

## 5.6 Socioeconomics

The primary socioeconomic region of interest is the Richland-Kennewick-Pasco metropolitan statistical area, comprising Benton and Franklin counties in Washington state (Tri-Cities region), where the vast majority of the socioeconomic impacts would be expected. Because the Tri-Cities region is the major retail and service center for the Hanford Site and its employees, over 90 percent of whom also live in Benton and Franklin counties, relatively little impact would be expected on the economies of the surrounding counties (Grant, Adams, Yakima, and Walla Walla counties in Washington or Umatilla County in Oregon) as a result of actions related to management of solid waste at Hanford.

The socioeconomic impacts are classified in terms of primary and secondary. Changes in Hanford employment and non-labor expenditures associated with the various alternative groups for dealing with LLW, MLLW, TRU waste, and ILAW are classified as primary impacts. Additional changes that result in the general regional economy and community as a result of these primary changes are classified as secondary effects. Examples of secondary impacts include changes in retail and service employment or changes in demand for housing. The total socioeconomic impact in the region is the sum of the primary and secondary impacts. Based on this analysis, the implementation of any of the HSW EIS alternative groups likely would have very small impacts on the local socioeconomic infrastructure, for instance housing, schools, medical support, and transportation.

Estimates of total employment impacts were calculated using a variant of the IMPLAN regional economic model (Minnesota IMPLAN Group, Inc. 1997) for the Tri-Cities region. These estimates were checked for consistency with the less-detailed estimates produced for the *Final Waste Management Programmatic Environmental Impact Statement for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste* (WM PEIS) (DOE 1997a) using the Regional Input-Output Modeling System (RIMS) of the U.S. Bureau of Economic Analysis. Allowing for differences in methods, the more-detailed estimates produced for the HSW EIS are in general agreement, but at the lower end of the range, with those produced by the earlier, less-detailed analysis in the WM PEIS. The HSW EIS estimate reports the changes in employment and earnings based on the most recently available historical data. The reports indicate that 93 percent of Hanford employees reside in the Tri-Cities region and that about 81 percent of all non-labor procurements made by Hanford management and operations contractors occur in the same region.

Impacts other than employment and income are largely based on changes in population, with respect to current capacities of the local roads, schools, waste and water treatment, and other elements of local infrastructure. Historical geographic patterns of settlement are assumed to persist.

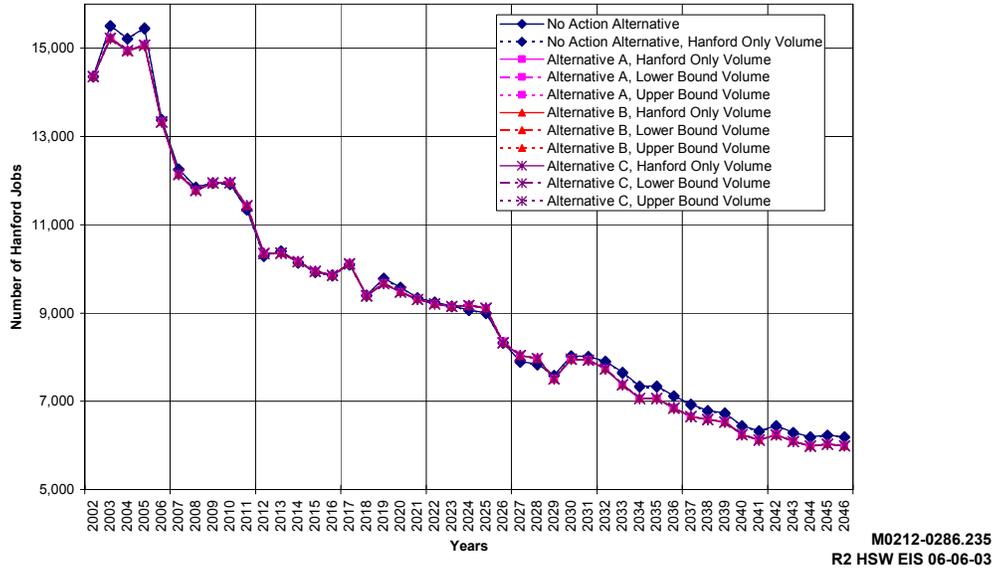
For purposes of this analysis, a baseline forecast of budgets and employment at Hanford was constructed that reflect October 2001 budget plans and estimates at the U.S. Department of Energy (DOE), Richland Operations Office; DOE, Office of River Protection; and the Pacific Northwest National Laboratory for DOE and non-DOE work. The baseline was necessary to provide perspective on the size of changes in Hanford activity that may occur as a result of actions to manage Hanford solid waste. Table 5.19 shows the baseline scenario.

