

# Survey of Plant Capacity: 2006

Issued November 2007

MQ-C1(06)

**Current Industrial  
Reports**



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# Introduction

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## SUMMARY OF 2006 SURVEY RESULTS

U.S. domestic manufacturing plants used an estimated 70 percent ( $\pm 1$  percent) of their full production capacity for the fourth quarter of 2006 and 71 percent ( $\pm 1$  percent) for the fourth quarter of 2005. The durable goods industries fourth quarter 2006 rate of 69 percent ( $\pm 1$  percent) was similar to the rate of 71 percent ( $\pm 1$  percent) observed for the nondurable goods industries. Durable goods industries are manufacturing industries in which products have a normal life expectancy of 3 years or more. North American Industry Classification System (NAICS) subsectors 321, 327, 331, 332, 333, 334, 335, 336, 337, and 339 are considered durable goods industries. Nondurable goods industries are manufacturing industries in which products generally have a life expectancy of less than 3 years. NAICS subsectors 311, 312, 313, 314, 315, 316, 322, 323, 324, 325, and 326 are nondurable goods industries.

The advanced processing industries fourth quarter rate of 68 percent ( $\pm 1$  percent) was lower than the rate of 72 percent ( $\pm 1$  percent) estimated for primary processing industries. Primary processing industries are industries in which products are generally the first processed output of raw materials in the manufacturing process. NAICS subsectors 313, 314, 321, 322, 324, 326, 327, and 331 are classified as the primary processing industries. Advanced processing industries are industries in which products are considered finished manufactured items. NAICS subsectors 311, 312, 315, 316, 323, 333, 334, 335, 336, 337, and 339 are advanced processing industries.

Among the manufacturing subsectors with the lowest utilization rates of their full production capacity in the fourth quarter of 2006 were textile mills (NAICS 313) at 63 percent and wood product manufacturing (NAICS 321) at 65 percent. Among the manufacturing subsectors with the highest utilization rates for the fourth quarter of 2006 were petroleum and coal products manufacturing (NAICS 324) at 81 percent and paper manufacturing (NAICS 322) at 78 percent. Full production capacity is broadly defined as the maximum level of production an establishment could attain under normal operating conditions. In this report, the full production utilization rate is a ratio of the actual level of operations to the full production level.

Manufacturing subsectors with the lowest utilization rates of their national emergency production capacity in the fourth quarter of 2006 were nonmetallic mineral product manufacturing (NAICS 327) at 33 percent and leather and allied product manufacturing (NAICS 316) at 38 percent. Among the manufacturing subsectors with the highest utilization rates for the fourth quarter of 2006 were petroleum and coal products manufacturing (NAICS 324) at 76 percent and paper manufacturing (NAICS 322) at 66 percent. National emergency production is broadly defined as the greatest level of production an establishment can expect to sustain for 1 year or more under national emergency conditions. The national emergency production utilization rate is a ratio of the actual level of operations to the national emergency production level.

Table 1a summarizes full production utilization rates and Table 1b summarizes emergency production utilization rates, at three-, four-, five-, and six-digit NAICS industry levels, for fourth quarters 2002 through 2006. Table 2 shows both full and emergency production utilization rates and standard errors for fourth quarters 2005 and 2006, and the standard error of the change in utilization rates from 2005 to 2006 at the three-, four-, five-, and six-digit NAICS industry levels. Estimates are subject to sampling variability and nonsampling error. The range at which estimates are tested in this report is at the 90-percent confidence level. Appendix A contains reproductions of the survey form and instructions; Appendix B describes the qualifications of the data; and Appendix C contains a description of the survey sample and estimating procedure.

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## **INDUSTRIAL CLASSIFICATION**

The industrial classification definitions are based on the 2002 edition of the North American Industry Classification System (NAICS) manual published by the U.S. Office of Management and Budget.

## **SURVEY DESCRIPTION**

Data are obtained from manufacturing establishments by means of a mailed questionnaire. Respondents are asked to report their actual production, full production, and national emergency production levels of operation for the fourth quarter of the year in terms of value of production. From these reported dollar values, utilization rates for full production and national emergency production are derived. Year-to-year changes in these rates are affected by changes in the estimated capacity of industrial plants due to factors such as capital expenditures, capital retirements, changes in the workforce, changes in prices, changes in product mix, and changes in respondents' estimates of productivity.

Final estimates are based on information collected from a sample of approximately 17,000 manufacturing and publishing establishments. Estimates in this release are based on response from approximately 80 percent of the survey panel.

