4.0 ENVIRONMENTAL CONSEQUENCES

This chapter presents the evaluation of the alternatives' direct, indirect, and cumulative environmental impacts. The sections of this chapter are organized by resource, with information presented in the same sequence as in Chapter 3 to provide a logical flow for the discussion. The baseline for determining potential impacts is the current condition described in Chapter 3. Each resource-specific section (Sections 4.1 through 4.15) provides (1) the evaluation criteria by which the analysis determined whether there is an adverse impact to the resource, and (2) the analysis of impacts to that resource from each of Alternatives A through F and Supplemental Alternative G. Potential impacts from each alternative are discussed separately for construction (short-term impacts) and operation (long-term impacts). The Impacts Summary Table in the Executive Summary summarizes the impacts of each alternative. Section 4.17 discusses the proposal's potential for generating substantial controversy (required by the Department of Veterans Affairs' [VA's] interim *National Environmental Policy Act* (NEPA) guidance). Sections 4.18 through 4.20 provide specific analyses required by the Council on Environmental Quality's (CEQ's) NEPA regulations: unavoidable adverse impacts, the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity, and irreversible or irretrievable commitments of resources.

Because certain aspects of the alternatives are not narrowly defined at this stage of project development (such as the specific location of new construction in the Hot Springs or Rapid City areas), a conservative scenario of environmental effects for each resource is evaluated throughout this chapter. This approach ensures an estimate of any adverse impacts that is unlikely to be exceeded in the actual design and implementation of an alternative.

As discussed in Section 1.3, it is beyond the scope of this environmental impact statement (EIS) (and not subject to NEPA review) to determine the health care services that VA offers or will offer at any location, even though some relevant service information is included in Chapter 2 to provide context for the features of the alternatives. Details of health care services are only discussed in this chapter as they are incidental to impacts of the alternatives in terms of physical buildings and infrastructure.

Impact Terminology

An ***impact*** is defined as a modification of the existing environment that is brought about by an outside action. The terms ***effect*** and ***impact*** as used in this document are synonymous and could be beneficial or adverse.

Adverse impacts are defined in terms of context and intensity. ***Context*** relates to environmental circumstances at the location of the impact and its immediate vicinity, as well as other interests that are potentially affected. ***Intensity*** refers to the severity or extent of the impact or magnitude of change from existing conditions. Impact intensity is used in the determination of the severity and magnitude of an impact, and helps determine whether mitigation is needed to lessen the impact. The following terms are among those that are applied in this EIS to describe the intensity of adverse impacts:

- None/no impact: No change from current conditions.
- Negligible impacts: No measurable or discernible change from current conditions.
- Minor impacts: Slight but detectable; there would be a small change. Effects are generally short-term and highly localized.
- Moderate impacts: Readily apparent; there would be a noticeable change that could result in major short-term or moderate long-term impacts.
- Major impacts: Large and highly noticeable; long-term or permanent.

The duration of the impact is important in evaluating its intensity:

- Short-term impacts occur only for a short time after implementation of a management action; for example, construction noise impacts from construction activities would be considered short-term in nature.
- Long-term impacts occur for an extended period after implementation of a management action; for example, operational noise during facility operations would be a long-term impact, as it would last for as long as the facility is in operation.

Direct effects are caused by the action and occur at the same time and place as the action. ***Indirect effects*** are caused by the action and occur later in time or further in distance, but are still reasonably foreseeable (40 Code of Federal Regulations [CFR] 1508.8).

Cumulative impacts are those effects resulting from the incremental impacts of an action when combined with other past, present, and reasonably foreseeable future actions (regardless of which agency or person undertakes such actions) (40 CFR 1508.7). Cumulative impacts could result from individually insignificant but collectively significant actions taking place over a period of time.

Mitigation Measures

The CEQ NEPA regulations (40 CFR 1508.20) state that ***mitigation*** includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

The measures and best practices identified in this EIS include measures that are incorporated into an alternative; compliance with federal, state, and local regulatory requirements; best management practices incorporated into an alternative; and additional VA-proposed protective measures. The record of decision (ROD) for an EIS binds an agency to implement specific mitigation

commitments stated in the ROD. In addition, compliance with regulatory requirements is enforced by the respective regulatory agency. For example, compliance with air quality regulations would be enforced by the South Dakota Department of Environment and Natural Resources (SDDENR). Where relevant for a particular alternative, the mitigation, monitoring, minimization, and best practices summarized in Chapter 5 could reduce adverse impacts identified in this chapter.

4.1 Aesthetics

4.1.1 Evaluation Criteria

A visual or aesthetic impact is the creation of an intrusion, obstruction, or noticeable contrast to the landscape that affects visual character or scenic quality. A visual effect can be considered adverse if an action obstructs what most observers would consider a scenic view or blocks or detracts from a significant feature of the landscape. The introduction of a visual element that is incompatible, out of scale, in great contrast, or out of character with the surrounding area can be an adverse visual impact. An action that eliminates open space can have an adverse effect on aesthetic or visual appeal of the area. Together with observers' attitudes, expectations, and perspectives, the extent of obstruction and the compatibility of introduced features within established views determine the subjective importance or intensity of the visual impact.

In regard to a historic property, adverse visual effects are those that diminish the property's integrity, which negatively affects its historic significance and its eligibility for listing in the National Register of Historic Places (NRHP). Visual impacts on historic properties are discussed in Section 4.3.

4.1.2 Alternative A

4.1.2.1 Impacts from Construction

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs campus, the visual appearance and aesthetic quality of the campus would not be affected.

Construction activities in Hot Springs for a community-based outpatient clinic (CBOC) and in Rapid City for a multi-specialty outpatient clinic (MSOC) and residential rehabilitation treatment program (RRTP) would temporarily affect the visual quality of the area because of the presence of heavy equipment and unfinished stages of site preparation and building construction. The visual quality impacts would change over the course of the phased construction as each task is completed, progressing toward being negligible in the later stages as landscaping is completed and work focuses on the interiors of completed buildings. The extent of the impact would depend on the visual or scenic quality of the site selected in each community, and the presence and expectations of observers of the site. Because the size of the site and building proposed in Hot Springs (a CBOC on five acres) is smaller than that proposed in Rapid City (14 to 17 acres for a co-located MSOC and RRTP), the extent of any visual impact from and during construction activities would be less in Hot Springs in both space and time.

Construction activities would be limited to daylight hours so there would be no impact from nighttime lighting from the use of construction equipment lights. Security lighting could be required for construction staging areas, which would have a minor impact relative to nighttime light levels near the sites; however, security lighting would be directed downward to minimize light trespass onto adjacent property and land uses.

4.1.2.2 Impacts from Operation

VA would continue to maintain the Hot Springs campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.1, and could affect the visual appearance of the site selected in each community. These buildings could create a noticeable contrast to the landscape surrounding the selected site. An undeveloped site on the suburban edge of the community could intrude on the scenic quality of the surrounding landscape, whereas an infill development would not likely affect a scenic landscape. The extent of any impact would depend on the visual or scenic quality of the selected site in each community and surrounding land uses, and would also depend on the compatibility of the buildings with existing or planned land use and zoning of the selected sites. Building setbacks, perimeter fences, and landscaping must conform to physical security and antiterrorism design requirements for VA facilities defined as mission critical. These requirements, along with incorporating the topography into the site layout, could minimize any noticeable presence of the buildings.

Exterior lighting around the buildings would be controlled to minimize light trespass onto adjacent properties but would be designed to provide sufficient illumination to meet physical security requirements. Lighting on roads internal to a larger site for a combined MSOC and RRTP in Rapid City would provide enough intensity so that drivers, pedestrians, and bicyclists can identify directional signage, access gates, lanes, and curbs. Exterior light fixtures would use the cutoff design that directs light downward and minimizes glare.

4.1.3 Alternative B

4.1.3.1 Impacts from Construction

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs campus, the visual appearance and aesthetic quality of the campus would not be affected.

Visual or aesthetic impacts from construction would be similar to the impacts described for Alternative A. Because only an MSOC (10 acres) is proposed for Rapid City, the extent of any temporary construction-related impact on the visual quality of the selected site could be less than in Hot Springs where a co-located CBOC and RRTP (11 to 13 acres) are proposed.

4.1.3.2 Impacts from Operation

VA would continue to maintain the Hot Springs campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.2, and could affect the visual appearance of the site selected in each community. Any impacts to the visual appearance or scenic quality of the selected sites from the design and placement of the buildings would be similar to the impacts described for Alternative A.

4.1.4 Alternative C

4.1.4.1 Impacts from Construction

Construction equipment and vehicles would be visible during interior renovations and modifications to Building 12 and the domiciliary. Because there would be no major exterior changes to or construction of new buildings on the VA Hot Springs campus, the temporary presence of construction equipment would not affect the visual appearance and aesthetic quality of the campus.

Visual or aesthetic impacts from construction of an MSOC on 10 acres in Rapid City would be similar to the impacts described for Alternative A.

4.1.4.2 Impacts from Operation

Health care operations and maintenance would continue at the VA Hot Springs campus, so there would be no change or affect to the visual or aesthetic appearance of the campus.

The size and height of the MSOC proposed for Rapid City would be as described in Section 2.3.1, and could affect the visual appearance of the selected site. Any impacts to the visual appearance or scenic quality of the selected site from the design and placement of the building would be similar to the impacts described for Alternative A.

4.1.5 Alternative D

4.1.5.1 Impacts from Construction

Because there would be no changes to existing buildings or construction of new buildings on the VA Hot Springs campus, the visual appearance and aesthetic quality of the campus would not be affected.

Visual or aesthetic impacts from construction would be similar to the impacts described for Alternative A. Because the size of the site and buildings proposed in Hot Springs (11 to 13 acres for co-located CBOC and RRTP) is slightly smaller than what would be needed in Rapid City (14 to 17 acres for co-located MSOC and RRTP), the extent of any visual impact from and during construction activities could be slightly less in Hot Springs in both space and time.

4.1.5.2 Impacts from Operation

VA would continue to maintain the Hot Springs campus so there would be no change or effect to the visual or aesthetic appearance of the campus, although health care operations would cease at this location.

The size and height of each building proposed for Hot Springs and Rapid City would vary as described in Section 2.3.4, and could affect the visual appearance of the site selected in each community. Any impacts to the visual appearance or scenic quality of the selected sites from the design and placement of the buildings would be similar to the impacts described for Alternative A.

4.1.6 Alternative E

4.1.6.1 Impacts from Construction

Construction equipment and vehicles would be visible during interior and exterior renovations and modifications of numerous buildings on the Hot Springs campus and during construction of new buildings to accommodate additional RRTP beds and housing as described in Section 2.3.5. Open space that might be suitable for new buildings is scattered throughout the campus, so the presence of construction equipment and ongoing construction activities would temporarily affect the visual appearance and aesthetic quality of the campus.

Because no modifications to the existing CBOC in Rapid City are proposed and an MSOC would not be constructed, there would be no temporary effects at sites within Rapid City or off-campus in Hot Springs on aesthetics or visual appearance from construction activities.

4.1.6.2 Impacts from Operation

Open space that might be suitable to construct a building for additional RRTP beds near the Hot Springs domiciliary is limited, and construction on that space would change the visual appearance and scenic quality of the original core of the campus. The building would likely be designed similar to the domiciliary for aesthetics, and any adverse effects would likely be minimal because of observers' expectations and attitudes regarding the additional building.

Construction of additional housing in open spaces within the loop near the staff quarters would also affect the visual appearance of this area. Similar housing designs and construction materials could minimize the visual intrusion and aesthetic impacts of new buildings. Simulated views of additional housing adjacent to the existing housing are shown in Figure 4.1-1.

Construction of new buildings for the RRTP and housing on the open space at the main entrance from North 5th Street would affect the visual appearance and scenic quality of the campus. These buildings would be out of character for the entrance but would likely be seen by observers as compatible with the view; thus, any adverse visual effects would be minimal.

There would be no changes to health care operations in Rapid City that would have any effect on aesthetics or visual quality of the area.

Figure 4.1-1. Visual Simulations of Possible Locations for Additional Housing.

4.1.7 Alternative F

4.1.7.1 Impacts from Construction

Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding was available through the routine budgeting process. Construction equipment and vehicles would be visible during interior renovations and modifications to buildings. Because there would be no major exterior changes or construction of new buildings on the VA Hot Springs campus, the temporary presence of construction equipment would not affect the visual appearance and aesthetic quality of the campus.

There would be no changes to the existing CBOC in Rapid City that would have any temporary effects on aesthetics or visual appearance from construction activities. If other space is leased upon the expiration of the current lease, that new location could require interior modifications to the building. Any impacts to the visual appearance of the area would be limited to the temporary presence of construction vehicles.

4.1.7.2 Impacts from Operation

Health care operations and maintenance would continue at the VA Hot Springs campus. The VA Black Hills Health Care System (BHHCS) has no plans that would require construction of new buildings or major exterior modifications or additions to existing buildings to support operations, so there would be no change or affect to the visual or aesthetic appearance of the campus.

There would be no changes to health care operations in Rapid City that would have any effect on aesthetics or visual quality of the area.

4.1.8 Supplemental Alternative G

4.1.8.1 Impacts from Construction

The effects on the visual appearance or scenic quality of the VA Hot Springs campus would depend on the selected re-use. Should the selected re-use include construction of new buildings on the campus or major exterior modifications or additions, construction activities and the presence of construction equipment would temporarily affect the visual appearance of the campus. The extent of the visual impact would depend on the location, size, and timing of construction. Impacts could be similar to those from Alternatives E (if some new construction was initiated) or F (if there was no new construction).

4.1.8.2 Impacts from Operation

The type of re-use of the VA Hot Springs campus would determine the extent of effects to the visual appearance, aesthetics, or scenic quality of the campus. The addition and placement of new buildings on the campus to support different operations could have a visual effect on the campus landscape and appearance, and would be similar to the impacts described for Alternative E. If no new buildings are constructed and the overall level of campus activity is similar to that due to current VA health care services, operational impacts would be similar to those of Alternative F.

4.2 Air Quality

4.2.1 Evaluation Criteria

All of South Dakota is in attainment or unclassified for all National Ambient Air Quality Standards (NAAQS). The alternatives are evaluated for their potential to result in a net increase in pollutants that causes or contributes to a violation of the NAAQS, exposes sensitive receptors to substantially increased pollutant concentrations, or exceeds any evaluation criteria established by a state implementation plan.

For this EIS, the proposed action occurs in an attainment area, therefore the *de minimis* levels do not apply and no conformity determination is required for proposed federal actions.

4.2.2 Alternative A

Alternative A would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA Office of Construction & Facilities Management (CFM) guidelines.

4.2.2.1 Impacts from Construction

The overall construction period for each new facility (CBOC in Hot Springs, MSOC and RRTP in Rapid City) would be approximately two years, with site clearing, excavation, and grading largely accomplished in the first year. Should VA BHHCS lease facilities, air quality impacts from potential customization of the facility for VA use would be minimal, less than those from constructing a new facility.

Particulates are the main air pollutant of concern from construction projects. VA would comply with the South Dakota Natural Events Action Plan, Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34, both of which are titled *Fugitive Emissions and the Abatement of Smoke*, where applicable. Figure 3.2-1 and 3.2.-2 illustrate the Rapid City area locations subject these local rules. The Natural Events Action Plan applies to the west Rapid City area (see Figure 3.2-2) and requires, in part, voluntary cessation of construction or use of control measures during high wind dust alerts.

Reasonably available control technology requirements for minimizing fugitive dust during construction activities, listed in Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34, include but are not limited to:

- Wetting down
- Chemical stabilization
- Applying dust palliative
- Minimization of area disturbed
- Reclamation of disturbed area as soon as possible
- Vehicular speed limitation
- Cleaning of paved areas

Construction activities would generate both coarse and fine particulate emissions from excavation, soil removal, site grading, and small-scale road construction. The amount of particulate emissions can be estimated from the amount of ground surface exposed, the type and intensity of activity, soil type and conditions, wind speed, and dust control measures used. Total suspended particulates were calculated using the emission factor for heavy construction activity operations specified in AP-42 Compilation for Air Pollutant Emission Factors (EPA 1995) resulting in conservative estimates of particulate emissions shown in Table 4.2-1. Reasonably available control technology requirements for construction activities would be applied.

Table 4.2-1. Estimated Year 1 Particulate Emissions from Construction—Alternative A

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/ month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Rapid City MSOC	10	12	1.2	80	28.8
Rapid City RRTP	10	12	1.2	80	28.8
Total	25	12			72

*Emission factor from Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 57.6 tons of particulates emitted from VA's Rapid City construction would be a 0.53 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). The 14.4 tons emitted from Hot Springs construction would be a 0.33 percent increase in the approximately 4,365 tons per year of particulates already emitted in Fall River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative A would have a negligible impact on regional air quality.

4.2.2.2 Impacts from Operation

Under Alternative A, VA BHHCS emissions from the existing Hot Springs VA Medical Center (VAMC) facilities would be reduced, although emissions from the campus would continue at some decreased level providing for facility maintenance or would be attributable to re-use of the campus, at a level estimated not to exceed the current emissions levels (as characterized for Alternative F, No Action, in Section 4.2.7).

Operation of newly or recently constructed facilities would produce air emissions through:

- Propane combustion for heat and hot water (Hot Springs)
- Propane storage and dispensing (Hot Springs)
- Natural gas combustion for heating and hot water (Rapid City)
- Electricity use (indirect emissions)
- Emergency generator(s) (RRTP only)
- Patient and employee commuting
- Ongoing maintenance and landscaping activities

In Hot Springs, the primary option for heating large facilities is propane stored onsite, and this is assumed to be the case for operation of new facilities in Hot Springs. Emissions from propane combustion would be directly attributable to VA BHHCS operations. Propane combustion produces mostly gaseous emissions and a lesser amount of particulate emissions. Pollutants from combustion (aside from carbon dioxide) are nitrogen oxides, carbon monoxide, sulfur dioxide, particulate matter (PM), and total organic compounds (EPA 1992). Fugitive emissions may also result from propane storage and dispensing, but these would be minimal compared to combustion emissions. The new facilities in Rapid City would be heated by natural gas supplied by the Montana-Dakota Utilities Company. It is further assumed that fuel oil combustion would continue at the Hot Springs VAMC in order to maintain existing facilities in an unoccupied state (assumed 30 percent of the fiscal year [FY] 2013 fuel oil combustion rate).

Estimated facility heating emissions are shown in Table 4.2-2 for each of the alternatives using the projected utility requirements provided in Section 4.14, *Utilities*.

Table 4.2-2. Estimate of Annual Emissions from Facility Heating under Each Alternative*

Alternative	Emissions (pounds per year)				
	Nitrogen oxides	Carbon monoxide	PM	Sulfur dioxide	Total Organic Compounds
A	3,691	968	457	5,084	158
B	3,909	1,152	459	5,084	160
C	9,860	2,124	1,338	16,933	259
D	3,847	1,067	464	5,085	168
E	12,415	2,604	1,703	21,894	295
F	9,620	2,022	1,318	16,932	230

*Emission factor from Volume 1, Chapter 1 "External Combustion Sources" of AP-42 (EPA 2010).

Electricity is provided to the existing VA facilities in Rapid City and Hot Springs by Black Hills Power. Black Hills Power would also provide electricity to the new facilities proposed in Alternative A. Indirect emissions from electricity generation are not calculated. The quantitative impact on overall electricity use is unknown from cessation of operations at existing facilities, movement of the Hot Springs campus into a maintenance status or re-use, and health care service operations at new facilities. However, it is likely that overall usage would decrease because newly constructed facilities would be designed to be more energy efficient (VA 2014).

An emergency generator would be required for the new 100-bed RRTP proposed to be constructed in Rapid City. Emissions would be minimal because it would only be operated if the primary electric supply was interrupted.

As illustrated by Table 2-2 in Section 2.1, Alternative A would improve geographic access to care, with reduced patient travel distances. Emissions from mobile sources would decrease proportionately under Alternative A compared to No Action (Alternative F). Ongoing maintenance and landscaping activities would not contribute measurably to operational emissions.

According to the VA Design Guide for Mental Health Facilities (VA 2014), the U.S. Green Building Council Leadership in Energy and Environmental Design Project Certification is a recommended standard. The following codes and standards are adopted for new construction at a minimum:

- *Energy Policy Act of 2005*
- Energy Efficiency Standards and Energy Code for New Federal Commercial and Multi-Family Residential Buildings (10 CFR Parts 433, 434 and 435)
- The 16-agency (including VA) memorandum of understanding committing to design, construct, and operate their facilities in an energy-efficient and sustainable manner, *Federal Leadership in High Performance and Sustainable Buildings*
- Executive Order 13423, Strengthening Federal Environmental, Energy, Transportation Management
- Executive Order 13148, Greening the Government through Leadership in Environmental Management

4.2.3 Alternative B

Alternative B would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA CFM guidelines.

4.2.3.1 Impacts from Construction

The air quality impacts from construction would be the same as under Alternative A except the RRTP would be built in Hot Springs, changing the location of emissions. Table 4.2-3 shows the estimated particulate emissions from construction under Alternative B.

Table 4.2-3. Estimated Year 1 Particulate Emissions from Construction—Alternative B

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/ month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Hot Springs RRTP	10	12	1.2	80	28.8
Rapid City MSOC	10	12	1.2	80	28.8
Total	25	12			72

*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 28.8 tons of particulates emitted from VA's Rapid City construction would be a 0.27 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). The 43.2 tons emitted from Hot Springs construction would be a 0.93 percent increase in the approximately 4,365 tons per year of particulates already emitted in Fall

River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative B would have a negligible impact on regional air quality.

4.2.3.2 Impacts from Operation

The air quality impacts from Alternative B would be similar to Alternative A except the RRTP is built in Hot Springs where the primary option for heat and hot water is propane. Emissions from propane combustion would be greater because propane would be required for both the CBOC and RRTP. The Rapid City MSOC would be heated with natural gas. Emissions projections are shown in Table 4.2-2.

4.2.4 Alternative C

Air quality impacts from Alternative C would be similar to but less than those from Alternative B. This alternative would produce less short-term emissions from construction than either Alternative A or B due to smaller areas developed for new construction. In the long term, the impact to air quality would be minor to moderate.

4.2.4.1 Impacts from Construction

Construction impacts would be less than for Alternative A and B because there would be no new construction in Hot Springs and only the MSOC in Rapid City. Emissions from renovations to develop the CBOC and RRTP within existing buildings at the Hot Springs campus would be negligible on a regional scale. Estimated construction emissions from Alternative C are provided in Table 4.2-4.

Table 4.2-4. Estimated Year 1 Particulate Emissions from Construction—Alternative C

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/ month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Rapid City MSOC	10	12	1.2	80	28.8
Total	25	12			28.8

*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 28.8 tons of particulates emitted from VA's Rapid City construction would be a 0.27 percent increase in the approximately 10,800 tons per year of particulates already emitted annually in Pennington County (EPA 2015). Negligible particulate emissions would be associated with renovations to existing facilities in Hot Springs. Thus, fugitive dust emissions from construction under Alternative C would have a negligible impact on regional air quality.

4.2.4.2 Impacts from Operation

In this alternative, the Hot Springs campus would continue to operate, using fuel oil combustion as the heat source. Air quality impacts for the MSOC in Rapid City would be the same as Alternative A. Total emissions projections for this alternative are shown in Table 4.2-2 and are comparable to Alternative F, No Action.

4.2.5 Alternative D

Alternative D would have short-term minor impacts to air quality during construction of new facilities in Rapid City and Hot Springs. In the long term, the impact to air quality from operations would be negligible as a result of operating from newer facilities designed for energy efficiency in accordance with VA CFM guidelines.

4.2.5.1 Impacts from Construction

Construction impacts would be similar to but slightly greater than for Alternative A or B because two separate RRTPs would be constructed.

The total construction period for each facility would be approximately two years, with most of the site excavation and grading accomplished in the first year. Table 4.2-5 shows the estimated particulate emissions from construction under Alternative D.

Table 4.2-5. Estimated Year 1 Particulate Emissions from Construction—Alternative D

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/ month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs CBOC	5	12	1.2	80	14.4
Hot Springs 24-bed RRTP	6	12	1.2	80	17.3
Rapid City MSOC	10	12	1.2	80	28.8
Rapid City 76-bed RRTP	10	12	1.2	80	28.8
Total	25	12			89.3

*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 14.4 tons of particulates emitted from VA's Rapid City construction would be a 0.063 percent increase in the approximately 23,000 tons per year of particulates already emitted annually in Pennington County. The 7.9 tons emitted from Hot Springs construction would be a 0.0089 percent increase in the approximately 89,000 tons per year of particulates already emitted in Fall River County. Thus, fugitive dust emissions from construction under Alternative D would have a negligible impact on regional air quality.

4.2.5.2 Impacts from Operation

The air quality impacts from Alternative D would be similar to those for Alternatives A or B, with variances based on the facility location and related heating source fuel. Propane combustion would be required for both the Hot Springs CBOC and RRTP. The Rapid City MSOC and RRTP would be heated with natural gas. It is further assumed that fuel oil combustion would continue at the Hot Springs VAMC in order to maintain existing facilities in an unoccupied state (assumed 30 percent of the FY 2013 fuel oil combustion rate). Emissions projections are shown in Table 4.2-2.

4.2.6 Alternative E

Alternative E would have short-term minor impacts to air quality during construction of new facilities on the Hot Springs campus. In the long term, the impact to air quality from operations would be similar to or slightly greater than those from Alternative F (No Action), due to operation from all existing facilities plus operation of new buildings on the Hot Springs campus.

4.2.6.1 Impacts from Construction

Construction under Alternative E would consist of constructing an 82-bed RRTP on the Hot Springs campus to provide the total capacity of 200 beds specified in the Save the VA proposal.

Construction impacts would be less than for Alternatives A, B, or C because there would be no new construction in Rapid City and the only construction in Hot Springs would be on limited areas on the Hot Springs campus. Emissions from renovations to develop the various facilities and improvements proposed within existing buildings on the Hot Springs campus would be negligible on a regional scale. Estimated construction emissions from Alternative E are provided in Table 4.2-6.

Table 4.2-6. Estimated Year 1 Particulate Emissions from Construction—Alternative E

Facility	Lot size (acres)	Construction Duration (months)	Emission Factor (tons/acre/ month)*	Control Efficiency (%)	Total Particulate Emissions (tons/year)
Hot Springs construction	2	12	1.2	80	5.8
Total	2	12			5.8

*Emission factor Section 13.2.3 "Heavy Construction Operations" (dated 1/95), of AP-42 (EPA 1995).

The estimated 5.8 tons of particulates emitted from VA's Rapid City construction would be a 0.13 percent increase in the approximately 4,365 tons per year of particulates already emitted annually in Fall River County (EPA 2015). Thus, fugitive dust emissions from construction under Alternative E would have a negligible impact on regional air quality.

4.2.6.2 Impacts from Operation

An increase in operational emissions due to expansion of services at the Hot Springs VAMC would be expected. It was assumed that any building renovations/additions would be connected to the existing fuel oil heating system, and fuel oil consumption would occur at the current rate (gallons per year per building square foot) scaled for the projected increase in facility size. The estimated emissions are presented in Table 4.2-2.

4.2.7 Alternative F

Alternative F would have no construction air quality impacts, as there would be no construction.

Emissions from facility heating (fuel oil combustion) and other operations would continue at levels shown in Table 4.2-2.

4.2.8 Supplemental Alternative G

4.2.8.1 Impacts from Construction

Under Alternative G, some or all of the existing facilities at the Hot Springs VAMC would be re-used by other tenants. Depending on the intended use, some facility renovation may be required. Air quality construction impacts would be minimal as facilities would largely be repurposed and building renovations would not disturb significant areas. Air quality impacts from construction would likely be similar to Alternatives C, E, or F, depending on the extent of renovation or construction.

4.2.8.2 Impacts from Operation

Air quality impacts attributable to re-use of Hot Springs VAMC facilities by other tenants would be similar to those for Alternatives C, E, and F, depending on the re-use. It is assumed that occupied facilities would continue to be heated using the existing fuel oil combustion system, and unoccupied facilities would be heated only to maintain them in an unoccupied state. Actual emissions estimated would depend on the extent of facility reutilization.

4.3 Cultural Resources and Historic Properties

4.3.1 Evaluation Criteria

The CEQ regulations implementing NEPA provide the basis for evaluating the context and intensity of impacts to historic properties listed in or eligible for listing in the NRHP or the degree to which it may cause loss or destruction of significant cultural resources (40 CFR 1508.27(b)(8)). The Section 106 regulations implementing the *National Historic Preservation Act* define an adverse effect as an action that may directly or indirectly alter a characteristic that qualifies a property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association (36 CFR 800.5(a)(1)). An impact would be beneficial if the action results in the preservation of historic properties and their character.

4.3.2 Assessment Methodology

The alternatives to implementing the reconfiguration proposal have common components that would result in similar effects on historic properties. The assessment methodology for identifying potential effects separated the components into "on-campus" and "off-campus" actions. The alternatives would involve some extent of action on the existing VA Hot Springs campus and away from the campus at some new location(s) yet to be identified in the Hot Springs and Rapid City areas. On-campus actions focus on vacating (and relocating health care services to other locations) or renovating campus buildings, whereas off-campus actions focus on development (new construction or modifications to existing buildings) at different locations. Potential types of direct and indirect effects on historic properties were identified by VA BHHCS and consulting parties based on the on-campus or off-campus actions similar among the alternatives. The criteria for determining if a direct or indirect effect is adverse, along with examples of adverse effects (36 CFR 800.5(a)(1) and (2)) were applied to the identified potential effects. This assessment methodology also provided a basic approach to determining measures to resolve those adverse effects that are common across alternatives (see Section 5.2, Resolution of Adverse Cultural Resources Effects). Figures 4.3-1 and 4.3-2 diagram this assessment methodology for on-campus and off-campus actions and effects. In keeping with this assessment methodology, the presentation of impacts by alternative differs from the other resources, where impacts are presented as they relate to construction and operation.

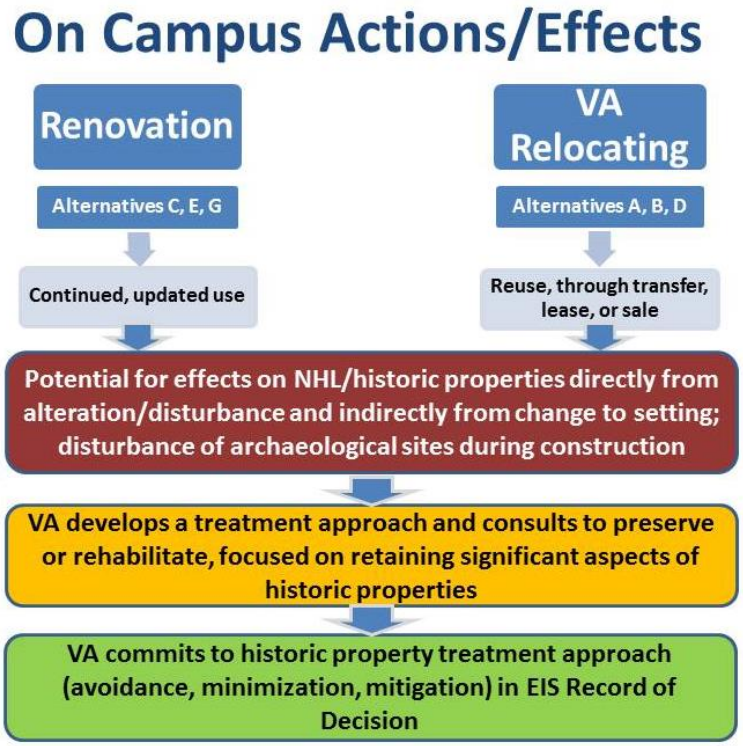

Figure 4.3-1. Assessment Methodology for On-Campus Actions and Effects.

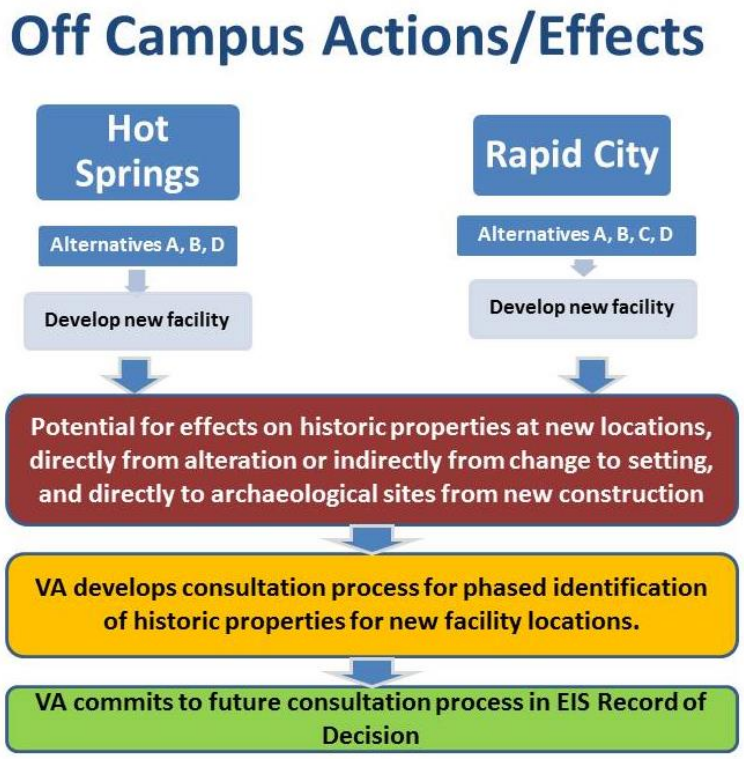

Figure 4.3-2. Assessment Methodology for Off-Campus Actions and Effects.

4.3.2.1 Types of Effects on Historic Properties and Other Cultural Resources

An effect is an alteration to the characteristics of a historic property qualifying it for the NRHP (36 CFR 800.13(i)). The same as for the other environmental resources (see Section 4.0), a direct effect is caused by the action and occurs at the same time and place (40 CFR 1508.8(a)), whereas an indirect effect is caused by the action and is later in time or farther removed in distance, but is still reasonably foreseeable (40 CFR 1508.8(b)).

Direct effects relate predominantly to the physical structure of the historic property or cultural resource:

- Battle Mountain Sanitarium National Historic Landmark (NHL) and its contributing resources (buildings and features) could be directly affected by physical modification, change in use, change in maintenance or upkeep of the buildings and campus, or other alteration.
- Hot Springs Historic District could be directly affected by any direct effects to the NHL, which is a contributing resource to the Historic District.
- Hot Springs/Battle Mountain traditional use area, or features or components of this area, could be directly affected if ground disturbance alters archaeological or cultural materials considered by Native American tribes to be associated with the traditional importance of the area.
- Other archaeological sites, historic building locations, or historic districts (identified during phased review (36 CFR 800.4(b)(2)) could be directly affected if relocated services occupy or change the use of buildings that are part of historic properties in the Hot Springs or Rapid City area, or if ground disturbance alters or results in unexpected discovery of archaeological or cultural materials.

Indirect effects relate predominantly to important aspects of historic setting, feeling, and association where these aspects are integral to conveying the character of historic properties:

- Battle Mountain Sanitarium NHL and its contributing resources, including the National Cemetery, could be indirectly affected if physical modifications or changes in use create substantial new contrasts to the historic setting of the NHL or alter its historic feeling and association.
- Hot Springs Historic District could be indirectly affected if substantial new contrasts are readily perceptible from the Historic District contributing resources or alter its historic feeling and association. Perceptible contrasts could include visible, audible, or atmospheric modifications at the NHL, which is located at an elevated position to the rest of the Historic District, or new construction in the Hot Springs area located within line of sight from the Historic District.
- Hot Springs/Battle Mountain traditional use area could be indirectly affected if substantial new contrasts are readily perceptible from traditional use places that retain their historic setting (natural environment of the Battle Mountain landform intact and undeveloped), or retain associated cultural features of traditional concern. Perceptible contrasts could include visible, audible, or atmospheric modifications at the NHL or a new construction location in the Hot Springs area.

- Other historic properties (identified during phased review (36 CFR 800.4(b)(2)) could be indirectly affected if buildings to support relocated services are readily perceptible (such as in line of sight) and create any substantial new contrasts to the historic setting, feeling, or association of these properties.

