology to identify Veterans living in rural areas. NCA is also in the process of establishing a new database that will enable analysis of Veteran demographics at the county, state, regional, and national levels. The database will identify each county in the country as either being served (within the 75-mile service area) or unserved by a VA national or VA-funded state Veterans cemetery and the specific cemeteries that provide service to each served county. The database will also include county-level Veteran population estimates from VA’s VetPop2011 model.

Combined with NCA’s new rural area definition, this database will enable NCA to estimate the number of and geographical areas where rural and urban Veterans are not currently served. NCA will also be able to conduct more detailed analyses of the gaps in service that will remain after the completion of the thirteen new national cemeteries and NVBGs currently in development. From this analysis, NCA will be able to identify actions designed to eliminate some of these service gaps.

The development of the database will also give NCA the capacity to produce a national map showing the locations and estimated number of all unserved Veterans. Additionally, NCA will be able to provide statistics on Veterans who are served solely by a cremation-only cemetery and Veterans who are considered reasonably served by state Veterans’ cemeteries with residency requirements.
Appendix V: Comments from the Department of Veterans Affairs

Enclosure

Department of Veterans Affairs (VA) Response to Government Accountability Office (GAO) Draft Report “VETERANS AFFAIRS: DATA NEEDED TO HELP IMPROVE DECISIONS CONCERNING VETERANS’ ACCESS TO BURIAL OPTIONS” (GAO-14-537)

In addition, NCA will continue to monitor cemetery utilization rates and client satisfaction results as prime indicators of whether travel time and/or distance to a national cemetery is a barrier to access. As the results of the new Urban Initiative become known, NCA will be able to leverage current data collection to recommend an enhancement or expansion of this policy to other locations, subject to the availability of funding.

NCA expects to complete this work and meet these remaining required elements by the end of the second quarter of fiscal year 2015.
# Appendix VI: GAO Contact and Staff Acknowledgments

<table>
<thead>
<tr>
<th>GAO Contact</th>
<th>Brian Lepore, (202) 512-4523 or <a href="mailto:leporeb@gao.gov">leporeb@gao.gov</a></th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff</td>
<td>In addition to the contact named above, GAO staff who made key contributions to this report include Maria Storts, Assistant Director; Bonita Anderson, Joanne Landesman, John Mingus, Terry Richardson, Amie Steele, Sabrina Streagle, and John Wren.</td>
</tr>
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</table>
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