## **ABBREVIATIONS AND SYMBOLS**

The following abbreviations and symbols appear frequently in the tables:

- Represents zero.
- (D) Withheld to avoid disclosing data for individual companies.
- (NA) Not available.
- NAICS North American Industry Classification System.
- <sup>a</sup> Data cells with a level of imputation exceeding 50 percent.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
<b>31-33</b>	<b>Manufacturing<sup>1</sup></b>	<b>70</b>	<b>71</b>	<b>70</b>	<b>64</b>	<b>63</b>
	<b>Durable goods industries<sup>1</sup></b>	<b>69</b>	<b>70</b>	<b>68</b>	<b>61</b>	<b>59</b>
	<b>Nondurable goods industries<sup>1</sup></b>	<b>71</b>	<b>71</b>	<b>72</b>	<b>69</b>	<b>69</b>
	<b>Advanced processing industries<sup>1</sup></b>	<b>68</b>	<b>70</b>	<b>68</b>	<b>62</b>	<b>61</b>
	<b>Primary processing industries<sup>1</sup></b>	<b>72</b>	<b>73</b>	<b>73</b>	<b>70</b>	<b>68</b>
311	Food mfg	71	73	73	74	73
3111	Animal food mfg	77	72	75	71	73
31111	Animal food mfg	77	72	75	71	73
311111	Dog & cat food mfg	74	70	73	81	80
311119	Other animal food mfg	81	75	78	63	68
3112	Grain & oilseed milling	74	81	78	84	79
31121	Flour milling & malt mfg	80	80	80	79	78
311211	Flour milling	82	81	81	79	79
311212	Rice milling	73	74	77	78	74
311213	Malt mfg	91	91	93	82	75
31122	Starch & vegetable fats & oils mfg	89	87	85	90	91
311221	Wet corn milling	94	94	95	95	93
311222	Soybean processing	91	88	85	94	96
311223	Other oilseed processing	85	87	78	76	70
311225	Fats & oils refining & blending	79	73	73	80	84
31123	Breakfast cereal mfg	60	76	71	81	<sup>a72</sup>
311230	Breakfast cereal mfg	60	76	71	81	<sup>a72</sup>
3113	Sugar & confectionery product mfg	67	69	70	70	69
31131	Sugar mfg	87	92	93	93	93
311311	Sugarcane mills	89	87	87	98	93
311312	Cane sugar refining	<sup>a73</sup>	<sup>a90</sup>	<sup>a89</sup>	<sup>a71</sup>	<sup>a79</sup>
311313	Beet sugar mfg	97	96	99	99	97
31132	Chocolate & confectionery mfg from cacao beans	68	70	67	83	81
311320	Chocolate & confectionery mfg from cacao beans	68	70	67	83	81
31133	Confectionery mfg from purchased chocolate	67	66	68	64	63
311330	Confectionery mfg from purchased chocolate	67	66	68	64	63
31134	Nonchocolate confectionery mfg	59	66	<sup>a65</sup>	66	63
311340	Nonchocolate confectionery mfg	59	66	<sup>a65</sup>	66	63
3114	Fruit & vegetable preserving & specialty food mfg	67	71	69	62	64
31141	Frozen food mfg	81	79	78	77	77
311411	Frozen fruit, juice, & vegetable mfg	77	75	73	85	79
311412	Frozen specialty food mfg	84	83	81	72	76
31142	Fruit & vegetable canning, pickling, & drying	59	66	64	54	57
311421	Fruit & vegetable canning	49	56	53	49	51
311422	Specialty canning	82	84	86	64	66
311423	Dried & dehydrated food mfg	73	78	77	67	68
3115	Dairy product mfg	72	71	72	79	77
31151	Dairy product (except frozen) mfg	74	73	74	81	78
311511	Fluid milk mfg	74	74	74	85	82
311512	Creamery butter mfg	67	72	71	74	72
311513	Cheese mfg	80	78	81	79	81
311514	Dry, condensed, & evaporated dairy product mfg	65	64	69	75	69
31152	Ice cream & frozen dessert mfg	64	67	62	<sup>a73</sup>	69
311520	Ice cream & frozen dessert mfg	64	67	62	<sup>a73</sup>	69
3116	Meat product mfg	82	81	84	82	83
31161	Animal slaughtering & processing	82	81	84	82	83
311611	Animal (except poultry) slaughtering	80	76	79	84	88
311612	Meat processed from carcasses	69	70	77	75	77
311613	Rendering & meat byproduct processing	71	73	70	78	76
311615	Poultry processing	92	91	91	87	86
3117	Seafood product preparation & packaging	57	60	60	61	56
31171	Seafood product preparation & packaging	57	60	60	61	56
311711	Seafood canning	52	52	50	69	64
311712	Fresh & frozen seafood processing	58	62	62	60	55
3118	Bakeries & tortilla mfg	71	72	71	72	73
31181	Bread & bakery product mfg	74	76	74	76	76
311811	Retail bakeries	71	74	75	<sup>a58</sup>	<sup>a65</sup>
311812	Commercial bakeries	76	77	75	78	76
311813	Frozen cakes, pies, & other pastries mfg	66	72	66	80	78
31182	Cookie, cracker, & pasta mfg	65	65	66	64	68
311821	Cookie & cracker mfg	63	63	65	62	66
311822	Flour mixes & dough mfg from purchased flour	71	70	70	69	72
311823	Dry pasta mfg	73	70	66	63	77
31183	Tortilla mfg	86	84	75	81	79
311830	Tortilla mfg	86	84	75	81	79
3119	Other food mfg	63	66	67	74	73
31191	Snack food mfg	69	85	82	85	80
311911	Roasted nuts & peanut butter mfg	63	73	75	72	76
311919	Other snack food mfg	70	88	84	89	81
31192	Coffee & tea mfg	50	60	67	<sup>a71</sup>	71
311920	Coffee & tea mfg	50	60	67	<sup>a71</sup>	71
31193	Flavoring syrup & concentrate mfg	54	49	50	72	70
311930	Flavoring syrup & concentrate mfg	54	49	50	72	70
31194	Seasoning & dressing mfg	65	64	65	67	67
311941	Mayonnaise, dressing, & other prepared sauce mfg	70	69	69	74	74
311942	Spice & extract mfg	61	60	61	61	62
31199	All other food mfg	66	69	72	70	71
311991	Perishable prepared food mfg	68	73	67	68	67
311999	All other miscellaneous food mfg	66	67	74	70	72

