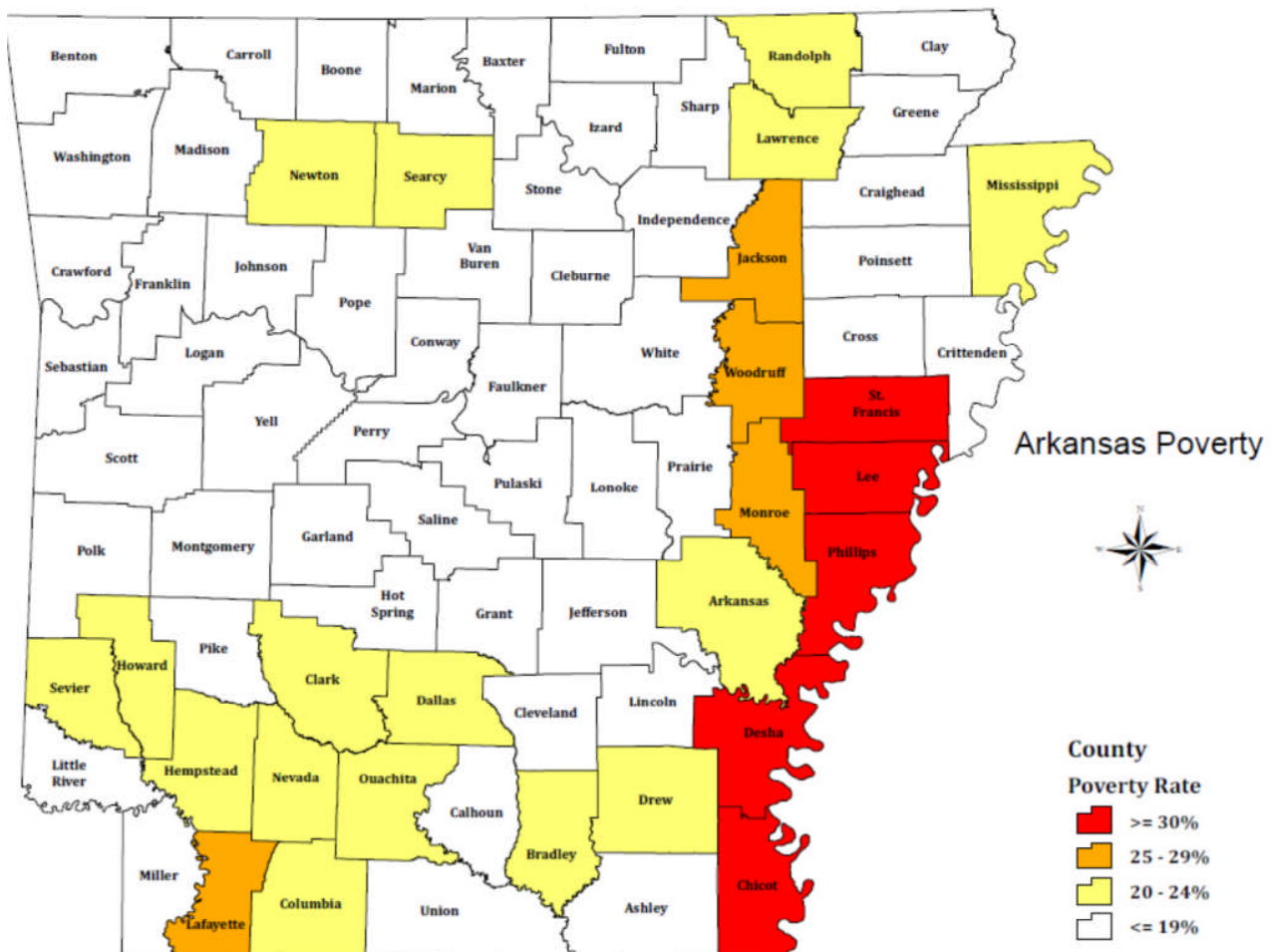


Arkansas USDA StrikeForce Economic Impact Study

StrikeForce initiative primary goal: To increase partnership with rural communities and leverage community resources in targeted, persistent poverty stricken communities.