Because the time pattern of spending is different under each of the alternative groups, Figure 5.24 depicts the level of Hanford employment as a simple way of showing how the solid waste program scenarios compare both with each other and total Hanford activity over time. Because the Hanford Solid Waste Program is an ongoing function, even the No Action Alternative has changing levels of employment and spending associated with it. For purposes of the socioeconomic analysis, all impacts were calculated as changes from conditions in 2002. For example, Hanford Solid Waste Program employment rises from the 2002 level of roughly 435 to levels over 750, and then eventually declines below 200. The corresponding impacts on direct employment are roughly +350 workers and -200 workers, relative to current conditions. The analysis calculates the direct and indirect socioeconomic impacts of these changes in direct employment and associated programmatic spending at the Hanford Site. Figure 5.25 shows solid waste program employment in each case relative to the 2002 level. The time patterns of total spending are similar for Alternative Groups A through E, as shown in Figure 5.26. Alternative Groups C, D<sub>1</sub>, D<sub>2</sub>, D<sub>3</sub>, E<sub>1</sub>, E<sub>2</sub>, and E<sub>3</sub> all have virtually identical levels of spending and employment in each year, and all are similar to Alternative Group A. To simplify Figures 5.24 through 5.26, Alternative Groups C through E are represented by Alternative Group C.

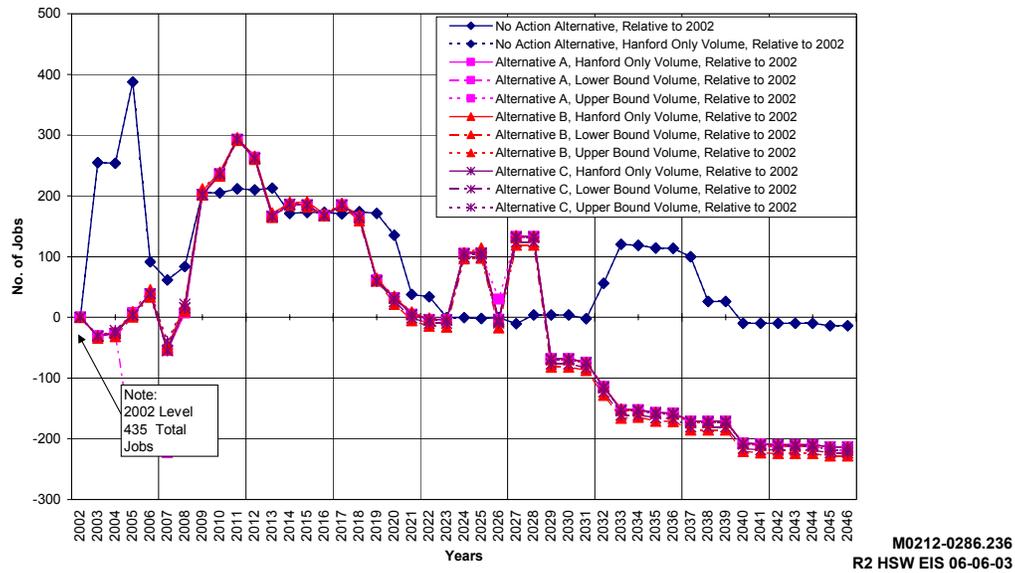
Non-labor costs play a relatively larger role in the No Action Alternative (Lower Bound waste volume), so that total costs in that case peak in about 2005 at \$150 million and again in 2013 at about \$132 million (with corresponding employment peaks), decline until 2023, reach a plateau between 2023 and 2032, and then finally decline for good. All costs are just slightly lower in the No Action Alternative when the Hanford Only waste volume is considered. In analyzing the socioeconomic impacts of the alternative groups, emphasis was placed on finding years between 2002 and 2046 showing the largest impacts, either positive or negative. Because the time pattern of spending is different under each of the alternative groups, the largest impacts (positive or negative) sometimes occur in different years.