Direct and indirect effects (impacts) may vary in duration and depend on the stage of implementing an action:

- Temporary impact – occurs during construction and ends when a historic property is returned to preconstruction condition; for example, when construction components such as scaffolding, equipment, markers/barriers, and machinery noise are removed.
- Short-term impact – occurs more persistently, possibly enduring two to five years; for example, returning landscaping to its original setting through vegetation regrowth, or temporarily shuttering instead of mothballing a historic building while its re-use is being negotiated.
- Long-term impact – lasts for the life of an extended action; for example, reducing the recognizable historic character of a building through re-use for another purpose subject to a long-term lease.
- Permanent impact – results from an action that alters a historic property in a manner persisting indefinitely, or that is irreversible; for example, altering a building or its setting through new additions or remodeling inconsistent with its historic character.

4.3.2.2 Types of Adverse Effects on Historic Properties

An adverse effect is an alteration that diminishes the integrity of the location, design, setting, materials, workmanship, feeling, or association of a historic property. Adverse effects may include reasonably foreseeable effects caused by the action that may occur later in time, be farther removed in distance, or be cumulative (36 CFR 800.5(a)(1)). Examples of adverse effects include:

- Physical destruction of or damage to all or part of the property
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR 68) and applicable guidelines
- Removal of the property from its historic location
- Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features
- Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to a Native American tribes

- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (30 CFR 800.5(a)(2))

The potential effects of the proposed on-campus and off-campus actions were analyzed against the criteria of adverse effects and compared to the examples above to determine if the impacts of the alternatives would adversely affect historic properties.

4.3.3 Alternative A

4.3.3.1 Impacts from On-Campus Actions

The on-campus actions under Alternative A would involve relocating health care services to other locations and vacating the VA Hot Springs campus including the Battle Mountain Sanitarium NHL. However, VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. Maintaining the campus could result in temporary shuttering or short-term mothballing of buildings. Maintenance would not likely result in substantial alterations or modifications to the NHL. VA BHHCS would monitor the condition of vacant (shuttered) buildings. If necessary, buildings would be mothballed following procedures outlined in the National Park Service Preservation Brief 31, Mothballing Historic Buildings (NPS 1993), with further consideration given due to the NHL status.

VA BHHCS would no longer offer health care services at the campus, which would diminish the character of the property's use that contributes to its historic significance, including the traditional feeling and association of the campus with the Veteran community. This adverse effect could be a permanent impact depending on future re-use of the campus.

Navigating between shuttering, mothballing, and re-use could be a temporary transition from current VA BHHCS occupancy to new occupancy, depending on interest from others (government, non-profit, and for-profit agencies and organizations) and options for a viable re-use. Mitigation measures (see Chapter 5) committed to by VA BHHCS would resolve an adverse effect. Re-use would be a permanent effect from VA BHHCS vacating the campus, and is assessed as Supplemental Alternative G.

4.3.3.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative A would involve new construction or redevelopment/ renovation of facilities in the Hot Springs area for a CBOC and in the Rapid City area for an MSOC and 100-bed RRTP. VA BHHCS has not yet identified specific locations for these facilities.

Regardless of the size and specific location that could be selected, the potential exists for impacts on historic properties and cultural resources. The locations would be in the Black Hills, which have received millennia of human use and occupancy. Lands anywhere in the region have the potential to reflect this lengthy heritage in the form of prehistoric archaeological vestiges and Native American cultural materials and features, as well as in the historic debris and remnants of development following the nineteenth century establishment of Hot Springs and Rapid City. Ground-disturbing activities could encounter archaeological and cultural materials that could be impacted by physical damage or removal from their historic location. These could be permanent adverse effects.

However, mitigation and minimization measures identified in Chapter 5 would address adverse effects to archaeological resources.

A location that best meets the selection criteria (see Section 2.3) could require new construction, involve redeveloping non-historic buildings, or involve redeveloping historic buildings pursuant to Executive Order 13006, Locating Federal Facilities on Historic Properties in Our Nation's Central Cities. Alterations to historic buildings to accommodate health care services could result in adverse effects. Historic buildings or districts could be present in the surroundings of a selected location and could be indirectly affected by introduction of visual, atmospheric, or audible elements by the new development. This could be an adverse effect if the new development diminishes the integrity of significant historic features such as setting, or design. The effect could be temporary during construction or permanent upon completion of construction. If a proposed location is in the viewshed of a historic property, potential effects would be resolved during phased evaluation and subsequent consultation.

New locations for a CBOC in Hot Springs and an MSOC and RRTP in Rapid City would be subject to a phased review to identify and evaluate historic properties (36 CFR 800.4(b)(2)). Any discovery of cultural resources and historic properties during the phased review would be addressed following the commitments stated in the record of decision (36 CFR 800.13(a)(2)). Discoveries of human burial remains on federal land would be addressed according to the *Native American Graves Protection and Repatriation Act*, and on non-federal lands according to State of South Dakota Statutes, Chapter 34-27-25.

4.3.4 Alternative B

4.3.4.1 Impacts from On-Campus Actions

The on-campus actions under Alternative B would involve relocating health care services to other locations and vacating the VA Hot Springs campus including the Battle Mountain Sanitarium NHL. However, VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The impacts on cultural resources and historic properties from vacating the VA Hot Springs campus would be the same as described for Alternative A.

4.3.4.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative B would involve new construction or redevelopment/ renovation of facilities in the Hot Springs area for a CBOC and 100-bed RRTP, and in the Rapid City area for an MSOC. VA BHHCS has not yet identified specific locations in either city. Although the construction footprints would not be the same in the Hot Springs and Rapid City areas because of the specific facilities proposed in each city, the difference would be too minimal to identify a substantial difference between the cities in the potential for impacts to archaeological sites or historic buildings. Thus, the likelihood of encountering cultural resources or affecting historic properties would be similar in both cities, in the absence of specific locations being identified. The process for selecting locations in the Hot Springs and Rapid City areas would be the same, and the types of effects to cultural resources and historic properties would be similar to the impacts described for Alternative A.

4.3.5 Alternative C

4.3.5.1 Impacts from On-Campus Actions

The on-campus actions under Alternative C would involve interior renovations and modifications to Building 12 and the domiciliary (Buildings 1 through 8 and 11) to continue partial operation of the VA Hot Springs campus as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property. Accessibility standards could be met by modifications, which would require a significant amount of evaluation and study to ensure major character-defining features of the historical property are not destroyed in the process. If inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (NPS 1995), they would be adverse effects. Visual, atmospheric, or audible elements of construction activities and equipment would not likely diminish the integrity of the property and would be removed after renovations are completed, so any effect would be temporary and not adverse.

Buildings unneeded for providing health care services would be vacated. VA BHHCS would continue to maintain and monitor the condition of vacant (shuttered) buildings and, as necessary, follow mothballing procedures as described for Alternative A. Transfer of the property out of federal ownership or control would not likely occur under Alternative C; however, leasing parts of the VA Hot Springs campus not needed by VA BHHCS could occur, with similar effects to the NHL as described for Supplemental Alternative G.

4.3.5.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative C would involve new construction or redevelopment/ renovation of existing facilities in the Rapid City area for an MSOC; however, VA BHHCS has not yet identified a specific location. The potential effects of development to cultural resources and historic properties in the Rapid City area would be the same as described for Alternative A.

There would be a reduced potential for affecting archaeological sites or surrounding historic properties in the Hot Springs area because no development would occur outside the VA Hot Springs campus. There would be no effect to the historic setting of the Hot Springs Historic District, the Hot Springs/Battle Mountain traditional use area, or other historic properties in the Hot Springs area. Ground disturbance that might expose archaeological materials or burial remains would not occur.

4.3.6 Alternative D

4.3.6.1 Impacts from On-Campus Actions

The on-campus actions under Alternative D would involve relocating health care services to other locations and vacating the VA Hot Springs campus including the Battle Mountain Sanitarium NHL. However, VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The impacts on cultural resources and historic properties from vacating the VA Hot Springs campus would be the same as described for Alternative A.

4.3.6.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative D would involve new construction or redevelopment/ renovation of facilities in the Hot Springs area for a CBOC and 24-bed RRTP, and in the Rapid City area for an MSOC and 76-bed RRTP. VA BHHCS has not yet identified specific locations in either city. Although the construction footprints would not be the same in the Hot Springs and Rapid City areas because of the specific facilities proposed in each city, the difference would be too minimal to identify a substantial difference between the cities in the potential for impacts to archaeological sites or historic buildings. Thus, the likelihood of encountering cultural resources or affecting historic properties would be similar in both cities, in the absence of specific locations being identified. The process for selecting locations would be the same, and the types of effects to cultural resources and historic properties would be similar to the impacts described for Alternative A.

4.3.7 Alternative E

4.3.7.1 Impacts from On-Campus Actions

The on-campus actions under Alternative E would involve interior and exterior renovations and modifications to numerous buildings to expand health care operations and address accessibility and barrier-free standards, and new construction of buildings to accommodate additional RRTP beds and housing, as described in Section 2.3.5. The VA Hot Springs campus, including the NHL, would continue to operate as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property.

The impacts of retaining and expanding health care operations on the VA Hot Springs campus would be similar to the impacts described for Alternative C but would be more intense. Exterior renovations for accessibility, an additional floor to Building 12, and loss of open space to accommodate more RRTP beds and housing would alter the historic property, change physical features of the historic setting, and introduce visual elements that could diminish the integrity of the significant historic features. If inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (NPS 1995), these would be adverse effects.

Visual, atmospheric, or audible elements of construction activities and equipment would not likely diminish the integrity of the property and would be removed after construction is completed, so any effect would be temporary and not adverse. Ground-disturbing activities could encounter archaeological and cultural materials that could be impacted by physical damage or removal from their historic location. These could be permanent adverse effects. However, mitigation and minimization measures identified in Chapter 5 would resolve adverse effects to archaeological resources.

New construction for additional RRTP beds and housing near the domiciliary or staff quarters could affect the integrity of the historic setting, feeling, and association of the property. Construction could indirectly adversely affect the Hot Springs Historic District or Hot Springs/Battle Mountain traditional use area if it creates a substantial contrast that diminishes the integrity of their significant historic features.

4.3.7.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative E would be the continuation of health care operations at the leased CBOC in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, the process for selecting the location and the types of effects to cultural resources and historic properties would be similar to those described for Alternative A as it relates to Rapid City.

4.3.8 Alternative F

4.3.8.1 Impacts from On-Campus Actions

The on-campus actions under Alternative F would involve continued management and operation of the VA Hot Springs campus as a medical facility for Veterans. This continuation would retain the character of the property's historic use, which would be beneficial to maintaining the integrity of the historic property. Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding became available. The effects to the property would be similar to the impacts described for Alternative C.

4.3.8.2 Impacts from Off-Campus Actions

The off-campus actions under Alternative F would be the continuation of operations at the leased CBOC in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, the process for selecting the location and the types of effects to cultural resources and historic properties would be similar to those described for Alternative A as it relates to Rapid City.

4.3.9 Supplemental Alternative G

4.3.9.1 Impacts from On-Campus Actions

The on-campus actions under Supplemental Alternative G would involve relocating health care services to other locations and vacating the VA Hot Springs campus including the Battle Mountain Sanitarium NHL. VA BHHCS would continue to maintain the campus pending transition to a future re-use. Maintenance of the National Cemetery would continue. The potential for effects to cultural resources and historic properties would depend on the selected re-use, but impacts would likely be similar to those described for Alternatives C and E.

Re-use of the VA Hot Springs campus could result in the transfer of ownership or change of occupant. If long-term preservation of the historic property is not legally ensured, an adverse effect could result; however, mitigation and minimization measures (see Chapter 5) committed to by VA BHHCS could resolve such effects. Further, any entity taking over use or possession that may involve change(s) to the facility would be required to comply with all mitigation, minimization, monitoring, and best practices identified in the ROD if VA BHHCS determines it will implement Supplemental Alternative G.

Alterations, modifications, or other activities to support re-use could affect the integrity of the historic properties. The historic setting, feeling, and association of the NHL, Hot Springs Historic District, and the Hot Springs/Battle Mountain traditional use area could be affected. Ground

disturbance could affect archaeological or cultural materials (prehistoric and historic) on the property. However, mitigation and minimization measures identified in Chapter 5 could resolve adverse effects to archaeological resources. These actions could have adverse effects on the property and NHL if inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (NPS 1995).

The re-use and continued occupancy of the campus could have beneficial effects. Occupancy of the campus by an entity other than VA BHHCS would avoid having to shutter or mothball the buildings for an extended period.

4.3.9.2 Impacts from Off-Campus Actions

There are no off-campus actions specific to Supplemental Alternative G.

4.4 Geology and Soils

4.4.1 Evaluation Criteria

The potential effects related to geology and soils were evaluated through a qualitative assessment of geologic hazards and the potential for severe erosion or liquefaction, including both construction- and operation-related activities. An alternative would be considered to result in an adverse impact related to geology and soils if it would result in any of the following effects:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking, or seismic-related ground failure, including liquefaction or landslides
- be located on a geologic unit or soil that is unstable or would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse
- be located on expansive soil creating substantial risks to life or property

4.4.2 Alternative A

4.4.2.1 Impacts from Construction

Under Alternative A, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 5 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the proposed facilities have not yet been selected. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction sites. Cut and fill actions in areas of severe sloping would be limited to those necessary to reduce erosion potential. Soils generated during excavation would be reutilized in areas requiring fill material or transported offsite. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

Development of a new facility location could impact prime, unique, statewide, or local important farmlands protected by the *Farmland Protection Policy Act*. Upon identification of a site for new construction, a Farmland Conversion Impact Rating form (Form AD-1006) would be completed by VA and submitted to the local National Resources Conservation Service office for a determination of whether the site contains prime, unique, statewide, or local important farmland and the level of impacts.

A general stormwater permit from the SDDENR would be required because the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan is required, consistent with the National Pollutant Discharge Elimination System (NPDES) general permit.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements. These minimization opportunities are described in Chapter 5.

4.4.2.2 Impacts from Operation

Operation of the proposed new facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.3 Alternative B

4.4.3.1 Impacts from Construction

Under Alternative B, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 15 acres could be disturbed in Hot Springs and approximately 10 acres could be disturbed in Rapid City. Locations for the potential facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements would be the same as those described for Alternative A as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.4.3.2 Impacts from Operation

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.4 Alternative C

4.4.4.1 Impacts from Construction

Under Alternative C, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 10 acres could be disturbed in Rapid City. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage and limited to Rapid City only under Alternative C.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.4.4.2 Impacts from Operation

Operation of the facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.5 Alternative D

4.4.5.1 Impacts from Construction

Under Alternative D, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 13 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.4.5.2 Impacts from Operation

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.6 Alternative E

4.4.6.1 Impacts from Construction

Under Alternative E, construction activities associated with the renovation of existing facilities at the Hot Springs VAMC would occur. Approximately two acres or less could be disturbed due to new construction on the campus. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction site. Soils generated during excavation would be reutilized in areas requiring fill material or transported offsite. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

Depending on the size of the campus location(s) selected for the additional RRTP facility and any new housing, a general stormwater permit from the SDDENR could be required if the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan would also be required, consistent with the NPDES general permit.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.4.6.2 Impacts from Operation

Operation of the potential facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.7 Alternative F

4.4.7.1 Impacts from Construction

Under Alternative F, only renovation of existing facilities at the Hot Springs VAMC provided for in annual budgets would occur. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from wind and stormwater runoff from the construction site. Wind erosion could temporarily increase airborne particulate matter in the area, resulting in short-term health, visibility, and aesthetics impacts. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

Construction-related impacts, if any, would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.4.7.2 Impacts from Operation

Continued operation of the facilities is not expected to result in adverse impacts to geology and soils. Landscape vegetation would be maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.4.8 Supplemental Alternative G

4.4.8.1 Impacts from Construction

Under Supplemental Alternative G, depending on the intended use, some facility renovation may be required, but construction of facilities would not be expected to exceed that described for Alternative E. The potential impacts from construction and regulatory compliance requirements would be similar to those of Alternative E if there was a small amount of construction or Alternative F if there was none.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.4.8.2 Impacts from Operation

Operation of some or all of the Hot Springs VAMC facilities by a new tenant is not expected to result in adverse impacts to geology and soils. For construction of any new building, landscape vegetation would be maintained, thereby minimizing exposed soils and the resulting erosion potential.

4.5 Hydrology and Water Quality

4.5.1 Evaluation Criteria

The potential effects related to hydrology and water quality were evaluated through a qualitative assessment of potential project-related drainage alterations, increased impervious areas, water quality degradation, or groundwater depletion, including both construction- and operation-related activities. An alternative would be considered to result in an adverse impact related to hydrology and water quality if it would result in any of the following effects:

- violate existing water quality standards or otherwise substantially degrade water quality
- result in substantial water quality changes that would adversely affect beneficial uses
- result in substantive groundwater depletion

4.5.2 Alternative A

4.5.2.1 Impacts from Construction

Under Alternative A, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 5 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected. Exposed soils would be susceptible to erosion from stormwater runoff from the construction sites. Drainage changes resulting from changes to site topography and installation of impervious surfaces are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

A general stormwater permit from the SDDENR must be obtained because the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan is required, consistent with the NPDES general permit.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters.

Groundwater resources are not anticipated to be used nor measurably affected by construction activities.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.5.2.2 Impacts from Operation

Operation of the proposed new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

4.5.3 Alternative B

4.5.3.1 Impacts from Construction

Under Alternative B, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 15 acres could be disturbed in Hot Springs and approximately 10 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.5.3.2 Impacts from Operation

Operation of the new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

4.5.4 Alternative C

4.5.4.1 Impacts from Construction

Under Alternative C, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Soil disturbance from building renovation activities would be minimal. Approximately 10 acres could be disturbed in Rapid City. A location for the potential new facility in Rapid City has not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage and limited to Rapid City only under Alternative C.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements, as described in Chapter 5.

4.5.4.2 Impacts from Operation

Operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

4.5.5 Alternative D

4.5.5.1 Impacts from Construction

Under Alternative D, construction activities would include site grading and preparation, which would disturb exposed subsurface soils. Approximately 13 acres could be disturbed in Hot Springs and approximately 17 acres could be disturbed in Rapid City. Locations for the potential new facilities have not yet been selected. The potential impacts from construction and regulatory compliance requirements are the same as those described for Alternative A as adjusted for the differences in affected acreage.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices and conformance with NPDES permit requirements as described in Section 5.5.

4.5.5.2 Impacts from Operation

Operation of the new facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

4.5.6 Alternative E

4.5.6.1 Impacts from Construction

Under Alternative E, construction activities associated with the renovation of existing facilities at the Hot Springs VAMC would occur. Approximately two acres or less could be disturbed due to new construction on the campus. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from stormwater runoff from the construction site. Site topography is not anticipated to be substantially altered. Drainage changes resulting from changes to site topography are anticipated to be minimal and would be monitored for erosion potential through routine site stormwater management practices. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters. However, these potential impacts would likely be less than potential impacts from the new facility construction activities of Alternatives A, B, and D.

Depending on the size of the campus location(s) selected for the additional RRTP facility and any new housing, a general stormwater permit from the SDDENR could be required if the construction activities would disturb one or more acres of land. Development of a Stormwater Pollution Prevention Plan would also be required, consistent with the NPDES general permit.

Groundwater resources are not anticipated to be used nor measurably affected by renovation activities.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.5.6.2 Impacts from Operation

Operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in either city of operation.

4.5.7 Alternative F

4.5.7.1 Impacts from Construction

Under Alternative F, only renovation of existing facilities at the Hot Springs VAMC provided for in annual budgets would occur. Soil disturbance from building renovation activities would be minimal. Exposed soils would be susceptible to erosion from stormwater runoff from the construction site. Temporary increases in sedimentation in stormwater drainages could occur as a result of surface runoff erosion.

The use of construction materials and generation of construction wastes could increase the potential for stormwater contamination that could adversely affect water quality. Additionally, spills or leaks from construction equipment could adversely affect water quality if allowed to enter surface waters. However, these potential impacts would be less than potential impacts from the renovation or new facility construction activities of Alternatives A through E.

Groundwater resources would not be affected by renovation activities.

Construction-related impacts, if any, would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.5.7.2 Impacts from Operation

Continued operation of the facilities is not expected to result in adverse impacts to hydrology and water quality. Landscape vegetation would be maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the municipal wastewater treatment plant in each city of operation.

4.5.8 Supplemental Alternative G

4.5.8.1 Impacts from Construction

Under Supplemental Alternative G, depending on the intended use, some facility renovation may be required, but construction of facilities would not be expected to exceed that described for Alternative E. The potential impacts from construction and regulatory compliance requirements would be similar to those of Alternative E if there was a small amount of construction or Alternative F if there was none.

Construction-related impacts would be minor and short-term. Erosion and sedimentation impacts and the potential for equipment spills or leaks would be minimized through implementation of construction best management practices, as described in Chapter 5.

4.5.8.2 Impacts from Operation

Operation of the VA Hot Springs campus facilities by a new tenant is not expected to result in adverse impacts to hydrology and water quality. For construction of any new building, landscape vegetation would be installed and maintained, thereby minimizing exposed soils and impervious surface areas. Wastewater generated by facility operations would be treated by the Hot Springs municipal wastewater treatment plant.

4.6 Wildlife and Habitat

4.6.1 Evaluation Criteria

Impacts on biological resources are based on (1) the legal, commercial, recreational, ecological, or scientific importance of the resource; (2) the proportion of the resource that would be affected relative to its occurrence in the region; (3) the sensitivity of the resource to the proposed activities; and (4) the duration of ecological effects. An adverse impact on a biological resource would be identified in the case of a violation of the laws and regulations pertaining to biological resources, if species or habitats of high concern are adversely affected over relatively large areas, or if disturbances cause reductions in population size or distribution of a species of special concern. A habitat perspective is used to provide a framework for analysis of general classes of effects such as those caused by due to removal of critical habitat, noise, or human disturbance.

New sites have not yet been selected for a proposed CBOC, RRTP, and MSOC in Hot Springs or Rapid City. For purposes of bounding the impact analysis, it is assumed that the alternatives would involve new construction on a previously undisturbed site. Ground disturbance and noise associated with construction might directly or indirectly cause potential effects on wildlife and habitat. Direct effects from ground disturbance were evaluated by identifying the types of potential ground-disturbing activities and area affected in comparison to the extent of existing resources. Mortality of individuals, habitat removal, and damage or degradation of habitats are impacts that might be associated with ground-disturbing activities. By itself, noise associated with these alternatives is not likely to be of sufficient magnitude to result in the direct loss of individuals or reduce reproductive output. Effects assessment considered the number of individuals or protected species involved, amount of habitat affected, relationship of the area of potential effect to total available habitat within the region, type of stressors involved, and magnitude of the effects.

To evaluate effects to biological resources, the alternatives are reviewed with respect to the following criteria to determine whether any activities have the potential to directly or indirectly result in the following:

- Cause displacement of terrestrial or aquatic communities or loss of habitat
- Diminish the value of habitat for wildlife or plants
- Interfere with the movement of native resident or migratory wildlife species
- Conflict with applicable management plans for terrestrial, avian and aquatic species and their habitat
- Cause the introduction of noxious or invasive plant species
- Diminish the value of habitat for fish species;
- Cause a decline in native fish populations
- Affect or displace endangered, threatened, or other special status species
- Cause encroachment on or affect designated critical habitat of a federally listed species

4.6.2 Alternative A

4.6.3.1 Impacts from Construction

Under Alternative A, construction activities would include site grading and preparation, which would clear existing vegetation and habitat. Siting the new CBOC in Hot Springs would disturb up to approximately 5 acres of land, and siting the new MSOC and RRTP in Rapid City would disturb up to approximately 17 acres of land if a greenfield site is selected.

Locations for the new facilities have not yet been selected; therefore, site-specific impacts on habitat and wildlife species within or adjacent to individual sites cannot be evaluated on a site-specific basis in this EIS. However, given the relatively small affected areas within each city in relation to available wildlife habitat in the area, habitat disturbance is expected to be minimal. In addition, VA's site selection process would include reviewing potential locations for the presence of sensitive ecological resources and protected species and a preference to avoid such locations.

Animal species that are adapted to more urban areas, such as small mammals (mice, rabbits, ground squirrels), birds, and reptiles would be affected at any site located within the city limits. Some of the less mobile species within the construction zone could perish during land-clearing activities and from increased vehicular traffic during construction and operation. Activities and noise associated with construction could cause larger mammals and birds to relocate to similar habitat in the area. Depending on the populations present in those areas, the ecosystem dynamics could be altered, adding stress if food or shelter were limited. Prior to construction, the proposed site would be surveyed for nests of migratory birds in accordance with the *Migratory Bird Treaty Act*. Construction impacts related to the presence of heavy equipment and related noise would be short-term, concentrated in the first year of an estimated two-year construction schedule for each new facility. To the extent that some of the building components may be constructed elsewhere, an offsite construction process has an advantage of reducing construction time and decreasing site disruption.

With respect to impacts on potential greenfield sites, VA would make efforts to preserve existing natural features and significant vegetation and avoid impacts to sensitive resources as part of the site selection process, consistent with VA siting guidelines (VA 2013), including:

- Preserve and conserve natural features and significant vegetation, especially trees and shrubs (including sensitive habitat), for environmental protection (reduce maintenance and enhance sustainability).
- Preserve existing trees, forests, wetlands and landscape features that are important resources and visual assets; site analysis and planting design shall identify, retain and protect mature trees and vegetation, whenever reasonably possible.
- Minimize site disturbance and modification to natural topography.
- Concentrate development in areas with minimal non-engineered slopes and existing infrastructure.
- Mitigate any construction disturbance.
- Minimize creation of impervious surfaces.
- Maximize use of existing drainage patterns and features.

- Use required buffers/setbacks to restrict use of the area if any wetlands or protected waterways are on the site; all wetlands and waterways on federal lands must be identified and protected throughout the site design and construction process and after the project is finished.

Although site clearing would destroy individual plants and would kill or displace individual animals (particularly small mammals and songbirds with limited home ranges), no adverse effects to these species are expected from implementing any of the alternatives because non-sensitive species impacts are assessed on a regional population-level basis.

Aquatic resources may be indirectly affected through increased runoff or water and soil to surface waters from construction sites. Additionally, incidental spills or leaks from construction equipment could adversely affect water quality and aquatic resources if they enter surface waters. However, implementation of best management practices and conformance with NPDES permit requirements would help minimize impacts on water quality and thus aquatic resources; these minimization opportunities are described in Chapter 5. Therefore, the impacts to aquatic ecosystem are expected to be minimal.

Protected Species and Habitats

Table 3.6-2 in Section 3.6 lists the federally and state-protected endangered and threatened species occurring or potentially occurring within the Fall River and Pennington Counties. If a site was selected on which construction and operation of a proposed facility could disturb, displace, injure, or kill a protected species, a site-specific analyses and consultation with the U.S. Fish and Wildlife Service (FWS) and South Dakota Department of Fish and Game (SDDFG) would be required before the project is implemented. That analysis would take into account specific locations for the facilities in relation to the location of sensitive habitats and sensitive species at or near the site, particularly species listed by the FWS or state as endangered or threatened.

For those sites that may contain sensitive habitats or protected wildlife, the degree to which these habitats and wildlife may be affected by noise or vibration disturbance, human presence, vehicle or equipment emissions, runoff, or encroachment by nearby construction activities depends on the likelihood such species or habitat are present and VA's ability to avoid siting near sensitive habitats and protected wildlife species. The occurrence of sensitive habitats and wildlife within Hot Springs and Rapid City area varies by location, with low to no occurrence in the developed city centers and slightly higher occurrence in adjacent rural areas, particularly in the adjoining Black Hills area.

The potential for site clearing and excavation to affect nearby sensitive habitats, including wetlands and designated critical habitats of federally and state-listed endangered and threatened species, was assumed to be proportional to facility acreage requirements. Considering the relatively small land requirements for the proposed facilities, compared to many federal and commercial development projects, it is expected that VA would have a great degree of flexibility in selecting a suitable site that would allow minimal impact to wildlife and habitat. VA follows siting guidelines that emphasize preservation (through avoidance) of sensitive habitats and special status vegetation and species, as listed above.

Pre-construction surveys and coordination/consultation with FWS and SDDFG would be conducted, as appropriate, to ensure that impacts on any sensitive animal and plant species in the

vicinity of the selected site are negligible and that appropriate mitigation and minimization actions are implemented. Mitigation measures could include site development plans that avoid disturbing species or habitat, timing activities to avoid critical timeframes such as breeding season, or relocating sensitive species away from areas likely to be disturbed. Appropriate mitigations would be coordinated with the regulatory agencies as part of the consultation process. As needed, site-specific NEPA analysis tiered to this EIS would evaluate the extent and severity of impacts from developing sites or undertaking actions that are not within the bounds of the analysis in this EIS.

4.6.2.2 Impacts from Operation

Operation of the new facilities could impact wildlife in the area due to human presence. Facility emissions would be minimal and would comply with all applicable regulations and permitting procedures. No point-source discharges to surface water are anticipated from routine operation of the facilities proposed under Alternative A. Depending on the site, there could be a potential for stormwater runoff to enter aquatic habitat. However, the mitigation and minimization measures described in Chapter 5 would ensure impacts are minimized. Therefore, the impacts to aquatic ecosystems are expected to be minimal.

The municipal water system would provide the water requirements for the proposed Hot Springs and Rapid City facilities. No need to withdraw water from surface water sources is anticipated; thus, surface water volumes would not be affected and would continue to adequately support the existing aquatic ecosystem.

Operational impacts on sensitive habitats would be unlikely because any airborne and aqueous effluents would be controlled and permitted. Because species and habitat presence would be considered during site selection, it is unlikely that any federally or state-listed threatened or endangered species would be affected by facility operations.

4.6.3 Alternative B

4.6.3.1 Impacts from Construction

Under Alternative B, construction would include site grading and preparation, which would disturb existing vegetation and habitat. Up to approximately 15 acres could be disturbed in Hot Springs and up to approximately 10 acres could be disturbed in Rapid City. Locations for the new facilities have not yet been selected.

Impacts from construction under Alternative B would be very similar to those under Alternative A, since similar facilities would be constructed and the same conditions would apply. The land requirements would be slightly different under Alternative B, potentially disturbing a slightly larger area in Hot Springs (15 acres versus 5 acres under Alternative A) and a slightly smaller area in Rapid City (10 acres versus 17 acres under Alternative A). However, overall impacts from construction under Alternative B are expected to be minimal.

Locations for the new facilities have not yet been selected, therefore site-specific impacts on terrestrial and aquatic habitats and wildlife within or adjacent to individual sites cannot be evaluated in this EIS, and would be addressed in additional NEPA analysis as needed. However, given the relatively small potentially affected areas within each city in relation to available wildlife habitat in the

area, and VA's site selection process that would avoid sites that have or are near protected species or sensitive habitat, habitat disturbance is expected to be minimal.

Considering the relatively small land requirements for new facilities under the alternatives and the small amount of sensitive habitat within the city limits of Hot Springs and Rapid City, it is expected that VA would have a great degree of flexibility in selecting a suitable site that would have minimal impact on sensitive habitat and wildlife. Appropriate mitigation measures (see Chapter 5) and coordination/consultation with FWS and SDDFG would ensure that site clearing to implement any alternative would not affect protected species or their habitat.

4.6.3.2 Impacts from Operation

The proposed facilities under Alternative B are not significantly different from those under Alternative A. Therefore, impacts from Alternative B from facility operation in Hot Springs and Rapid City would be similar to those from Alternative A. Operation of the facilities is not expected to result in adverse impacts to existing ecological resources including vegetation, habitat, and wildlife.

4.6.4 Alternative C

4.6.4.1 Impacts from Construction

Under Alternative C, construction activities would include site grading and preparation, which would disturb existing vegetation and habitat. Vegetation and habitat disturbance from building renovation activities at the existing Hot Springs VAMC would be minimal since most activities would occur within existing buildings. Approximately 10 acres could be disturbed in Rapid City for construction of an MSOC. A location for this new facility has not yet been selected; however, impacts would be identical to those in Rapid City under Alternative B, which would also affect up to 10 acres of land. Overall impacts from construction under Alternative B are expected to be minimal.

4.6.4.2 Impacts from Operation

The size of the proposed new facility in Rapid City under Alternative C is identical to that proposed in Rapid City under Alternative B. Therefore, impacts are expected to be the same. Activities proposed at the existing Hot Springs VAMC would not disturb any new land. Operation of the proposed facilities under Alternative C is not expected to result in adverse impacts to existing ecological resources including vegetation and habitat and wildlife.

4.6.5 Alternative D

4.6.5.1 Impacts from Construction

Under Alternative D, construction activities would include site grading and preparation, which would disturb existing vegetation and habitat. Up to approximately 13 acres could be disturbed in Hot Springs and up to approximately 17 acres could be disturbed in Rapid City.

Locations for the new facilities have not yet been selected; however, impacts occurring in Hot Springs would be somewhat less than but similar to those under Alternative B (where up to 15 acres would be affected), and impacts occurring in Rapid City would be similar to those under Alternative A.

4.6.5.2 Impacts from Operation

The sizes of the proposed new facilities in Hot Springs and Rapid City under Alternative D are not significantly different from those proposed under Alternatives A and B. Therefore, impacts from Alternative B from facility operation in Hot Springs and Rapid City would be similar to those from Alternatives A and B. Operation of the facilities is not expected to result in adverse impacts to existing ecological resources including vegetation and habitat and wildlife.

4.6.6 Alternative E

4.6.6.1 Impacts from Construction

Under Alternative E, construction activities would include the renovation of existing facilities and minor onsite new construction in previously disturbed areas on the VA Hot Springs campus. There would be no change in location or operation of the existing CBOC in Rapid City. The majority of renovation work in Hot Springs would be confined to building interiors and disturbance to existing vegetation and habitat from building renovation activities would be minimal, affecting less than two acres. There would be negligible potential for adverse impact to existing vegetation and wildlife at the VA facilities in Hot Springs or Rapid City under Alternative E.

4.6.6.2 Impacts from Operation

Continued operation of the existing facilities, even with some new facility uses and limited new construction at the Hot Springs VAMC, is not expected to result in adverse impacts to ecological resources including vegetation, habitat, and wildlife.

4.6.7 Alternative F

4.6.7.1 Impacts from Construction

Under Alternative F, there would be no (or limited) exterior construction. Ground disturbance would be minimal and there would be no appreciable change in existing habitat and wildlife conditions. This alternative would have no adverse impact on ecological resources, including terrestrial and aquatic resources or sensitive habitats and species.

4.6.7.2 Impacts from Operation

Continued operation of the existing facilities in Hot Springs and Rapid City under Alternative F is not expected to result in adverse impacts to existing ecological resources including vegetation, habitat, and wildlife.

4.6.8 Supplemental Alternative G

4.6.8.1 Impacts from Construction

Under Alternative G, some of the existing facilities in Hot Springs would be re-used by other tenants. Depending on the intended use, some facility renovation and small construction (as in Alternative E) may be required; the majority of renovation activities are assumed to occur inside and ground disturbance would be minimal (two acres or less is assumed). Impacts on ecological resources would be minimal to none, similar to those of Alternatives E and F.

4.6.8.2 Impacts from Operation

Operations from re-use of some or all of the VA Hot Springs campus by a tenant are not expected to result in adverse impacts to ecological resources, including habitat and wildlife; activities and impacts are estimated to be bounded by those projected for Alternatives E and F, depending on the intensity of onsite activity.

4.7 Noise

To assess the potential short-term noise impacts from construction, sensitive receptors and their relative levels of exposure were identified. Construction noise generated by the proposed projects was predicted using the Roadway Construction Noise Model (FHWA 2006). Noise levels of specific construction equipment and resultant noise levels at representative locations were calculated.

Ground-borne vibration impacts from construction activities were assessed based on existing documentation (such as for vibration levels produced by specific construction equipment operations) and the distance of sensitive receptors from the given source. Vibration levels were predicted, and impacts were evaluated against the established thresholds.