Study Goal: Assess the economic impact of USDA investments in Arkansas's 25 StrikeForce designated counties during fiscal years (FY) 2011-13. Conduct the impact study in collaboration with the University of Arkansas Division of Agriculture Research and Extension.

Arkansas FY 2011-13 StrikeForce Counties



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The Arkansas Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, sex, *gender identity*, *sexual orientation*, national origin, religion, age, disability, marital or veteran status, *genetic information*, or any other legally protected status, and is an Affirmative Action/Equal Opportunity Employer.

Strategy

- Create an overview of economic impacts of USDA programs in Arkansas's 25-county StrikeForce area.
- Employed IMPLAN economic analysis model to estimate the impact. IMPLAN Version: IMPLAN 3.1.001.12, Model type: Social Accounting Matrices (SAM) and Multiplier models base year 2011.
- IMPLAN provides means for analysts to examine relationships between industry sectors to quantify how one affects another — provides a way to measure the ripple effects in the state as a whole and within state regions.
- The analysis used FY 2011-13 budget expenditure (payments and loans closed) figures from various USDA programs and initiatives. Agencies' program expenditures provide measurable impact to local economies. Expenditures were allocated to specific IMPLAN sectors. All references to years refer to fiscal year (FY).
- Analysis comprises USDA's Farm Service Agency (FSA), Natural Resources Conservation Service (NRCS), and Rural Development (RD) program expenditures. This analysis shows the economic impact of the USDA expenditures in these 25 counties, on the state of Arkansas.

The IMPLAN economic input-output model estimates the direct, indirect and induced effects of the USDA program expenditures paid in StrikeForce counties. These impact types make up the total economic effect:

- The **direct effect** includes the employment needed; income paid to employees and value added that are associated with the initial spending needed to complete a funded project.
- The **indirect effect** is the increased economic activity resulting from purchases of goods and services by firms required to complete the project or program.
- Additional economic activity generated when proprietors and employees, who received more income because of the direct and indirect project spending, buy more consumer goods and services. This activity is called the **induced effects**.
- IMPLAN defines a "**job year**" as the amount of labor needed for one year's work. Job estimates coming directly out of IMPLAN represent both full and part-time jobs.

The economic activities generated by USDA program expenditures captured in:

- **Additional output**, similar to additional sales
- **Employment** in jobs created / maintained. IMPLAN jobs are about 0.92/FTEs (full time employees)
- **Income**, wages and profits
- **Value added**, which is similar to gross state product, the measure of the size of the state's economy.
- **Economic multiplier** is a number used to estimate regional economic impacts of industry changes. For example in our study, an output multiplier of 1.5 means that for every \$1.00 received by an in-state business or organization from the Federal government, an additional \$0.50 is generated by other industries or businesses in the regional economy as a result of these funds flowing to Arkansas. This impact measures only the backward linkages, or what it takes (industrial and consumer goods and services) to produce the output.

Each agency provided program expenditures data analyzed in this study. The following reputable agency database sources were used:

- ✚ FSA Deputy Administrator Farm Program website;
- ✚ FSA CORE Data Mart;
- ✚ Direct and Guaranteed Loan Data Mart;
- ✚ NRCS Resource Economics, Analysis and Policy Division (REAP);
- ✚ RD Centralize Service Center Database, Hyperion, Multi-family Accounting System and Focus

2011 StrikeForce Results Summary

Below are the FY2011 USDA agencies' program outlays (Table 1). This study estimates the economic impact of 35 USDA programs along with the FSA's Concentration Banking System funds. Total USDA program outlays in the 25 StrikeForce counties in FY2011 were a little over \$501 million.