**Table 5.19.** Hanford Budget and Direct Employment Associated with Baseline Conditions

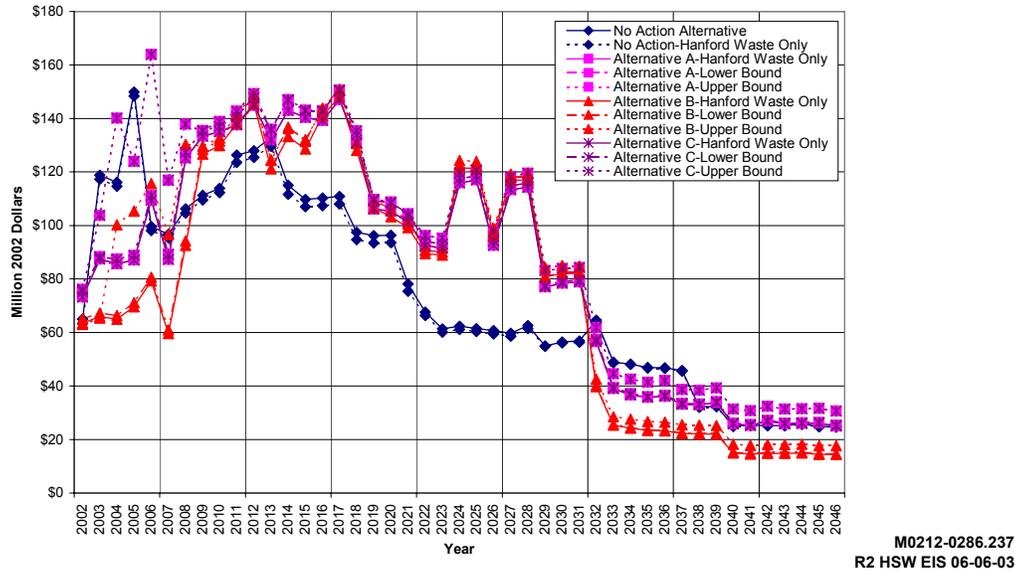
Variable	2002–2009	2010–2020	2021–2032	2033–2046
<b>Budget (in millions)</b> <sup>(a,b)</sup>	\$2,000–\$2,300	\$1,450–\$2,250	\$800–\$1,450	\$550–800
<b>Hanford Jobs</b> <sup>(b)</sup>	11,700–15,200	9,200–11,700	7,550–9,250	6,150–7,500
(a) Budget is in 2002 dollars.				
(b) Maximum and minimum during the period. Jobs rounded to nearest 50; budget to nearest 50 million. These values provide bounds for impacts.				



**Figure 5.24.** Impact of HSW EIS Alternative Groups on Total Hanford Employment



**Figure 5.25.** Impact of HSW EIS Alternative Groups on Solid Waste Program Employment



**Figure 5.26.** Impact of HSW EIS Alternative Groups on Solid Waste Program Total Costs

### 5.6.1 Alternative Group A

Table 5.20 shows the employment and population changes related to construction and operations of the additional required facilities relative to those expected under baseline conditions for certain key years.

For purposes of this analysis, the general level of employment and budget at the Hanford Site is assumed to follow the level discussed previously under the baseline conditions. Population impacts were calculated at 1.3 times total employment impacts, consistent with DOE (1996a). An unknown number of current Hanford workers could be reassigned to operations activities, reducing immigration to the region below the estimates shown in this section. Construction activity is assumed to require a normal proportion of new construction workers coming into the region.

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste operations are provided in the Technical Information Document (FH 2004) for Alternative Group A. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document. For construction activity, FH (2004) and the ILAW documentation report the construction year or years, total labor-years required, and schedule. This procedure resulted in an estimate of the number of jobs by year, consistent with the peak year and total labor-years required.