Two primary groups of noise-generating activities were identified: construction and renovation. For each activity group, noise levels were predicted using the Roadway Construction Noise Model (FHWA 2006). Default values for equipment specification sound levels and usage factors were used in modeling predicted noise levels. It was assumed that all equipment is in use simultaneously (conservative assumption overestimating predicted noise levels) and the construction site is surrounded by a noise barrier with some gaps (providing an estimated noise shielding of five A-weighted decibels [dBA]). Outdoor noise levels were predicted at distances from the source equipment of 100 feet and 500 feet. Figures 4.7-1 through 4.7-6 provide the model results.

For the construction activities group, the following pieces of equipment were assumed to potentially be in use:

- Backhoe
- Compactor (ground)
- Compressor (air)
- Concrete mixer truck
- Concrete pump truck
- Concrete saw
- Crane
- Dozer
- Dump truck
- Excavator
- Flat bed truck
- Front end loader
- Generator
- Grader
- Man lift
- Pickup truck
- Pneumatic tools
- Pumps
- Scraper
- Warning horn

The resulting predicted equivalent continuous noise level (L_{eq}) for the construction activities group at a distance of 100 feet is 81.0 dBA and at a distance of 500 feet is 67.0 dBA.

For the renovation activities group, the following pieces of equipment were assumed to potentially be in use:

- Backhoe
- Compactor (ground)
- Compressor (air)
- Crane
- Dump truck
- Flat bed truck
- Front end loader
- Generator
- Man lift
- Pickup truck
- Pneumatic tools
- Pumps
- Warning horn

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Hot Springs, SD @ 100 ft	Residential	50	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		100	5
Compactor (ground)	No	20	80		100	5
Compressor (air)	No	40	80		100	5
Concrete Mixer Truck	No	40	85		100	5
Concrete Pump Truck	No	20	82		100	5
Concrete Saw	No	20	90		100	5
Crane	No	16	85		100	5
Dozer	No	40	85		100	5
Dump Truck	No	40	84		100	5
Excavator	No	40	85		100	5
Flat Bed Truck	No	40	84		100	5
Front End Loader	No	40	80		100	5
Generator	No	50	82		100	5
Grader	No	40	85		100	5
Man Lift	No	20	85		100	5
Pickup Truck	No	40	55		100	5
Pneumatic Tools	No	50	85		100	5
Pumps	No	50	77		100	5
Scraper	No	40	85		100	5
Warning Horn	No	5	85		100	5

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Noise Limit Exceedance (dBA) Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq
Backhoe	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	71	64	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	79	72	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	79	81	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-1. Hot Springs Construction Noise Estimates at 100 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Hot Springs, SD @ 500 ft	Residential	50	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		500	5
Compactor (ground)	No	20	80		500	5
Compressor (air)	No	40	80		500	5
Concrete Mixer Truck	No	40	85		500	5
Concrete Pump Truck	No	20	82		500	5
Concrete Saw	No	20	90		500	5
Crane	No	16	85		500	5
Dozer	No	40	85		500	5
Dump Truck	No	40	84		500	5
Excavator	No	40	85		500	5
Flat Bed Truck	No	40	84		500	5
Front End Loader	No	40	80		500	5
Generator	No	50	82		500	5
Grader	No	40	85		500	5
Man Lift	No	20	85		500	5
Pickup Truck	No	40	55		500	5
Pneumatic Tools	No	50	85		500	5
Pumps	No	50	77		500	5
Scraper	No	40	85		500	5
Warning Horn	No	5	85		500	5

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	57	50	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	65	58	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	60	52	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	57	54	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	60	53	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	30	26	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	60	57	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	52	49	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	60	47	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	65	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-2. Hot Springs Construction Noise Estimates at 500 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Rapid City, SD @ 100 ft	Residential	55	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		100	5
Compactor (ground)	No	20	80		100	5
Compressor (air)	No	40	80		100	5
Concrete Mixer Truck	No	40	85		100	5
Concrete Pump Truck	No	20	82		100	5
Concrete Saw	No	20	90		100	5
Crane	No	16	85		100	5
Dozer	No	40	85		100	5
Dump Truck	No	40	84		100	5
Excavator	No	40	85		100	5
Flat Bed Truck	No	40	84		100	5
Front End Loader	No	40	80		100	5
Generator	No	50	82		100	5
Grader	No	40	85		100	5
Man Lift	No	20	85		100	5
Pickup Truck	No	40	55		100	5
Pneumatic Tools	No	50	85		100	5
Pumps	No	50	77		100	5
Scraper	No	40	85		100	5
Warning Horn	No	5	85		100	5

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	71	64	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	79	72	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	74	70	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	79	81	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-3. Rapid City Construction Noise Estimates at 100 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Rapid City, SD @ 500 ft	Residential	55	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		500	5
Compactor (ground)	No	20	80		500	5
Compressor (air)	No	40	80		500	5
Concrete Mixer Truck	No	40	85		500	5
Concrete Pump Truck	No	20	82		500	5
Concrete Saw	No	20	90		500	5
Crane	No	16	85		500	5
Dozer	No	40	85		500	5
Dump Truck	No	40	84		500	5
Excavator	No	40	85		500	5
Flat Bed Truck	No	40	84		500	5
Front End Loader	No	40	80		500	5
Generator	No	50	82		500	5
Grader	No	40	85		500	5
Man Lift	No	20	85		500	5
Pickup Truck	No	40	55		500	5
Pneumatic Tools	No	50	85		500	5
Pumps	No	50	77		500	5
Scraper	No	40	85		500	5
Warning Horn	No	5	85		500	5

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Mixer Truck	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Pump Truck	57	50	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Concrete Saw	65	58	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	60	52	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dozer	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Excavator	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	57	54	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Grader	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	60	53	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	30	26	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	60	57	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	52	49	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Scraper	60	56	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	60	47	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	65	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-4. Rapid City Construction Noise Estimates at 500 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Hot Springs, SD @ 100 ft	Residential	50	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		100	5
Compactor (ground)	No	20	80		100	5
Compressor (air)	No	40	80		100	5
Crane	No	16	85		100	5
Dump Truck	No	40	84		100	5
Flat Bed Truck	No	40	84		100	5
Front End Loader	No	40	80		100	5
Generator	No	50	82		100	5
Man Lift	No	20	85		100	5
Pickup Truck	No	40	55		100	5
Pneumatic Tools	No	50	85		100	5
Pumps	No	50	77		100	5
Warning Horn	No	5	85		100	5

Results

Equipment	Calculated (dBA) *Lmax	Calculated (dBA) Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	69	62	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	74	66	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	73	69	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	69	65	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	71	68	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	74	67	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	44	40	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	74	71	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	66	63	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	74	61	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	74	77.6	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-5. Hot Springs Renovation Noise Estimates at 100 Feet from Source.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 2/9/2015
Case Description: BHHCS EIS - Construction Activities

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Hot Springs, SD @ 500 ft	Residential	50	40	35

Description	Impact Device	Usage (%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Backhoe	No	40	80		500	5
Compactor (ground)	No	20	80		500	5
Compressor (air)	No	40	80		500	5
Crane	No	16	85		500	5
Dump Truck	No	40	84		500	5
Flat Bed Truck	No	40	84		500	5
Front End Loader	No	40	80		500	5
Generator	No	50	82		500	5
Man Lift	No	20	85		500	5
Pickup Truck	No	40	55		500	5
Pneumatic Tools	No	50	85		500	5
Pumps	No	50	77		500	5
Warning Horn	No	5	85		500	5

Equipment	Results Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Noise Limit Exceedance (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Backhoe	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compactor (ground)	55	48	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Compressor (air)	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Crane	60	52	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Dump Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Flat Bed Truck	59	55	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Front End Loader	55	51	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Generator	57	54	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Man Lift	60	53	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pickup Truck	30	26	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pneumatic Tools	60	57	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Pumps	52	49	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Warning Horn	60	47	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A
Total	60	63.7	90	90	N/A	N/A	N/A	N/A	None	None	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Note: dBA = A-weighted decibel. L_{eq} = equivalent continuous noise level. L_{max} = maximum noise level.

Figure 4.7-6. Hot Springs Renovation Noise Estimates at 500 Feet from Source.

The resulting predicted L_{eq} for the construction activities group at a distance of 100 feet is 77.6 dBA and at a distance of 500 feet is 63.7 dBA.

At distances from the noise-generating activities of greater than 2,000 feet (0.38 miles), predicted noise levels are not significantly above measured background sound levels and would not likely have an adverse impact on receptors.

4.7.1 Evaluation Criteria

An alternative would be considered to result in an adverse impact related to noise if it would result in either of the following:

- the exposure of receptors to construction noise levels in excess of U.S. Environmental Protection Agency (EPA) standards, as stated in Table 3.7-2 in Section 3.7
- exposure of persons or structures to excessive ground-borne vibration

4.7.2 Alternative A

4.7.2.1 Impacts from Construction

Under Alternative A, construction activities associated with the construction of a new CBOC in Hot Springs and a new MSOC and RRTP in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the proposed new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Because locations for the proposed new facilities have not yet been selected, vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels), depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate in magnitude, depending on the receptor type and proximity to the project location. Mitigation, minimization, monitoring, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.2.2 Impacts from Operation

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the proposed new facilities, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

4.7.3 Alternative B

4.7.3.1 Impacts from Construction

Under Alternative B, construction activities associated with the construction of a new CBOC and RRTP in Hot Springs and a new MSOC in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, and noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate in magnitude depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.3.2 Impacts from Operation

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

4.7.4 Alternative C

4.7.4.1 Impacts from Construction

Under Alternative C, the existing CBOC and RRTP facilities in Hot Springs would be renovated, and a new MSOC in Rapid City would be constructed. Construction activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

Renovation activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and renovation activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and moderate in magnitude depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.4.2 Impacts from Operation

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

4.7.5 Alternative D

4.7.5.1 Impacts from Construction

Under Alternative D, construction activities associated with the construction of a new CBOC and RRTP in Hot Springs and a new MSOC and RRTP in Rapid City would occur. These activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 81.0 dBA at 100 feet from the source and 67.0 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the construction activities continue to decrease as they approach existing background sound levels. In the event that VA operations are located in existing facilities rather than newly constructed facilities, the construction-related noise level increases described would not occur.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). Locations for the new facilities have not yet been selected, thus noise-related impacts to specific receptors cannot be determined. However, the predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels,

in the immediate vicinity of the construction activities averaged over an entire day may approach the EPA-recommended noise level standards.

Construction activities would include vibration-producing activities (such as excavation, grading, basement excavation, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. Locations for the new facilities have not yet been selected, thus vibration-related impacts to specific receptors cannot be determined. The increase in vibration levels in the vicinity of the construction and demolition activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.5.2 Impacts from Operation

Routine operation of a CBOC, MSOC, and RRTP would not significantly increase sound levels from existing background levels. New facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase in the vicinity of the new facility locations, but would not be expected to increase disproportionately from current levels typical of urban settings. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

4.7.6 Alternative E

4.7.6.1 Impacts from Construction

Under Alternative E, some of the existing facilities in Hot Springs would be renovated, and a building would be constructed to accommodate the additional RRTP beds. Renovation and construction activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation and construction activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation and construction activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). The predicted increases in noise levels would be consistent with typical urban construction projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the renovation and

construction activities and averaged over an entire day, may approach the EPA-recommended noise level standards.

Renovation activities could include vibration-producing activities (such as excavation, grading, and clearing). Depending on the specific construction equipment used and operations involved, short-term increases in ground vibration may result. The increase in vibration levels in the vicinity of the construction and renovation activities would be short-term but noticeable. Activities would be limited to daytime hours and would be anticipated to be a minor disturbance to neighboring receptors.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location, including day and residential Veteran patients on campus. Construction-related vibration impacts would also be adverse, short-term, and potentially moderate, depending on the receptor type and proximity to the project location. Mitigation, monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.6.2 Impacts from Operation

Routine operation of the VA hospital and RRTP would not significantly increase sound levels from existing background levels at the Hot Springs campus. Renovated facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Traffic-related noise levels may increase due to increased campus activity, but would not be expected to increase appreciably from current levels onsite. Routine operation would not be expected to increase vibration levels.

Operation-related noise impacts would be minor. Operation-related vibration impacts would not be expected.

4.7.7 Alternative F

4.7.7.1 Impacts from Construction

Under Alternative F, some of the existing facilities in Hot Springs would be renovated as annual budgets allow. Renovation activities would be accompanied by a conservatively predicted short-term noise level increase to approximately 77.6 dBA at 100 feet from the source and 63.7 dBA at 500 feet from the source (comparable to traffic sound levels from a nearby freeway). The increase in noise levels in the vicinity of the renovation activities would be short-term but noticeable. As the distance from the source is increased, the noise levels attributable to the renovation activities continue to decrease as they approach existing background sound levels.

The perceived impacts from the increase in noise levels would depend on the receptor and site-specific conditions (including sound shielding). The predicted increases in noise levels would be consistent with typical urban renovation projects, activities could be scheduled for normal daytime business hours, and proper equipment maintenance and noise shielding would minimize noise level increases from construction activities. Sound levels, in the immediate vicinity of the renovation activities, averaged over an entire day may approach the EPA-recommended noise level standards.

No vibration-producing activities (such as excavation, grading, and clearing) are anticipated.

Construction-related noise impacts would be adverse, short-term, and potentially moderate in magnitude (approaching EPA threshold levels) depending on the receptor type and proximity to the project location, including day and residential Veteran patients on campus. Construction-related vibration impacts are not anticipated. Mitigation monitoring, minimization, and best practices to control noise and vibration impacts are listed in Chapter 5.

4.7.7.2 Impacts from Operation

Continued operation of the Hot Springs VAMC and domiciliary would not increase sound levels from existing background levels. Renovated facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Routine operation would not be expected to increase vibration levels.

Operation-related noise and vibration impacts would not be expected.

4.7.8 Supplemental Alternative G

4.7.8.1 Impacts from Construction

Under Supplemental Alternative G, some or all of the existing facilities at the VA Hot Springs campus would be re-used by other tenants. Depending on the intended use, some facility renovation or small-scale construction could occur. Impacts would be similar to those of Alternatives E (if there was some construction) or Alternative F (if improvements consisted only of renovations).

4.7.8.2 Impacts from Operation

The operational noise-generating potential of new tenants on the existing VA Hot Springs campus would depend on the intended use. However, uses would be compatible with the site's status as a National Historic Landmark; therefore, industrial operations or similar activities that would generate excessive noise would not occur, and noticeable increases in sound levels from existing background levels would not be expected. Renovated facilities could be designed to position and incorporate sound shielding for stationary noise-generating equipment (such as refrigeration units). Routine operation would not be expected to increase vibration levels.

Operation-related noise and vibration impacts would not be expected.

4.8 Land Use

4.8.1 Evaluation Criteria

The evaluation of land use impacts focuses on current land use plans and zoning. In carrying out its federal functions, VA is not subject to state or local regulations absent a clear statutory waiver to the contrary. This concept is based upon the Supremacy Clause (Article VI) of the U.S. Constitution. Although local governments cannot regulate or permit activities of the federal government on federally owned land, federal agencies must consider local zoning laws for new building construction (40 United States Code [U.S.C.] 619(b)). VA actions on non-federal land (such as at a leased facility) are subject to the regulatory requirements of the landowner, including local plans and ordinances pertaining to land use and zoning.

General compatibility with existing and future land use designations and zoning ordinances is the basis to indicate the potential for land use impacts. Adverse land use impacts are identified if the reconfiguration proposal would:

- Be inconsistent with current or planned future land uses and community goals for land use
- Alter the character and use of the land in relation to surrounding uses
- Conflict with zoning designations or ordinances

4.8.2 Alternative A

4.8.2.1 Impacts from Construction

Construction of the proposed CBOC in the Hot Springs area and the proposed co-located MSOC and RRTP in the Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use. Should the adjacent land use be commercial or retail, daytime construction could have a temporary effect on access to these businesses and could be inconvenient to customers. Construction activities would not likely affect adjacent land use that is vacant (undeveloped), but could disturb users of adjacent land use that is open space or parkland.

4.8.2.2 Impacts from Operation

4.8.2.2.1 Hot Springs

The criteria for selecting a site in the Hot Springs area to operate a CBOC would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan (see Section 3.8.1.2.4) and current zoning. VA design guidance requirements for advancing local planning goals, prioritizing areas that are currently served by public infrastructure (utilities and roads), and protecting the natural environment while avoiding environmental hazards are generally compatible with the Hot Springs Comprehensive Plan objectives of intensifying land uses adjacent to transportation facilities, clustering activities to promote efficient land use, and prohibiting development in natural hazard areas. Based on the land use and zoning throughout Hot Springs (see Figure 3.8-1), it is anticipated a suitable site of five acres would be available in or adjacent to General Commercial, Mixed Use, or Highway Service zoning where a CBOC would be a compatible land use and not substantially conflict with zoning designations.

VA BHHCS would continue to maintain the Hot Springs campus (although health care services would not be offered there) and the National Cemetery would be operated and maintained as usual; thus, there would be no impact on land use. Although VA health care services would continue to be offered in the Hot Springs area, vacating the campus would change one of "the factors [that] represent the keys to the future strength and vitality of the Hot Springs' economy" in the City of Hot Springs Comprehensive Plan, which assumed the campus "will continue to grow in size and importance". However, as federally owned land, the campus is not subject to local land use planning or zoning restrictions. Potential land use impacts due to re-use of the campus are described as part of Alternative G (see Section 4.8.8).

4.8.2.2.2 Rapid City

Both the Pennington County and Rapid City comprehensive plans recognize the area as a regional center for health care. The criteria for selecting sites in the Rapid City area to operate an MSOC and RRTP would be generally compatible with the planning policies that endorse health care services development (see Section 3.8.1.2.4). VA design guidance requirements for advancing local planning goals, prioritizing areas that are currently served by public infrastructure (utilities and roads), and protecting the natural environment while avoiding environmental hazards are generally compatible with the Rapid City Comprehensive Plan goals and policies of targeting infrastructure investments, supporting a diverse mix of land uses, and protecting natural resources. The city has sufficient scale, complexity, utilities, and other characteristics necessary to accommodate both an MSOC and RRTP. Based on the future land use throughout Rapid City (see Figure 3.8-2), it is anticipated suitable sites would be available in or adjacent to areas identified as Mixed Use or Employment categories where health care facilities would be a compatible land use. The Rapid City Comprehensive Plan provides flexibility in applying future land use categories; thus, site selection and facility design for an MSOC and RRTP should not substantially conflict with current or planned future land uses.

The Rapid City zoning ordinance (Rapid City 2014b) defines medical facilities to include "medical clinic" and "sanitarium." Medical clinic is further defined as an examination and treatment facility for outpatients, whereas sanitarium is defined as an institution providing health facilities for inpatient medical treatment or treatment and recuperation using natural therapeutic agents. These definitions would include the health care services that would be provided at an MSOC and RRTP. The zoning ordinance allows for medical facilities in districts zoned as General Commercial, Neighborhood Commercial, Neighborhood Shopping Center, Community Shopping Center, or Office Commercial. A proposed MSOC and RRTP in the Rapid City area would require 14 to 17 acres. It is anticipated suitable sites would be available in or adjacent to these zoning districts; thus, operation of an MSOC and RRTP would not substantially conflict with zoning designations or the zoning ordinance.

The zoning ordinance defines group home as a facility that provides room, board, counseling, and rehabilitative services for individuals who, by reason of mental or physical disability, addiction to drugs or alcohol, or family and school adjustment problems, require specialized attention and care in order to achieve personal independence. This definition would include the health care services provided at the RRTP. A group home is a conditional use that may be permitted in Low, Medium, and High Density Residential and General Commercial zoning districts, as well as the Central Business district. It is anticipated suitable sites would be available in or adjacent to these zoning districts; thus, operation of an RRTP would not substantially conflict with these zoning designations or the zoning ordinance.

4.8.3 Alternative B

4.8.3.1 Impacts from Construction

Construction of a CBOC and RRTP in the Hot Springs area and an MSOC in the Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use, and in Hot Springs the extent of disturbance would also depend on whether the CBOC and RRTP would be at separate sites or co-located. The potential land use impacts from construction would be similar to the impacts described for Alternative A.

4.8.3.2 Impacts from Operation

4.8.3.2.1 Hot Springs

The criteria for selecting sites in the Hot Springs area to operate a CBOC and 100-bed RRTP would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan and current zoning. Impacts to land use would be similar to the impacts described for Alternative A. However, a suitable site of 11 to 13 acres in the Hot Springs area to co-locate a CBOC and RRTP with a fire station may be difficult to locate within the currently zoned areas for General Commercial and Mixed Use as a compatible land use. A suitable site may be available within or adjacent to Highway Service zoning to avoid incompatible land uses, or located on land not zoned where a potential land use conflict could occur. The extent of any incompatible land use would depend on the surrounding land use and planned future use.

Health care services would not be offered at the VA Hot Springs campus. The land use impacts of vacating the campus are similar to the impacts described for Alternative A.

4.8.3.2.2 Rapid City

The criteria for selecting a site in the Rapid City area to operate an MSOC would be generally compatible with the planning policies that endorse health care services development and the zoning ordinances that apply to medical facilities. Impacts to land use and zoning from siting and operating an MSOC in the Rapid City area would be similar to the impacts described for Alternative A. Because only an MSOC would be proposed under Alternative B, the land use and zoning restrictions for siting and operating an RRTP would not apply.

4.8.4 Alternative C

4.8.4.1 Impacts from Construction

Renovations and modifications to buildings on the VA Hot Springs campus would not affect land use. No construction is proposed elsewhere in Hot Springs under this alternative so there would be no conflicts with existing land use and zoning designations. Potential temporary impacts to adjacent land uses from construction of an MSOC in Rapid City would be similar to the temporary impacts described for Alternative A.

4.8.4.2 Impacts from Operation

4.8.4.2.1 Hot Springs

Health care operations and building maintenance would continue at the VA Hot Springs campus, which would not affect the existing land use of the campus or the land uses or zoning designations of the areas surrounding the campus. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

4.8.4.2.2 Rapid City

Impacts to land use and zoning from siting and operating an MSOC in the Rapid City area would be similar to the impacts described for Alternative B.

4.8.5 Alternative D

4.8.5.1 Impacts from Construction

Construction of a CBOC and 24-bed RRTP in the Hot Springs area and an MSOC and 76-bed RRTP in Rapid City area would cause disturbances to adjacent land uses. The extent of the disturbance would depend on the type of adjacent land use, and whether the facilities would be at separate sites or co-located. The potential temporary land use impacts from construction would be similar to the impacts described for Alternative A.

4.8.5.2 Impacts from Operation

4.8.5.2.1 Hot Springs

The criteria for selecting sites in the Hot Springs area to operate a CBOC and 24-bed RRTP with a fire station would be generally compatible with the land use objectives of the Hot Springs Comprehensive Plan and current zoning. Impacts to land use would be similar to the impacts described for Alternative A if the facilities are at separate locations or similar to Alternative B if the facilities are co-located.

Health care services would not be offered at the VA Hot Springs campus. The land use impacts of vacating the campus are similar to the impacts described for Alternative A.

4.8.5.2.2 Rapid City

Impacts to land use and zoning from siting and operating an MSOC and 76-bed RRTP in the Rapid City area would be similar to the impacts described for Alternative A. Although the RRTP proposed for the Rapid City area would have fewer beds than Alternative A, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar.

4.8.6 Alternative E

4.8.6.1 Impacts from Construction

Renovations and modifications to buildings and construction of additional buildings on the VA Hot Springs campus are proposed under Alternative E. Open space that might be suitable for construction of new buildings is scattered throughout the campus. Although the overall use of the

campus for health care services would remain, open space land use would be lost to construction of new buildings. Expansion on the campus would be consistent with the City of Hot Springs' planning, which assumed the campus "will continue to grow in size and importance". No construction is proposed elsewhere in Hot Springs under this alternative so there would be no conflicts with existing land use and zoning designations off the campus.

Because no modifications to the existing CBOC in Rapid City are proposed and an MSOC would not be constructed, there would be no temporary impacts on land use or zoning from construction activities in the Rapid City area.

4.8.6.2 Impacts from Operation

4.8.6.2.1 Hot Springs

Health care operations and building maintenance would continue at the VA Hot Springs campus, which would not affect the existing land uses or zoning designations of the areas surrounding the campus. Although the overall use of the campus for health care services would remain, open space land use would be lost to accommodate new buildings. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

4.8.6.2.2 Rapid City

The CBOC would continue to operate in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that another location in Rapid City would be in compliance with the zoning ordinances for medical facilities and there would be no impact on land uses.

4.8.7 Alternative F

4.8.7.1 Impacts from Construction

Upgrades and renovations to buildings to maintain clinical standards would be initiated as funding was available through the routine budgeting process. These construction projects would not affect the existing land uses or zoning designations of the areas surrounding the VA Hot Springs campus. There would be no upgrades or renovations to the existing CBOC in Rapid City so there would be no temporary impacts on land use or zoning from construction.

4.8.7.2 Impacts from Operation

4.8.7.2.1 Hot Springs

Health care operations and building maintenance would continue at the VA Hot Springs campus, which would not affect the existing land use of the campus or the land uses or zoning designations of the areas surrounding the campus. As federally owned land, operation of the campus is not subject to local planning or zoning restrictions.

4.8.7.2.2 Rapid City

The CBOC would continue to operate in Rapid City. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that the different location in Rapid

City would be in compliance with the zoning ordinances for medical facilities and there would be no impact on land uses.

4.8.8 Supplemental Alternative G

4.8.8.1 Impacts from Construction

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs campus and could only happen with implementation of Alternatives A, B, C, or D. If the proposed re-use included any renovations or modifications to buildings or construction of additional buildings on the VA Hot Springs campus, these actions would be consistent with the City of Hot Springs' planning, which assumed the campus "will continue to grow in size and importance" and construction impacts would be similar to or less than those impacts described for Alternative E. If the potential re-use did not require any construction, renovation, or modification, potential impacts from construction would be similar to the impacts described for Alternative F.

4.8.8.2 Impacts from Operation

Impacts to existing land use of the campus or to the land uses or zoning designations of the areas surrounding the campus would depend on the type of re-use selected. Should the re-use involve renovations and modifications to buildings and construction of additional buildings on the VA Hot Springs campus to continue to operate as a medical facility, potential land use impacts would be similar to the impacts described for Alternative E.

If VA retains ownership of the Hot Springs campus and re-use is accomplished through an enhanced-use lease, or if it is transferred to another federal agency, there would be no adverse effects on land use from implementing Supplemental Alternative G.

Should re-use involve the transfer of land ownership from the federal government, re-use plans would be subject to the Hot Springs Comprehensive Plan and zoning ordinances. Depending on the proposed type of re-use, the re-use proponent may have to coordinate with the City of Hot Springs to avoid conflict with, request a waiver from, or revise current land use plans and zoning ordinances. VA BHHCS would also ensure that any transfer agreement to a non-federal entity is developed in accordance with the outcome of appropriate *National Historic Preservation Act* consultation, and that the agreement incorporates conditions and restrictions to ensure the prospective landowner would maintain the National Historic Landmark status of the site.

4.9 Floodplains and Wetlands

4.9.1 Evaluation Criteria

Executive Order 11988, *Floodplain Management*, requires VA to avoid adverse impacts associated with occupancy and modification of floodplains to the extent possible, and avoid direct and indirect support of floodplain development wherever there is a practicable alternative. According to the VA Site Development Design Manual, development within the 100-year floodplain should be avoided or limited, with structures in the floodplain only if absolutely necessary. For purposes of this evaluation, an impact to floodplains would be considered adverse if development impedes or redirects flood flows, no practicable alternative exists to development within a 100-year floodplain, or compliance with flood hazard reduction requirements is not technically or economically feasible.

Section 404 of the *Clean Water Act* requires authorization for activities that fill or disturb waters of the U.S, including wetlands. USACE determines if a wetland is within their jurisdictional authority to regulate waters of the U.S. To be a jurisdictional wetland, it must meet the regulatory definition and be adjacent to other waters of the U.S. For purposes of this evaluation, an impact to wetlands would be considered adverse if the loss of a jurisdictional wetland cannot be avoided or if compensatory mitigation is not feasible, and USACE does not authorize the activity that fills or disturbs the wetland.

4.9.2 Alternative A

4.9.2.1 Impacts from Construction

There are no special flood hazard areas, other flood areas, or wetlands on the VA Hot Springs campus that could be impacted. (Note that no construction on the campus is proposed under Alternative A.)

One criterion to selecting a site in Hot Springs to construct a CBOC and in Rapid City to construct an MSOC and RRTP would be to avoid sites within a designated 100-year floodplain. The size of the site for a proposed CBOC in Hot Springs is five acres. Based on the location and extent of the flood-prone areas throughout Hot Springs (see Figure 3.9-1), it is anticipated a suitable site would be available outside the 100-year floodplain to meet this site selection criterion. There would be practicable alternatives to developing within the 100-year floodplain; thus, construction activities would not impede flood flows or impact a floodplain in the Hot Springs area.

A proposed MSOC and RRTP in Rapid City would require 10 acres each or 14 to 17 acres if the buildings are co-located. The special flood hazard zones are located throughout the city and the extent varies based on proximity to Rapid Creek and to the larger tributaries and drainages entering Rapid Creek (see Figure 3.9-2). Together with other siting criteria, such as natural and built site features, infrastructure improvements, and public transportation access, the criterion of avoiding the 100-year floodplain would likely be met. Construction activities would therefore not impede flood flows or impact a 100-year floodplain in the Rapid City area.

A site could be selected in Rapid City within the 500-year floodplain, including the area of reduced flood risk due to levees, if other siting criteria are available and acceptable. New construction or renovation of existing buildings are permitted by the City of Rapid City within these other flood areas without specific flood reduction design and construction requirements, such as finished floor

elevations or floodproofing. Construction in these areas would not impede flood flows or cause a rise in flood elevations.

The wetland adjacent to Fall River in Hot Springs would not be impacted by construction simply because of its location. The two wetlands in the northeast corner of Hot Springs would not likely be impacted because their locations appear to be on residential properties near houses. This area would not meet the site selection criteria for a CBOC. The two manmade excavations in the southwest, regardless if disturbed by construction, would not meet the regulatory definition of a wetland and the locations are not adjacent to Fall River or other waters of the U.S. Therefore, no jurisdictional wetlands would be impacted by construction of a CBOC in Hot Springs.

Many of the wetlands shown on the National Wetlands Inventory in Rapid City are within or near the 100- and 500-year floodplains. Because of the floodplain locations, construction of an MSOC and RRTP would not likely impact these wetlands. It is possible a wetland(s) shown on the National Wetlands Inventory or observed in the field could be on a site determined to be available and meeting the selection criteria for acceptable siting for an MSOC and RRTP. Construction could impact the wetland(s) if the site design and layout of buildings and infrastructure could not avoid disturbing the wetland(s). The extent of any impact would not only depend on whether the wetland met the regulatory definition, but also the function, value, quality, and size of the wetland(s) that could be disturbed during construction.

Field surveys would be completed of potential sites to determine presence and jurisdiction of any wetlands. Impacts to jurisdictional (regulated) wetlands would be minimized to the extent practicable during construction. If jurisdictional wetlands cannot be avoided, VA would develop a mitigation plan to compensate for the lost function and value of the wetland either by creating or enhancing other wetlands onsite or at an offsite location through an established mitigation bank, or through an in-lieu fee program.

Impacts to any nearby floodplains or wetlands from changes to the site hydrology, stormwater runoff patterns, and stormwater volumes are addressed in Section 4.5. Site designs or structures, such as drainage swales or detention basins, could be necessary to manage stormwater on the selected site. Any such design or structure could potentially serve a secondary purpose of wetland creation.

4.9.2.2 Impacts from Operation

VA BHHCS would continue to maintain the VA Hot Springs campus, although health care operations would not be offered at that location. There are no special flood hazard areas, other flood areas, or wetlands on the campus that could be impacted regardless of continued maintenance activities.

Operations of a CBOC, MSOC, and RRTP at new locations in Hot Springs and Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

4.9.3 Alternative B

4.9.3.1 Impacts from Construction

There are no special flood hazard areas, other flood areas, or wetlands on the VA Hot Springs campus that could be impacted (note that no construction on the campus is proposed under Alternative B).

Potential impacts to floodplains and wetlands from construction would be similar to the impacts described for Alternative A. It is anticipated a suitable site of 11 to 13 acres would be available outside the 100-year floodplain in the Hot Springs area to co-locate a CBOC and RRTP with a fire station; thus, construction activities would not impede flood flows or impact the floodplain or wetlands. Because only an MSOC (10-acre site) is proposed for Rapid City, the extent of any construction-related impact on floodplains and wetlands could be less than Alternative A, but would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A.

4.9.3.2 Impacts from Operation

VA BHHCS would continue to maintain the Hot Springs campus, although health care operations would not be offered at this location. There are no floodplains or wetlands on the campus that could be impacted regardless of continued maintenance.

Operations of a CBOC, MSOC, and RRTP at new locations in Hot Springs and Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

4.9.4 Alternative C

4.9.4.1 Impacts from Construction

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted, regardless of renovations and modifications proposed to campus buildings under Alternative C.

No construction is proposed elsewhere in Hot Springs under this alternative so floodplains and wetlands would not be affected.

Potential impacts to floodplains and wetlands from construction of an MSOC proposed for Rapid City would be similar to the impacts described for Alternative A. Because only a 10-acre site is proposed instead of a larger site to co-locate an RRTP, the extent of any construction-related impact on floodplains and wetlands could be less than Alternative A, but would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A.

4.9.4.2 Impacts from Operation

Health care operations and building maintenance would continue at the VA Hot Springs campus. There are no floodplains or wetlands on the campus that could be impacted regardless of continued operations and maintenance.

Operations of an MSOC at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected site.

4.9.5 Alternative D

4.9.5.1 Impacts from Construction

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted (note that no construction on the campus is proposed under Alternative B).

Potential impacts to floodplains and wetlands from construction in Hot Springs and Rapid City would be similar to the impacts described for Alternative A. It is anticipated a suitable site of 11 to 13 acres would be available outside the 100-year floodplain in the Hot Springs area to co-locate a CBOC and 24-bed RRTP with a fire station; thus, construction activities would not impede flood flows or impact the floodplain or wetlands. Although the RRTP proposed for Rapid City would be smaller than Alternative A, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar. The extent of any construction-related impact on floodplains and wetlands in Rapid City would depend on the location and features of the selected site. The process for identifying and minimizing impacts to any jurisdictional wetlands on potential sites would be as described for Alternative A.

4.9.5.2 Impacts from Operation

VA would continue to maintain the Hot Springs campus, although health care operations would no longer be offered there. There are no floodplains or wetlands on the campus that could be impacted regardless of continued maintenance.

Operations of a CBOC and RRTP with a fire station at a different location in Hot Springs and an MSOC and RRTP at a new location in Rapid City would not impede flood flows or affect floodplains or wetlands. Impacts to floodplains and wetlands would be addressed during the design and construction phases of the buildings at the selected sites.

4.9.6 Alternative E

4.9.6.1 Impacts from Construction

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted, regardless of renovations and modifications to campus buildings and construction of additional buildings proposed under Alternative E.

Because no modifications to the existing CBOC in Rapid City are proposed and an MSOC would not be constructed, there would be no affect to floodplains or wetlands. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that the different location in Rapid City and any interior modifications to the building would be in compliance with floodplain ordinances.

4.9.6.2 Impacts from Operation

Health care operations would continue at the VA Hot Springs campus. There are no floodplains or wetlands on the campus that could be impacted regardless of expanded operations and maintenance.

There would be no changes to health care operations in Rapid City that would have any effect on floodplains or wetlands.

4.9.7 Alternative F

4.9.7.1 Impacts from Construction

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted, regardless of upgrades and renovations over time to buildings to maintain clinical standards.

The existing CBOC in Rapid City is not within any floodplain, and there would be no changes that would affect nearby floodplains or wetlands. If space is leased in a different location for a CBOC upon the expiration of the current lease, it is anticipated that the different location in Rapid City and any interior modifications to the building would be in compliance with floodplain ordinances.

4.9.7.2 Impacts from Operation

Health care operations and maintenance would continue at the VA Hot Springs campus without major exterior modifications or additions to existing buildings. There are no floodplains or wetlands on the campus that could be impacted regardless of continued operations and maintenance.

There would be no changes to health care operations in Rapid City that would have any effect on floodplains or wetlands.

4.9.8 Supplemental Alternative G

4.9.8.1 Impacts from Construction

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted, regardless of possible renovations and modifications to campus buildings or construction of additional buildings to support a selected full or partial re-use of the campus.