Table 1. USDA Programs and Outlays – FY 2011

Farm Service Agency 2011 Programs		Expenditures per Programs	Total	\$348,355,562
Farm Loan Programs		\$71,443,908		
Conservation Reserve Program (CRP)		\$6,347,443		
Dairy Loss Assistance		\$2,659		
Counter Cyclical Payments		\$120,844,693		
Disaster Program		\$39,921,092		
Emergency Assistance Livestock Program		\$51,564		
Livestock Forage Program		\$2,889,402		
Supplemental Revenue Assistance Payments (SURE)		\$1,089,151		
Emergency Conservation		\$303,542		
Farm Stored Facility Loan Program		\$952,643		
Livestock Indemnity Program		\$568,160		
Noninsured Assistance Program		\$1,573,208		
Grasslands Reserve Program (GRP)		\$25,096		
Price Support Program		\$101,412,722		
Production Adjustment		\$46		
Trade Adjustment Assistance		\$925,015		
Concentration Banking System (Administrative Funds)		\$5,218		
Natural Resources Conservation Service 2011 Programs		Expenditures per Programs	Total	\$11,016,520
Agriculture Water Enhancement Program (AWEP)		\$73,476		
Conservation Security Program (CSP)		\$1,723,266		
Conservation Stewardship Program (CStP)		\$4,124,153		
Environmental Quality Incentives Program (EQIP)		\$4,365,707		
Wildlife Habitat Incentives Program (WHIP)		\$729,918		
Rural Development 2011 Programs		Expenditures per Programs	Total	\$142,249,394
Broadband Initiatives Program Grant		\$1,141,600		
Business and Industry Loans Program (B&I)		\$16,243,500		
Community Facility Loan and Grant Program		\$11,508,200		
Electric Program		\$50,312,011		
Intermediary Relending Program (IRPO)		\$96,500		
Multi-family Housing Direct Loan Programs		\$437,784		
Rural Business Enterprise Grants Program (RBEG)		\$1,348,250		
Rural Business Opportunity Grants (RBOG)		\$50,000		
Rural community Development Initiative (RCDI)		\$145,921		
Rural Cooperative Development Grant Program (RCDG)		\$224,993		
Rural Energy for America Program (REAP)		\$318,630		
Single-family Housing Loans and Grants Programs		\$39,676,305		
Water and Environmental Programs (WEP)		\$20,745,700		
			Total	\$501,621,476

It is estimated that the FY2011 USDA investment of \$501 million in the StrikeForce counties generated a total of 6,997 full and part-time jobs in the state. This investment also provided income of \$171 million to state residents and contributed \$315 million of value added to the state economy (Table 2).

Table 2. Arkansas Total USDA StrikeForce Economic Impacts – FY 2011

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	4,613	\$92,079,635	\$174,272,182	\$445,974,675
Indirect Effect	1,465	\$47,424,667	\$82,844,266	\$177,930,640
Induced Effect	919	\$31,922,957	\$58,578,187	\$101,949,703
Total Effect	6,997	\$171,427,259	\$315,694,635	\$725,855,017

The implicit employment and output multipliers generated by the IMPLAN model for this USDA StrikeForce spending were 1.52 and 1.63 respectively. Table 3 presents the total economic impact and the implicit employment and output multipliers by agency.

Table 3. 2011 Arkansas StrikeForce Total Economic Impacts – by USDA Agency

Agency	Employment	Employment Multipliers	Labor Income	Value Added	Output	Output Multipliers
FSA	5,641	1.50	\$118,869,369	\$219,594,913	\$548,858,497	1.66
NRCS	120	1.46	\$4,268,437	\$5,643,835	\$10,516,997	1.83
RD	1,236	1.69	\$48,289,453	\$90,455,887	\$166,479,523	1.54

Many industry sectors benefited from the USDA StrikeForce investments in FY2011. Agriculture accounted for only about 50% of the increase in output resulting from the USDA StrikeForce investments (Table 4)