**Table 5.20.** Socioeconomic Impacts Associated with Alternative Group A, Relative to Baseline Conditions<sup>(a)</sup>

<b>Alternative Group A</b>	<b>2011</b>	<b>2017</b>	<b>2032</b>	<b>2046</b>
<b>Hanford Solid Waste Program Total Budget (Million 2002\$)</b>				
Hanford Only Volume	\$138	\$147	\$57	\$25
Lower Bound Volume	\$141	\$150	\$57	\$25
Upper Bound Volume	\$143	\$151	\$62	\$31
<b>Hanford Jobs<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	750	650	350	250
Solid Waste Program Total, Lower Bound Volume	800	650	350	250
Solid Waste Program Total, Upper Bound Volume	750	650	350	250
<i>Impact, Hanford Only Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Lower Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Upper Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<b>Non-Labor Procurements (Million 2002\$)<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	\$83	\$100	\$30	\$6
Solid Waste Program Total, Lower Bound Volume	\$85	\$102	\$31	\$6
Solid Waste Program Total, Upper Bound Volume	\$88	\$103	\$35	\$11
<i>Impact, Hanford Only Volume</i>	<i>\$45</i>	<i>\$61</i>	<i>(\$8)</i>	<i>(\$33)</i>
<i>Impact, Lower Bound Volume</i>	<i>\$46</i>	<i>\$63</i>	<i>(\$9)</i>	<i>(\$34)</i>
<i>Impact, Upper Bound Volume</i>	<i>\$47</i>	<i>\$62</i>	<i>(\$6)</i>	<i>(\$29)</i>
<b>Tri-Cities Region Jobs Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(1,000)</i>
<i>Lower Bound Volume</i>	<i>1,400</i>	<i>1,500</i>	<i>(400)</i>	<i>(1,050)</i>
<i>Upper Bound Volume</i>	<i>1,450</i>	<i>1,500</i>	<i>(350)</i>	<i>(1,000)</i>
<b>Population Change Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,800</i>	<i>1,900</i>	<i>(500)</i>	<i>(1,350)</i>
<i>Lower Bound Volume</i>	<i>1,800</i>	<i>1,950</i>	<i>(500)</i>	<i>(1,400)</i>
<i>Upper Bound Volume</i>	<i>1,850</i>	<i>1,900</i>	<i>(450)</i>	<i>(1,250)</i>
<p>(a) Numbers in parentheses denote lower level of activity (negative impact) relative to baseline conditions. Area jobs and population rounded to nearest 50.</p> <p>(b) Hanford Solid Waste Program totals and positive or negative impact or change (italicized text) relative to 2002. These impacts provide the basis for area-wide impacts.</p> <p>(c) Maximum positive or negative impact only.</p>				

The solid waste program budget under Alternative Group A is projected to peak in 2017, with employment slightly higher in 2011. In 2011, solid waste program employment is expected to be about 750 to 800 for the Hanford Only, Lower Bound, and Upper Bound waste volumes, representing an increment of about 300 to 350 to the baseline. Additionally, there is an increment to non-labor procurements of \$83 to \$88 million relative to the baseline (see Table 5.20). The largest total impact on community employment (Hanford and non-Hanford workers) in the Tri-Cities region would be about +1,450 to +1,500 relative to the baseline in 2017. In Alternative Group A, the level of solid waste program employment and spending is above that in the No Action Alternative for the period 2007 through 2032. Employment falls below 2002 levels beginning about the year 2029, and spending does the same in 2032, reflecting an incremental reduction in the DOE mortgage (that is, ongoing annual costs of managing and safekeeping facilities and wastes from former activities) at the Hanford Site. As a result, a slight negative impact would occur on the economy after about 2032.

The population impact is expected to peak in 2017, with an increase in population of 1,900 to 1,950, representing an increase of about 1 percent over the 2000 Census population of 191,822 (Census 2000a, 2000b). Because most communities can usually handle an increase in population of up to 5 percent without disruption in services (Gilmore and Duff 1975), the effects on demand for community infrastructure and services would be small due to the impact of the solid waste program alone. The impact of the long-term reduction in population of 1,250 to 1,400 shown in Table 5.20 is about 0.7 percent of the 2000 baseline. The infrastructure impacts likely would be very small.

## **5.6.2 Alternative Group B**

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste operations and construction are provided in the Technical Information Document (FH 2004) for Alternative Group B. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document.