4.9.8.2 Impacts from Operation

There are no floodplains or wetlands on the VA Hot Springs campus that could be impacted, regardless of the possible operational requirements of a selected full or partial re-use of the campus.

4.10 Socioeconomics

4.10.1 Evaluation Criteria

The socioeconomic analysis considers the economic conditions of the VA BHHCS service area in terms of population, housing, income, employment, and labor force. The evaluation includes a qualitative and quantitative analysis of various sources of data to predict reconfiguration-related impacts within the service area, with specific focus on Fall River County and Pennington County as the locations where the reconfiguration proposal would be implemented. An impact would be considered adverse if the reconfiguration would result in any of the following conditions:

- Displace populations, residents, or businesses to accommodate construction
- Generate an economic loss or gain without the capacity to absorb a decrease or increase
- Place a demand on suitable housing that exceeds availability
- Induce growth without adequate supporting infrastructure

The intensity of socioeconomic impacts can be determined by analyzing fluctuations in employment. Such an analysis provides a threshold beyond which changes in employment would noticeably affect individuals and communities in other areas such as housing, community services, schools, and revenues. Based on the trend in employment (see Table 3.10-5) shown in Figure 4.10-1, the average annual change calculated for Fall River County is -4.4 percent, with deviation between the annual change and average annual change ranging from 3.7 percent (difference between -4.4 and -0.7 percent) and -9.5 percent (difference between -4.4 and -13.9 percent). These threshold values represent the range within which Fall River County would have the capacity to absorb increases or decreases in socioeconomic conditions. Thus, a major impact for Fall River County would be an increase greater than 3.7 percent or a decline more than 9.5 percent. Similarly for Pennington County, the average annual change is 0.3 percent with the deviation ranging from 1.7 percent (difference between 0.3 and 2.0 percent) and -1.7 percent (difference between 0.3 and -2.0 percent). Therefore, a major impact for Pennington County would be an increase greater than 1.7 percent or a decline more than 1.7 percent.

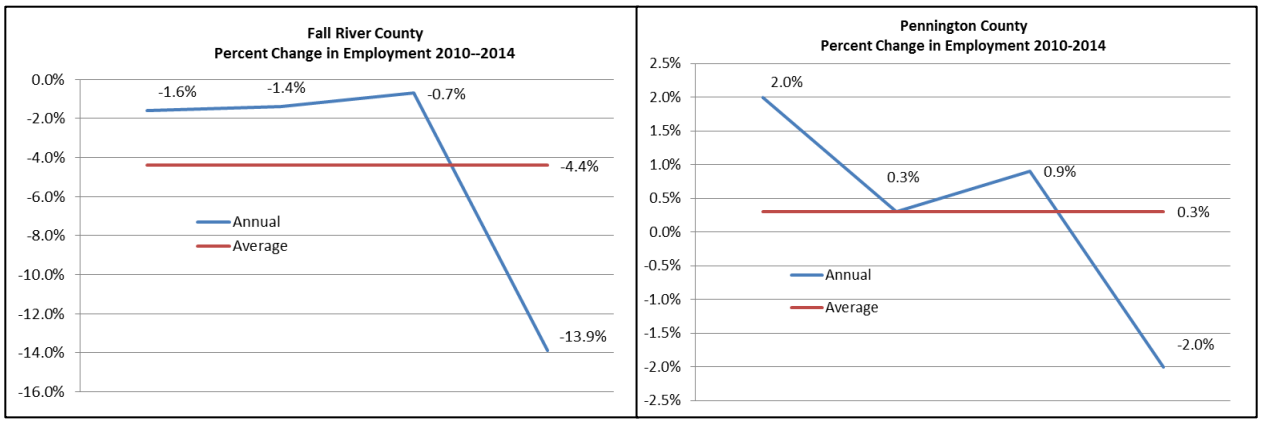

Figure 4.10-1. Employment Trend for Fall River County and Pennington County.

Implementation of any action alternative was estimated to occur over a five-year time period from design to completion. It is important to note that although actual construction activities (site

preparation, erection of structures, utilities installations, interior finishes, and landscaping) would probably take between two and three years, the time period used for analysis includes the ramp-up time to construction (site selection and acquisition, plans and designs) and transition time following construction to full operational status of the reconfiguration of services.

It is typical for project estimates to include costs for pre-design planning, architectural and engineering services, site acquisition, construction services, and contingencies. For this analysis, the project estimate is referred to as "construction costs". It is common for impact analyses to average the construction costs over the entire project time frame to discount the extremes in activity. Using an annual average presents the impacts of a project as a whole versus what the impacts would be during the first year, second year, and so on. Additionally, from a timing perspective, specific details of construction costs are not available on a year-by-year basis prior to completing project designs and bid estimates. The annual average is also the method by which action alternatives can be compared on a consistent basis.

4.10.2 Alternative A

4.10.2.1 Impacts from Construction

Construction of the proposed CBOC in Hot Springs and the proposed MSOC and RRTP in Rapid City was estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

The number of construction workers potentially needed to construct or lease facilities was determined by using wages and employee numbers from the construction sector for Fall River County (81 employees) and Pennington County (3,635 employees) (see Table 3.10-7) with the total estimated construction cost. A weighted average annual wage was first calculated using the percentage of construction workers from each county and the wage earned in that county to arrive at $42,211 per construction worker in the area. This wage would exceed the median household income (see Table 3.10-4) in Fall River County ($35,833) by approximately 17.8 percent, but it would be 9.9 percent less than the median household income in Pennington County ($46,849). A weighted average was used because the size of the construction sector in Fall River County alone is unlikely to provide the requisite number and skill of workers to complete the scale of construction proposed for Hot Springs. For example, the general contractor for the new State Veterans Home is based in Pennington County with construction and trade workers coming from outside Fall River County (D. Iverson, Scull Construction Services, personal communication, July 2015). The value of benefits (paid leave, insurance, retirement, social security, etc.) was then added to the weighted average annual wage of $42,211 to arrive at a total compensation cost. Benefits add 34 percent to the hourly wage for a construction worker (BLS 2015), putting the total compensation per construction worker at $56,563.

Labor generally accounts for approximately 40 percent of the total construction cost of a project (CLMA 2014). Therefore, the number of construction workers would be determined by dividing the 40 percent labor portion of the project construction cost by the total compensation cost per construction worker. A range of ±15 percent and an annual average over the five-year construction time period are used for analysis purposes. The number of annual average workers is not cumulative but reflects the level of employment that could be required to complete the construction. An annual

average was also used for analysis purposes because of the difficulty in determining fluctuations in numbers of workers due to different phases of construction.

Table 4.10-1 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative A, and the number of construction workers needed. Leasing and renovating an existing facility generally takes less time to complete than constructing a new facility, but the same five-year time period from design to completion was used for purposes of this analysis.

Table 4.10-1. Construction Workers Estimated by Facility Construction Cost, Alternative A.

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC	$11,070,525	$642,243	--	--
MSOC, 100-bed RRTP	--	--	$71,655,425	$5,626,049
Labor (40% construction cost)	$4,428,210	$256,897	$28,662,170	$2,250,420
Total compensation per worker	$56,563	$56,563	$56,563	$56,563
Workers (labor/compensation)	78	5	507	40
Range of workers (±15%)	67-90	4-5	431-583	34-46
Annual average of workers over 5 years	13-18	1	86-117	7-10

Source: JLL 2012a (for facility construction cost).

4.10.2.1.1 Hot Springs

The annual average of 13 to 18 construction workers would add approximately 0.6 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Because the number of annual workers is not cumulative, some of these workers would retain their employment year to year. Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria (Section 4.10.1).

There are no general contractors located in Hot Springs that are licensed to construct projects valued greater than $500,000 (Hot Springs 2013). Therefore, it was assumed that a general contractor available to construct the CBOC would be from outside Fall River County and would provide their own construction workers, but could also use some local construction or trade workers. Research shows that construction workers will commute as much as two hours one way from their residence rather than relocate (EPRI 1982). A general contractor and most construction workers from Pennington County would be within a two-hour commute; thus, impact to the local Hot Springs economy from construction of VA facilities would be primarily from the purchase of construction materials and supplies, gas, and food.

Construction workers residing outside a two-hour commute could occupy local housing or accommodations (hotel, campground/RV park) during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. There are 13 hotels in Hot Springs (Hot Springs 2015) and more than 900 housing units available in Fall River County (based on the total number of housing units and occupancy rate shown in Table 3.10-3). In the unlikely scenario that the 13 to 18 construction workers all occupied housing units, the number of available units would decrease by approximately

2.0 percent. The short-term impact to housing or hotel accommodations would be a minor beneficial impact to the local economy.

There would be no measurable impact to local employment, housing, or the economy from leasing and renovating an existing facility in Hot Springs for a CBOC. An annual average of one construction job would benefit the local economy but the impact would likely be unmeasurable.

4.10.2.1.2 Rapid City

The annual average of 86 to 117 construction workers would add approximately 0.2 percent to the 2014 employment numbers for Pennington County (see Table 3.10-5). Although the short-term impact to employment would be beneficial for the local economy, it would be negligible when compared to the evaluation criteria.

If a general contractor available to construct the MSOC and RRTP was located in Pennington County, it is assumed that many of the construction workers would also be located in Rapid City or other communities within the county. The 86 to 117 construction workers represent an average increase of 2.8 percent in construction sector employees in Pennington County (see Table 3.10-7). This would be a major increase in the construction sector employment in the county when compared to the evaluation criteria. However, the impact would only be adverse if the existing sector employees from Pennington County would not be available for construction of VA facilities without drawing on workers from nearby counties within a two-hour commute. Any construction workers residing outside a two-hour commute to Rapid City could occupy local housing or accommodations (hotel, campground/RV park) during the work week, or could temporarily relocate to Rapid City depending on length of work assignment, current residence, and personal preference. However, based on the assumption that a general contractor from Pennington County with their local workforce would construct the VA facilities, there would be a relatively low demand on available housing and accommodations. Any impact on the housing market or hotel accommodations from temporary occupancy by construction workers would be beneficial, but the impact would likely be unmeasurable.

Should a general contractor be from outside Pennington County with their own construction workers, there would be a short-term impact on local housing and hotel accommodations. There are over 5,400 hotel rooms in the Rapid City area (Rapid City 2015) and approximately 3,700 housing units available in Pennington County (based on the total number of housing units and occupancy rate shown in Table 3.10-3). If the 86 to 117 construction workers all occupied housing units, the number of available units would decrease by approximately 2.8 percent. This would be considered a major impact, which would be beneficial to the local housing market. Occupancy of approximately 2.0 percent of available hotel rooms would also be considered a major beneficial impact to the hotel industry.

There would be a negligible impact to local employment, housing, or the economy to lease and renovate an existing facility in Rapid City for an MSOC and RRTP. An average annual of 7 to 10 construction workers would likely be available in Pennington County and, although the construction would benefit the local economy, the impact would be negligible.

4.10.2.2 Impacts from Operation

Operational impacts would potentially affect local employment, housing, and income (wages), and ultimately the local economy. Change in the number and location of full-time equivalent employees (FTEEs) would be the primary source of socioeconomic impacts from operating the facilities under Alternative A. A change in wages associated with the change in FTEEs could affect local revenue that supports public services benefitting the community. Thus, impacts due to gain or loss in wages are tied to the county of residence of the wage earner and not the location of employment. Impacts to community services are described in Section 4.11.

Table 4.10-2 shows the FY 2014 FTEEs assigned to the VA Hot Springs campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new VA BHHCS facilities in Hot Springs and Rapid City. **For purposes of analysis, the estimated change in FTEEs by county of residence was based strictly on the percentage of the total FY 2014 FTEEs currently assigned to the VA Hot Springs campus and Rapid City CBOC.** The actual change in FTEEs by county of residence at the time of implementation would result from operational decisions such as staffing needs (nurses, physicians, administrators, and other staff) and staff availability (location, recruitment, retirement, and other factors such as willingness to commute to another VA BHHCS facility). For example, the actual FTEE increase to staff the MSOC and RRTP in Rapid City could be filled by the FTEEs residing in Fall River County instead of new FTEEs residing in Pennington County.

VA BHHCS estimates 464 FTEEs would be eligible for retirement within the service area by FY 2020 (VA 2015). The 387 FTEEs assigned to the VA Hot Springs campus and Rapid City CBOC combined represent 36.2 percent of the 1,069 total FTEEs in the VA BHHCS. For purposes of this analysis, it is assumed that 168 of the retirement-eligible FTEEs (36.2 percent of 464) would be from VA facilities in Hot Springs and Rapid City. Thus, many of the proposed reductions in FTEEs at the VA Hot Springs campus could occur as retirements that could happen with or without the reconfiguration.

Implementation of the reconfiguration proposal was estimated to occur over a five-year time period. The gain or loss of FTEEs would be expected to occur over the same period; thus, for analysis purposes, the full gain or loss would be reached by the end of FY 2020.

Table 4.10-2. Change in Total FTEEs by County of Residence, Alternative A.

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-290 FTEEs	+98 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(216)	0	(216)
Pennington	39	10.9%	26	86.7%	(32)	85	53
Other[1]	52	14.6%	4	13.3%	(42)	13	(29)
Total	357	100.0%	30	100.0%	(290)	98	(192)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015.

An average annual wage was used to determine the gains or losses of total wages associated with the number of FTEEs proposed to staff and operate VA BHHCS facilities in Hot Springs and Rapid

City. This wage was calculated by using the total compensation of VA BHHCS employees for FY 2014, discounting 32 percent to account for benefits, and then dividing by the total number of FTEEs to arrive at an annual average wage of $65,939 per FTEE. The estimated change in total wages due to the reconfiguration proposal was calculated by county of residence for the FY 2014 FTEEs. The wages for Fall River County, Pennington County, and the other counties within and outside the service area were based strictly on the percentage of the total FTEEs currently assigned to the VA Hot Springs campus and Rapid City CBOC. For example, Table 4.10-2 shows 266 FTEEs assigned to the Hot Springs campus who reside in Fall River County. This represents 74.5 percent of the 357 total FTEEs assigned to the campus. Thus, 74.5 percent of the total change in wages associated with the change in FTEEs proposed for the VA Hot Springs campus would be assumed to affect Fall River County.

Table 4.10-3 shows the changes in wages to operate a new CBOC in Hot Springs and an MSOC and RRTP in Rapid City. Implementation of the reconfiguration proposal was estimated to occur over a five-year time period. The gain or loss of wages would therefore be expected to occur over the same period; thus, for analysis purposes, the full gain or loss would be reached by the end of FY 2020.

Table 4.10-3. Change in Total Wages by FTEE County of Residence, Alternative A.

FTEE County of Residence	Total Wages FY 2014	Hot Springs -290 FTEEs	Rapid City +98 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	$16,783,925	($14,247,959)	$0	($14,247,959)	$2,535,966	(84.9%)
Pennington	$14,510,058	($2,088,986)	$5,600,405	$3,511,419	$18,021,477	24.2%
Other[1]	$39,194,626	($2,785,315)	$861,600	($1,923,715)	$37,270,911	(4.9%)
Total	$70,488,609	($19,122,260)	$6,462,005	($12,660,255)	$57,828,354	(18.0%)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015 (for total FY 2014 wages, FTEEs).

4.10.2.2.1 Hot Springs

A new CBOC in Hot Springs would be staffed with 67 FTEEs, which would result in a reduction of 290 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-2, there would be a reduction of 216 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 7.5 percent in employment in Fall River County (see Table 3.10-5). There would be a similar increase in the unemployment rate (see Table 3.10-6) from 4.6 to 11.8 percent if all 216 FTEEs became unemployed and remained in the labor force. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, more than half of the FTEE reduction (116 of 216) could occur through retirement, with an overall decrease in Fall River County employment of 3.5 percent. There would be a similar increase in the unemployment rate from 4.6 to 7.9 percent if the other 100 FTEEs (216 minus 116) became unemployed and remained in the labor force. This change in Fall River County employment assumes none of the 216 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer to another position within the VA BHHCS service area. A reduction in employment and an increase in the unemployment rate would be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements) when compared to the evaluation criteria.

The reduction in FTEEs could have an effect on available housing and occupancy if the FTEEs relocated away from Fall River County. The reduction of 216 FTEEs would decrease the occupancy rate by 5.2 percentage points from 78.1 percent (see Table 3.10-3) to 72.9 percent. The reduction could be less (2.4 percentage points) if those FTEEs eligible for retirement remained in Fall River County or if the other FTEEs gained employment within commuting distance of their residences. A reduction in housing occupancy would be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements).

As shown in Table 4.10-3, wages of FTEEs residing in Fall River County would decrease by 84.9 percent over the five-year implementation time period. The reduction of $14.25 million in VA wages would represent a decrease of 18.6 percent in the total wages of $76.7 million for Fall River County (see Table 3.10-7), which would be a major impact. If the FTEE reduction is partially met by not replacing FTEEs eligible for retirement, the reduction in VA wages due to the proposal would be smaller by approximately $7.65 million (116 FTEEs x $65,939 annual wage), since it was assumed the retired FTEEs would have no additional wages. Therefore, the total reduction with retirements would be approximately $6.6 million, which represents a decrease of 8.6 percent in total county wages. Although the reduction in wages would be adverse, the impact would be considered moderate when compared to the evaluation criteria.

4.10.2.2.2 Rapid City

A new MSOC and RRTP in Rapid City would be staffed with 128 FTEEs, which would result in an additional 98 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-2, there would be an increase of 53 FTEEs residing in Pennington County over the five-year implementation time period. This would represent a negligible change (0.1 percent increase) in employment in Pennington County (see Table 3.10-5) and a similar change in the unemployment rate. This change in Pennington County employment assumes none of the 53 FTEE additions would be filled by existing FTEEs residing in Fall River County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. Any impact on Pennington County employment would be negligible regardless if the retirement-eligible FTEEs remained in the labor force.

The increase in FTEEs could affect available housing and occupancy. The increase of 53 FTEEs in Pennington County would increase the occupancy rate by 0.1 percentage points from 91.8 percent (see Table 3.10-3) to 91.9 percent. Any further increase would be negligible if those FTEEs eligible for retirement remained in Pennington County and replacement FTEEs resided in or within commuting distance of the county. Although an increase in housing occupancy would be beneficial, the impact would be considered negligible.

As shown in Table 4.10-3, wages of FTEEs residing in Pennington County would increase by 24.2 percent over the five-year implementation time period. On its own, this increase in wages from VA employment would be a major impact. However, as a percent of the total wages of $2.09 billion for Pennington County (see Table 3.10-7) the increase of $3.51 million (0.2 percent) in VA wages would be beneficial but negligible.

4.10.2.2.3 Other Counties

VA BHHCS employees reside in 20 other counties in addition to Fall River County and Pennington County. The other counties include 12 within the service area (9 South Dakota counties, 2 Nebraska counties, and 1 Wyoming county), and 8 outside the service, with the majority of the FTEEs residing in the South Dakota counties of Lawrence and Meade. There would be a reduction of 29 FTEEs residing in these other counties with an estimated reduction of $1.92 million (-4.9 percent) in VA wages (see Tables 4.10-2 and 4.10-3) to implement Alternative A in Hot Springs and Rapid City.

There would not likely be measurable changes in employment in these other counties because of the size of the total labor force (see Table 3.10-5), and no measurable change in the unemployment rate regardless if all 29 FTEEs became unemployed and remained in the labor force. Of the 168 retirement-eligible FTEEs assigned to the VA Hot Springs campus and Rapid City CBOC, 24 FTEEs would reside in these other counties. Thus, almost all of the FTEE reduction (24 of 29) proposed to implement the reconfiguration could occur through retirement, with an unmeasurable impact on employment, housing, and wages in these other counties.

4.10.3 Alternative B

4.10.3.1 Impacts from Construction

Construction of the proposed CBOC and RRTP in Hot Springs and the proposed MSOC in Rapid City is estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-4 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative B, and the annual average number of construction workers needed over the five-year time period.

Table 4.10-4. Construction Workers Estimated by Facility Construction Cost, Alternative B.

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC, 100-bed RRTP, fire station	$44,292,636	$3,938,441	--	--
MSOC	--	--	$42,026,299	$2,547,131
Labor (40% construction cost)	$17,717,054	$1,575,376	$16,810,520	$1,018,852
Total compensation per worker	$56,563	$56,563	$56,563	$56,563
Workers (labor/compensation)	313	28	297	18
Range of workers (±15%)	266-360	24-32	253-342	15-21
Annual average of workers over 5 years	53-72	5-6	51-68	3-4

Source: JLL 2012a (for facility construction cost).

4.10.3.1.1 Hot Springs

Construction of new facilities would have similar effects on local housing and accommodations as described for Alternative A, but the effects would be much greater because of the larger Hot Springs construction workforce.

The annual average of 53 to 72 construction workers would add approximately 2.2 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria. A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. Assuming the 53 to 72 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 7.0 percent, a moderate short-term beneficial to the local housing market and economy. The more likely scenario would be far fewer workers occupying housing, with a smaller short-term beneficial impact.

Leasing and renovating existing facilities would have similar effects on local housing and accommodations as constructing new facilities described for Alternative A. However, the extent of the effects would be less because a smaller construction workforce would be needed for renovations as compared to new construction.

4.10.3.1.2 Rapid City

Construction would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative A, but the extent of the effects would be less because of the smaller construction workforce needed for Alternative B.

The annual average of 51 to 68 construction workers would add approximately 0.1 percent to the 2014 employment numbers for Pennington County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor.

Based on the assumption that a general contractor from Pennington County would construct the MSOC, there would be relatively low to no demand on available housing and accommodations because the general contractor's workforce would likely reside within a two-hour commute.

The housing market and hotel accommodations would benefit from temporary occupancy by construction workers should the general contractor and their workforce be from outside Pennington County and reside more than two hours from Rapid City. In the unlikely scenario that the 51 to 68 construction workers all occupied housing units, the number of available units would decrease by approximately 2.0 percent. The short-term impact to housing availability would be considered major when compared to the evaluation criteria, but would benefit the local housing market and economy. Occupancy of approximately 1.0 percent of available hotel rooms would be a moderate beneficial impact to the hotel industry and local economy.

Leasing and renovating an existing facility for an MSOC would have similar effects on local housing and accommodations as described for Alternative A, but the extent of the effects would be less because a smaller construction workforce would be needed for renovations for Alternative B.

4.10.3.2 Impacts from Operation

Table 4.10-5 shows the FY 2014 FTEEs assigned to the VA Hot Springs campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new

VA BHHCS facilities in Hot Springs and Rapid City for Alternative B. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A.

Table 4.10-5. Change in Total FTEEs by County of Residence, Alternative B.

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-218 FTEEs	+26 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(162)	0	(162)
Pennington	39	10.9%	26	86.7%	(24)	23	(1)
Other[1]	52	14.6%	4	13.3%	(32)	3	(29)
Total	357	100.0%	30	100.0%	(218)	26	(192)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015.

Table 4.10-6 shows the changes in wages to operate a new CBOC and RRTP in Hot Springs and an MSOC in Rapid City. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A.

Table 4.10-6. Change in Total Wages by FTEE County of Residence, Alternative B.

FTEE County of Residence	Total Wages FY 2014	Hot Springs -218 FTEEs	Rapid City +26 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	$16,783,925	($10,710,535)	$0	($10,710,535)	$6,073,390	(63.8%)
Pennington	$14,510,058	($1,570,342)	$1,485,822	($84,520)	$14,425,538	(0.6%)
Other[1]	$39,194,626	($2,093,789)	$228,588	($1,865,201)	$37,329,425	(4.8%)
Total	$70,488,609	($14,374,666)	$1,714,410	($12,660,256)	$57,828,353	(18.0%)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015 (for total FY 2014 wages, FTEEs).

4.10.3.2.1 Hot Springs

A new CBOC and 100-bed RRTP in Hot Springs would be staffed with 139 FTEEs, which would result in a reduction of 218 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-5, there would be a reduction of 162 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 5.6 percent in employment in Fall River County (see Table 3.10-5). There would be a similar increase in the unemployment rate (see Table 3.10-6) from 4.6 to 10.0 percent if all 162 FTEEs became unemployed and remained in the labor force. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, almost three-fourths of the FTEE reduction (116 of 162) could occur through retirement, with a smaller impact on Fall River County employment of -1.6 percent. There would be a similar increase in the unemployment rate from 4.6 to 6.1 percent if the other 46 FTEEs (162 minus 116) became unemployed and remained in the labor force. This change in Fall River County employment none of the 162 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer another position within the VA BHHCS service area. A reduction in employment and an increase in the unemployment rate would

be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements) when compared to the evaluation criteria.

The reduction in FTEEs could have an effect on available housing and occupancy. The reduction of 162 FTEEs in Fall River County would decrease the occupancy rate by 3.9 percentage points from 78.1 percent (see Table 3.10-3) to 74.2 percent. The reduction could be less (1.1 percentage points) if those FTEEs eligible for retirement remained in Fall River County or the other FTEEs remained employed within commuting distance of their residences. Although a reduction in housing occupancy would be adverse, the impact would be considered minor (with or without retirements).

As shown in Table 4.10-6, wages of FTEEs residing in Fall River County would decrease by 63.8 percent over the five-year implementation time period. The reduction of $10.71 million in VA wages would represent a decrease of 14.0 percent in the total wages of $76.7 million for Fall River County (see Table 3.10-7), which would be a major impact. If the FTEE reduction is partially met by not replacing FTEEs eligible for retirement, the reduction in wages due to the proposal would be smaller by approximately $7.65 million (116 FTEEs x $65,939 annual wage), since it was assumed the retired FTEEs would have no additional wages. The total reduction with retirements would therefore be $3.06 million, which would represent 4.0 percent of the total county wages. Although the reduction of wages would be adverse, the impact would be considered minor when compared to the evaluation criteria.

4.10.3.2.2 Rapid City

A new MSOC in Rapid City would be staffed with 56 FTEEs, which would result in an additional 26 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-5, there would be a reduction of one FTEE residing in Pennington County over the five-year implementation time period, which would have no effect to employment or to the unemployment rate in Pennington County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. This change in Pennington County employment assumes the one FTEE addition and retirement-eligible FTEEs would not be filled by existing FTEEs residing in Fall River County. Any impact on Pennington County employment would be unmeasurable regardless if the retirement-eligible FTEEs remained in the labor force.

The reduction of one FTEE would not affect available housing or the occupancy rate. Any effect would be negligible if those FTEEs eligible for retirement remained in Pennington County and replacement FTEEs resided in or within commuting distance of the county.

As shown in Table 4.10-6, wages of FTEEs residing in Pennington County would decrease by 0.6 percent over the five-year implementation time period. This reduction of $84,520 in wages from VA employment would be negligible as a percent of the total wages of $2.09 billion for Pennington County, and would be essentially offset if the FTEE reduction is met by not replacing an FTEE eligible for retirement.

4.10.3.2.3 Other Counties

There would be a reduction of 29 FTEEs residing in the other counties with an estimated reduction of $1.87 million (-4.8 percent) in VA wages to implement Alternative B in Hot Springs and Rapid

City. The impacts to employment, housing, and wages would be similar to the impacts described for Alternative A.

4.10.4 Alternative C

4.10.4.1 Impacts from Construction

Renovations to Building 12 and the domiciliary and construction of a new MSOC are estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-7 shows the total construction cost (JLL 2012a) to renovate existing facilities on the VA Hot Springs campus and build new or lease existing facilities Rapid City for Alternative C, and the average annual number of construction workers needed over the five-year implementation period.

Table 4.10-7. Construction Workers Estimated by Facility Construction Cost, Alternative C.

Construction Workers by Facility	Hot Springs		Rapid City	
	Renovate	--	New	Lease
CBOC, 100-bed RRTP	$46,290,392	--	--	--
MSOC	--	--	$42,026,299	$2,547,131
Labor (40% construction cost)	$18,516,157	--	$16,810,520	$1,018,852
Total compensation per worker	$56,563	--	$56,563	$56,563
Workers (labor/compensation)	327	--	297	18
Range of workers (±15%)	278-376	--	253-342	15-21
Annual average of workers over 5 years	56-75	--	51-68	3-4

Source: JLL 2012a (for facility construction cost).

4.10.4.1.1 Hot Springs

Renovations to Building 12 and the domiciliary would have similar effects on local employment, housing and accommodations, and the economy as described for constructing new facilities for Alternative B because of the comparable number of annual average construction workers needed to complete the renovations.

4.10.4.1.2 Rapid City

The proposed construction of new facility or lease and renovation of an existing facility for an MSOC would be the same as Alternative B, so impacts on employment, local housing and accommodations, and the economy would be the same as described for Alternative B.

4.10.4.2 Impacts from Operations

4.10.4.2.1 Hot Springs

The VA Hot Springs campus would be staffed with 139 FTEEs, which would result in a reduction of 218 FTEEs from the FY 2014 total of 357 FTEEs. The FTEEs to operate a renovated Building 12 as a CBOC and a renovated domiciliary for a 100-bed RRTP would be the same as Alternative B.

Reductions in FTEEs and wages would have the same impacts on local employment, housing, income, and the economy as the impacts described for Alternative B.

4.10.4.2.2 Rapid City

Operation of a new MSOC in Rapid City would be staffed with 56 FTEEs, which would result in an additional 26 FTEEs from the FY 2014 total of 30 FTEEs. The increase in FTEEs and wages to operate a new MSOC would be the same as Alternative B, so impacts on employment, housing, income, and the economy would be the same as described for Alternative B.

4.10.4.2.3 Other Counties

The reduction in FTEEs and wages in the other counties throughout the VA BHHCS service area would be the same as Alternative B, so impacts on employment, housing, income, and the economy would be the same as described for Alternative B.

4.10.5 Alternative D

4.10.5.1 Impacts from Construction

Construction of the proposed CBOC and 24-bed RRTP in Hot Springs and the proposed MSOC and 76-bed RRTP in Rapid City is estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers.

Table 4.10-8 shows the total construction cost (JLL 2012a) to build new facilities or lease and renovate existing facilities in Hot Springs and Rapid City for Alternative D, and the annual average number of construction workers needed over the five-year implementation period.

Table 4.10-8. Construction Workers Estimated by Facility Construction Cost, Alternative D.

Construction Workers by Facility	Hot Springs		Rapid City	
	New	Lease	New	Lease
CBOC, 24-bed RRTP, fire station	$24,959,425	$2,268,370	--	--
MSOC, 76-bed RRTP	--	--	$66,810,520	$5,109,048
Labor (40% construction cost)	$9,983,770	$907,348	$26,772,303	$2,043,619
Total compensation per worker	$56,563	$56,563	$56,563	$56,563
Workers (labor/compensation)	177	16	473	36
Range of workers (±15%)	150-203	14-18	402-544	31-42
Annual average of workers over 5 years	30-41	3-4	80-109	6-8

Source: JLL 2012a (for facility construction cost).

4.10.5.1.1 Hot Springs

Construction of new facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative B, but the extent of the effects would be less because of the smaller construction workforce needed for Alternative D.

The annual average of 30 to 41 construction workers would add approximately 1.2 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria.

A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commuting distance from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. Assuming the 30 to 41 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 4.0 percent, a moderate short-term beneficial impact to the local housing market and economy. The more likely scenario would be far fewer workers occupying housing, with a smaller short-term beneficial impact.

Leasing and renovating existing facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative B, but the extent of the effects could be slightly less because a smaller construction workforce would be needed for renovations.

4.10.5.1.2 Rapid City

The proposed construction of new facilities or lease and renovation of existing facilities would have similar effects on local employment, housing and accommodations, and the economy as described for Alternative A, but the extent of the effects could be slightly less because of the slightly smaller construction workforce needed for Alternative D.

4.10.5.2 Impacts from Operation

Table 4.10-9 shows the FY 2014 FTEEs assigned to the VA Hot Springs campus and Rapid City CBOC by their county of residence and the proposed change in FTEEs to staff and operate the new VA BHHCS facilities in Hot Springs and Rapid City for Alternative D. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A.

Table 4.10-9. Change in Total FTEEs by County of Residence, Alternative D.

FTEE County of Residence	Hot Springs Campus FY 2014		Rapid City CBOC FY 2014		Hot Springs	Rapid City	Change 2014-2020
	FTEEs	% Total	FTEEs	% Total	-270 FTEEs	+88 FTEEs	Total FTEEs
Fall River	266	74.5%	0	0.0%	(201)	0	(201)
Pennington	39	10.9%	26	86.7%	(30)	76	46
Other[1]	52	14.6%	4	13.3%	(39)	12	(27)
Total	357	100.0%	30	100.0%	(270)	88	(182)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015.

Table 4.10-10 shows the changes in wages to operate a new CBOC and 24-bed RRTP in Hot Springs and an MSOC and 76-bed RRTP in Rapid City. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A.

Table 4.10-10. Change in Total Wages by FTEE County of Residence, Alternative D.

FTEE County of Residence	Total Wages FY 2014	Hot Springs -270 FTEEs	Rapid City +88 FTEEs	Change in Wages	Total Wages FY 2020	Change 2014-2020
Fall River	$17,930,497	($13,265,341)	$0	($13,265,341)	$3,518,584	(79.0%)
Pennington	$14,369,104	($1,944,918)	$5,028,935	$3,084,016	$17,594,074	(21.3%)
Other[1]	$38,189,008	($2,593,225)	$773,682	($1,819,542)	$37,375,084	(4.6%)
Total	$70,488,609	($17,803,484)	$5,802,617	($12,000,867)	$58,487,742	(17.0%)

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015 (for total FY 2014 wages, FTEEs).

4.10.5.2.1 Hot Springs

A new CBOC and 24-bed RRTP in Hot Springs would be staffed with 87 FTEEs, which would result in a reduction of 270 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-9, there would be a reduction of 201 FTEEs residing in Fall River County over the five-year implementation time period. This would represent a decrease of 7.0 percent in employment in Fall River County. There would be a similar increase in the unemployment rate from 4.6 to 11.3 percent if all 201 FTEEs became unemployed and remained in the labor force. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, more than half of the FTEE reduction (116 of 201) could occur through retirement, with an overall decrease in Fall River County employment of 2.9 percent. There would be a similar increase in the unemployment rate from 4.6 to 7.4 percent if the other 85 FTEEs (201 minus 116) became unemployed and remained in the labor force. This change in Fall River County employment assumes none of the 201 FTEE reductions would occur via retirement, early retirement, buy-out, or a transfer to another position within the VA BHHCS service area. A reduction in employment and an increase in the unemployment rate would be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements) when compared to the evaluation criteria.

The reduction in FTEEs could have an effect on available housing and occupancy if the FTEEs relocated away from Fall River County. The reduction of 201 FTEEs would decrease the occupancy rate by 4.8 percentage points from 78.1 percent to 73.3 percent. The reduction could be less (2.0 percentage points) if those FTEEs eligible for retirement remained in Fall River County or if the other FTEEs gained employment within commuting distance of their residences. A reduction in housing occupancy would be adverse; however, the impact would be considered minor (with retirements) to moderate (without retirements).

As shown in Table 4.10-10, wages of FTEEs residing in Fall River County would decrease by 79.0 percent over the five-year implementation time period. The reduction of $13.27 million in VA wages would represent a decrease of 17.3 percent in the total wages of $76.7 million for Fall River County, which would be a major impact. If the FTEE reduction is partially met by not replacing FTEEs eligible for retirement, the reduction in VA wages would be smaller by approximately $7.65 million (116 FTEEs x $65,939 annual wage), since it was assumed the retired FTEEs would have no additional wages. The total reduction with retirements would therefore be $5.62 million, which would amount to 7.3 percent of the total county wages. Although the reduction of VA wages would be adverse, the impact would be considered moderate when compared to the evaluation criteria.

4.10.5.2.2 Rapid City

A new MSOC and 76-bed RRTP in Rapid City would be staffed with 118 FTEEs, which would result in an additional 88 FTEEs from the FY 2014 total of 30 FTEEs. As shown in Table 4.10-9, there would be an increase of 46 FTEEs residing in Pennington County over the five-year implementation period. This would represent a negligible change (0.1 percent increase) in employment in Pennington County, with a similar change in the unemployment rate. This change in Pennington County employment assumes none of the 46 FTEE additions would be filled by existing FTEEs residing in Fall River County. Assuming the same distribution of FTEEs by county of residence, 28 of the 168 retirement-eligible FTEEs could reside in Pennington County and would need to be replaced to operate the VA facilities in Rapid City. Any impact on Pennington County employment would be negligible regardless if the retirement-eligible FTEEs remained in the labor force.