Table 4. StrikeForce Output Impacts by Industry Sectors – 2011

Description	Direct	Indirect	Induced	Total
Total	\$445,974,667	\$177,930,641	\$101,949,704	\$725,855,012
Agriculture, Forestry, Fish & Hunting	\$327,605,182	\$34,393,445	\$497,559	\$362,496,186
Mining	\$2,349,770	\$5,672,154	\$445,675	\$8,467,599
Utilities	\$71,156,674	\$7,404,333	\$3,207,749	\$81,768,756
Construction	\$10,209,213	\$10,313,531	\$1,113,300	\$21,636,044
Manufacturing	\$1,868,761	\$33,482,061	\$5,348,269	\$40,699,091
Wholesale Trade	\$240,733	\$6,046,101	\$5,098,564	\$11,385,398
Retail Trade	\$572,582	\$1,266,081	\$11,899,964	\$13,738,627
Transportation & Warehousing	\$45,190	\$10,711,612	\$2,237,530	\$12,994,332
Information	\$1,086,134	\$3,621,412	\$4,082,338	\$8,789,884
Finance & Insurance	\$1,180,000	\$23,253,156	\$10,799,990	\$35,233,146
Real Estate & Rental	\$747,993	\$20,369,044	\$19,830,576	\$40,947,613
Administrative & Waste Services	\$16,653,174	\$7,591,934	\$3,724,418	\$27,969,526
Professional-scientific & Technical Services	\$186,559	\$4,142,751	\$1,184,346	\$5,513,656
Management of Companies	\$1,210,046	\$2,582,480	\$1,210,262	\$5,002,788
Educational Services	\$39,314	\$113,023	\$1,151,074	\$1,303,411
Health & Social Services	\$7,197,336	\$15,341	\$18,130,142	\$25,342,819
Arts - Entertainment & Recreation	\$35,939	\$213,275	\$986,782	\$1,235,996
Accommodation & Food Services	\$238,374	\$2,168,950	\$5,489,238	\$7,896,562
Other Services	\$522,799	\$1,955,387	\$4,041,977	\$6,520,163
Government	\$2,828,894	\$2,614,570	\$1,469,951	\$6,913,415

2012 StrikeForce Results Summary

Below are the FY2012 USDA agencies' program outlays (Table 5). This study estimates the economic impact of 33 USDA programs along with the FSA's Concentration Banking System funds. Total USDA program outlays in the 25 StrikeForce counties in FY2012 were a little over \$365 million.

Table 5. USDA Programs and Expenditures – FY 2012

Farm Service Agency 2012 Programs	Expenditures per Programs	Total	\$275,100,931
Farm Loan Programs	\$75,684,287		
Biomass Crop Assistance Program	\$1,908,580		
Conservation Reserve Program (CRP)	\$7,404,116		
Counter Cyclical Payments	\$94,109,166		
Emergency Assistance Livestock Program	\$151,282		
Emergency Conservation	\$2,720,574		
Farm Stored Facility Loan Program	\$4,558,293		
Livestock Forage Program	\$1,143,298		
Livestock Indemnity Program	\$27,529		
Supplemental Revenue Assistance Payments (SURE)	\$2,537,920		
Milk Income Loss	\$48,414		
Noninsured Assistance Program	\$4,419,209		
Grasslands Reserve Program (GRP)	\$34,230		
Price Support Program	\$80,028,502		
Trade Adjustment Assistance	\$320,000		
Concentration Banking System (Administrative Funds)	\$5,531		
Natural Resources Conservation Service 2012 Programs	Expenditures per Programs	Total	\$18,039,801
Agriculture Water Enhancement Program (AWEP)	\$69,232		
Conservation Security Program (CSP)	\$3,179,578		
Conservation Stewardship Program (CStP)	\$8,668,121		
Environmental Quality Incentives Program (EQIP)	\$5,552,779		
Wildlife Habitat Incentives Program (WHIP)	\$570,091		
Rural Development 2012 Programs	Expenditures per Programs	Total	\$72,068,492
Business and Industry Loans Program (B&I)	\$4,168,500		
Community Facility Loan and Grant Program	\$23,619,600		
Distance Learning & Telemedicine (DLT)	\$460,398		
Multi-family Housing Direct Loan Programs	\$438,715		
Intermediary Relending Program (IRP)	\$701,200		
Rural Business Enterprise Grants Program (RBEG)	\$336,400		
Rural Business Opportunity Grants (RBOG)	\$49,500		
Value-Added Producer Grants (VAPG)	\$98,500		
Rural community Development Initiative (RCDI)	\$87,552		
Rural Energy for America Program (REAP)	\$30,632		
Single-family Housing Loans and Grants Programs	\$39,522,095		
Water and Environmental Programs (WEP)	\$2,555,400		
		Total	\$365,209,224