Table 5.21 shows the employment and population changes related to construction and operations of the additional required facilities relative to those expected under baseline conditions for certain key years. The scenarios in Alternative Group B achieve their peak positive impact on economic activity in 2017, with the peak total Tri-Cities employment impact reaching about 1,650 above baseline conditions for the Hanford Only waste volume and 1,750 for the Upper Bound waste volume. The peak total of Tri-Cities employment increases represents a 2 percent increase over the 1999 baseline of 88,100 (DOE-RL 2000a), the last year for which complete data are available. After 2030, the largest negative impact on employment is the loss of 950 to 1,100 jobs relative to the baseline in the year 2046.

Corresponding population increases and decreases range from +2,150 to 2,250 in 2017 to -1,250 to -1,400 in 2046, representing an increase of about 1.2 percent relative to the 2000 Census population of 191,822 (Census 2000a, 2000b) and a decrease of 0.7 percent relative to the 2000 Census value. By themselves, these figures imply that the incremental impact on demand for community infrastructure and services likely would be very small.

**Table 5.21.** Socioeconomic Impacts Associated with Alternative Group B, Relative to Baseline Conditions<sup>(a)</sup>

<b>Alternative Group B</b>	<b>2011</b>	<b>2017</b>	<b>2032</b>	<b>2046</b>
<b>Hanford Solid Waste Program Total Budget (Million 2002\$)</b>				
Hanford Only Volume	\$138	\$148	\$40	\$14
Lower Bound Volume	\$141	\$151	\$40	\$15
Upper Bound Volume	\$141	\$151	\$40	\$18
<b>Hanford Jobs<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	800	700	350	250
Solid Waste Program Total, Lower Bound Volume	800	700	350	250
Solid Waste Program Total, Upper Bound Volume	800	700	350	250
<i>Impact, Hanford Only Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Lower Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(150)</i>	<i>(250)</i>
<i>Impact, Upper Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<b>Non-Labor Procurements (Million 2002\$)<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	\$83	\$100	\$13	\$5
Solid Waste Program Total, Lower Bound Volume	\$85	\$102	\$13	\$5
Solid Waste Program Total, Upper Bound Volume	\$86	\$102	\$15	\$2
<i>Impact, Hanford Only Volume</i>	<i>\$55</i>	<i>\$72</i>	<i>(\$15)</i>	<i>(\$33)</i>
<i>Impact, Lower Bound Volume</i>	<i>\$56</i>	<i>\$73</i>	<i>(\$16)</i>	<i>(\$34)</i>
<i>Impact, Upper Bound Volume</i>	<i>\$58</i>	<i>\$75</i>	<i>(\$12)</i>	<i>(\$29)</i>
<b>Tri-Cities Region Jobs Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,550</i>	<i>1,650</i>	<i>(500)</i>	<i>(1,000)</i>
<i>Lower Bound Volume</i>	<i>1,600</i>	<i>1,700</i>	<i>(550)</i>	<i>(1,100)</i>
<i>Upper Bound Volume</i>	<i>1,650</i>	<i>1,700</i>	<i>(450)</i>	<i>(950)</i>
<b>Population Change Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>2,050</i>	<i>2,150</i>	<i>(650)</i>	<i>(1,350)</i>
<i>Lower Bound Volume</i>	<i>2,050</i>	<i>2,200</i>	<i>(700)</i>	<i>(1,400)</i>
<i>Upper Bound Volume</i>	<i>2,100</i>	<i>2,250</i>	<i>(600)</i>	<i>(1,250)</i>
<p>(a) Numbers in parentheses denote lower level of activity (negative impact) relative to baseline conditions. Area jobs and population rounded to nearest 50.</p> <p>(b) Hanford Solid Waste Program totals and positive or negative impact or change (italicized text) relative to 2002. These impacts provide the basis for area-wide impacts.</p> <p>(c) Maximum positive or negative impact only.</p>				

### 5.6.3 Alternative Group C

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste operations and construction are derived from the Technical Information Document (FH 2004) for Alternative Group C. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document.