The increase of 46 FTEEs would have a similar effect on available housing and occupancy as described for Alternative A (increase of 53 FTEEs).

As shown in Table 4.10-10, wages of FTEEs residing in Pennington County would increase by 21.3 percent over the five-year implementation time period. On its own, this increase in wages from VA employment would be a major impact. However, as a percent of the total wages of $2.09 billion for Pennington County the increase of $3.08 million (0.1 percent) in VA wages would be beneficial but negligible.

4.10.5.2.3 Other Counties

There would be a reduction of 27 FTEEs residing in the other counties with an estimated reduction of $1.82 million (-4.6 percent) in VA wages to implement Alternative D in Hot Springs and Rapid City. The impacts to employment, housing, and wages would be similar to the impacts described for Alternative A (29 FTEE reductions, $1.92 million fewer wages).

4.10.6 Alternative E

4.10.6.1 Impacts from Construction

Renovations and additions to Building 12 to expand inpatient/outpatient care, and renovations to the domiciliary and construction of a new facility for a total of 200 beds are estimated to occur over a five-year time period from design to completion. During this time, there could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers. No construction or renovations are proposed to the CBOC in Rapid City under this alternative.

Table 4.10-11 shows the total construction cost (JLL 2012b) to renovate existing facilities and build new facilities on the VA Hot Springs campus for Alternative E, and the annual average number of construction workers needed over the five-year implementation period.

Table 4.10-11. Construction Workers Estimated by Facility Construction Cost, Alternative E.

Construction Workers by Facility	Hot Springs
	Renovate / Construct
Inpatient/outpatient, 200-bed RRTP	$100,176,540
Labor (40% construction cost)	$40,070,616
Total compensation per worker	$56,563
Workers (labor/compensation)	708
Range of workers (±15%)	602-815
Annual average of workers over 5 years	120-163

Source: JLL 2012b (for facility construction cost).

Constructing new facilities and renovating existing facilities on the VA Hot Springs campus would have similar effects on local employment, housing and accommodations, and the economy as described for Alternatives B and C; however, the extent of the effects would be greater because of the larger construction workforce needed for Alternative E.

The annual average of 120 to 163 construction workers would add approximately 4.9 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). This would be considered a minor short-term beneficial impact to employment when compared to the evaluation criteria.

A general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, and some could temporarily relocate to Fall River County depending on length of work assignment, current residence, and personal preference. In the unlikely scenario that the 120 to 163 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 15.0 percent. This would be considered a short-term major impact that would benefit the local housing market and economy. Hotel occupancy rates (South Dakota 2014) indicate that hotels could accommodate an increase in demand, which would also benefit the local economy.

4.10.6.2 Impacts from Operation

Table 4.10-12 shows the FY 2014 FTEEs assigned to the VA Hot Springs campus by their county of residence and the proposed change in FTEEs to staff and operate the expanded facilities on the campus for Alternative E. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A. No change in staffing is proposed to operate the CBOC in Rapid City under this alternative.

Table 4.10-12. Change in Total FTEEs by County of Residence, Alternative E

FTEE County of Residence	Hot Springs Campus FY 2014		Hot Springs	Change 2014-2020
	FTEEs	% Total	+276 FTEEs	FTEEs
Fall River	266	74.5%	206	206
Pennington	39	10.9%	30	30
Other[1]	52	14.6%	40	40
Total	357	100.0%	276	276

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015.

Table 4.10-13 shows the changes in wages to operate the expanded VA Hot Springs campus. The assumptions used for analysis are the same as described in Section 4.10.2.2 for Alternative A.

Table 4.10-13. Change in Total Wages by FTEE County of Residence, Alternative E

FTEE County of Residence	Total Wages FY 2014	Hot Springs +276 FTEEs	Total Wages FY 2020	Change 2014-2020
Fall River County	$17,930,497	$13,560,127	$30,344,052	80.8%
Pennington County	$14,369,104	$1,988,139	$16,498,197	13.7%
Other Counties	$38,189,008	$2,650,852	$41,845,478	6.8%
Total	$70,488,609	$18,199,118	$88,687,727	25.8%

[1] Includes other counties within and outside the VA BHHCS service area.
Source: VA 2015 (for total FY 2014 wages, FTEEs).

4.10.6.2.1 Hot Springs

An expanded campus in Hot Springs would be staffed with 633 FTEEs, which would result in an additional 276 FTEEs from the FY 2014 total of 357 FTEEs. As shown in Table 4.10-12, there would be an increase of 206 FTEEs residing in Fall River County over the five-year implementation time period. This would represent an increase of 7.1 percent in employment in Fall River County (see Table 3.10-5), which would be a major impact. There would be a similar decrease in the unemployment rate (see Table 3.10-6) by 6.8 percentage points from 4.6 to -2.2 percent if all new employees were already Fall River County residents. A negative unemployment rate means there are not enough employable persons available to fill jobs. An increase in employment and a decreased unemployment rate would be beneficial to a point, but then could become an adverse impact.

As shown in Table 3.10-6, there were 140 unemployed persons in Fall River County in 2014. In the unlikely scenario those 140 persons could fill the 206 FTEEs needed to implement Alternative E, another 66 employable persons (206 minus 140) would have to either relocate to Fall River County or change jobs in the county. Assuming the same distribution of FTEEs by county of residence, 116 of the 168 retirement-eligible FTEEs could reside in Fall River County. Thus, an additional (replacement) 116 FTEEs from Fall River County could be needed to implement Alternative E. These 322 FTEEs (206 plus 116) would represent an increase of 11.2 percent in county employment with a similar decrease in the unemployment rate of 10.6 percentage points from 4.6 to -6.0 percent, which would be a major impact. Generally, an increase in employment and a decrease in the unemployment rate are viewed as beneficial. However, the impact would be potentially adverse to the City of Hot Springs if it lacks sufficient supporting infrastructure (particularly housing, but also

schools and other community services) to absorb the increase, and to the city and VA BHHCS if the local labor force does not offer enough capacity in the employment sectors assumed to be needed to implement Alternative E. Insufficient labor capacity could result in competition with other Hot Springs employers for candidates, as well as provide a challenge for VA in staffing positions without relocating people to the area.

The increase in FTEEs could have an effect on available housing and occupancy. The increase of 206 FTEEs in Fall River County would increase the occupancy rate by 4.9 percentage points from 78.1 percent (see Table 3.10-3) to 83.0 percent, which would be a major impact. The increase could be greater at 7.7 percentage points (85.8 percent occupancy) if those FTEEs eligible for retirement remained in Fall River County, or the additional (replacement) 116 FTEEs preferred or needed to relocate to Hot Springs based on their current location of residence. A major increase in housing occupancy would generally be considered beneficial based on the assumption that available housing units would be suitable and accommodate occupiers' preferences.

As shown in Table 4.10-13, wages of FTEEs residing in Fall River County would increase by 80.8 percent over the five-year implementation time period. As a percent of the total wages of $76.7 million for Fall River County (see Table 3.10-7), an increase of $13.56 million in VA wages would amount to a 17.7 percent increase in the total county wages. The increase in wages would be considered major and beneficial.

4.10.6.2.2 Rapid City

Although no change in staffing is proposed to operate the CBOC in Rapid City, the substantial increase in FTEEs to implement Alternative E in Hot Springs would have an effect in Pennington County on housing, income, and the local economy. As shown in Table 4.10-12, there would be an additional 30 FTEEs residing in Pennington County over the five-year implementation time period. Because of the retirement-eligible FTEEs, an additional (replacement) 28 FTEEs from Pennington County could be needed to implement Alternative E in Hot Springs. This number of FTEEs would not result in a measurable change in employment in Pennington County or a measurable change in the unemployment rate because of the size of the labor force in the county. The impact on employment and housing would be similar to but less than the impact described for Alternative D (increase of 46 FTEEs).

As shown in Table 4.10-13, wages of FTEEs residing in Pennington County would increase by 13.7 percent ($1.99 million) over the five-year implementation time period. The beneficial impact on income (VA wages) and the local economy would be similar to but slightly greater than the impact described for Alternative D (increase of $1.82 million in wages).

4.10.6.2.3 Other Counties

There would be an increase of 40 FTEEs residing in counties other than Fall River and Pennington, with an estimated increase of $2.65 million in wages to implement Alternative E in Hot Springs. Even with the increases, there would not likely be measurable changes in employment in these other counties because of the size of the total labor force, and no measurable change in the unemployment rate. Because of the retirement-eligible FTEEs, an additional (replacement) 24 FTEEs from these other counties could be needed to implement this alternative. These 64 FTEEs (40 plus 24) could slightly increase employment in some of these counties with a similar decrease in

the unemployment rate; however, the changes would not likely be measureable but would be beneficial.

The increase in FTEEs in these other counties could increase the housing occupancy rate; however, changes to the rates would not likely be measureable because of the number of available units in these counties (see Table 3.10-3). Although an increase in housing occupancy would be beneficial, the impact would be negligible.

As shown in Table 4.10-13, wages of FTEEs residing in these other counties would increase by 6.8 percent over the five-year implementation time period. This increase in VA wages would be a beneficial impact, and depending on the amount compared against the total wages of a particular county, the impact could be measurable but likely negligible.

4.10.7 Alternative F

4.10.7.1 Impacts from Construction

Buildings on the VA Hot Springs campus would be renovated and modified to maintain clinical standards. Renovations would be scheduled under the routine budget process. For purposes of this analysis, it was unrealistic to assume the routine budget process would provide sufficient funds to accomplish the long-term renovations of the "no action alternative" during the same five-year time period proposed to implement an "action alternative" that supports reconfiguration of services within five years. A more realistic time period would be closer to 20 years; however, for this analysis a 10-year time period was used for the baseline by which to compare the action alternatives.

There could be short-term impacts to employment, housing, and the local economy primarily connected to the number of construction workers. No construction or renovations are proposed for the CBOC in Rapid City under this alternative. Table 4.10-14 shows the total construction cost (JLL 2012a) to renovate facilities on the VA Hot Springs campus for Alternative F, and the annual average number of construction workers needed over a 10-year time period.

Table 4.10-14. Construction Workers Estimated by Facility Construction Cost, Alternative F.

Construction Workers by Facility	Hot Springs
	Renovate / Maintain
Inpatient/outpatient, 100-bed RRTP	$63,184,331
Labor (40% construction cost)	$25,273,732
Total compensation per worker	$56,563
Workers (labor/compensation)	447
Range of workers (±15%)	380-514
Annual average of workers over 10 years	38-51

Source: JLL 2012a (for facility construction cost).

The annual average of 38 to 51 construction workers would add approximately 1.6 percent to the 2014 employment numbers for Fall River County (see Table 3.10-5). Although the short-term impact to employment would benefit the local economy, it would be minor when compared to the evaluation criteria. Similar to the other alternatives, a general contractor with their own construction workforce would be from outside Fall River County, but could also use some local construction or

trade workers. Construction workers residing outside a two-hour commute from Hot Springs could occupy local housing or accommodations during the work week, which would benefit the local economy. In the unlikely scenario that the 38 to 51 construction workers all occupied housing units, the number of available units would decrease by an average of approximately 5.5 percent. This would be considered a short-term moderate impact that would benefit the local housing market and economy. Hotel occupancy rates (South Dakota 2014) indicate that hotels could accommodate an increase in demand, which would also benefit the local economy.

4.10.7.2 Impacts from Operation

Operation of the VA Hot Springs campus and Rapid City CBOC would continue with the FTEEs assigned to these facilities (see Table 3.10-8). Any changes to employment, housing, and wages for continued operation of these facilities would be negligible.

4.10.8 Supplemental Alternative G

4.10.8.1 Impacts from Construction

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction-related impacts to local employment, housing and accommodations, and the economy could likely be similar to the impacts described for Alternatives C and E. However, the extent of the impacts would depend on the total construction value of the renovations and modifications, and the time period over which the construction would occur.

4.10.8.2 Impacts from Operation

The type of re-use of the VA Hot Springs campus would determine the extent of effects to employment, housing, income, and ultimately the economy. The extent of any impacts would depend on the scope and scale of the re-use and the employment workforce it would need; however, the impacts could likely be similar to those described for Alternatives C and E.

4.11 Community Services

4.11.1 Evaluation Criteria

The evaluation of impacts on community services focused on the availability of and demand for educational, medical, public safety and protection, and recreational services. The evaluation involved a qualitative analysis of the operational capacity of and funding for providing such services, with specific focus on Hot Springs and Rapid City as the locations where physical facilities would be changed to implement the reconfiguration proposal. An adverse effect on community services is identified under any of the following conditions:

- Change in the number of users of community services that exceed existing capacity
- Change in the demand for emergency and public protection services that would increase response times based on existing personnel resources and equipment
- Change in the funding needed to sustain services or to increase access to services

The demand for and use of community services is based on the population served; therefore, changes in demand and use depend on changes in that population. The alternatives would change the population through changes in employment. Therefore, the magnitude of impacts on community services can be determined by analyzing fluctuations in employment, as estimated in the analysis for impacts on socioeconomics (see Section 4.10.1 Evaluation Criteria). This analysis provides a threshold beyond which changes in employment would noticeably affect the community. A noticeable impact to community services offered in Hot Springs (based on data for Fall River County) would result from an increase greater than 3.7 percent or a decrease more than 9.5 percent in users, response times, or funding. For Rapid City (based on data for Pennington County) the noticeable impact would be an increase greater than 1.7 percent or a decrease more than 1.7 percent.

A change in wages associated with a change in FTEEs could affect local revenue used to support public services that benefit the community. Thus, impacts due to a gain or loss in wages are tied to the county of residence of the wage earner and not the location of employment. Local government decisions regarding funding for community services generally place a higher priority on public safety and less on recreation or other "non-essential" governmental functions. Decreases in revenues often result in disproportionate reductions in "non-essential" services to allow for the continued adequate funding of public safety and other "essential" services.

4.11.2 Alternative A

4.11.2.1 Impacts from Construction

Construction of the proposed CBOC in Hot Springs and the proposed MSOC and RRTP in Rapid City could have short-term impacts to public safety and protection services. Construction sites can be sources of accidents involving workers, equipment, and materials; attract theft and vandalism; and create safety hazards for persons not authorized to enter the site. Such incidents would have the potential to increase the number of calls for responses by emergency medical providers, fire departments (FDs), or police departments (PDs). General contractors minimize the occurrence of these types of incidents by properly maintaining construction equipment and implementing "good housekeeping" procedures to prevent fire ignition, educating construction workers in Occupational Safety and Health Administration-required safety standards, and securing and monitoring the

construction site. In addition, the general contractor would be required to follow VA Construction Specification Section 01-35-26 "Safety Requirements" and prepare and implement an accident prevention plan and fire safety plan, and Section 01-00-00 "General Requirements, Construction Security" and prepare a plan to secure the site. With these procedures and plans to manage accident, fire, and security risks, any increase in requests for emergency response by medical, fire, or police would not likely exceed the capacity of these providers in either Hot Springs or Rapid City. The VA Hot Springs FD, through the mutual aid agreement with the Hot Springs Volunteer Fire Department (VFD), would provide firefighting assistance as necessary.

Construction activities that temporarily close or restrict travel lanes or designate a detour, along with slow-moving construction traffic, could potentially affect emergency vehicle (medical, fire, and police) response times. Access to buildings adjacent to the construction sites would be maintained for fire trucks and emergency vehicles; however, construction vehicles and haul trucks near the sites could reduce traffic flows and delay emergency vehicles traveling through the area. Traffic control plans would be prepared and shared with emergency response providers, as required by the local public works/engineering departments in Hot Springs and Rapid City.

The numbers of workers associated with the construction of VA facilities in either community would not likely cause an increase in student enrollment high enough to affect average student-to-staff ratios in the Hot Springs and Rapid City school districts. The estimated yearly average of 13 to 18 construction workers would not be expected to relocate to Hot Springs (see Section 4.10.2.1.1). However, should some of these workers have school-age children and choose to temporarily relocate, the capacity of the Hot Springs School District would not be impacted based on enrollment trends and student-to-staff ratios over the past five years (see Tables 3.11-1 and 3.11-2). The estimated yearly average of 86 to 117 workers that would be needed for construction in Rapid City would likely already reside in the local area (see Section 4.10.2.1.2); thus, there would be no measurable impact on student enrollment in the Rapid City School District. However, should there be a temporary influx of some construction workers with school-age children the capacity of the Rapid City School District would not be impacted based on trends in enrollment and student-to-staff ratios over the past five years (see Tables 3.11-4 and 3.11-5).

The temporary influx of a few construction workers to Hot Springs would not be expected to substantially increase the usage of city parks or place excess demand on recreational facilities. Many of the workers in Rapid City would be expected to already reside in the area; thus, construction-related impacts on parks and recreation facilities would be negligible.

4.11.2.2 Impacts from Operation

The reduction of approximately 216 FTEEs whose residence is Fall River County and the addition of 53 FTEEs whose residence is Pennington County (see Table 4.10-2) would reduce VA wages by approximately $14.25 million in Fall River County and increase VA wages by $3.51 million in Pennington County (see Table 4.10-3) over the five-year implementation time period. The reduction in VA wages would be moderate when compared to total wages earned in Fall River County and minor when retirement-eligible FTEEs and wages are included (see Section 4.10.2.2.1). The increase in VA wages would be negligible when compare to total wages earned in Pennington County (see Section 4.10.2.2.2). Local sources of funding for FDs, emergency medical services, PDs, schools, and parks are predominantly property and sales taxes. Property taxes would not be affected by reduction in FTEEs and wages because the tax would still be paid regardless if the property is

occupied. The increase in FTEEs in Pennington County would have a negligible impact on housing and thus a negligible impact on property taxes. Fall River County could experience a minor to moderate decrease in sales tax revenue, whereas a negligible increase in sales tax revenue could occur in Pennington County.

The VA Hot Springs campus is federal government property on federal land owned by VA. It is not defined as "entitlement land" under the *Payments in Lieu of Taxes Act* (31 U.S.C. 69); therefore, Fall River County does not receive federal payments associated with the VA campus to offset losses in property taxes that fund community services.

4.11.2.2.1 Hospitals and Clinics

The reconfiguration proposal would increase options for Veterans to choose to receive care from non-VA providers at clinics and hospitals in their local communities throughout the VA BHHCS service area. The projected operating cost for non-VA care was estimated to increase approximately 19.9 percent from $25.9 million to $31.0 million (VA 2012). This would be a major increase in health care services provided by non-VA clinics and hospitals based on the evaluation criteria. Because the care would be provided at a number of different locations and would be a mutually agreeable service between VA BHHCS and the clinic or hospital, any impact on the capacity of facilities to provide service would be negligible.

4.11.2.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services

The demand for fire protection, emergency medical services, and police protection is closely linked to the size of the population served. The operation of a new CBOC in Hot Springs and an MSOC and RRTP in Rapid City would result in the reduction of approximately 216 FTEEs whose residence is Fall River. Implementation of the reconfiguration proposal was estimated to occur over five years, so the reduction of FTEEs would be reached by the end of FY 2020. If these 216 FTEEs all relocated from Hot Springs, the projected 2020 population of Fall River County (see Table 3.10-1) would decrease by 2.9 percent, which would be a minor impact. The decrease would be less (1.4 percent) but still minor if the FTEE reduction was partially met by the 116 retirement-eligible FTEEs and if they continued to reside in the county. The addition of 53 FTEEs to Rapid City would have no measurable change to the projected 2020 population of Pennington County. There would be no additional demand that would exceed the capacity of fire or police protection response or emergency medical services because of changes in VA staff levels to operate VA facilities in either Hot Springs or Rapid City.

VA BHHCS would no longer staff and operate the VA Hot Springs FD since there would not be 24-hour inpatient care at the campus or the new CBOC. VA Hot Springs FD has only received two or three requests from the Hot Springs VFD for firefighting assistance under the mutual aid agreement over the past couple of years. Ending the VA Hot Springs FD operations and relocating fire equipment from the VA campus would have a negligible impact on the fire response within the community by the Hot Springs VFD. There are numerous other century-old sandstone buildings in Hot Springs, so including the similar type buildings on the vacated VA campus within the response area of the Hot Springs VFD should not impact the capacity of the VFD to provide fire protection services.

The location and operation of an MSOC and RRTP would be within the response area of the Rapid City FD. The department is staffed 24 hours a day by professional firefighters at seven fire stations.

The department has developed a plan and increased annual budgets to add staffing to address the growth and development occurring in the response area (RCFD 2015; Rapid City 2015). The Rapid City FD can provide the response time requirements for VA facilities with 24-hour patient care, eliminating the need for VA BHHCS to staff and operate an FD to support the MSOC and RRTP. The VA facilities would be comparable to facilities and land uses in planned growth areas where the Rapid City FD would provide services; thus, operating an MSOC and RRTP would not exceed the capacity of the Rapid City FD to provide fire suppression and emergency response services to the community.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at the CBOC in Hot Springs and the MSOC and RRTP in Rapid City. VA police would continue to patrol the VA Hot Springs campus until a re-use is implemented that would no longer require VA security. The proposed CBOC would not require 24-hour patrol. Requests could be made of the Hot Springs PD to respond to calls or alarms requiring immediate response and to any potential increase in incidents due to the unoccupied campus, but any increase would not be expected to exceed the response capacity of the Hot Springs PD. VA BHHCS police would monitor any such activity and respond accordingly to protect VA facilities, such as increasing the frequency of patrols by VA police. The presence of VA police would increase in Rapid City to provide protection and security for the MSOC and RRTP, with assistance from the Rapid City PD. Because a location has not been selected, the proximity of the Rapid City PD is not yet determined for responding to calls or alarms from the MSOC or RRTP that could require an immediate response; the need for 24-hour patrols by VA officers would be reviewed but would not likely be necessary. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

Any decrease in sales tax revenue used to support the Hot Springs VFD and PD because of reduced VA wages would be minor to moderate in sustaining the services when compared to total wages for Fall River County. There would be a negligible change to sales tax revenue used to support the Rapid City FD and PD. Emergency response services are mostly cost recovery services with negligible effects from changes in sales tax revenues.

4.11.2.2.3 Schools

The reduction of approximately 216 FTEEs whose residence is Fall River County would have a minor impact on the capacity of the Fall River County school districts. There were 1,088 students enrolled in the three districts at the end of the 2014 school year (see Table 3.11-1). Students account for approximately 15 percent of the population, or 150 students per 1,000 residents, based on the 2015 projected population of 7,262 for Fall River County (see Table 3.10-1). Using this simple ratio, if all 216 FTEEs relocated out of Fall River County with school-age children, the enrollment would decrease by approximately 32 students or 2.9 percent. This decrease would be minor when compared to the evaluation criteria. Because more than half of the FTEEs (116 of 216) would be eligible for retirement by FY 2020 (see Section 4.10.2.2.1) and would probably not have school-age children at home, the impact on school enrollment would be much less. Assuming the remaining 100 FTEEs would relocate from Fall River County and all would have school-age children, the decrease in school enrollment would be 15 students or 1.3 percent, which would be a minor impact.

Students account for approximately 13 percent of the Pennington County population, or 130 students per 1,000 residents. The addition of 53 FTEEs residing in Pennington County, with an additional (replacement) 28 retirement-eligible FTEEs by 2020, could increase enrollment by approximately 11 students if all FTEEs would have school-age children and would relocate into the school district. This increase would have an unmeasurable impact on a school enrollment of over 13,700 (see Table 3.11-4) and on the Rapid City School District.

Any decrease in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Any increase in sales tax revenue to support the Rapid City School District would be negligible.

4.11.2.2.4 Parks and Recreation

There are numerous city, state, and federal recreational lands, facilities, and amenities that are easily accessible to VA BHHCS employees in both Hot Springs and Rapid City and the surrounding area. The demand for recreational facilities is also closely linked to the size of the population served, so any reduction in population would increase the amount of city park acreage per resident, having a beneficial effect on the user. Relocating VA BHHCS employees from the VA Hot Springs campus to a new CBOC would impact those employees who use the campus grounds and open spaces during the workday for passive recreation or exercise.

Patients and visitors to the Hot Springs CBOC and Rapid City MSOC would not be expected to use nearby parks because their visits to the VA facilities would be focused on health care services. Patients and visitors to the Rapid City RRTP would likely use parks and recreational facilities that are nearby and accessible from the RRTP. Because Rapid City maintains more parks and open space per 1,000 residents than the national average (see Section 3.11.2.5), any use by VA patients, visitors, and employees would be negligible.

4.11.3 Alternative B

4.11.3.1 Impacts from Construction

Construction of a proposed MSOC in Rapid City could have short-term impacts to public safety and protection services, and would have similar effects on community services as described for Alternative A. Temporary impacts to fire and emergency vehicle response times in Hot Springs could be more extensive than described for Alternative A because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and RRTP with a fire station, and the amount of construction vehicle and equipment traffic would be greater. Construction workers would have similar effects on schools and recreation facilities as described for Alternative A, but the effects would be greater in Hot Springs because of the larger construction workforce.

4.11.3.2 Impacts from Operation

4.11.3.2.1 Hospitals and Clinics

Operational impacts on local clinics and hospitals for Alternative B would be the same as described for Alternative A.

4.11.3.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services

The demand for fire and police protection and emergency medical services for Alternative B would not exceed the capacity of local departments, and impacts would be similar to the impacts described for Alternative A. A smaller reduction in FTEEs for Alternative B to operate VA facilities in Hot Springs and Rapid City would have similar impacts to population as Alternative A; thus, the decrease in demand for and operational impacts on fire, police, and emergency services would be slightly less than Alternative A.

VA BHHCS would construct, staff, and operate a new fire station to support a new RRTP in Hot Springs because the Hot Springs VFD would not be able to meet the response times required by VA. The presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at a CBOC and RRTP in Hot Springs. VA police would continue to patrol the VA Hot Springs campus until a re-use is implemented that would no longer require VA security. VA officers would provide 24-hour patrol of the RRTP in Hot Springs. The presence of VA police in Rapid City would be similar to the current situation in which VA police from the Fort Meade campus monitor alarms and other law enforcement actions at the Rapid City facility, with assistance from the Rapid City PD in accordance with the terms of a written support agreement. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the changes in VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A but slightly less.

4.11.3.2.3 Schools

The reduction 162 FTEEs residing in Fall River County would have similar impacts on school enrollment and the school districts, but slightly less than described for Alternative A. If all 162 FTEEs relocated out of Fall River County with school-age children, the enrollment would decrease by approximately 24 students or 2.2 percent. This decrease would be minor when compared to the evaluation criteria. Because almost three-fourths of the FTEEs (116 of 162) would be eligible for retirement by FY 2020 and would probably not have school-age children at home, the impact on school enrollment would be much less (decrease of 7 students or 0.6 percent) if the remaining 46 FTEEs would relocate from Fall River County with school-age children.

The reduction of 1 FTEE and 28 retirement-eligible FTEEs residing in Pennington County would have an unmeasurable impact on school enrollment in the Rapid City School District.

Change in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Change in sales tax revenue to support the Rapid City School District would be negligible.

4.11.3.2.4 Parks and Recreation

Impacts on parks and recreational facilities would be the same as described for Alternative A.

4.11.4 Alternative C

4.11.4.1 Impacts from Construction

Renovations to Building 12 and the domiciliary would have similar effects on community services as described for constructing new facilities for Alternative B because of the comparable number of yearly construction workers needed to complete the renovations. Construction activities on the VA Hot Springs campus could require temporary closures or blockages of internal roads, but access to buildings for VA fire and police vehicles would be maintained during construction.

Construction of a proposed MSOC in Rapid City would have similar impacts to community services as described for Alternative A.

4.11.4.2 Impacts from Operation

4.11.4.2.1 Hospitals and Clinics

Operational impacts on local clinics and hospitals for Alternative C would the same as described for Alternative A.

4.11.4.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services

The demand for fire and police protection and emergency medical services and funding sources for these services for Alternative C would be similar to the impacts described for Alternative B. The operation of a renovated CBOC and RRTP on the VA Hot Springs campus and an MSOC in Rapid City would result in the same reduction of FTEEs as Alternative B. There would be no additional demand that would exceed the capacity of the local fire or police protection response or emergency medical services because of changes in VA staff levels to operate VA facilities in either Hot Springs or Rapid City.

VA BHHCS would continue to staff and operate the fire station on the campus to support the RRTP. The continued presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors to VA facilities. VA police would continue to patrol the campus, including 24-hour patrol by VA officers for the RRTP. The presence of VA police in Rapid City would be similar to Alternative B. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A but slightly less.

4.11.4.2.3 Schools

Because the reduction in FTEEs would be the same as Alternative B, impacts on school enrollment and school districts would be the same as Alternative B.

4.11.4.2.4 Parks and Recreation

Because the reduction in FTEEs would be the same as Alternative B, impacts on parks and recreational facilities would be the same as Alternative B, except the VA Hot Springs campus would remain available for passive recreation and exercise by VA employees during the work day.

4.11.5 Alternative D

4.11.5.1 Impacts from Construction

Construction of a proposed MSOC and 76-bed RRTP in Rapid City would impact fire, police, and emergency vehicle response times similar to the impacts described for Alternative A. Temporary impacts to fire, police, and emergency vehicle response times in Hot Springs could be slightly more than described for Alternative A because the construction site would be larger to co-locate a CBOC and 24-bed RRTP with a fire station. Construction workers would have similar effects on schools and recreational facilities as described for Alternative A, because the size of the construction workforce would be comparable.

4.11.5.2 Impacts from Operation

4.11.5.2.1 Hospitals and Clinics

Operational impacts on local clinics and hospitals for Alternative D would the same as described for Alternative A.

4.11.5.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services

The demand for fire and police protection and emergency medical services for Alternative D would be similar to the impacts described for Alternative A. A smaller reduction in FTEEs for Alternative D to operate VA facilities in Hot Springs (-201 FTEEs) and a smaller increase in Rapid City (+46 FTEEs) would have similar impacts to population as Alternative A; thus, the change in demand for and operational impacts on community fire, police, and emergency services would be slightly less than Alternative A.

VA BHHCS would construct, staff, and operate a new fire station to support the 24-bed RRTP in Hot Springs because the Hot Springs VFD would not be able to meet the response times required by VA. The presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors at a CBOC and 24-bed RRTP in Hot Springs and an MSOC and 76-bed RRTP in Rapid City. VA police would continue to patrol the VA Hot Springs campus until a re-use is implemented that would no longer require VA security. VA police officers would provide 24-hour patrol of the RRTP in Hot Springs. The presence of VA police in Rapid City would be similar to

Alternative A. Because a location has not been selected, the proximity of the Rapid City PD is not yet determined for responding to calls or alarms from the MSOC or RRTP that would require an immediate response; the need for 24-hour patrols by VA officers would be reviewed but would not likely be necessary. VA BHHCS would update the support agreements with local law enforcement agencies to reflect the change in police presence and security patrols for VA facilities in Hot Springs and Rapid City.

The change in sales tax revenue and impact to the Hot Springs VFD and PD or Rapid City FD and PD would be similar to Alternative A but slightly less.

4.11.5.2.3 Schools

Because the reduction of 201 FTEEs would be very similar to Alternative A (216 FTEEs), impacts on Fall River County school enrollment and school districts would be similar to Alternative A. Enrollment would decrease by approximately 30 students or 2.8 percent if all FTEEs relocated out of Fall River County with school-age children, which would be a minor impact. Because more than half of the FTEEs (116 of 201) would be eligible for retirement by FY 2020 and would probably not have school-age children at home, the impact on school enrollment would be much less. Assuming the remaining 85 FTEEs would relocate from Fall River County and all would have school-age children, the decrease in school enrollment would be 13 students or 1.2 percent, which would be a minor impact.

The addition of 46 FTEEs residing in Pennington County, with an additional (replacement) 28 retirement-eligible FTEEs by 2020, could increase enrollment by approximately 10 students if all FTEEs would have school-age children and would all relocate into the school district. This increase would have an unmeasurable impact on school enrollment or on the Rapid City School District.

Change in sales tax revenue used to support the Fall River County school districts because of reduced VA wages would be minor to moderate in sustaining school revenue when compared to total wages for the county. Change in sales tax revenue to support the Rapid City School District would be negligible.

4.11.5.2.4 Parks and Recreation

Because the reduction in FTEEs would be very similar to Alternative A, impacts on parks and recreational facilities would be similar to Alternative A.

4.11.6 Alternative E

4.11.6.1 Impacts from Construction

Constructing new facilities and renovating existing facilities on the VA Hot Springs campus would have similar effects on fire and emergency response times, and law enforcement services as described for Alternative C; however, the extent of the effects would be greater because the construction workforce needed for Alternative E would be more than double that of Alternative C. The temporary influx of construction workers would have similar effects on schools and recreational facilities as described for Alternative A, but the extent of the effects would be greater because the size of the construction workforce would be larger. No construction would be proposed for Rapid City for Alternative E; no construction-related impacts to community services would occur there.

4.11.6.2 Impacts from Operation

4.11.6.2.1 Hospitals and Clinics

There would be no change compared to current levels of Veterans receiving care from non-VA providers.

4.11.6.2.2 Fire/Rescue, Emergency Medical, and Law Enforcement Services

The demand for fire and police protection and emergency medical services is closely linked to the size of the population served. The expansion of the VA Hot Springs campus would increase the FTEEs residing in Fall River County by approximately 206 and in Pennington County by approximately 30 (see Table 4-10.12). If these 206 FTEEs all relocated to Fall River County from outside the county, the projected 2020 population (see Table 3.10-1) would increase by approximately 2.8 percent, which would be a moderate impact. There could be additional demand from this population increase that could exceed the capacity of fire or police protection response or emergency medical services from local departments in Hot Springs. There would be no measurable change to the Pennington County population that would have an additional demand on fire, police, or emergency services.

VA BHHCS would continue to staff and operate the fire station on the campus to support the RRTP and expanded 24-hour inpatient care. The doubling of the number of RRTP beds would not be expected to increase the VA Hot Springs FD staffing or equipment. The continued presence of the VA Hot Springs FD would benefit the community by providing firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

VA BHHCS would continue to maintain a police and security unit to provide for the safety of patients, staff, and visitors to the expanded VA Hot Springs campus. VA police would continue 24-hour patrols of the campus. VA security in Rapid City would be similar to the current operations, in which VA police from the Fort Meade campus monitor alarms and other law enforcement actions at the CBOC, with assistance from the Rapid City PD in accordance with the terms of a written support agreement. VA BHHCS would maintain the support agreements with local law enforcement agencies for the VA facilities in Hot Springs and Rapid City.

Increases in sales tax revenue from increases in the VA wages would benefit funding for fire and police services, local schools, and parks and recreational facilities in both communities, and would be a major beneficial impact for Fall River County.

4.11.6.2.3 Schools

The increase of approximately 206 FTEEs whose residence would be Fall River County would have a minor impact on the capacity of the Fall River County school districts. There were 1,088 students enrolled in the three districts at the end of the 2014 school year (see Table 3.11-1). Students account for approximately 15 percent of the population, or 150 students per 1,000 residents, based on the 2015 projected population of 7,262 for Fall River County (see Table 3.10-1). Using this simple ratio, if all 206 FTEEs relocated to Fall River County with school-age children, the enrollment would increase by approximately 31 students or approximately 2.8 percent. This increase would be a moderate impact on enrollment when compared to the evaluation criteria. If the 116 retirement-eligible FTEEs from Fall River County would be replaced to implement Alternative E and all had

school-age children, enrollment would increase by approximately 48 students or approximately 4.4 percent, which would be a major impact on enrollment. However, if all 48 students enrolled in the Hot Springs School District, the student-to-staff ratio would be 14.5, which would slightly exceed the state average of 14.1.

Students account for approximately 13 percent of the Pennington County population, or 130 students per 1,000 residents. The increase of 30 FTEEs residing in Pennington County, along with 28 eligible for retirement by 2020, would increase enrollment by approximately 8 students which would have an unmeasurable impact on school enrollment and the Rapid City School District.

4.11.6.2.4 Parks and Recreation

Impacts on parks and recreational facilities would be similar to the impacts described for Alternative A, but with an increase in FTEEs and population, usage of local parks and recreational facilities in Hot Springs would be expected to increase.