It is estimated that the 2012 USDA investment of \$365 million in the StrikeForce counties generated a total of 5,708 full and part-time jobs in the state. This investment also provided income of \$146 million to state residents and contributed \$267 million of value added to the state economy (Table 6).

Table 6. Arkansas Total USDA StrikeForce Economic Impacts – FY 2012

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	3,887	\$85,756,917	\$156,272,535	\$355,015,970
Indirect Effect	1,090	\$34,994,817	\$63,484,218	\$130,914,409
Induced Effect	732	\$25,867,714	\$47,471,953	\$83,037,285
Total Effect	5,708	\$146,619,447	\$267,228,707	\$568,967,664

The implicit employment and output multipliers generated by the IMPLAN model for this USDA StrikeForce spending were 1.47 and 1.60 respectively. Table 7 presents the total economic impact and implicit employment and output multipliers by agency.

Table 7. 2012 Arkansas StrikeForce Economic Impacts – by USDA Agency

Agencies	Employment	Employment Multipliers	Labor Income	Value Added	Output	Output Multipliers
FSA	4,338	1.46	\$101,541,928	\$187,060,095	\$421,036,071	1.61
RD	970	1.56	\$34,195,379	\$61,462,603	\$108,103,856	1.58
NRCS	400	1.43	\$10,882,139	\$18,706,009	\$39,827,736	1.58

Many industry sectors benefited from the USDA StrikeForce investments in FY2012. Agriculture accounted for only about 50% of the increase in output resulting from the USDA StrikeForce investments (Table 8)

Table 8. StrikeForce Output Impacts by Industry Sectors – 2012

Description	Direct	Indirect	Induced	Total
Total	\$355,015,970	\$130,914,409	\$83,037,285	\$568,967,664
Agriculture, Forestry, Fish & Hunting	\$260,479,185	\$24,877,106	\$398,742	\$285,755,033
Mining	\$1,383,743	\$2,732,233	\$365,756	\$4,481,732
Utilities	\$2,964,384	\$5,428,181	\$2,599,251	\$10,991,816
Construction	\$16,700,752	\$4,544,064	\$898,427	\$22,143,243
Manufacturing	\$4,866,325	\$21,416,512	\$4,318,645	\$30,601,482
Wholesale Trade	\$994,953	\$4,091,465	\$4,094,938	\$9,181,356
Retail Trade	\$2,366,484	\$1,032,987	\$9,643,412	\$13,042,883
Transportation & Warehousing	\$186,778	\$6,017,851	\$1,812,753	\$8,017,382
Information	\$675,859	\$2,957,612	\$3,298,316	\$6,931,787
Finance & Insurance	\$36,369,341	\$24,244,620	\$8,790,276	\$69,404,237
Real Estate & Rental	\$3,091,117	\$16,795,754	\$16,216,189	\$36,103,060
Administrative & Waste Services	\$5,056,819	\$5,535,278	\$3,046,930	\$13,639,027
Professional-scientific & Technical Services	\$126,611	\$2,675,690	\$970,153	\$3,772,454
Management of Companies	\$572,142	\$2,236,319	\$992,153	\$3,800,614
Educational Services	\$162,481	\$82,396	\$933,627	\$1,178,504
Health & Social Services	\$17,063,946	\$43,155	\$14,883,141	\$31,990,242
Arts- entertainment & Recreation	\$148,538	\$211,956	\$808,043	\$1,168,537
Accommodation & Food Services	\$985,220	\$1,744,004	\$4,472,881	\$7,202,105
Other Services	\$517,863	\$2,200,587	\$3,291,447	\$6,009,897
Government	\$303,429	\$2,046,639	\$1,202,205	\$3,552,273