Table 5.22 shows the employment and population changes related to construction and operations of the additional required facilities relative to those expected under baseline conditions for certain key years. The scenarios in Alternative Group C achieve their peak positive impact on economic activity in 2017, where projected employment increases of 1,450 to 1,500 represent a 1.7 percent increase over the 1999 baseline of 88,100 (DOE-RL 2000a), the last year for which complete data are available. After 2030, the largest negative impact on employment is the loss of 950 to 1,050 jobs relative to the baseline in the year 2046.

Corresponding population increases and decreases range from +1,900 to +1,950 in 2017 to -1,250 to -1,400 in 2046, representing an increase of about 1 percent relative to the 2000 Census population of 191,822 (Census 2000a, 2000b) and a decrease of 0.7 percent relative to the 2000 Census value. By themselves, these figures imply that an incremental impact on demand for community infrastructure and services likely would be very small.

### 5.6.4 Alternative Group D

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste operations and construction are derived from the Technical Information Document (FH 2004) for Alternative Group D. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document. It is assumed there is no difference in cost and employment among Alternative Groups D<sub>1</sub>, D<sub>2</sub>, and D<sub>3</sub>, as similar activities are conducted in different onsite locations that have similar characteristics.

Table 5.23 shows the employment and population changes related to construction and operations of the additional required facilities relative to those expected under baseline conditions for certain key years. The scenarios in Alternative Group D achieve their peak positive impact on economic activity in 2017, with the peak total Tri-Cities employment impact reaching about 1,450. The peak total of Tri-Cities employment increases represents a 1.6-percent increase over the 1999 baseline of 88,100 (DOE-RL 2000a), the last year for which complete data are available. After 2030, the largest negative impact on employment is the loss of 950 to 1,050 jobs relative to the baseline in the year 2046.

Corresponding population increases and decreases range from +1,900 in 2017 to -1,250 to -1,350 in 2046, representing a net increase of about 1 percent relative to the 2000 Census population of 191,822 (Census 2000a, 2000b) and a decrease of 0.7 percent relative to the 2000 Census value. By themselves, these figures imply that incremental impact on demand for community infrastructure and services likely would be very small.

**Table 5.22.** Socioeconomic Impacts Associated with Alternative Group C, Relative to Baseline Conditions<sup>(a)</sup>

<b>Alternative Group C</b>	<b>2011</b>	<b>2017</b>	<b>2032</b>	<b>2046</b>
<b>Hanford Solid Waste Program Total Budget (Million 2002\$)</b>				
Hanford Only Volume	\$138	\$147	\$57	\$25
Lower Bound Volume	\$141	\$150	\$57	\$25
Upper Bound Volume	\$143	\$151	\$62	\$31
<b>Hanford Jobs<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	750	650	350	250
Solid Waste Program Total, Lower Bound Volume	800	650	350	250
Solid Waste Program Total, Upper Bound Volume	750	650	350	250
<i>Impact, Hanford Only Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Lower Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Upper Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<b>Non-Labor Procurements (Million 2002\$)<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	\$83	\$100	\$30	\$6
Solid Waste Program Total, Lower Bound Volume	\$85	\$102	\$31	\$6
Solid Waste Program Total, Upper Bound Volume	\$88	\$103	\$35	\$11
<i>Impact, Hanford Only Volume</i>	<i>\$45</i>	<i>\$61</i>	<i>(\$8)</i>	<i>(\$33)</i>
<i>Impact, Lower Bound Volume</i>	<i>\$46</i>	<i>\$63</i>	<i>(\$9)</i>	<i>(\$34)</i>
<i>Impact, Upper Bound Volume</i>	<i>\$47</i>	<i>\$62</i>	<i>(\$6)</i>	<i>(\$29)</i>
<b>Tri-Cities Region Jobs Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(1,000)</i>
<i>Lower Bound Volume</i>	<i>1,400</i>	<i>1,500</i>	<i>(400)</i>	<i>(1,050)</i>
<i>Upper Bound Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(950)</i>
<b>Population Change Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,800</i>	<i>1,900</i>	<i>(500)</i>	<i>(1,350)</i>
<i>Lower Bound Volume</i>	<i>1,800</i>	<i>1,950</i>	<i>(550)</i>	<i>(1,400)</i>
<i>Upper Bound Volume</i>	<i>1,850</i>	<i>1,900</i>	<i>(450)</i>	<i>(1,250)</i>
<p>(a) Numbers in parentheses denote lower level of activity (negative impact) relative to baseline conditions. Area jobs and population rounded to nearest 50.</p> <p>(b) Hanford Solid Waste Program totals and positive or negative impact or change (italicized text) relative to 2002. These impacts provide the basis for area-wide impacts.</p> <p>(c) Maximum positive or negative impact only.</p>				