4.11.7 Alternative F

4.11.7.1 Impacts from Construction

Buildings on the VA Hot Springs campus would be renovated as agency budgets allow. Renovations would have similar effects on community services in Hot Springs as described for Alternative A. Construction activities on the VA Hot Springs campus could require temporary closures or blockages of internal roads, but access to buildings for VA fire and police vehicles would be maintained during construction. No construction or renovations are proposed for the CBOC in Rapid City under this alternative.

4.11.7.2 Impacts from Operation

Operation of the VA Hot Springs campus and Rapid City CBOC would continue with the FTEEs assigned to these facilities. There would be no additional demand in services that would exceed the capacity of the local fire, police, or emergency medical services, or increased school enrollment or usage of parks and recreational facilities because of continued operation of VA facilities in either Hot Springs or Rapid City.

VA BHHCS would continue to maintain a police and security unit and FD to provide for the safety of patients, staff, and visitors to the VA Hot Springs campus, and support the RRTP and 24-hour inpatient care. VA police would continue 24-hour patrols of the campus. VA BHHCS would maintain support agreements with local law enforcement agencies, and provide firefighting assistance if requested by the Hot Springs VFD in accordance with the mutual aid agreement.

4.11.8 Supplemental Alternative G

4.11.8.1 Impacts from Construction

Supplemental Alternative G would involve full or partial re-use of the VA Hot Springs campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction activities that could increase the demand on fire, police, and emergency vehicle response times, school enrollment, and parks and recreational facilities would likely be similar to the

impacts described for Alternatives C and E. However, the extent of the impacts on these community services would depend on the number of construction workers that would be users of these services and the time period over which construction would occur.

4.11.8.2 Impacts from Operation

The type of re-use of the VA Hot Springs campus would determine the extent of effects to community services. Additional employment and induced population growth relating to this alternative could lead to increased demand on fire and police protection, and increased school enrollment and usage of parks and recreational facilities. The extent of any impacts would depend on the scope and scale of the re-use and the employment workforce it would need; however, the impacts would likely be similar to those described for Alternatives C and E.

4.12 Solid Waste and Hazardous Materials

4.12.1 Evaluation Criteria

The potential effects related to solid waste generation and disposal were evaluated through a comparison of current and projected solid waste generation rates and the permitted capacity and intake rates for solid waste landfills serving each project area. The evaluation resulted in a determination as to whether existing solid waste disposal facilities could accommodate the projected solid waste generation rates for each alternative.

Hazardous materials that could be transported, used, encountered, or disposed in the construction and operation of each alternative were evaluated to predict the potential effects to human health and the environment. Additionally, the potential for legacy hazardous material contamination at project sites was considered.

An alternative would be considered to result in an adverse impact related to solid waste and hazardous materials if it would:

- result in the exposure of the public or the environment to harmful levels of hazardous materials
- exceed the permitted capacity or intake rates for solid waste landfills serving each project area
- result in noncompliance with applicable federal and state regulations or VA management practices

4.12.2 Alternative A

4.12.2.1 Impacts from Construction

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the proposed new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible effect on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.2.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from the proposed Hot Springs CBOC would decrease from the current waste generation rates of the VAMC campus. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC and RRTP in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from operating a Rapid City MSOC and RRTP could continue to be managed under the Fort Meade VAMC permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts related to solid waste and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

4.12.3 Alternative B

4.12.3.1 Impacts from Construction

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction-related adverse impacts from solid waste and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.3.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from a Hot Springs CBOC and RRTP would be similar to or less than current waste generation rates of the VA Hot Springs campus. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste

generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a similar level of medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from operating a Rapid City MSOC could continue to be managed under the Fort Meade VAMC permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts to solid and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

4.12.4 Alternative C

4.12.4.1 Impacts from Construction

Wastes generated by renovation of the Hot Springs VAMC and construction of the MSOC in Rapid City would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

A location for a new MSOC in Rapid City has not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of MSOC construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of renovation activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction- or renovation-related adverse impacts from solid wastes and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.4.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from operations in Hot Springs would be similar to or less than current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to continue accepting this level of solid waste without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a similar level of medical waste generation. Hazardous waste generation would also be similar or less. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from a Rapid City MSOC could continue to be managed under the Fort Meade VAMC permit or would require a new permit.

Operation of the new/renovated facilities is not expected to result in adverse impacts to solid and hazardous materials. In Rapid City, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

4.12.5 Alternative D

4.12.5.1 Impacts from Construction

Wastes generated by construction activities would be transferred to either the Custer Fall River Regional Landfill or the Rapid City Landfill, both of which have adequate capacity to receive additional solid waste.

Locations for the new facilities have not yet been selected. As such, the potential for existing contamination at a project site cannot be determined. However, should environmental contamination be encountered during construction activities, all waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities.

In the event that a new storage tank is installed as part of facility construction, the tank must be registered with SDDENR and spill controls may need to be installed. Similarly, any tanks that are closed and removed as part of demolition activities must be coordinated with SDDENR and in accordance with applicable regulations.

Construction-related adverse impacts from solid wastes and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.5.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from operating a CBOC and 24-bed RRTP in Hot Springs would decrease from current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to accept a decreased level of solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept a decreased level of medical waste generation. Hazardous waste generation could also decrease. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operating an MSOC and 76-bed RRTP in Rapid City would increase from current waste generation rates. The Rapid City Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation from Rapid City operations could continue to be managed under the Fort Meade VAMC permit or would require a new permit.

Operation of the new facilities is not expected to result in adverse impacts to solid wastes and hazardous materials. In Rapid City, creases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

4.12.6 Alternative E

4.12.6.1 Impacts from Construction

Wastes generated by renovation and small-scale construction activities at the Hot Springs campus would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste. No construction activities would occur in Rapid City.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

Renovation- and construction-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.6.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from expanded operations on the Hot Springs campus would increase from current waste generation rates. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are

available to accept increases in medical waste generation. Hazardous waste generation could also increase. VA would determine whether hazardous waste generation could continue to be managed under the current permit or a new permit would be required. Attempts to meet VA waste diversion goals could reduce quantities destined for disposal. Adverse impacts to waste disposal facilities are not expected.

Solid waste, medical waste, and hazardous waste generation from operations in Rapid City would remain relatively similar to current waste generation rates.

Operation of the facilities is not expected to result in adverse impacts to solid and hazardous materials. In Hot Springs, increases in generation of solid, medical, and hazardous waste are predicted, but would have a negligible impact on treatment and disposal facilities. Waste minimization opportunities are described in Chapter 5.

4.12.7 Alternative F

4.12.7.1 Impacts from Construction

Under Alternative F, only renovation of existing facilities at the Hot Springs VAMC as authorized by annual budgets would occur. Wastes generated by renovation activities would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste. No construction activities would occur in Rapid City.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

Renovation-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.7.2 Impacts from Operation

Solid waste, medical waste, and hazardous waste generation from operations in Hot Springs and Rapid City would remain relatively similar to current waste generation rates. Continued operation of the facilities is not expected to result in adverse impacts to solid and hazardous materials. Waste minimization opportunities are described in Chapter 5.

4.12.8 Supplemental Alternative G

4.12.8.1 Impacts from Construction

Under Supplemental Alternative G, some or all of the existing facilities in Hot Springs would be re-used by other tenants. Depending on the intended use, some facility renovation or small-scale construction may be required. Wastes generated by renovation and construction activities would be transferred to the Custer Fall River Regional Landfill, which has adequate capacity to receive additional solid waste.

Renovation activities could generate special wastes, including asbestos-containing materials and lead-based paint waste. All waste would be abated and managed in accordance with regulations and disposed in appropriate disposal facilities. Attempts to meet VA solid waste diversion goals would reduce quantities destined for disposal.

Construction- and renovation-related adverse impacts from solid and hazardous materials are not expected to occur. Short-term increases in solid waste generation are predicted, but would have a negligible impact on remaining landfill capacities. Waste minimization opportunities are described in Chapter 5.

4.12.8.2 Impacts from Operation

Operation of some or all of the Hot Springs VAMC facilities by new tenant(s) is not expected to result in adverse impacts to solid and hazardous materials. Solid waste, medical waste, and hazardous waste generation could increase or decrease, depending on nature of the tenant operations. The Custer Fall River Regional Landfill has sufficient capacity to accept an increase in solid waste generation without adversely affecting the facility. Similarly, medical waste treatment facilities (located outside South Dakota) are available to accept increases in medical waste generation. Hazardous waste generation could also increase. The tenant would determine whether a hazardous waste permit would be required.

4.13 Transportation and Traffic

4.13.1 Evaluation Criteria

The evaluation of transportation and traffic focuses on the operational capacity and physical condition of the urban and rural roadway networks and the availability of modes of travel. The VA Site Development Design Manual (VA 2013) includes traffic circulation and roadway network as criteria for site selection, along with accessibility to public transportation. An impact would be considered adverse if a reconfiguration alternative would result in any of the following conditions:

- The current roadway network is insufficient to accommodate changes in traffic circulation around existing or proposed VA BHHCS facilities in Hot Springs or Rapid City without major capacity, safety, or access improvements.
- A substantial increase in demand for public transit services that could not be accommodated by transit providers without disrupting available capacity or existing levels of service.
- Potentially hazardous conditions for pedestrians or bicyclists, or interference with pedestrian or bicycle access to existing or proposed VA BHHCS facilities or adjacent areas.

Reduction in vehicle trips or travel associated with any reconfiguration alternative would be a beneficial impact on traffic circulation on the local and urban roadway networks.

4.13.2 Alternative A

4.13.2.1 Impacts from Construction

Construction of the proposed CBOC in the Hot Springs area and the proposed MSOC and RRTP in the Rapid City area would temporarily disrupt the roadway network and traffic circulation. The extent of the disruption would depend on the location of the selected sites and the existing roadway function (arterial, collector, or local road), and traffic conditions. Construction activities could temporarily require the closure or restriction of travel lanes (including sidewalks and bikeways) or designation of a detour, which could result in traffic congestion near the construction sites and impede safe travel by pedestrians and bicyclists. Trucks hauling construction equipment, materials, and debris to and from the sites would be expected to use local truck traffic routes; however, haul truck activity would still likely result in temporary adverse impacts on traffic in the vicinity of the construction sites. Traffic control plans would be coordinated with the local public works/engineering departments to address temporary road closures, detours, and haul truck routes to minimize disruption to traffic flow and to maintain access to any businesses and residential areas that could be near the selected locations.

Increases in the number of construction worker vehicles and haul trucks traveling on the primary arterials outside the city limits of Hot Springs and Rapid City would be temporary and not likely to have any adverse effects to these roadways.

4.13.2.2 Impacts from Operation

4.13.2.2.1 Hot Springs

The roadway network through and around Hot Springs would be expected to accommodate traffic to and from a new five-acre CBOC site located in the Hot Springs area. Depending on the selected site, local roadway improvements could include resurfacing, drainage (curb and gutter), accessible sidewalks, and crosswalks.

Vehicle trips to, from, and within Hot Springs by employees, patients, visitors, and support/delivery services would decrease with the relocation of the RRTP to Rapid City, maintenance status of the VA Hot Springs campus pending re-use, and availability of expanded health care services at an MSOC in Rapid City. The reduction in vehicle trips would result in a net neutral or a beneficial impact on local traffic and roads. On a city-wide basis, the route of these vehicle trips would change based on the location of the new Hot Springs CBOC in relation to the VA campus, but could still affect traffic circulation and congestion during the peak tourist season along the main thoroughfares and intersections.

Rural public transit could experience an increase in demand for transportation service should Veterans choose not to use their community's health care services and instead choose to travel to a VA facility. Since rural public transit is provided on 24-hour advanced request, any increase in demand is not likely to disrupt capacity or level of service.

4.13.2.2.2 Rapid City

The roadway network through and around Rapid City would be expected to accommodate traffic to and from a 17-acre site for a co-located RRTP and MSOC. Depending on the selected site, local roadway improvements could include resurfacing, drainage (curb and gutter), turn lanes, traffic signals, bus turn-outs, bicycle lanes, accessible sidewalks, and crosswalks. These improvements are typical of new developments within larger communities and would be addressed by the local zoning and code requirements for public roadways and traffic control to minimize adverse effects.

Operating an MSOC and RRTP in the Rapid City area would increase vehicle trips to and from the selected site. Any adverse effect to local traffic conditions would depend on the location of the site and roadway improvements associated with the development. Traffic congestion is based on the number of vehicle trips during peak travel hours. The number of peak-hour vehicle trips made by employees, patients, visitors, and delivery services can be estimated based on the type of land use or facility. The estimated vehicle trips associated with an MSOC and RRTP are shown in Table 4.13-1.

Table 4.13-1. Estimated Vehicle Trips for MSOC and RRTP.

Facility Type	Trip Rate Unit[1]	Trip Rate[1]		Units[2]	Vehicle Trips	
		PM Peak Hour	Daily		PM Peak Hour	Daily
MSOC[3]	**1,000 square feet**	**3.57**	**36.13**	**66,281 square feet**	**237**	**2,395**
RRTP[4]	**Room**	**0.47**	**5.63**	**100 beds**	**47**	**563**
Total (co-located MSOC and RRTP)					**284**	**2,958**

[1] Source: ITE 2012.
[2] Refer to Section 2.3.1.1.1, New Facilities
[3] Comparable to medical office land use code (ITE 2012).
[4] Comparable to motel land use code (ITE 2012).

An estimated 284 vehicles could be entering and exiting the site of a co-located MSOC and RRTP during a peak hour between 4:00 p.m. and 6:00 p.m. on a weekday. This number of vehicles could contribute to current or future congestion (based on 2035 projected traffic) anticipated along principal and minor arterial roadways throughout Rapid City during evening peak travel time (shown in Figures 3.13-2, 3.13-3, and 3.13-5 in Section 3.13). The extent of any adverse effect to traffic circulation would depend on the selected site and travel routes to and from the site, and locations of other future development that would contribute to 2035 traffic. The estimated 2,958 daily vehicle trips on weekdays would contribute to the average daily traffic on the roadways used as travel routes to access the site of a co-located MSOC and RRTP. The current (2014) average daily traffic on principal and minor arterial roadways ranges between 8,000 and 30,000 vehicles (see Section 3.13.2.2) and, depending on the location and travel routes, the daily vehicle trips to and from a co-located MSOC and RRTP could have an adverse effect on traffic circulation on lesser-traveled roadways. However, if travel routes are the same as those used to access the existing CBOC, the number of daily vehicle trips would be less due to accounting for the CBOC vehicles trips already on those routes. Any effect on roadway condition or capacity that could require improvements would depend on whether current or projected traffic exceeds the design function of the roadway for safe and convenient travel. VA BHHCS would coordinate with the Rapid City Public Works Department to complete a traffic study, if required, for the selected site for the MSOC and RRTP and incorporate appropriate roadway improvements into the site design. Roadway improvements to minimize adverse traffic impacts could include traffic signals, turn lanes, and bus turn-outs.

The demand for public transportation (fixed bus route and door-to-door transit) could increase because of the addition of the MSOC and RRTP to the Rapid City area. A criterion for site selection is accessibility to public transportation; therefore, a fixed bus route adjacent to or near the selected site(s) could experience an increase in riders. The extent of any adverse effect from increased ridership would depend on the existing operating capacity on routes serving the area. VA BHHCS would coordinate with the Rapid Transit System to encourage adding or extending bus service and capacity to accommodate any increased ridership, including adding a bus stop and shelter at the site of the MSOC and RRTP. Since door-to-door transit is provided on 24-hour advanced request, any increase in demand is not likely to disrupt capacity or level of service.

4.13.3 Alternative B

4.13.3.1 Impacts from Construction

Construction activities would be expected to have similar effects on local roadways and traffic circulation as described for Alternative A. Temporary impacts to traffic in the Hot Springs area could be more extensive than described for Alternative A because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and RRTP with a fire station. Because only an MSOC (10-acre site) is proposed for Rapid City, construction-related impacts on traffic could be less extensive than Alternative A. The extent of impacts would be dependent on the location of the selected sites in Hot Springs and Rapid City and the design function and traffic conditions of the roadway network adjacent to and surrounding the sites.

4.13.3.2 Impacts from Operation

4.13.3.2.1 Hot Springs

Impacts to local roadways and traffic circulation would be similar to impacts described for Alternative A. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A.

4.13.3.2.2 Rapid City

Impacts to the local roadways and traffic circulation in Rapid City would be similar to and possibly less extensive than the impacts described for Alternative A. Operation of an MSOC in Rapid City would increase daily vehicle trips (see Table 4.13-1) to and from the selected site over the number of vehicle trips to the existing CBOC, and would have similar but less extensive impacts to traffic circulation and congestion as the impacts described for Alternative A. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A.

4.13.4 Alternative C

4.13.4.1 Impacts from Construction

Construction activities in Hot Springs would only occur on the VA campus and would be primarily internal building renovations. Temporary construction impacts to local roadways and traffic circulation would be limited to disruptions caused by haul truck activity, and would be similar to but less extensive than the impacts described for Alternative A.

Potential impacts to Rapid City roadways and traffic during construction of an MSOC would be similar to the impacts described for Alternative A. Because only a 10-acre site is proposed instead of a larger site to co-locate an RRTP, the extent of any construction-related disruptions to roadways and traffic would be less extensive than Alternative A, but would depend on the design function and traffic conditions of the roadway network adjacent to and surrounding the site.

4.13.4.2 Impacts from Operation

4.13.4.2.1 Hot Springs

Impacts to local roadways and traffic would be similar to impacts described for Alternative A. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A.

4.13.4.2.2 Rapid City

Impacts to the local roadways and traffic circulation in Rapid City would be similar to the impacts described for Alternative B. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A.

4.13.5 Alternative D

4.13.5.1 Impacts from Construction

Construction activities would be expected to have similar effects on local roadways and traffic circulation as described for Alternative A. Temporary impacts to traffic in the Hot Springs area could be more extensive than described for Alternative A because the construction site would be larger (11 to 13 acres) to co-locate a CBOC and 24-bed RRTP with a fire station. Although the RRTP proposed for Rapid City would have fewer beds than Alternative A, the size of the site (14 to 17 acres) to co-locate the RRTP and MSOC would be similar; thus, construction-related impacts on traffic would be similar to those described for Alternative A. The extent of impacts would be dependent on the location of the selected sites in Hot Springs and Rapid City and the design function and traffic conditions of the roadway network adjacent to and surrounding the sites.

4.13.5.2 Impacts from Operation

4.13.5.2.1 Hot Springs

Impacts to local roadways and traffic circulation would be similar to impacts described for Alternative A. This is because the number of vehicle trips would still likely decrease due to the reduction in FTEEs and availability of expanded health care services at a new MSOC in Rapid City. Impacts to rural public transit would be similar to the impacts described for Alternative A.

4.13.5.2.2 Rapid City

Impacts to the local roadways and traffic circulation in Rapid City would be similar to and possibly less extensive than the impacts described for Alternative A. Operation of an MSOC and a 76-bed RRTP would increase daily vehicle trips (but less than shown in Table 4.13-1) to and from the selected site over the number of vehicle trips to the existing CBOC, and would have similar but less extensive impacts to traffic circulation and congestion as the impacts described for Alternative A because the RRTP would have fewer beds than Alternative A. Impacts to public transportation would be similar to but less extensive than the impacts described for Alternative A.

4.13.6 Alternative E

4.13.6.1 Impacts from Construction

Construction activities in Hot Springs would likely only occur on the VA campus and would include exterior and interior renovations to numerous buildings, the addition of another floor to Building 12, and construction of new buildings to accommodate additional RRTP beds and housing. Temporary construction impacts to local roadways and traffic circulation would be limited to disruptions caused by haul truck activity, and would be similar to and more extensive than the impacts described for Alternative B.

Because no modifications to the existing CBOC in Rapid City are proposed and an MSOC would not be constructed, there would be no temporary disruptions to local roads or traffic from construction activities in Rapid City.

4.13.6.2 Impacts from Operation

4.13.6.2.1 Hot Springs

Operations of the VA Hot Springs campus would expand with doubling the RRTP capacity; increasing the number of in-patient, community living center, and intensive care beds; and initiating compensated work therapy programs. The number of VA FTEEs would almost double, along with workers from other support systems.

The proposed expansion would greatly increase vehicle trips by employees, patients, visitors, and support/delivery services and workers, which could have an adverse effect on the traffic circulation on the local roadways through Hot Springs and on the campus. Traffic congestion and vehicle queues could increase along the main thoroughfares and at certain intersections during peak morning and evening travel hours, and during the peak tourist season. The capacity of the roadway network in Hot Springs would likely accommodate an increase in vehicle trips; however, certain roadway improvements such as adding turn lanes and intersection signals (traffic light, four-way stop) would minimize adverse traffic impacts. Implementation of any roadway improvements outside the VA campus would be at the discretion of the City of Hot Springs.

The additional vehicle trips could adversely affect the capacity of the roadway network and parking on the campus such that roadway improvements could be necessary to minimize traffic congestion, especially during peak travel hours. Possible improvements could include one-way travel direction, lane striping, and additional parking.

Demand for rural public transit service is not likely to change.

4.13.6.2.2 Rapid City

There would be no change to the operation of the Rapid City CBOC that would have any effect on local roadways, traffic, or public transportation.

4.13.7 Alternative F

4.13.7.1 Impacts from Construction

Buildings on the VA Hot Springs campus would be renovated and modified to maintain clinical standards as funds are available through the routine budget process. Construction-related transportation impacts would be similar to the impacts described for Alternative C but would be less extensive. There would be no upgrades or renovations to the existing CBOC in Rapid City so there would be no temporary impacts on local roads or traffic from construction in Rapid City.

4.13.7.2 Impacts from Operation

There would be no change to the operation of the Hot Springs campus that would affect local roads or traffic. Vehicle trips to and from the campus would be expected to remain fairly consistent. Demand for rural public transit service is not likely to change. There would be no change to the operation of the Rapid City CBOC that would have any effect on local roadways, traffic, or public transportation.

4.13.8 Supplemental Alternative G

4.13.8.1 Impacts from Construction

Supplemental Alternative G involves full or partial re-use of the VA Hot Springs campus and could only happen with implementation of Alternatives A, B, C, or D. If a potential re-use included renovations or modifications to buildings or construction of additional buildings on the campus, construction-related impacts to the roadway network and local traffic would be similar to the impacts described for Alternatives C and E. There would be no construction-related transportation impacts if a potential re-use did not require any construction, renovation, or modification to campus buildings.

4.13.8.2 Impacts from Operation

The type of re-use of the VA Hot Springs campus would determine the extent of effects to the roadway network and traffic in Hot Springs and on the campus. The extent of any adverse impacts would depend on the specific re-use and the level of traffic it would generate, which could vary widely, for example, from low-traffic uses of a continuing care facility or low-density residential occupation of existing buildings, in contrast to retail or general office uses. Impacts to the roadway network and traffic circulation could be similar to impacts described for Alternative E. However, some re-use proposals, such as the Medical Miracle (see Section 2.3.8), would incorporate off-campus components of their activities, which would further increase vehicle trips through Hot Springs and potentially have a greater adverse effect by increasing traffic congestion and vehicle queues during peak travel times. Roadway improvements could be necessary to minimize traffic congestion, especially during peak travel hours. Possible improvements could include adding turn lanes and intersection signals (traffic light, four-way stop) on the main thoroughfares in Hot Springs and one-way travel direction, lane striping, and additional parking on the VA campus.

4.14 Utilities

4.14.1 Evaluation Criteria

An alternative would be considered to result in an adverse impact related to utilities if it would:

- require or result in the construction of new water supply or new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause adverse environmental effects
- require or result in the construction of new electricity or natural gas generation or transmission facilities, the construction of which could cause adverse environmental effects
- require or result in the construction of communications lines or expansion of existing facilities, the construction of which could cause adverse environmental effects

The assumptions used in estimating utility consumption and potential for impacts are listed in the following paragraphs.

4.14.1.1 Water Supply and Wastewater Treatment

Indoor water use projections can vary widely for a given facility and function, and would depend on the number of staff employed and patients served. However, water use projections for some facilities based on facility size are available.

- CBOC – It is assumed that a CBOC would resemble the water use of a facility characterized as a medical office. Reported medical office water use rates range from 0.0375 gallons per day per square foot (gpd/ft^2) to 0.6185 gpd/ft^2. A water use rate of 0.1308 gpd/ft^2 was used in the impact evaluation (Morales et al. 2009).
- MSOC – It is assumed that an MSOC would, as an upper bound, resemble the water use of a facility characterized as a hospital. A water use rate of 0.2040 gpd/ft^2 was used in the impact evaluation (Stanford 2010).
- RRTP – It is assumed that a RRTP would resemble the water use of a facility characterized as a hotel. A water use rate of 0.2696 gpd/ft^2 was used in the impact evaluation (Morales et al. 2009).

Outdoor water uses (including landscape irrigation) are also included in water use projections. It is assumed that approximately 10 percent of a site would be irrigated, and the associated outdoor water use requirement is approximately 610,000 gallons per year per acre (Brelje & Race 2009). This estimate is consistent with past Hot Springs VAMC irrigation water usage (average 620,000 gallons per year per acre from FY 2010 to FY 2014) (L. Epperson, email to C. Modovsky and M. Peters, July 6, 2015).

Wastewater generation rates are typically associated with water consumption rates. An indoor water use to wastewater generation ratio of 1:1 was assumed for the impact evaluation.

4.14.1.2 Electricity

The potential effects related to electricity consumption were evaluated through a comparison of current and projected electricity consumption rates and the ability of electric utilities to supply the projected consumption requirements. Electricity consumption rates were projected using the current electricity consumption rates, standard electricity consumption rates based on geographic location and facility size, and the estimated facility size for each alternative. The standard annual electricity consumption rate of 13.2 kilowatt-hours per square foot for all buildings in the Midwest census region (EIA 2003a) was used for the impact evaluation.

4.14.1.3 Heating

For new facilities located in Rapid City, where natural gas is available, the standard annual natural gas consumption rate of 51.5 cubic feet per gross square foot (ft^3/GSF) for all buildings in the Midwest census region (EIA 2003b) was used for the impact evaluation.

For new facilities located in Hot Springs, propane-fueled heating was assumed. The heating requirement was determined using the standard natural gas consumption rate, and a corresponding propane consumption rate was calculated.

For use of existing (and renovated) facilities at the VAMC in Hot Springs, continued consumption of fuel oil was assumed. The fuel oil consumption rate for the existing VA Hot Springs facilities indicates that the campus has a higher rate of energy use for facility heating, measured in British thermal units (Btu) per GSF, than the standard consumption rate (EIA 2003b). This may be due to inefficiencies with the boiler system and because generated steam is used for purposes other than heating (such as equipment sterilization, hot water production, and humidification). Renovations to the boiler system could result in improved efficiencies.

4.14.1.4 Communications

The potential effects related to communications services were evaluated through a qualitative assessment of the ability of communications utilities to provide services to new facilities.

4.14.2 Alternative A

The following assumptions pertain to facilities under Alternative A:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements
- RRTP (100-bed facility), Rapid City – approximately 78,675 GSF, moderate landscape irrigation requirements

4.14.2.1 Impacts from Construction

Projected utility requirements for all alternatives are summarized in Figure 4.14-1.

Figure 4.14-1. Projected Utility Requirements

BHHCS EIS Utilities

Constants:

Facility Size Estimates

Facility	GSF	Irr. Acres
Hot Springs VAMC	464,000	15.0
CBOC	16,711	0.5
RRTP (100 bed)	78,675	1.0
RRTP (24 bed)	28,119	0.6
MSOC	66,281	1.0
RRTP (76 bed)	66,661	0.7
Fire Department	7,099	0.0

Utility Consumption Estimates

Commodity	Rate	Unit	Source	Rate	Unit
Electricity	13.2	kWh/GSF yr	EIA 2013a		
Natural Gas	51.5	ft^3/GSF yr	EIA 2013b		
Natural Gas	1,030	BTU/ft^3	Propane 101		
Propane	2,516	BTU/ft^3	Propane 101		
Propane	0.0278	gal/ft^3	@ STP		
Water, Clinic Avg.	0.10	gal/GSF day	Stanford Univ.	0.1000	gal/GSF day
Water, Hospital	1,310	L/bed day	Mays et. al.	346	gal/bed day
Water, Hospital	177	gal/bed day	Sutter Med. Ctr.	177	gal/bed day
Water, Hospital	315	gal/bed day	WaterSense	315	gal/bed day
Water, Hospital Avg. (MSOC)	0.204	gal/GSF day	Stanford Univ.	0.2040	gal/GSF day
Water, Hotel	102	gal/room day	WaterSense	102	gal/room day
Water, Hotel/Motel (RRTP)	8.2	gal/HSF mo	Morales et. al.	0.2696	gal/HSF day
Water, Medical Office	25.2	L/m^2 day	Mays et. al.	0.6185	gal/GSF day
Water, Medical Office (CBOC)	3.98	gal/HSF mo	Morales et. al.	0.1308	gal/HSF day
Water, Medical Office	0.0375	gal/GSF day	Sutter Med. Ctr.	0.0375	gal/GSF day
Water, Nursing Home	503	L/bed day	Mays et. al.	133	gal/bed day
Water, Office	12	gal/worker day	WaterSense	12	gal/worker day
Water, Private Hospital	2.62	gal/HSF mo	Morales et. al.	0.0861	gal/HSF day
Water/Wastewater Ratio	1.0	gal : gal	assumed		
Water, Landscape Irrigation	610,000	gal/acre yr	Sutter Med. Ctr. (CA)		

Electricity and Heating:

Alt.	RC GSF	HS GSF	RC Elec. kWh/yr	HS Elec. kWh/yr	Tot. Elec. kWh/yr	RC NG ft3/yr	RC NG MMBTU/yr	HS Prop. gal/yr	HS Prop. MMBTU/yr
A	144,956	16,711	1,913,419	220,585	2,134,004	7,465,234	7,689	9,794	886
B	66,281	95,386	874,909	1,259,095	2,134,004	3,413,472	3,516	55,907	5,060
C	66,281	181,426	874,909	2,394,823	3,269,732	3,413,472	3,516	Fuel Oil	Fuel Oil
D	132,942	44,830	1,754,834	591,756	2,346,590	6,846,513	7,052	26,275	2,378
E	16,711	600,000	220,585	7,920,000	8,140,585	860,617	886	Fuel Oil	Fuel Oil
F	16,711	464,000	220,585	6,124,800	6,345,385	860,617	886	Fuel Oil	Fuel Oil

Water and Wastewater:

Alt.	RC GSF	HS GSF	RC H_2O Indoor gal/yr	RC H_2O Outdoor gal/yr	RC H_2O Total gal/yr	RC WW gal/yr	HS H_2O Indoor gal/yr	HS H_2O Outdoor gal/yr	HS H_2O Total gal/yr	HS WW gal/yr
A	144,956	16,711	12,676,903	1,220,000	13,896,903	12,676,903	798,117	305,000	1,103,117	798,117
B	66,281	95,386	4,935,283	610,000	5,545,283	4,935,283	8,539,737	915,000	9,454,737	8,539,737
C	66,281	181,426	4,935,283	610,000	5,545,283	4,935,283	6,214,427	9,300,000	15,514,427	6,214,427
D	132,942	44,830	11,494,726	1,037,000	12,531,726	11,494,726	3,565,027	671,000	4,236,027	3,565,027
E	16,711	600,000	798,117	305,000	1,103,117	798,117	20,551,940	9,300,000	29,851,940	20,551,940
F	16,711	464,000	798,117	305,000	1,103,117	798,117	15,893,500	9,300,000	25,193,500	11,654,239

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

4.14.2.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the proposed new facilities in Rapid City is projected at 13.9 million gallons per year. This is 0.4 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facilities in Rapid City is projected at 12.7 million gallons per year. This is 0.4 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the proposed new facility in Hot Springs is projected at 1.1 million gallons per year, and wastewater generation is projected at 0.8 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. The projected wastewater generation rate is significantly reduced from the current VAMC wastewater generation rate. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

Electricity

The new facilities would consume approximately 220,600 kilowatt-hours per year in the Hot Springs area and approximately 1,913,400 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The new facilities in Rapid City would consume approximately 7,500,000 ft^3/year (approximately 7,700 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facility in Hot Springs would consume approximately 9,800 gallons per year of

propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facility.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

4.14.3 Alternative B

The following assumptions pertain to the facilities under Alternative B:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- RRTP (100-bed facility), Hot Springs – approximately 78,675 GSF, moderate landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements

4.14.3.1 Impacts from Construction

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

4.14.3.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the new facility in Rapid City is projected at 5.5 million gallons per year. This is 0.2 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 4.9 million gallons per year. This is 0.1 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the new facilities in Hot Springs is projected at 9.5 million gallons per year, and wastewater generation is projected at 8.5 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. Additionally, the water rights held by the VA could be reused/transferred to accommodate the new facilities. The projected wastewater generation

rate is reduced from the current VAMC wastewater generation rate. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

Electricity

The new facilities would consume approximately 1,260,000 kilowatt-hours per year in the Hot Springs area and approximately 875,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The new facility in Rapid City would consume approximately 3,400,000 ft^3/year (approximately 3,500 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facility in Hot Springs would consume approximately 55,900 gallons per year of propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facility.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

4.14.4 Alternative C

The following assumptions pertain to the facilities under Alternative C:

- CBOC and RRTP (100-bed facility), Hot Springs – assumed CBOC would occupy 45,841 GSF within existing 134,918 GSF hospital building, continued use of 135,585 GSF in the domiciliary and administration building for a 100-bed RRTP, significant landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements

4.14.4.1 Impacts from Construction

The new facility in Rapid City is projected to be located within the utility service area such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply) would not be required.

Renovation activities at the Hot Springs VAMC would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during renovation activities could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

4.14.4.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the new facility in Rapid City is projected at 5.5 million gallons per year. This is 0.2 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 4.9 million gallons per year. This is 0.1 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the renovated facilities in Hot Springs are projected to decrease compared to current operation rates. Water use for the renovated facilities on the VA Hot Springs campus is projected at 15.5 million gallons per year based on the use rate assumptions stated above, and wastewater generation is projected at 6.2 million gallons per year based on the use rate assumptions. Water would continue to be supplied by the natural spring, at a decreased rate compared to the current 25.2 million gallons per year. The projected wastewater generation rate would also be expected to be reduced, as compared to the current VAMC wastewater generation rate of 11.7 million gallons. (Note that the use rate assumptions have overpredicted wastewater generation on the Hot Springs campus compared to current rates, but a reduction would be expected.) The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

Electricity

The new and renovated facilities would consume approximately 2,395,000 kilowatt-hours per year in the Hot Springs area and approximately 875,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is similar to current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy

elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The new facility in Rapid City would consume approximately 3,400,000 ft^3/year (approximately 3,500 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Renovated facilities (and existing facilities) at the Hot Springs VAMC are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate would be less compared to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations or continuing services would not result in adverse impacts to area communication utilities.

4.14.5 Alternative D

The following assumptions pertain to the facilities under Alternative D:

- CBOC, Hot Springs – approximately 16,711 GSF, minimal landscape irrigation requirements
- RRTP (24-bed facility), Hot Springs – approximately 28,119 GSF, moderate landscape irrigation requirements
- MSOC, Rapid City – approximately 66,281 GSF, minimal landscape irrigation requirements
- RRTP (76-bed facility), Rapid City, SD – approximately 66,661 GSF, moderate landscape irrigation requirements

4.14.5.1 Impacts from Construction

The facilities are projected to be located within the utility service area of each city such that extensive construction of new utility connections (water supply, wastewater collection, electricity supply, and natural gas supply [Rapid City only]) would not be required.

Construction activities would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction activities would also likely be provided by offsite sources and would not adversely affect existing utility systems.

4.14.5.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the new facilities in Rapid City is projected at 12.5 million gallons per year. This is 0.4 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facilities in Rapid City is projected at 11.5 million gallons per year. This is 0.3 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use for the new facilities in Hot Springs is projected at 4.2 million gallons per year, and wastewater generation is projected at 3.6 million gallons per year. The Hot Springs City Engineer stated that system capacity exists for new water users. The projected wastewater generation rate is significantly reduced from the current VAMC wastewater generation rate. The Hot Springs City Engineer noted that concerns have been raised regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow. However, it is unknown at what average flow such conditions would develop (Bastian 2014). A significant reduction in inflow from VA operations could result in adverse impacts to the Hot Springs wastewater treatment plant.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new facilities.