2013 StrikeForce Results Summary

Below are the FY2013 USDA agencies' program outlays (Table 9). This study estimates the economic impact of 30 USDA programs. Total USDA program outlays in the 25 StrikeForce counties in FY2013 were a little over \$377 million.

Table 9. USDA Programs and Expenditures – FY 2013

Farm Service Agency 2013 Programs		Expenditures per Programs	Total	\$247,068,185
Farm Loan Programs		\$41,310,654		
Biomass Crop Assistance Program		\$855,453		
Conservation Reserve Program (CRP)		\$6,514,447		
Counter Cyclical Payments		\$119,378,938		
Emergency Conservation		\$207,537		
Farm Stored Facility Loan Program		\$2,079,659		
Livestock Forage Program		\$6,234		
Livestock Indemnity Program		\$11,785		
Marketing Assistance Loans		\$66,190,056		
Supplemental Revenue Assistance Payments (SURE)		\$2,929,968		
Milk Income Loss Contract		\$66,661		
Noninsured Assistance Program		\$6,997,992		
Grasslands Reserve Program (GRP)		\$461,982		
Price Support Program		\$18,660		
Production Adjustment		\$2,159		
Trade Adjustment Assistance		\$36,000		
Natural Resources Conservation Service 2013 Programs		Expenditures per Programs	Total	\$33,544,366
Agriculture Water Enhancement Program (AWEP)		\$232,060		
Conservation Security Program (CSP)		\$3,052,670		
Conservation Stewardship Program (CStP)		\$20,146,642		
Environmental Quality Incentives Program (EQIP)		\$9,468,842		
Wildlife Habitat Incentives Program (WHIP)		\$644,152		
Rural Development 2013 Programs		Expenditures per Programs	Total	\$5,509,576
Business and Industry Loans Program (B&I)		\$2,341,000		
Community Facility Loan and Grant Program		\$46,200,435		
Multi-family Housing Direct Loan Programs		\$451,169		
Rural Business Enterprise Grants Program (RBEG)		\$272,250		
Rural Business Opportunity Grants (RBOG)		\$100,000		
Value-Added Producer Grants (VAPG)		\$50,000		
Rural Energy for America Program (REAP)		\$181,438		
Single-family Housing Loans and Grants Programs		\$40,571,284		
Water and Environmental Programs (WEP)		\$6,342,000		
Total			\$377,122,127	

It is estimated that the 2013 USDA investment of \$377 million in the StrikeForce counties generated a total of 6,319 full and part-time jobs in Arkansas. This investment also provided income of \$177 million to state residents and contributed \$293 million of value added to the state economy (Table 10).

Table 10. Arkansas Total USDA StrikeForce Economic Impacts – FY 2013

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	4,399.8	\$111,960,421	\$173,704,427	\$362,943,182
Indirect Effect	1,019.3	\$33,379,817	\$60,562,969	\$125,756,508
Induced Effect	899.8	\$32,345,687	\$59,358,267	\$104,376,896
Total Effect	6,319	\$177,685,925	\$293,625,663	\$593,076,586

The implicit employment and output multipliers generated by the IMPLAN model for this USDA StrikeForce spending were 1.41 and 1.63 respectively. Table 11 presents the total economic impact and implicit employment and output multipliers by agency.