**Table 5.23.** Socioeconomic Impacts Associated with Alternative Group D, Relative to Baseline Conditions<sup>(a)</sup>

<b>Alternative Group D</b>	<b>2011</b>	<b>2017</b>	<b>2032</b>	<b>2046</b>
<b>Hanford Solid Waste Program Total Budget (Million 2002\$)</b>				
Hanford Only Volume	\$138	\$147	\$56	\$25
Lower Bound Volume	\$140	\$150	\$59	\$27
Upper Bound Volume	\$143	\$151	\$64	\$33
<b>Hanford Jobs<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	750	650	350	250
Solid Waste Program Total, Lower Bound Volume	800	650	350	250
Solid Waste Program Total, Upper Bound Volume	800	650	350	250
<i>Impact, Hanford Only Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Lower Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<i>Impact, Upper Bound Volume</i>	<i>300</i>	<i>200</i>	<i>(100)</i>	<i>(200)</i>
<b>Non-Labor Procurements (Million 2002\$)<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	\$83	\$91	\$30	\$6
Solid Waste Program Total, Lower Bound Volume	\$85	\$102	\$32	\$8
Solid Waste Program Total, Upper Bound Volume	\$89	\$104	\$37	\$13
<i>Impact, Hanford Only Volume</i>	<i>\$45</i>	<i>\$61</i>	<i>(\$8)</i>	<i>(\$33)</i>
<i>Impact, Lower Bound Volume</i>	<i>\$45</i>	<i>\$62</i>	<i>(\$8)</i>	<i>(\$33)</i>
<i>Impact, Upper Bound Volume</i>	<i>\$46</i>	<i>\$61</i>	<i>(\$6)</i>	<i>(\$30)</i>
<b>Tri-Cities Region Jobs Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(1,000)</i>
<i>Lower Bound Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(1,050)</i>
<i>Upper Bound Volume</i>	<i>1,400</i>	<i>1,450</i>	<i>(350)</i>	<i>(950)</i>
<b>Population Change Impacts<sup>(c)</sup></b>				
<i>Hanford Only Volume</i>	<i>1,800</i>	<i>1,900</i>	<i>(500)</i>	<i>(1,350)</i>
<i>Lower Bound Volume</i>	<i>1,800</i>	<i>1,900</i>	<i>(500)</i>	<i>(1,350)</i>
<i>Upper Bound Volume</i>	<i>1,850</i>	<i>1,900</i>	<i>(450)</i>	<i>(1,250)</i>
<p>(a) Numbers in parentheses denote lower level of activity (negative impact) relative to baseline conditions. Area jobs and population rounded to nearest 50.</p> <p>(b) Hanford Solid Waste Program totals and positive or negative impact or change (italicized text) relative to 2002. These impacts provide the basis for area-wide impacts.</p> <p>(c) Maximum positive or negative impact only.</p>				

### **5.6.5 Alternative Group E**

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste operations and construction are derived from the Technical Information Document (FH 2004) for Alternative Group E. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document. Primary jobs and budget for Alternative Group E ILAW operations are assumed to be the same as in Alternative Group D. It is assumed there is no difference in cost and employment among Alternative Groups E<sub>1</sub>, E<sub>2</sub>, and E<sub>3</sub>, as similar activities are conducted in different onsite locations that have similar characteristics.

Impacts on employment and population are the same as those for Alternative Group D (see Section 5.6.4)

### **5.6.6 No Action Alternative**

Estimates of Hanford primary jobs and budget for LLW, MLLW, and TRU waste construction and operations are provided in the Technical Information Document (FH 2004) for the No Action Alternative, Lower Bound volume. Costs and budget for the No Action Alternative with the Hanford Only waste volume are nearly the same as for the Lower Bound volume and are derived by scaling for the slightly lower volume of wastes handled in the Hanford Only waste volume case. Primary jobs and budget for ILAW operations were calculated in support of the ILAW EIS, which now has been merged with this document.