Electricity

The new facilities would consume approximately 590,000 kilowatt-hours per year in the Hot Springs area and approximately 1,755,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate is projected to decrease from current operating conditions and would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The new facilities in Rapid City would consume approximately 6,800,000 ft^3/year (approximately 7,100 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

New facilities constructed in the Hot Springs area are assumed to consume propane for heating purposes. The new facilities in Hot Springs would consume approximately 26,300 gallons per year of propane. Fuel oil consumption at the existing facility would be reduced to that necessary to shutter and maintain buildings until eventual reuse, preservation, or demolition. Adverse impacts on propane and fuel oil suppliers are not expected as a result of the new Hot Springs facilities.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and propane consumption rate of new facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

4.14.6 Alternative E

The following assumptions pertain to the facilities under Alternative E:

- Facility renovations/expansions, Hot Springs – assumed 600,000 GSF, significant landscape irrigation requirements
- CBOC, Rapid City – approximately 16,711 GSF, minimal landscape irrigation requirements

4.14.6.1 Impacts from Construction

CBOC operations in Rapid City would continue, presumably at the present facility location. Construction of new utility connections would not be required.

Renovation and expansion activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction and renovation activities can be accommodated by existing onsite systems and would not adversely affect existing utility systems.

4.14.6.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the existing CBOC facility in Rapid City is projected at 1.1 million gallons per year. This is 0.03 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the existing CBOC in Rapid City is projected at 0.8 million gallons per year. This is 0.02 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the renovated and expanded facilities in Hot Springs, SD are projected to increase from current operation rates. Water would continue to be supplied by the natural spring. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

Electricity

The renovated and expanded facilities would consume approximately 7,920,000 kilowatt hours per year in the Hot Springs area, and the current facility would consume approximately 220,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The current facility in Rapid City would consume approximately 860,000 ft^3/year (approximately 900 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Renovated and expanded facilities (and existing facilities) at the Hot Springs VAMC are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate is assumed to be similar to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. Transferring these services to other facility locations in the area would not result in adverse impacts to area communication utilities.

4.14.7 Alternative F

Under Alternative F, current operations would continue at the existing facilities at the Hot Springs VAMC and the CBOC in Rapid City. The following assumptions pertain to these facilities:

- VAMC, Hot Springs – assumed 464,000 GSF, significant landscape irrigation requirements
- CBOC, Rapid City – approximately 16,711 GSF, minimal landscape irrigation requirements

4.14.7.1 Impacts from Construction

CBOC operations in Rapid City would continue, presumably at the present facility location. Construction of new utility connections would not be required.

VAMC operations in Hot Springs would also continue, although some building renovations may be undertaken over time. Renovation activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during renovation could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

4.14.7.2 Impacts from Operation

Water Supply and Wastewater Treatment

Water use for the CBOC facility in Rapid City is projected at 1.1 million gallons per year. This is 0.03 percent of the total water produced by the Rapid City Public Works Department in 2011. Wastewater generation for the new facility in Rapid City is projected at 0.8 million gallons per year. This is 0.02 percent of the total wastewater treated by the Rapid City wastewater treatment plant. Projected water use and wastewater generation are not expected to have an adverse impact on Rapid City utilities.

Water use and wastewater generation for the facilities in Hot Springs are projected to remain at current operation rates. Water would continue to be supplied by the natural spring. The potential for water use and wastewater generation rates to increase or decrease from current levels exists. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

Electricity

The existing facilities would consume approximately 6,125,000 kilowatt-hours per year in the Hot Springs area, and the current facility would consume approximately 220,000 kilowatt-hours per year in the Rapid City area. This electricity consumption rate would not result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

Heating

Natural gas supply is available for consumers in the Rapid City area. The current facility in Rapid City would consume approximately 860,000 ft^3/year (approximately 900 million Btu/year) of natural gas. This natural gas consumption would not result in an adverse impact to area natural gas utilities.

Existing facilities at the Hot Springs VAMC are assumed to continue use of fuel oil for heating purposes. The fuel oil consumption rate is assumed to be similar to current operating conditions and would not result in an adverse impact to fuel oil suppliers.

Incorporation of energy efficiency elements into facility design could reduce the natural gas and fuel oil consumption rate of new and renovated facilities.

Communications

Telephone, television, and internet services are currently provided in both Hot Springs and Rapid City. The No Action Alternative would not result in adverse impacts to area communication utilities.

4.14.8 Supplemental Alternative G

Under Supplemental Alternative G, some or all of the existing facilities on the VA Hot Springs campus would be reused by other tenants. Depending on the intended use, some facility renovation may be required.

4.14.8.1 Impacts from Construction

If required, renovation activities in Hot Springs would involve the use of heavy equipment and support vehicles, resulting in a temporary increase in energy consumption attributable to fuel use. However, this fuel use would not adversely affect existing site utility systems as vehicles and equipment would likely be fueled offsite. Water and wastewater requirements during construction and demolition activities could be accommodated by existing onsite systems and would not adversely affect existing utility systems.

4.14.8.2 Impacts from Operation

Water Supply and Wastewater Treatment

If VAMC facilities are repurposed, water use and wastewater generation in Hot Springs could increase. Water could continue to be supplied to the repurposed facilities by the natural spring. If necessary, the Hot Springs City Engineer stated that system capacity exists for new water users, and increased flows to the wastewater treatment plant would help to alleviate concerns regarding anaerobic conditions developing in the treatment plant clarifier due to average flows being significantly lower than the design flow (Bastian 2014). Projected water use and wastewater generation are not expected to have an adverse impact on Hot Springs utilities.

Incorporation of water efficiency elements into facility design could reduce the water consumption rate and wastewater generation rate of new and renovated facilities.

Electricity

If Hot Springs VAMC facilities are repurposed, regional electricity consumption could increase. The level of increase would depend on the extent to which facilities are repurposed and the function of the tenant, but would not be expected to result in an adverse impact to area electrical utilities. Incorporation of energy efficiency and renewable energy elements into facility design could further reduce the electricity consumption rate of new and renovated facilities.

Heating

Repurposed facilities at the Hot Springs VAMC are assumed to continue use of fuel oil for heating purposes, although conversion to propane could be considered. The fuel oil or propane requirement would depend on the extent to which facilities are repurposed and the function of the tenant, but would not be expected to result in an adverse impact to fuel oil or propane suppliers.

Incorporation of energy efficiency elements into facility design could reduce the fuel oil or propane consumption rate of new and renovated facilities.

Communications

Telephone, television, and internet services are currently provided in Hot Springs and available to new users. The supplemental alternative would not result in adverse impacts to area communication utilities.

4.15 Environmental Justice

4.15.1 Evaluation Criteria

An analysis of environmental justice determines whether a disproportionate share of adverse human health or environmental impacts from implementing a federal action would be borne by minority or low-income populations.

The CEQ (1997) guidance states that, to determine whether impacts to minority or low-income populations are disproportionately high and adverse, agencies should consider the following:

- For human health effects (including bodily impairment, infirmity, illness, or death), whether:
  - Risks or rates of health effects are significant (as the term is used in NEPA analyses) or above generally accepted norms
  - The risk or rate of exposure to an environmental hazard for a minority or low-income population is significant and appreciably exceeds or is likely to exceed the risk or exposure rate for the general population.
  - Health effects occur in a minority or low-income population affected by cumulative or multiple adverse exposures from environmental hazards
- For environmental effects (ecological, cultural, human health, economic, or social impacts), whether:
  - There is or would be an impact on the natural or physical environment that significantly and adversely affects a minority or low-income population when those impacts are interrelated to impacts on the natural or physical environment
  - Environmental effects are significant (as the term is used in NEPA analyses) and are or may be having an adverse impact on minority or low-income populations that appreciably exceeds or is likely to appreciably exceed those on the general population
  - The environmental effects occur or would occur in a minority or low-income population by cumulative or multiple adverse exposures from environmental hazards

As described in Section 3.15, the affected area for the environmental justice analysis is the VA BHHCS service area, including counties in the states of South Dakota, Nebraska, and Wyoming. The South Dakota counties of Bennett, Corson, Dewey, Jackson, Lyman, Mellette, Oglala Lakota, Todd, and Ziebach are environmental justice communities in the VA BHHCS service area based on guidance in CEQ (1997), as described in Section 3.15.1.2. There are no environmental justice communities in the VA BHHCS service area in Nebraska or Wyoming. Therefore, the environmental justice impact analysis for the reconfiguration proposal is limited to the nine South Dakota counties listed above. Fall River and Pennington Counties, where the physical effects of any alternative would occur, do not have any environmental justice communities.

Section 2.1 provides a discussion of the improved geographic access to health care—including primary, secondary, and tertiary care—that would be available throughout the catchment area under the VA BHHCS services reconfiguration proposal. Overall, the services reconfiguration proposal improves geographic access, as summarized in Table 2-2 in Section 2.1. While services are not a

focus of the impact analysis in this EIS (see Section 1.3), it is important to note that this would be a beneficial effect for all Veterans in the catchment area, including those in minority and low-income populations. Attaining improved geographic access to care in this rural health care system is one of the main objectives of the services reconfiguration resulting in VA's proposed changes to the facilities in Hot Springs and Rapid City.

4.15.2 All Alternatives – Construction

Construction impacts to all resources would be limited to the vicinity of the construction in the areas of Hot Springs (Fall River County) and Rapid City (Pennington County). Neither of these counties was defined as having an environmental justice community; thus, environmental or health impacts would not be disproportionately borne by any environmental justice community.

Construction sites that are in close proximity to areas with higher concentrations of children, such as schools or parks, could attract unauthorized entry by children. Active construction sites are generally monitored or secured by fencing so the potential for unauthorized entry resulting in a safety risk would be minimal. Construction would not have environmental health risks or safety risks that would disproportionately affect children.

4.15.3 All Alternatives – Operation

The operational impacts of the reconfiguration under any alternative would occur predominantly in the areas of Hot Springs (Fall River County) and Rapid City (Pennington County). Neither of these counties was defined as having a minority or low-income population; thus, environmental or health impacts would not be disproportionately borne by any environmental justice community. The reconfiguration under any alternative would not affect the existing VA BHHCS facilities located in the counties that have minority or low-income populations: a therapy program office in McLaughlin (Corson County), CBOCs in Eagle Butte and Isabel (Dewey County), CBOC and compensated work therapy facility in Pine Ridge (Oglala Lakota County), and a CBOC in Mission (Todd County).

Improving travel time to access health care is one of the underlying conditions that contribute to the need for the VA BHHCS reconfiguration proposal (see Section 1.2.2.2.2, *Distance Veterans Must Travel for Care*). Alternatives A, B, C, or D would improve overall geographic access to care (see Table 2-2 in Chapter 2). As summarized in Table 2-1 in Chapter 2, primary and specialty health care services under Alternatives A, B, C, or D would continue in Hot Springs at a new CBOC, renovated Building 12 on the campus, or community facilities, and services would expand at a new MSOC in the Rapid City area where more Veterans are served. The changes in travel time and distance to receive care would benefit most Veterans in the VA BHHCS catchment area. For Veterans who are closer to Hot Springs than Rapid City, the change in location of VA's RRTP services from Hot Springs to Rapid City under Alternative A is the only service for which the distance would increase. This change to travel time and distance would not be disproportionately borne by Veterans from minority or low-income populations any more so than Veterans from the general population; therefore, this would not be an environmental justice impact. Alternatives E and F would retain the current levels of geographic access, with no beneficial effect to travel time and distance.

Supplemental Alternative G is limited to potential re-use scenarios at the VA Hot Springs campus. Although the nature of any such re-use has not yet been determined, any effects are expected to be

localized, with no potential for adverse operational impacts to environmental justice populations in the nine listed counties.

The operations conducted under any alternative for the VA BHHCS reconfiguration proposal would continue to be provision of health care services to Veterans and their families, and would not have environmental health risks or safety risks that would disproportionately affect children.

4.16 Cumulative Impacts

Section 3.16 identified the other past, present, and reasonably foreseeable future actions that may occur within the VA BHHCS service area. Actions in Hot Springs include expansion of the State Veterans Home, updating and relocating a community nursing home, new water distribution, and highway repair and reconstruction. Actions in Rapid City include new electricity transmission, road improvements and reconstruction, and residential developments.

Scoping for this EIS included requests that the cumulative impact analysis evaluate the effects of VA's changes to health care services at the Hot Springs VAMC since the mid-1990s. However, these changes related only to the offering of specific health care services from various locations, and are not subject to NEPA review (see Section 1.3).

Cumulative impacts from these actions or other potential future actions together with those of any of the EIS alternatives are expected to be absent, negligible or minor for aesthetics, air quality, geology and soils, hydrology and water quality, wildlife and habitat, noise, floodplains and wetlands, community services, solid waste and hazardous materials, utilities, and environmental justice. Any impacts to these resources would be similar to current VA health care services operations or to other new private and commercial developments that may occur within Hot Springs and Rapid City, and would include mitigation measures to minimize impacts as described in Chapter 5.

Cultural Resources

Direct or indirect adverse effects to historic properties from implementing any of the reconfiguration alternatives could further diminish the integrity of that property should any of the other past, present, or reasonably foreseeable projects also adversely affect the same property.

There could be a cumulative indirect effect to the Hot Springs Historic District if exterior renovations, new construction, and aesthetic changes on the VA Hot Springs campus, together with other ongoing and planned construction in Hot Springs, cause substantial contrasts to the historic setting, feeling, and association of the Historic District.

Changes in local economic conditions could alter the use and upkeep of historic commercial areas in Hot Springs and Rapid City and have the potential for indirect effects to accumulate on such historic properties. However, ongoing and planned construction projects in Hot Springs and Rapid City, including proposed construction for the reconfiguration alternatives, would cumulatively benefit local economies, and indirectly benefit historic properties. There would be no impacts to the economies of Hot Springs or Rapid City from changes in employment under any reconfiguration alternative that, together with changes in employment associated with other development projects, could result in significant cumulative indirect effects to historic properties.

There could be cumulative adverse effects to archaeological resources from ground disturbance in the Hot Springs and Rapid City areas from ongoing and planned construction, together with construction proposed for the reconfiguration alternatives. The significance of any cumulative adverse effect would depend on the extent of archaeological resources encountered, and how other projects mandatorily or voluntarily address such resources.

Land Use

For alternatives that include construction (A, B, C, and D), the potential for cumulative impacts related to land use depends on the specific site(s) selected and the existing adjacent and nearby land uses. Construction of a new VA facility, particularly if it is in an area in which other building or roadway construction is ongoing, could have a short-term adverse effect on residents or businesses use and enjoyment of their property in case of increased noise and traffic; this type of cumulative effect would be temporary, occurring only while the construction projects overlap in time. For Supplemental Alternative G, possible non-federal re-use scenarios could increase the locations in Hot Springs available for various uses, competing with existing private and commercial parcels that may be offered to potential users.

Socioeconomic Conditions

There could be cumulative impacts to the economy of Fall River County if the schedules of the larger construction projects listed in Table 3.16-1 overlap with construction for the reconfiguration proposal. The construction industry could experience short-term impacts if the industry is not able to locate and employ an adequate number of workers with the appropriate skills. The construction workforce for overlapping projects could have a cumulative impact on the demand for local housing and accommodations, particularly during the peak tourist season. Although these cumulative impacts could overlap for the VA facility construction period (estimated to be two to three years), the impacts would be considered short-term and overall beneficial to the local economy. The increase in employment anticipated with Alternative E and possibly Supplemental Alternative G could induce growth in other similar businesses and thus create a further demand on the available labor force. This cumulative impact could be adverse if the induced growth creates competition for the same employment sector needed to successfully implement the reconfiguration or re-use alternatives.

Transportation and Traffic

There could be possible short-term cumulative impacts to traffic circulation if a site selected for a new VA facility in Hot Springs or Rapid City is near or mainly accessed by a travel route that is undergoing or planned for roadway improvements or reconstruction. The vehicle trips added to the local area by the construction and operation of VA facilities could further increase traffic congestion beyond what the locality would have experienced due to the roadway project alone, in the absence of the VA-related traffic. This cumulative impact would be temporary. A travel route that would serve the site selected for a new VA facility in Rapid City could be the same route that would serve areas planned for residential and commercial development. There could be a cumulative impact if the daily vehicle trips to and from the VA facility would exceed the safe and efficient design function of the travel route planned to serve future development. However, any cumulative impact would not be significant because the traffic projections and long-range planning conducted by the City of Rapid City extend to 2035 (with an update underway to 2040) and include development scenarios similar to the proposed VA facility.

4.17 Potential for Generating Substantial Controversy

As discussed in Chapter 6, VA has solicited input from various federal, state, and local government agencies regarding the reconfiguration proposal, and has conducted town halls, scoping meetings, and other outreach regarding the details of this effort. The public and agencies will now have an opportunity to comment on this Draft EIS, with their input incorporated into the Final EIS.

Before the Notice of Intent for this EIS was published, the local community, particularly in Hot Springs, organized against the reconfiguration proposal and developed a detailed alternative, which has been analyzed in this EIS as Alternative E.

As communicated throughout the public participation events and scoping meetings, and re-stated in Section 2.2 of this EIS, Alternatives A through D involve expansion into new facilities in Rapid City while maintaining a presence in Hot Springs. **There was a common misconception during scoping, also appearing in subsequent editorials and social media posts, that expansion in Rapid City meant that all services in Hot Springs would be discontinued. VA has clearly stated, and reiterates in this EIS, that continuation of outpatient primary care services in Hot Springs (either at the current location or a different facility) is and always has been part of every alternative.**

A summary of the public scoping process and the comments received is included in Appendix B, and can also be viewed at the VA BHHCS webpage (www.blackhills.va.gov/vablackhillsfuture).

Since the project was first announced, several dozen newspaper articles have been published in local newspapers regarding the reconfiguration proposal.

In summary, VA BHHCS reconfiguration proposal is associated with public controversy. The issues of concern to the public that were identified through the scoping process and that are within the scope of the analysis for this EIS (see Section 1.3) have been evaluated in this impact analysis.

4.18 Unavoidable Adverse Impacts

Unavoidable adverse impacts are those that would occur if an alternative was implemented. In many cases, adverse impacts that were identified and evaluated in this chapter are avoidable through following agency policies, procedures, and directives; complying with federal, state, and local requirements; and applying best management practices, including those listed in Chapter 5.

Because site selection for potential new VA facilities (whether new construction, lease, or renovation of an existing non-VA facility) has not occurred, any adverse impact that could occur simply because of a new VA facility being sited in a particular location would be considered avoidable. For example, if a site has endangered species habitat that would be eliminated to construct the VA facilities, the adverse impact to the endangered species can be avoided by selecting a different site. As stated in Section 2.2, VA would follow departmental facility specifications, standards, and guidelines in any site selection, planning, design, and construction for a new CBOC, MSOC, or RRTP. These requirements include those that are available online for public access from the Technical Information Library of VA's Office of Construction & Facilities Management (www.cfm.va.gov/til/).

The following unavoidable adverse impacts have been identified.

Air Quality: Construction- or renovation- and operation-related air emissions, within permit limits, would occur under each alternative. These emissions would be mitigated to acceptable levels by compliance with permit limits and regulatory requirements.

Cultural Resources and Historic Properties: A change in the character of use that contributes to the historic significance of the Battle Mountain Sanitarium NHL would be an unavoidable adverse impact under Alternatives A, B, and D; and Supplemental Alternative G. Introducing visual or audible elements to the historic setting of the Battle Mountain Sanitarium NHL during construction would be a temporary unavoidable adverse impact under Alternatives C, E, and F; and Supplemental Alternative G. Introducing new development within the Battle Mountain Sanitarium NHL could diminish the integrity of historic features such as setting or design, which would be an unavoidable adverse impact under Alternative E. Mitigation for these impacts will be identified with consulting party input; see Chapter 5, Mitigation, Monitoring, Minimization, and Best Practices.

Noise: Construction- and renovation-related noise and vibration impacts would occur to varying degrees under each alternative, as would ongoing minor noise from operations. The intensity of noise impacts would depend on locations compared to receptors, and would be mitigated by daytime scheduling of construction activities and shielding where appropriate.

Socioeconomics: The reduction in FTEEs and wages would be an unavoidable adverse impact to some local economies of the VA BHHCS service area.

Solid Waste and Hazardous Materials, Utilities: Construction and renovation would generate solid waste and, for renovation of older facilities, specialty wastes (asbestos-containing materials, lead-based paint). Solid, medical, and hazardous waste would be generated by operation of facilities. Energy (electricity, propane, natural gas, fuel oil) and water would be consumed during construction and operation. VA BHHCS would continue to comply with VA's Waste Prevention and Recycling Program, strategic sustainability performance plan (update in progress in accordance with Executive

Order 13693), Sustainability Management Policy, and related agency guidance to minimize waste generation and improve energy and resource efficiency.

Transportation and Traffic: Construction vehicles and haul trucks traveling on roadways and accessing the construction site could have short-term unavoidable impacts to other motorists.

4.19 Relationship between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity

CEQ's NEPA regulations (40 CFR 1502.16) require consideration of the relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity. This involves considering whether an alternative would sacrifice a resource value that might benefit the environment in the long-term for some short-term value to the government or the public. In this analysis, short-term refers to a time span of approximately five years, including continued uses that would not change and the construction and initial operation of any new facilities. Long-term refers to VA's ongoing operation of existing or new facilities for as long as the location is operated by VA and all time thereafter.

Short-term uses are generally those that determine the present quality of life for the public, including Veterans utilizing VA health care services, VA BHHCS employees, and the local community. The current use of the Hot Springs VAMC and Rapid City CBOC is that of facilities providing health care services to Veterans and their families. The short-term uses of the environment associated with implementing any of the alternatives would be those typical of operating a medical hospital or clinic or residential facility. Table 4.19-1 summarizes the current use of each existing and potential facility location, and how that use would change under each alternative.

Table 4.19-1. Existing and Future Uses.

Location / Facility and Existing Use	Change to Use, by Alternative						
	A	B	C	D	E	F	G (supplemental)
Hot Springs VAMC: VA health care	No VA health care	No VA health care	Decreased intensity	No VA health care	Increased intensity	No change	Unknown
New Hot Springs CBOC (+RRTP): current use unknown (location not selected)	VA health care (CBOC only)	VA health care	NA	VA health care	NA	No change	NA
Rapid City CBOC: VA health care	No VA health care	No VA health care	No VA health care	Non-VA	No change	No change	NA
New Rapid City MSOC (+RRTP): current use unknown (location not selected)	VA health care	VA health care (MSOC only)	VA health care (MSOC only)	VA health care	NA	No change	NA

NA = not applicable.

Long-term productivity for a medical facility refers to its capability to support and improve the health of patients seeking care, which is a component of the human environment. Alternatives A through E would improve one or more aspects of the long-term productivity of the VA BHHCS medical facilities in Hot Springs and Rapid City by increasing access, improving service locations

compared to patient populations, or increasing levels of service in one of the cities. The clear goal of VA's proposal to reconfigure VA BHHCS health care services is to maintain and enhance the long-term productivity (capacity to provide health care for Veterans) of its facilities.

With the exceptions of economic conditions in the City of Hot Springs, land selected for new construction, and construction waste generation, no measurable difference in the current level of impact to long-term productivity of the human or natural environment is expected, regardless of changes that may be made in the location and levels of activities at VA facilities in Hot Springs and Rapid City:

- Alternatives that decrease VA's operations in Hot Springs (A, B, C, D; whether at the existing VAMC or elsewhere) would also decrease the VA-related input to the local economy, including local employment, purchase of goods and services by VA, and utilization of local businesses by employees and patients. However, under Alternatives A, B, C, and D, the existing Hot Springs VAMC campus would be made partially or fully available for re-use, with associated input to the Hot Springs economy that would partially, fully, or more than offset the decrease in VA-related local economic input. Thus, Alternatives A through D's impact on the long-term productivity of economic conditions in Hot Springs may be a decrease, little change, or an enhancement, depending on the concurrent implementation of Supplemental Alternative G and the features of the specific re-use plan.
- Construction being considered by VA BHHCS under Alternatives A, B, C, and D could result in disturbance, use, and long-term decreased productivity of relatively small amounts of previously undisturbed land. The potential locations in Hot Springs and Rapid City for a new CBOC, RRTP(s), and MSOC have not been identified but are expected to be within city limits, with a zoned land use that would accommodate, or that the respective city would be willing to revise to accommodate, a VA health care services facility. Location selection and facility design would consider and seek to minimize any potential for impacts to the environmental values and characteristics of the natural and human environment.
- Ongoing management of sanitary solid waste and medical waste generated by existing or new locations would continue to require the use of energy and space at local or regional disposal facilities. Construction debris would similarly require appropriate disposal. Land used for waste management requires a permanent commitment of terrestrial resources, preventing its long-term environmental productivity. A VA health care facility would not constitute a novel waste source nor generate more than a minor or negligible portion of the volume of the waste handled by a facility; thus, it would have a similarly minor or negligible contribution to the lack of long-term productivity of the land used for disposal. Adequate landfill capacity has already been developed in the area to accommodate any construction waste associated with the alternatives, and thus would also have a minor or negligible contribution to the lack of long-term productivity of the land used for its disposal.

4.20 Irreversible or Irretrievable Commitments of Resources

The CEQ NEPA regulations (40 CFR 1502.16) require an analysis of irreversible and irretrievable commitments of resources, such as the use or consumption of a resource that is neither renewable nor recoverable, or the unavoidable destruction of environmental resources. Irreversible and irretrievable commitments of resources from the VA BHHCS alternatives include fossil fuel-based energy consumption and use of nonrenewable materials for construction and operation. Construction, operation, and transportation would mainly rely on fossil fuel-based energy to run construction equipment; supply heat, air conditioning, and electricity for operation of the medical facilities; and power private, public, and volunteer transportation of patients to and from the facilities. Energy would be consumed in the form of gas- and oil-generated electricity, fuel oil, natural gas, propane, gasoline, and diesel fuel. Materials from nonrenewable sources used for construction and operation include those produced from mined materials (such as metals) or petroleum-based plastics, polymers, and other materials.

In compliance with Executive Order 13693, VA's pending update to its strategic sustainability performance plan will, in part, identify approaches for reducing energy use and cost, finding renewable or alternative energy solutions, and using recycled and sustainably produced materials. The provisions of the updated plan will be applied agency-wide, including during implementation of the selected alternative from this EIS process, reducing the irreversible and irretrievable commitment of resources.

5.0 MITIGATION, MONITORING, MINIMIZATION, AND BEST PRACTICES

The Council on Environmental Quality (CEQ) *National Environmental Policy Act* (NEPA) regulations (40 Code of Federal Regulations [CFR] 1508.20) state that mitigation includes:

- Avoiding the impact altogether by not taking a certain action or parts of an action
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action
- Compensating for the impact by replacing or providing substitute resources or environments

Mitigation also includes resolution of adverse effects identified through the integrated *National Historic Preservation Act* (NHPA) Section 106 consultation process; see Section 5.2.

The measures and best practices identified in this environmental impact statement (EIS) include measures that are incorporated into an alternative; compliance with federal, state, and local regulatory requirements; best management practices incorporated into an alternative; and additional VA-proposed protective measures. The record of decision (ROD) for an EIS binds an agency to implement specific mitigation commitments stated in the ROD. In addition, compliance with regulatory requirements is enforced by the respective regulatory agency. For example, compliance with air quality regulations would be enforced by the South Dakota Department of Environment and Natural Resources. Where relevant for a particular alternative, the following mitigation, monitoring, minimization, and best practices can reduce the adverse impacts that were identified in Chapter 4.

If the characteristics of the proposed site(s) for a new facility in either Hot Springs or Rapid City could be associated with potential environmental impacts not evaluated in this EIS, additional NEPA review would be undertaken and would incorporate the measures described in this chapter.

5.1 Resources other than Cultural Resources

5.1.1 Aesthetics

Any security lighting used during construction would be directed downward to minimize light trespass onto adjacent property and land uses.

VA would consult with local officials and consider recommendations on setbacks, landscaping, lighting, and aesthetic qualities of buildings in accordance with 40 United States Code 619(c) and (d).

5.1.2 Air

The U.S. Department of Veterans Affairs (VA) Black Hills Health Care System (VA BHHCS) would comply with the South Dakota Natural Events Action Plan; and Pennington County Ordinance 12,

and Rapid City Code of Ordinance 8.34, both of which are titled *Fugitive Emissions and the Abatement of Smoke*, where applicable. The Natural Events Action Plan applies to the west Rapid City area and requires, in part, voluntary cessation of construction or use of control measures during high wind dust alerts.

Pennington County Ordinance 12 and Rapid City Code of Ordinance 8.34 also identify reasonably available control technology requirements for minimizing fugitive dust during construction activities, including but not limited to:

- Wetting down
- Chemical stabilization
- Applying dust palliative
- Minimization of area disturbed
- Reclamation of disturbed area as soon as possible
- Vehicular speed limitation
- Cleaning of paved areas

New construction would comply with the *VA Design Guide for Mental Health Facilities*, in which the U.S. Green Building Council Leadership in Energy and Environmental Design Project Certification is a recommended standard. The following codes and standards would be followed for new construction at a minimum:

- *Energy Policy Act of 2005*
- Energy Efficiency Standards and Energy Code for New Federal Commercial and Multi-Family Residential Buildings (10 CFR Parts 433, 434 and 435)
- The 16-agency (including VA) memorandum of understanding committing to design, construct, and operate their facilities in an energy-efficient and sustainable manner (Federal Leadership in High Performance and Sustainable Buildings)
- Executive Order 13423, *Strengthening Federal Environmental, Energy, Transportation Management*
- Executive Order 13148, *Greening the Government through Leadership in Environmental Management*
- VA's strategic sustainability performance plan (in preparation), which will specify agency plans and procedures for complying with Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*. This order states, in part, that federal agencies should propose greenhouse gas emission reduction targets and decrease fleet inventories and mobile source greenhouse gas emissions.

5.1.3 Geology and Soils

Construction- and operation-related geology and soils impacts, including erosion and sedimentation impacts, would be minimized through implementation of the following:

- Design, install, and maintain erosion and sediment controls during the duration of construction activities and any subsequent soil disturbance activities near site drainages. Such controls may include silt fences, runoff control berms, erosion control fabric, and rip-rap.
- Minimize the amount of exposed soils at any given time during construction activities. Quickly revegetate disturbed areas following completion of activities.

- Minimize the disturbance of steep slopes.
- Provide an undisturbed natural buffer between the activity area and surface drainages, and direct stormwater runoff to vegetated areas.
- Develop a stormwater pollution prevention plan, consistent with the requirements of the National Pollutant Discharge Elimination System general permit.
- Implement spill and leak prevention and response procedures.
- Use appropriate dust control methods during construction activities. Dust control methods include water sprays, chemical soil additives, and wheel washers.
- Suspend construction activities during periods of high winds.

5.1.4 Hydrology and Water Quality

Construction- and operation-related hydrology and water quality impacts, including erosion and sedimentation impacts, would be minimized through implementation of the best management practices listed above for Geology and Soils. Additional impacts would be minimized through implementation of the following:

- Design new facilities to minimize the area of impervious surfaces.
- Route stormwater runoff from impervious surfaces to stormwater retention and drainage areas.
- Implement spill and leak prevention and response procedures, including maintaining a complete spill kit at the project area, to reduce the impacts of incidental releases of vehicle fluids.
- Design onsite construction staging areas to minimize stormwater runoff from these areas directly to drainages.

5.1.5 Wildlife and Habitat

During site selection for new construction, review potential locations for the presence of sensitive ecological resources and protected species and include a preference to avoid such locations.

Prior to construction, survey the proposed site for nests of migratory birds in accordance with the *Migratory Bird Treaty Act*.

For construction on greenfield sites, make efforts to preserve existing natural features and significant vegetation and avoid impacts to sensitive resources as part of the site selection process, consistent with VA siting guidelines, including:

- Preserve and conserve natural features and significant vegetation, especially trees and shrubs (including sensitive habitat), for environmental protection (reduce maintenance and enhance sustainability).
- Preserve existing trees, forests, wetlands and landscape features that are important resources and visual assets; site analysis and planting design would identify, retain and protect mature trees and vegetation, whenever reasonably possible.

- Minimize site disturbance and modification to natural topography.
- Concentrate development in areas with minimal non-engineered slopes and existing infrastructure.
- Mitigate any construction disturbance.
- Minimize creation of impervious surfaces.
- Maximize use of existing drainage patterns and features.
- Use required buffers/setbacks to restrict access if any wetlands or protected waterways are on the site; all wetlands and waterways on federal lands must be identified and protected throughout the site design and construction process and after the project is finished.

Protect aquatic species habitat by implementing best management practices and conforming to National Pollutant Discharge Elimination System permit requirements (see measures listed for Geology and Soils and for Hydrology and Water Quality, above).

Conduct pre-construction surveys and coordination/consultation with the U.S. Fish and Wildlife Service and the South Dakota Department of Fish and Game, as appropriate, to ensure that impacts on any sensitive animal and plant species in the vicinity of the selected site are negligible and that appropriate mitigation actions are implemented. Mitigation measures would include site development plans that avoid disturbing species or habitat, timing activities to avoid critical timeframes such as breeding season, or relocating sensitive species away from areas likely to be disturbed. Regulatory agencies would be consulted in developing and applying appropriate mitigation.

5.1.6 Noise

Construction- and operation-related noise impacts would be minimized through implementation of the following:

- Limit outdoor construction activities using heavy equipment to daylight hours.
- Properly maintain and muffle equipment such that the equipment sound levels specified in the VA Master Construction Specifications, *Temporary Environmental Controls* are not exceeded.
- Monitor area noise levels at least once every five days during high noise generating activities.
- Maintain sound shielding around the project site during high noise generating activities.
- Minimize equipment idling, and shut down construction equipment when not in use.
- Design new facilities and renovated facilities to utilize berms, tree lines, and vegetative buffers for additional sound shielding of operational activities.
- Upon determining the location of new facilities, conduct a survey of the preexisting condition of neighboring facilities and receptors for both potential noise and vibration impacts. Consider site-specific impact minimization actions.

5.1.7 Land Use

VA BHHCS would notify and coordinate with property owners adjacent to the selected sites for a community-based outpatient clinic, multi-specialty outpatient clinic, and residential rehabilitation treatment program to minimize disturbance to land uses during construction. Construction would occur during daytime hours to minimize disruption to residential areas. Construction would not block ingress/egress to adjacent businesses during their business hours of operation.

If the campus is transferred out of federal ownership, VA BHHCS would require the re-use proponent to coordinate with the City of Hot Springs to ensure compliance with the city's current land use plan and zoning, or would become compliant through a waiver or revision to the plan or zoning. VA BHHCS would also ensure a transfer agreement is developed in accordance with NHPA consultation requirements and that it includes conditions and restrictions to ensure the prospective landowner would maintain the integrity of the National Historic Landmark status of the site.

5.1.8 Floodplains and Wetlands

VA BHHCS would conduct field surveys to identify and determine the jurisdiction of any wetlands as part of the site selection process.

Site design would avoid jurisdictional (regulated) wetlands to the extent practicable. If jurisdictional (regulated) wetlands cannot be avoided, VA BHHCS would develop a mitigation plan to compensate for the lost function and value of wetlands either by creating or enhancing other wetlands onsite or at an offsite location through an established mitigation bank, or through an in-lieu fee program.

5.1.9 Socioeconomics

The impacts to employment associated with the reduction in the number of full-time equivalent employees needed to operate VA facilities would be minimized through eligible retirements and offers for voluntary early retirements, buy-outs, re-training, and transfers to other positions within the VA BHHCS service area.

Alternative E could strain the capacity of Fall River County to absorb the major increase of employees proposed to implement this alternative. VA BHHCS would coordinate with the City of Hot Springs, Fall River County, and Save the VA organization in the community's planning for the anticipated increased demands on housing and infrastructure.

5.1.10 Community Services

VA BHHCS would update support agreements with local law enforcement agencies to reflect the change in VA police presence and security patrols for VA facilities in Hot Springs and Rapid City.

VA BHHCS police would monitor for increases in incidents due to the unoccupied Hot Springs campus that require police response, and respond accordingly to protect VA facilities, such as by increasing the frequency of patrols by VA police.