Table 11. 2013 Arkansas StrikeForce Economic Impacts – by USDA Agency

Agencies	Employment	Employment Multipliers	Labor Income	Value Added	Output	Output Multipliers
FSA	3,937	1.48	\$98,868,274	\$183,618,861	\$403,124,447	1.60
RD	777	1.67	\$29,628,795	\$57,449,748	\$105,102,582	1.58
NRCS	1,605	1.26	\$49,188,857	\$52,557,054	\$84,849,558	1.92

Many industry sectors benefited from the USDA StrikeForce investments in FY2013. Agriculture accounted for only about 53% of the increase in output resulting from the USDA StrikeForce investments (Table 12)

Table 12. StrikeForce Output Impacts by Industry Sectors – 2013

Description	Direct	Indirect	Induced	Total
Total	\$362,943,182	\$125,756,508	\$104,376,896	\$593,076,586
Agriculture, Forestry, Fish & Hunting	\$288,136,788	\$24,358,504	\$494,378	\$312,989,670
Mining	\$832,477	\$2,621,087	\$464,943	\$3,918,507
Utilities	\$6,416,502	\$5,235,581	\$3,265,589	\$14,917,672
Construction	\$10,343,787	\$5,174,993	\$1,118,990	\$16,637,770
Manufacturing	\$3,500,504	\$21,063,281	\$5,396,752	\$29,960,537
Wholesale Trade	\$181,259	\$3,900,919	\$5,073,227	\$9,155,405
Retail Trade	\$431,123	\$793,289	\$12,041,317	\$13,265,729
Transportation & Warehousing	\$37,455	\$5,738,956	\$2,539,066	\$8,315,477
Information	\$82,917	\$2,198,964	\$3,852,553	\$6,134,434
Finance & Insurance	\$35,939,562	\$23,391,394	\$11,017,495	\$70,348,451
Real Estate & Rental	\$573,239	\$15,674,050	\$20,447,412	\$36,694,701
Administrative & Waste Services	\$321,294	\$5,046,904	\$3,848,544	\$9,216,742
Professional-scientific & Technical Services	\$22,373	\$2,732,515	\$1,226,376	\$3,981,264
Management of Companies	\$36	\$1,871,573	\$1,255,515	\$3,127,124
Educational Services	\$29,601	\$101,871	\$1,177,840	\$1,309,312
Health & Social Services	\$9,468,336	\$12,746	\$18,845,706	\$28,326,788
Arts- entertainment & Recreation	\$27,061	\$185,762	\$1,021,845	\$1,234,668
Accommodation & Food Services	\$179,489	\$1,514,558	\$5,631,072	\$7,325,119
Other Services	\$979,972	\$2,174,279	\$4,137,639	\$7,291,890
Government	\$5,439,407	\$1,965,282	\$1,520,637	\$8,925,326

Summary

USDA through their StrikeForce program has invested between \$365 million and \$501 million each year from FY2011 to FY2013 in the 25 StrikeForce counties in Arkansas. This investment has resulted in a substantial impact on the Arkansas economy. It is estimated that these investments have increased output in the Arkansas economy between \$569 million and nearly \$726 million per year. More importantly it is estimated that these investments have provided between 5,708 and 6,997 additional jobs per year for Arkansas residents, many of these in the 25 StrikeForce counties (Figure 1). Just as important it is estimated that these investments have increased incomes of Arkansas residents between \$147 million and \$178 million per year in the three years and have increased the size of the state economy (value added) between \$267 million and \$316 million in each of the three years.

Figure 1, Estimated Employment, Labor Income and Value Added Generated by USDA StrikeForce Investments, FY2011 to Fy2013