Total employment at Hanford is currently expected to increase by as much as 3,000 jobs (from the 2001 level of 12,000, the last year of historical data) through 2005, as the Hanford Waste Treatment Plant is constructed and begins operations (see Figure 5.22). Overall, the activity associated with the No Action Alternative would add increases in annual budgets of as much as \$150 million in 2005 (an increase of \$82 million from the level in 2002) and up to 400 additional jobs onsite to this baseline. After 2040, employment in solid waste management operations would fall to about the baseline value, as shown in Figure 5.23, while the solid waste management budget would decline below the 2002 level by 2032 (see Figure 5.24). Overall, the Tri-Cities socioeconomic conditions would continue as they currently are, with employment increasing and fluctuating in the short run and generally declining over the long-term.

Table 5.24 shows the current solid waste program budget, employment, and estimated non-labor procurements that would continue under the No Action Alternative.

In 2002, the solid waste management program (including ILAW) required a total budget of about \$68 million and employed slightly over 400 workers. As shown in Figure 5.23, in 2005 (the highest direct employment year), about 400 additional employees beyond 2002 levels would be needed to operate and support the solid waste program (over 800 total). This is also the year with the largest impact on total community employment (Hanford and non-Hanford workers), with about 1,800 workers needed beyond baseline levels (see Table 5.24). This impact relative to 2002 is noticeable but not large (about 2 percent

of the 1999 base of 88,100 total non-farm jobs) (DOE-RL 2000a). Area population might increase above baseline by as many as 2,350 people, or about 1.3 percent of the 2000 Census population of 191,822 (Census 2000a, 2000b).

**Table 5.24.** Socioeconomic Impacts Associated with the No Action Alternative, Relative to Baseline Conditions<sup>(a)</sup>

No Action Alternatives	2005	2013	2032	2046
<b>Hanford Solid Waste Program Total Budget (Million 2002\$)</b>				
Hanford Only Volume	\$148	\$130	\$64	\$25
Lower Bound Volume	\$150	\$133	\$65	\$25
<b>Hanford Jobs<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	850	700	500	450
Solid Waste Program Total, Lower Bound Volume	850	700	550	450
<i>Impact, Hanford Only Volume</i>	<i>400</i>	<i>200</i>	<i>50</i>	<i>(0)</i>
<i>Impact, Lower Bound Volume</i>	<i>400</i>	<i>200</i>	<i>50</i>	<i>(0)</i>
<b>Non-Labor Procurements (Million 2002\$)<sup>(b)</sup></b>				
Solid Waste Program Total, Hanford Only Volume	\$86	\$80	\$26	0
Solid Waste Program Total, Lower Bound Volume	\$86	\$82	\$25	0
<i>Impact, Hanford Only Volume</i>	<i>\$54</i>	<i>\$47</i>	<i>(\$10)</i>	<i>(\$38)</i>
<i>Impact, Lower Bound Volume</i>	<i>\$54</i>	<i>\$48</i>	<i>(\$10)</i>	<i>(\$39)</i>
<b>Tri-Cities Region Jobs Impact<sup>(c)</sup></b>				
<i>Impact, Hanford Only Volume</i>	<i>1,800</i>	<i>1,350</i>	<i>50</i>	<i>(700)</i>
<i>Impact, Lower Bound Volume</i>	<i>1,800</i>	<i>1,400</i>	<i>50</i>	<i>(700)</i>
<b>Population Change Impacts<sup>(c)</sup></b>				
<i>Impact, Hanford Only Volume</i>	<i>2,350</i>	<i>1,750</i>	<i>50</i>	<i>(900)</i>
<i>Impact, Lower Bound Volume</i>	<i>2,350</i>	<i>1,800</i>	<i>50</i>	<i>(950)</i>
<p>(a) Numbers in parentheses denote lower level of activity (negative impact) relative to baseline conditions. Area jobs and population rounded to nearest 50.</p> <p>(b) Hanford Solid Waste Program totals and positive or negative impact or change (italicized text) relative to 2002. These impacts provide the basis for area-wide impacts.</p> <p>(c) Maximum positive or negative impact only.</p>				