VA BHHCS would require the general contractor(s) to manage accident, fire, and security risks such that requests for emergency response by medical, fire, or police would not exceed the capacity of

these providers in Hot Springs or Rapid City. This would be accomplished by ensuring the general contractor(s) follow VA Construction Specification Section 01-35-26 "Safety Requirements" and prepare and implement an accident prevention plan and fire safety plan; and follow Section 01-00-00 "General Requirements, Construction Security" and prepare a plan to secure the construction site.

5.1.11 Solid Waste and Hazardous Materials

Construction- and operation-related solid waste and hazardous materials impacts would be minimized through implementation of the following:

- Conduct proper vehicle maintenance and inspection to reduce the potential for incidental releases of vehicle fluids.
- Maximize reuse and recycling of wastes to minimize quantities destined for disposal. Conduct facility renovation/demolition such that valuable facility components may be reused or recycled.

5.1.12 Transportation and Traffic

VA BHHCS would coordinate with the Hot Springs Engineering Department and the Rapid City Public Works Department to address transportation-related requirements during the site selection process for new facilities.

VA BHHCS would prepare traffic control plans in coordination with the Hot Springs Engineering Department and the Rapid City Public Works Department to address construction-related road closures, detours, and haul truck routes to minimize disruption to traffic flow, maintain access to any businesses and residential areas near the construction sites, and provide safe passage for pedestrians and bicyclists.

VA BHHCS would coordinate with the Hot Springs Engineering Department and Rapid City Public Works Department on any requirements to complete a traffic study for the selected site(s) for new facilities, and incorporate appropriate roadway improvements into a site design. Improvements to minimize adverse traffic impacts at a site could include roadway resurfacing, drainage (curb and gutter), accessible sidewalks, crosswalks, turn lanes, bicycle lanes, intersection signalization (traffic light, four-way stop), and bus turn-outs.

VA BHHCS would coordinate with the Rapid Transit System to encourage the expansion of bus service to accommodate any projected increase in ridership, including the extension of bus route(s), additional bus stop(s), and shelter(s) at new facilities in Rapid City.

If the campus is transferred out of federal ownership, VA BHHCS would require the re-use proponent to coordinate with the Hot Springs Engineering Department to ensure the re-use plan complies with the city's transportation planning goals. VA BHHCS would also ensure a transfer agreement is developed in accordance with NHPA consultation requirements and that it includes conditions and restrictions to ensure the prospective landowner would maintain the integrity of the National Historic Landmark status of the site, including the road network, which is a contributing resource to the landmark.

5.1.13 Utilities

Construction- and operation-related utilities impacts would be minimized through implementation of the following:

- Consider use of renewable energy generation and energy/water conservation measures in the design of new and renovated facilities.
- Utilize native vegetation and drought-resistant vegetation for area landscaping to reduce irrigation requirements.

5.1.14 Environmental Justice

Implementation of the mitigation measures for all environmental impacts identified in the paragraphs above would also ensure that environmental justice impacts would be negligible. Neither of the communities affected by facility construction or renovation have disproportionately high minority or low income populations.

5.2 Resolution of Adverse Cultural Resources Effects

5.2.1 Guidance

Adverse effects to historic properties can be resolved by measures that VA BHHCS would take to avoid, minimize, or mitigate such effects. Regulations, directives, policies, standards, and guidelines of VA, the Advisory Council on Historic Preservation, and National Park Service (NPS) provide the basis for identifying and developing measures to resolve adverse effects to historic properties, including those presented in the following sections.

5.2.1.1 Standards and Guidelines for Treatment of Historic Properties

The Secretary of the Interior's Standards are a series of concepts about maintaining, repairing, and replacing historic materials, as well as designing new additions or making alterations to historic properties (NPS 1995). The Standards are presented by the four treatment approaches of preservation, rehabilitation, restoration, and reconstruction. The Guidelines offer general design and technical recommendations to assist in applying the standards to a specific property (NPS 1995). Together, the Standards and Guidelines provide a framework for decision-making about changes to a historic property. For the VA BHHCS reconfiguration alternatives, both the Standards and Guidelines would be advisory, not regulatory.

Rehabilitation treatment is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey the property's historical, cultural, or architectural values (NPS 1995). The 10 standards for rehabilitation acknowledge the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character and would be the treatment most applicable to the VA BHHCS reconfiguration alternatives. The rehabilitation treatment standards (NPS 1995) are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archaeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

5.2.1.2 Mothballing

The process of closing up (shuttering) a building temporarily to protect it from the weather and secure it from vandalism while planning for future re-use is referred to as mothballing. NPS Preservation Brief 31 provides guidance on protecting historic buildings for up to 10 years, depending on continued monitoring and maintenance (NPS 1993). The Preservation Brief identifies the following nine steps in properly mothballing a building:

- Documentation:
  - Document the architectural and historical significance of the building.
  - Prepare a condition assessment of the building.
- Stabilization:
  - Structurally stabilize the building, based on a professional condition assessment.
  - Exterminate or control pests, including termites and rodents.
  - Protect the exterior from moisture penetration.

- Mothballing:
  - Secure the building and its component features to reduce vandalism or break-ins.
  - Provide adequate ventilation to the interior.
  - Secure or modify utilities and mechanical systems.
  - Develop and implement a maintenance and monitoring plan for protection.

5.2.1.3 Facility Condition Assessment

VA tracks and manages the physical and operational condition of VA facilities through the Facility Condition Assessment process. The Facility Condition Assessment is compiled by a multidisciplinary contractor team of architects and engineers working with VA facility engineering staff and program managers to evaluate most VA buildings on a three-year cycle (VA 2014). Each building system (architectural, structural, mechanical, electrical, and plumbing) is assessed and assigned a grade of A, B, C, D, or F based on condition and remaining useful life of the system components. Any component graded D or F is recorded with an estimated cost for maintenance, repair, or replacement.

5.2.1.4 Managing Underutilized Real Property

VA Directive 7633 and associated Handbook 7633 address methods, policies, and options for managing underutilized real property (buildings and land) (VA 2006a, 2006b). Options for managing underutilized property are considered in the order of priority listed below:

- Offer underutilized property to other VA entities and federal agencies.
- Enhanced-use leasing to a public, private, or non-profit sector for up to 75 years for VA or non-VA use consistent with the mission of VA.
- Sharing, license, outlease, permit, or easement to a public, private, or non-profit sector for VA or non-VA use for three- to five- year timeframes.
- Transfer to non-VA entity, including a federal or state agency, Indian tribe, or public or private entity, depending on the suitability and availability of the property for use by a homeless assistance group.
- Like-kind exchange of property.
- Disposal through the General Services Administration.
- Mothballing, demolition, or deconstruction.

The Building Utilization Review and Repurposing initiative assesses underutilized real property for the potential to develop new housing opportunities for homeless Veterans or Veterans and their families at risk for homelessness (VA 2015). This initiative is part of VA's enhanced-use lease program.

Any transfer or disposal of real property must comply with NEPA and the NHPA. VA may also enter into a partnership or agreement with public or private entities dedicated to historic preservation to facilitate a transfer of properties listed in the National Register of Historic Places (VA 2006b).

5.2.2 Measures to Avoid, Minimize, or Mitigate Adverse Effects

Table 5-1 lists the possible measures that VA BHHCS could take to resolve the potential adverse effects on historic properties from the alternatives to implement the reconfiguration proposal. The measures include input received from the consulting parties. The measures are briefly outlined and are not intended to be all-inclusive for purposes of this Draft EIS. VA BHHCS will continue consultation with the consulting parties and, with input from the public's review of the Draft EIS, will develop further details of the possible measures and present them in the Final EIS, focusing on the preferred reconfiguration alternative and the supplemental alternative, as appropriate. The measures to avoid, minimize, or mitigate adverse effects to historic properties that VA BHHCS will commit to implementing will be documented in the ROD (36 CFR 800.8(c)(4)(i)(A)).

Table 5-1. Possible Measures to Resolve Potential Adverse Effects by Alternative.

Alternative Actions and Effects	Potential Adverse Effects[1,2]	Possible Measures to Resolve Adverse Effects[3]
Alternative A		
On-Campus (Hot Springs): • Continued maintenance of campus facilities. • Temporarily shutter or mothball campus facilities. • Change of use of campus facilities from providing health care services to unoccupied.	2, 4	• Use the Facility Condition Assessment (FCA) process to identify and schedule maintenance needs of unoccupied campus facilities. − Facility staff with historic preservation training will accompany FCA team. • Provide historic preservation training to and/or employ facilities staff/manager with historic preservation qualifications. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*), as necessary, in maintaining unoccupied campus facilities. − Consult with architects/engineers with historic preservation qualifications on maintenance actions. • Follow NPS Preservation Brief 31 *Mothballing Historic Buildings* as necessary to shutter unoccupied campus facilities pending re-use. • Establish procedures to monitor and report on status of resolutions. • Define and implement a future consultation process.
Off-Campus: • Ground disturbance that could potentially encounter and remove archaeological and cultural materials. • Introduction of visual or audible elements into historic setting.	1, 2, 3, 5	• Implement VA Directive 7545 *Cultural Resource Management* and follow VA Handbook 7545 *Cultural Resource Management Procedures* for phased identification and evaluation of historic properties. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*) for renovating any historic building(s) to accommodate health care services at new locations in Hot Springs and Rapid City. − Consult with architects/engineers with historic preservation qualifications on rehabilitation/renovation designs. • Develop a plan for treatment/recovery of archaeological and cultural materials, including a *Native American Graves Protection and Repatriation Act* plan of action. • Determine presence of archaeological and cultural materials. − Determine treatment/recovery measures, as appropriate. − Implement treatment/recovery measures, as appropriate. • Establish procedures to monitor and report on status of resolutions. • Define and implement a future consultation process.

Alternative Actions and Effects	Potential Adverse Effects[1,2]	Possible Measures to Resolve Adverse Effects[3]
Alternative B		
Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
Alternative C		
On-Campus (Hot Springs): • Exterior and interior renovations to Building 12 and domiciliary. • Continued maintenance of campus facilities. • Temporarily shutter or mothball certain campus facilities.	2, 4	• Facility staff with historic preservation training will accompany FCA team. • Provide historic preservation training to and/or employ facilities staff/manager with historic preservation qualifications. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*) for exterior and interior renovations and for maintaining campus facilities. − Consult with architects/engineers with historic preservation qualifications on renovation designs and maintenance actions. • Develop a historic preservation plan. • Follow NPS Preservation Brief 31 *Mothballing Historic Buildings* as necessary to shutter facilities pending re-use. • Establish procedures to monitor and report on status of resolutions. • Define and implement a future consultation process.
Off-Campus: Same as Alternative A.	Same as Alternative A.	Same as Alternative A.
Alternative D		
Same as Alternative A.	Same as Alternative A.	Same as Alternative A.

Alternative Actions and Effects	Potential Adverse Effects[1,2]	Possible Measures to Resolve Adverse Effects[3]
Alternative E		
On-Campus (Hot Springs): • Exterior and interior renovations to campus facilities. • New construction of buildings. • Continued maintenance of campus facilities. • Introduction of visual or audible elements into historic setting. • Ground disturbance that could potentially encounter and remove archaeological and cultural materials.	1, 2, 3, 4, 5	• Facility staff with historic preservation training will accompany FCA team. • Provide historic preservation training to and/or employ facilities staff/manager with historic preservation qualifications. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*) for exterior and interior renovations and for maintaining campus facilities. − Consult with architects/engineers with historic preservation qualifications on renovation designs, new construction designs, and maintenance actions. • Develop a historic preservation plan. • Develop a plan for treatment/recovery of archaeological and cultural materials, including a *Native American Graves Protection and Repatriation Act* plan of action. • Determine presence of archaeological and cultural materials. − Determine treatment/recovery measures, as appropriate. − Implement treatment/recovery measures, as appropriate. • Establish procedures to monitor and report on status of resolutions. • Define and implement a future consultation process.
Off-Campus: No effects.	None.	None required.
Alternative F		
On-Campus (Hot Springs): • Continued maintenance of campus facilities. • Upgrade and renovate campus facilities to maintain clinical standards.	2	• Facility staff with historic preservation training will accompany FCA team. • Provide historic preservation training to and/or employ facilities staff/manager with historic preservation qualifications. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*) for renovations and maintenance of campus facilities. − Consult with architects/engineers with historic preservation qualifications on renovation designs and maintenance actions. • Develop a historic preservation plan. • Consult with SHPO and NPS, as appropriate.
Off-Campus: No effects.	None.	None required.

Alternative Actions and Effects	Potential Adverse Effects[1,2]	Possible Measures to Resolve Adverse Effects[3]
Supplemental Alternative G		
On-Campus (Hot Springs): • Exterior and interior renovations to campus facilities. • New construction of buildings. • Continued maintenance of campus facilities. • Introduction of visual or audible elements into historic setting. • Ground disturbance that could potentially encounter and remove archaeological and cultural materials. • Change of use of campus facilities from providing health care services to a different use.	1, 2, 3, 4, 5, 7	• Implement VA Directive 7633 *Managing Underutilized Real Property, Including Disposal* and follow VA Handbook 7633 *Managing Underutilized Real Property, Including Disposal* and Building Utilization Review and Repurposing initiatives for re-use decisions and compliance with NHPA. • Develop a historic preservation plan • Develop a plan for treatment/recovery of archaeological and cultural materials, including a *Native American Graves Protection and Repatriation Act* plan of action. • Use the Rehabilitation treatment standards (from the Secretary of the Interior's *Standards for the Treatment of Historic Properties*) for exterior and interior renovations, maintenance of campus facilities, and for new construction. − Consult with architects/engineers with historic preservation qualifications on renovation designs, new construction designs, and maintenance actions. • Execute a legally enforceable document with new occupant/owner to implement the historic preservation plan or follow *Standards for the Treatment of Historic Properties*. • Establish procedures to monitor and report on status of resolutions. • Define and implement a future consultation process.

[1] 36 CFR 800.5.(a): Examples of adverse effects on historic properties include, but are not limited to:

1. Physical destruction of or damage to all or part of a historic property.
2. Alteration of a historic property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the Standards for the Treatment of Historic Properties (36 CFR 68) and applicable guidelines.
3. Removal of a historic property from its historic location.
4. Change in character of the property's use or of physical features within the property's setting that contributes to its historic significance.
5. Introduction of visual, atmospheric, or audible elements that diminish the integrity of a historic property's significant historic features.
6. Neglect of a historic property which causes its deterioration, except where such neglect and deterioration are recognized qualities of religious and cultural significance to a Native American tribe.
7. Transfer, lease, or sale of a historic property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

[2] Identification of possible adverse effects not covered by these examples from the regulation would be indicated by a text notation in the second column of this table, as Section 106 consultation continues.

[3] Possible resolutions are not listed in any order of importance or priority.

6.0 AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The goals of public involvement and agency coordination are to provide thorough information in a convenient and timely manner to allow meaningful input to the integrated *National Environmental Policy Act* (NEPA)/*National Historic Preservation Act* (NHPA) process, and help facilitate decisions to be made by the U.S. Department of Veterans Affairs (VA) Black Hills Health Care System (BHHCS). The public and agencies are commonly referred to as "stakeholders". Stakeholders include those who may be affected by or have an interest in VA's proposal and the NEPA/NHPA process, including individuals, interest groups, community organizations, elected officials, tribal governments, and federal, state, or local government agencies. Stakeholders also include consulting parties as defined by the consultation regulations of Section 106 of the NHPA.

Federal regulations, policies, and guidelines provide the framework within which VA remains accountable for timely and effective stakeholder involvement in decisions which may interest or affect them. This chapter provides an overview of the framework to involve stakeholders during the integrated NEPA/NHPA process.

6.1 Public Involvement Process

The public involvement process begins with scoping and continues throughout the preparation of the environmental impact statement (EIS) until VA signs the record of decision. This section describes the milestones and timeframes when stakeholders are involved during the NEPA process.

6.1.1 Scoping

"Scoping" is the term used in the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1501.7) to define the process for determining the scope of issues to address during the environmental analysis of an agency's proposed action. Scoping also helps identify issues that are neither significant nor relevant to a proposal, or alternatives that are not feasible, thereby eliminating these issues or alternatives from detailed analysis.

6.1.1.1 Notice of Intent

The Notice of Intent (NOI) is the U.S. government's means of notifying the public and interested parties of an agency's intention to prepare an EIS for its proposed action. VA published NOIs in the Federal Register on May 16, 2014, announcing the preparation of an integrated EIS for the VA BHHCS reconfiguration proposal and the start of the public scoping period; and on June 13, 2014, announcing the extension of the public scoping comment period.

6.1.1.2 Scoping Notice and News Release

Scoping notices announcing the reconfiguration proposal, schedules for public scoping meetings, and an extension to the comment period were published in 15 newspapers covering communities in the VA BHHCS catchment area in South Dakota, Nebraska, and Wyoming. The two scoping notices were paid publications in the public notice or legal section of the newspapers. VA BHHCS also prepared news releases announcing the NOI, schedules and locations for public scoping meetings, and the extension to the public comment period along with additional public scoping

meetings. The three news releases were circulated to more than 50 media outlets, and were posted on the VA BHHCS reconfiguration proposal webpage (www.blackhills.va.gov/vablackhillsfuture).

6.1.1.3 Scoping Meetings

VA BHHCS hosted 10 scoping meetings in 9 different communities throughout the service area between June 11 and 27, 2014. The scoping meetings offered stakeholders an opportunity to learn about and provide comments on the reconfiguration proposal. Attendance at the meetings ranged from 3 to 115 people. The meeting format consisted of an open house followed by a presentation that explained the purpose of and need for the reconfiguration proposal, alternatives for implementing the reconfiguration, the integration of the NHPA process with the EIS, and the public's role in contributing to the NEPA process. Upon completion of the presentation, the attendees were invited to provide verbal comments.

6.1.1.4 Scoping Summary

The public scoping period was open for 90 days from May 16 through August 16, 2014. The scoping process provided sufficient opportunity for stakeholders to express their comments and provide meaningful input to the integrated NEPA/NHPA process. There were 386 written comments received, 159 verbal comments made during the scoping meetings, and a form letter submitted by 138 individuals. The comments focused generally on the purpose, need, and alternatives for the reconfiguration; potential effects to local social and economic conditions, community services, and utilities; the National Historic Landmark (NHL) status of the VA Hot Springs campus and potential adverse effects to historic properties; integration of NHPA consultation with the NEPA process; and implementation of the NEPA process. A summary of the public scoping process and the comments received is included in Appendix D, and can also be viewed at the VA BHHCS webpage (www.blackhills.va.gov/vablackhillsfuture).

6.1.2 EIS Status Open House

Although not required by CEQ regulations implementing NEPA or by VA's NEPA regulations or guidance, VA BHHCS hosted an open house in six communities within the service area between November 17 and 20, 2014, to update stakeholders on the status of preparing the EIS. Stakeholders were provided with additional information on the purpose of and need for the reconfiguration, a summary of public scoping comments, and a map of the proposed area in which to identify and assess effects to historic properties. The potential health care services were outlined on a chart to explain the basis for the facility types and changes proposed under each alternative and location. VA BHHCS and EIS contractor staff informally discussed the information with attendees; no public testimony or comments were invited or recorded. The information presented at the open houses can be viewed at the VA BHHCS reconfiguration webpage (www.blackhills.va.gov/vablackhillsfuture).

6.1.3 Draft EIS Comment Period

VA published a Notice of Availability (NOA) of the Draft EIS in the Federal Register, inviting public comments on the content of the document. VA BHHCS offers a 60-day comment period that officially started when the NOA for the Draft EIS was published by the Environmental Protection Agency in the Federal Register. The NOA was published in local newspapers, posted online (along with other project updates and information) on the VA BHHCS reconfiguration webpage (www.blackhills.va.gov/vablackhillsfuture), and provided to the media outlets covering the

service area. More than 500 stakeholders who had previously signed on to the project mailing list were mailed a postcard with the NOA of the Draft EIS.

VA BHHCS will host public comment meetings in six communities within the service area during the 60-day comment period. The meetings will provide stakeholders an opportunity to comment on the potential environmental, social, and economic impacts as described in the Draft EIS. The meeting format will consist of a presentation to explain the purpose of and need for the reconfiguration proposal, describe the alternatives, and summarize the analysis and potential impacts associated with each alternative. The presentation and verbal comments at each meeting will be transcribed by a professional court reporter. Responses to comments received during the comment period will be addressed in the Final EIS.

6.2 NEPA/NHPA Substitution and Consultation

The reconfiguration proposal is a federal undertaking subject to Section 106 of the NHPA and Advisory Council on Historic Preservation (ACHP) regulations implementing Section 106 (36 CFR 800). VA has chosen to integrate Section 106 compliance within the overall NEPA framework, following the substitution process of 36 CFR 800.8(c).

VA BHHCS used *NEPA and NHPA, A Handbook for Integrating NEPA and Section 106* as guidance in preparing this EIS. Developed jointly by ACHP and CEQ, the handbook includes a checklist for preparing environmental documents to comply with the Section 106 substitution process. This checklist is included in Appendix C, NEPA/NHPA Substitution Process.

6.2.1 Notification

VA's Federal Preservation Officer initiated informal conversation in September 2012 with the ACHP, National Park Service, South Dakota State Historic Preservation Office (SHPO), and other stakeholders of the possibility of substituting the NEPA process for Section 106 compliance for the reconfiguration proposal being considered at that time. By letter dated May 13, 2014, VA BHHCS formally notified ACHP, the National Park Service, SHPO, and numerous other stakeholders of its intent to integrate the NHPA Section 106 evaluation and consultation procedures into the NEPA environmental impact analysis following the substitution process. This letter and the list of recipients are included in Appendix C, NEPA/NHPA Substitution Process.

6.2.2 Identification of Consulting Parties

Consulting parties, as defined under 36 CFR 800.2(c), include: (1) SHPO; (2) Indian tribes; (3) representatives of local governments; (4) applicants for federal assistance, permits, licenses and other approvals; and (5) additional consulting parties. An additional consulting party is defined as "certain individuals and organizations with a demonstrated interest in the undertaking [who] may participate as consulting parties due to the nature of their legal or economic relation to the undertaking or affected properties, or their concern with the undertaking's effects on historic properties". Because the reconfiguration proposal involves an NHL, the Secretary of the Interior, represented by the National Park Service, is included as a consulting party pursuant to Section 110(f) of the NHPA and 36 CFR 800.10, which address special requirements for protecting an NHL.

VA BHHCS identified potential consulting parties from stakeholders who were notified by letter dated May 13, 2014, of the intent to prepare an EIS that integrates the Section 106 compliance requirements of the NHPA within the framework of the NEPA process. Attendees at the public scoping meetings were invited to submit written requests to VA BHHCS to be considered as a consulting party. Agencies and organizations that submitted written requests to be consulting parties during the scoping period were accepted. VA BHHCS conducted additional outreach to Native American tribes to participate as consulting parties (see Section 6.3). By letter dated October 9, 2014, VA BHHCS notified stakeholders of the preliminary list of consulting parties identified from the scoping process. VA BHHCS again notified four Veterans service organizations by letter dated January 15, 2015, of participation in the process as a consulting party, and accepted those organizations that responded in writing.

Table 6-1 lists the 17 NHPA Section 106 consulting parties identified as of the publication of the Draft EIS. Additional consulting parties may be identified as the integrated NEPA and Section 106 process continues. Correspondence pertaining to consulting party identification and consulting party representatives is included in Appendix C, NEPA/NHPA Substitution Process.

Table 6-1. NHPA Section 106 Consulting Parties

Advisory Council for Historic Preservation
American Federation of Government Employees, Hot Springs Local
Assiniboine and Sioux Tribes of the Fort Peck Reservation
City of Hot Springs
Department of the Interior, National Park Service
Fall River County Commissioners Office
Fall River County Historical Society
Hot Springs Certified Local Government–Historic Preservation Commission
Individual Veteran
Kiowa Tribe of Oklahoma
National Trust for Historic Preservation
Northern Arapaho Tribe
Oglala Sioux Tribe of the Pine Ridge Reservation
Save the VA Organization
South Dakota American Legion
South Dakota State Historic Preservation Office
Yankton Sioux Tribe

6.2.3 Consultation on Effects to Historic Properties

VA hosted an initial Section 106 consultation meeting on May 31, 2012, to receive input from stakeholders regarding potential effects to historic properties, primarily the VA Hot Springs campus, which encompasses the Battle Mountain Sanitarium NHL. With the Federal Register publication of the NOI on May 16, 2014, VA BHHCS re-initiated the consultation process to identify and address effects to historic properties with the start of the integrated NEPA/NHPA process.

VA BHHCS hosted workshops and a teleconference with consulting parties between November 2014 and April 2015 to consult on:

- Geographic area of potential effects of the reconfiguration alternatives in Hot Springs and Rapid City
- Identification of historic properties within the geographic area of potential effects
- Types of actions that potentially affect historic properties
- Criteria and examples of adverse effects
- Approach to identifying and assessing potential adverse effects to historic properties
- Possible measures to avoid, minimize, or mitigate adverse effects

The summaries of the consultation and discussions from the workshops and teleconference are included in Appendix C, NEPA/NHPA Substitution Process.

6.3 Native American Consultation

VA consults with federally recognized tribal governments in accordance with NHPA Section 106 on issues relating to historic properties, including those of traditional religious and cultural importance. VA also consults with tribal governments on a much broader range of potential tribal concerns and issues with respect to proposed VA actions, as prescribed by Executive Order 13175, Consultation and Coordination with Indian Tribal Governments and by VA Directive 8603, Consultation and Communication with Federally-Recognized Indian Tribes.

VA sought government-to-government consultation with Native American tribes that have potential traditional, historic, or current ties to the VA BHHCS service area. A list of potentially affected tribes (federally recognized and other tribes) was compiled from VA sources and from SHPOs for South Dakota, Nebraska, and Wyoming; the U.S. Department of Housing and Urban Development website; tribal historic preservation office directories; tribal government websites; federal agency websites related to tribal consultation; historic maps of tribal territories; and from the EIS contractor's previous experience. The VA Office of Public and Intergovernmental Affairs, by letter sent in August 2014, informed these tribal governments of the reconfiguration proposal, invited their participation in the Section 106 consultation process pertaining to historic properties, and requested their input on other issues such as access to medical care and Veterans benefits. The letter was sent to 68 representatives of 41 tribes. The letter and list of tribes to whom it was sent are included in Appendix C, NEPA/NHPA Substitution Process.

Follow-up contacts were made with the 41 tribes after the August 2014 letter was sent to gauge interest in the reconfiguration proposal and participation in the consultation process on historic properties. The follow-up contacts included phone calls to both tribal leadership (chairpersons, presidents, and governors) and tribal historic preservation officers (as applicable). Contact was attempted until the person was reached or a message could be left with an administrative assistant or on voicemail. Additional outreach was conducted to the tribes residing within the VA BHHCS service area and within the State of South Dakota. As a result of the additional outreach, five tribes are participating as consulting parties (refer to Table 6-1).

The Office of Public and Intergovernmental Affairs, along with the Office of Tribal Government Relations and VA BHHCS, hosted a government-to-government consultation meeting on the reconfiguration proposal on the Pine Ridge Reservation in South Dakota in November 2014. This meeting was part of VA's ongoing responsibilities to consult and coordinate with tribal governments per Executive Order 13175 and VA Directive 8603. Issues pertaining to historic properties or the EIS were not raised or discussed during this meeting, for which a transcript is available.

6.4 Agency Coordination

Coordination with federal, state, or local agencies is required by certain laws such as the NHPA, *Endangered Species Act*, or *Clean Water Act*; by executive orders addressing interagency and intergovernmental coordination; and by CEQ regulations implementing NEPA that emphasize cooperative consultation among agencies. Agencies with jurisdiction by law or with special expertise with respect to any environmental issue are requested to cooperate in the NEPA process (40 CFR 1501.6). VA BHHCS has requested such agencies, including ACHP, the National Park Service, and SHPO, to cooperate as NHPA Section 106 consulting parties for their expertise in historic properties and cultural issues, along with the other agencies and organizations listed in Table 6-1. No other environmental issues are anticipated that would require the special expertise or jurisdiction of other agencies to cooperate in the preparation of the EIS, or provide additional coordination required by law.

Certain federal, state, and local agencies were contacted by VA BHHCS and the EIS contractor for data to use in describing baseline environmental, social, and economic conditions, and for use in assessing impacts to those conditions. Further input or comments from these agencies will be addressed in the Final EIS.

Copies of the Draft EIS were sent to the following federal, state, and local agencies and officials, in addition to those that are also listed as consulting parties in Table 6-1:

Ellsworth Air Force Base
U.S. Environmental Protection Agency, Region 8
U.S. Fish and Wildlife Service
U.S. Representative Kristi Noem (SD)
U.S. Senator John Thune (SD)
U.S. Senator Mike Rounds (SD)

Nebraska Department of Veterans Affairs
South Dakota Department of Environment and Natural Resources
South Dakota Department of Veterans Affairs
South Dakota Division of Wildlife
Wyoming Veterans Commission

Fall River Board of County Commissioners

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James Steely	Cultural Resources Section 106 Integration	MS, Architectural Studies BS, History and Photojournalism	38

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9.0 GLOSSARY

Aesthetic resources: The components of the environment as perceived through the visual sense only. Aesthetic specifically refers to beauty in both form and appearance.

Affected environment: A portion of the NEPA document that succinctly describes the environment of the area(s) to be affected or created by the alternatives under consideration. Includes the environmental and regulatory setting of the proposed action.

Alternative: A reasonable way to fix the identified problem or satisfy the stated need.

Attainment area: An area that the Environmental Protection Agency has designated as being in compliance with one or more of the National Ambient Air Quality Standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants but not for others.

Council on Environmental Quality (CEQ): Established by Congress within the Executive Office of the President as part of the *National Environmental Policy Act of 1969*, CEQ coordinates federal environmental efforts and works closely with agencies and other White House offices in the development of environmental policies and initiatives. The Council's Chair, who is appointed by the President with the advice and consent of the Senate, serves as the principal environmental policy adviser to the President. The CEQ reports annually to the President on the state of the environment, oversees federal agency implementation of the environmental impact assessment process, and acts as a referee when agencies disagree over the adequacy of such assessments.

Criteria pollutant: An air pollutant that is regulated by National Ambient Air Quality Standards. Criteria pollutants include sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and two size classes of particulate matter, PM_{10} and $PM_{2.5}$ New pollutants may be added to, or removed from, the list of criteria pollutants as more information becomes available.

Critical habitat: Habitat essential to the conservation of an endangered or threatened species that has been designated as critical by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act* and its implementing regulations.

Cumulative effect (cumulative impact): The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Decibel (dB): A unit for expressing the relative intensity of sounds on a logarithmic scale from zero for the average least perceptible sound to about 130 for the average level at which sound causes pain to humans. For traffic and industrial noise measurements, the A-weighted decibel (dBA), a frequency-weighted noise unit, is widely used. The A-

weighted decibel scale corresponds approximately to the frequency response of the human ear and thus correlates well with the loudness perceived by people.

Direct effects: Caused by the action and occur at the same time and place.

Ecoregion: Geographical area with similar climate and landforms, containing a variety of ecosystems characterized by its plant and animal communities and abiotic conditions, such as climate, soils, and elevation.

Effects: "Effects" and "impacts" as used in this analysis are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Endangered species: Plants or animals that are in danger of extinction through all or a significant portion of their ranges and that have been listed as endangered by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service following the procedures outlined in the *Endangered Species Act* and its implementing regulations.

Environmental impact statement (EIS): A detailed written statement required by Section 102(2)(C) of NEPA, analyzing the environmental impacts of a proposed action, adverse effects of the project that cannot be avoided, alternative courses of action, short-term uses of the environment versus the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitment of resources.

Environmental justice: The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Executive Order 12898 directs federal agencies to make achieving environmental justice part of their missions by identifying and addressing disproportionately high and adverse effects of agency programs, policies, and activities on minority and low-income populations.

Floodplain: The lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Hazardous material: Any material that poses a threat to human health and/or the environment. Hazardous materials are typically toxic, corrosive, ignitable, explosive, or chemically reactive.

Historic property: Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the

Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impacts: See Effects.

Impervious surface: A hard surface area that either prevents or retards the entry of water into the soil or causes water to run off the surface in greater quantities or at an increased rate of flow. Common impervious surfaces include, but are not limited to, rooftops, walkways, patios, driveways, parking lots, storage areas, concrete or asphalt paving, and gravel roads.

Indirect effects: Caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. May include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Mitigation: Includes (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

National Ambient Air Quality Standards (NAAQS): Standards defining the highest allowable levels of certain pollutants in the ambient air (i.e., the outdoor air to which the public has access). Primary standards are established to protect public health; secondary standards are established to protect public welfare (for example, visibility, crops, animals, buildings).

National Pollutant Discharge Elimination System (NPDES): A provision of the *Clean Water Act* that prohibits discharge of pollutants into waters of the United States unless a special permit is issued by the Environmental Protection Agency, a state, or, where delegated, a tribal government on an Indian reservation.

National Register of Historic Places: The nation's inventory of known historic properties that have been formally listed by the National Park Service (NPS). The National Register of Historic Places is administered by the NPS on the behalf of the Secretary of the Interior. National Register listings include districts, landscapes, sites, buildings, structures, and objects that meet the set of criteria found in 36 CFR 60.4.

No action alternative: The alternative where current conditions and trends are projected into the future without another proposed action.

Non-attainment area: An area that the Environmental Protection Agency has designated as not meeting (that is, not being in attainment of) one or more of the National Ambient Air

Quality Standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants, but not for others.

Particulate matter (PM), PM_{10}, $PM_{2.5}$: Any finely divided solid or liquid material, other than uncombined (that is, pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM_{10} includes only those particles equal to or less than 10 micrometers (0.0004 inch) in diameter; $PM_{2.5}$ includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter.

Primary care: The Institute of Medicine's definition of primary care provides the foundation of VHA primary care. "Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community." VHA primary care gives eligible Veterans easy access to health care professionals familiar with their needs. It provides long-term patient-provider relationships, coordinates care across a spectrum of health services, educates, and offers disease prevention programs. Primary care has become the first point of contact with the health care system for Veterans enrolled in VHA. (Source: http://www.va.gov/health/services/primarycare/)

Runoff: The portion of rainfall, melted snow, or irrigation water that flows across ground surface and is eventually returned to streams. Runoff can pick up pollutants from the air or the land and carry them to streams, lakes, and oceans.

Scoping: An early and open process for determining the extent and variety of issues to be addressed and for identifying the significant issues related to a proposed action (40 CFR §1501.7). The scoping process helps not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the NEPA process accordingly, and for early identification of what are and what are not the real issues (40CFR §1500.5(d)). The scoping process identifies relevant issues related to a proposed action through the involvement of all potentially interested or affected parties (affected federal, state, and local agencies; recognized Indian tribes; interest groups, and other interested persons) in the environmental analysis and documentation.

Secondary care: Provided by someone with specific expertise in a condition, generally by reference from primary care physician.

Solid waste: Non-liquid, non-soluble materials ranging from municipal garbage to industrial wastes that contain complex and sometimes hazardous substances. Solid wastes also include sewage sludge, agricultural refuse, demolition wastes, and mining residues. Technically, solid waste also refers to liquids and gases in containers.

Specialty care: VHA specialty care components include: allergy and immunology, anesthesia, cardiology, chaplain Services, critical care, dermatology, diabetes and endocrinology, emergency medicine, eye care (optometry and ophthalmology), gastroenterology, infectious diseases, nephrology (kidneys), neurology, nutrition and food services,

oncology and hematology, pain management, podiatry, and rheumatology. Source: http://www.medicalsurgical.va.gov/medicalsurgical/index.asp

Tertiary care: A higher level of specialty care within a hospital, including highly specialized equipment and surgery.

Unique Veteran: A "unique Veteran" is counted as unique in each division from which they receive care. For example, if a patient receives primary care at one VA facility and specialty care from another VA facility, they will be counted as a unique patient in each.

Wetlands: Those areas that are inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances do, or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas. Jurisdictional wetlands are those wetlands protected by the *Clean Water Act*. They must have a minimum of one positive wetland indicator from each parameter (vegetation, soil, and hydrology). The U.S. Army Corps of Engineers requires a permit to fill or dredge jurisdictional wetlands.

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