See footnotes at end of table.



Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
312	Beverage & tobacco product mfg .....	70	69	65	64	65
3121	Beverage mfg .....	67	67	64	68	65
31211	Soft drink & ice mfg .....	58	59	56	63	57
312111	Soft drink mfg .....	65	64	62	70	60
312112	Bottled water mfg .....	<sup>a38</sup>	<sup>a42</sup>	45	32	50
312113	Ice mfg .....	25	30	24	28	23
31212	Breweries .....	82	82	82	78	81
312120	Breweries .....	82	82	82	78	81
31213	Wineries .....	70	63	55	63	66
312130	Wineries .....	70	63	55	63	66
31214	Distilleries .....	66	68	70	69	66
312140	Distilleries .....	66	68	70	69	66
3122	Tobacco mfg .....	73	72	67	61	65
31221	Tobacco stemming & redrying .....	(D)	(NA)	64	77	59
312210	Tobacco stemming & redrying .....	(D)	(NA)	64	77	59
31222	Tobacco product mfg .....	73	71	67	61	65
312221	Cigarette mfg .....	72	71	65	61	65
312229	Other tobacco product mfg .....	84	74	95	69	66
313	Textile mills .....	63	69	72	64	66
3131	Fiber, yarn, & thread mills .....	70	75	80	77	74
31311	Fiber, yarn, & thread mills .....	70	75	80	77	74
313111	Yarn spinning mills .....	74	82	87	82	78
313112	Yarn texturing, throwing, & twisting mills .....	67	68	73	68	69
313113	Thread mills .....	52	70	<sup>a67</sup>	<sup>a72</sup>	66
3132	Fabric mills .....	66	69	71	66	65
31321	Broadwoven fabric mills .....	67	71	78	69	66
313210	Broadwoven fabric mills .....	<sup>a67</sup>	71	78	69	66
31322	Narrow fabric mills & schiffli machine embroidery .....	63	68	76	64	68
313221	Narrow fabric mills .....	64	69	76	68	69
313222	Schiffli machine embroidery .....	<sup>a56</sup>	<sup>a63</sup>	73	53	66
31323	Nonwoven fabric mills .....	70	69	65	60	62
313230	Nonwoven fabric mills .....	70	69	65	60	62
31324	Knit fabric mills .....	53	63	64	72	63
313241	Weft knit fabric mills .....	<sup>a64</sup>	<sup>a68</sup>	<sup>a73</sup>	71	71
313249	Other knit fabric & lace mills .....	45	59	56	58	59
3133	Textile & fabric finishing & fabric coating mills .....	56	66	70	58	64
31331	Textile & fabric finishing mills .....	54	64	70	58	65
313311	Broadwoven fabric finishing mills .....	46	58	67	55	71
313312	Textile & fabric finishing mills .....	67	73	77	63	55
31332	Fabric coating mills .....	64	71	70	61	59
313320	Fabric coating mills .....	64	71	70	61	59
314	Textile product mills .....	70	72	73	73	66
3141	Textile furnishings mills .....	77	79	78	76	73
31411	Carpet & rug mills .....	80	82	82	78	75
314110	Carpet & rug mills .....	80	82	82	78	75
31412	Curtain & linen mills .....	72	74	73	73	72
314121	Curtain & drapery mills .....	85	84	84	<sup>a72</sup>	77
314129	Other household textile product mills .....	69	72	71	73	70
3149	Other textile product mills .....	61	62	64	69	57
31491	Textile bag & canvas mills .....	70	65	72	59	61
314911	Textile bag mills .....	53	60	71	<sup>a49</sup>	67
314912	Canvas & related product mills .....	75	<sup>a67</sup>	73	66	59
31499	All other textile product mills .....	57	61	62	73	55
314991	Rope, cordage, & twine mills .....	67	73	75	61	61
314992	Tire cord & tire fabric mills .....	70	91	91	89	83
314999	All other miscellaneous textile product mills .....	55	57	58	73	53
315	Apparel mfg .....	71	71	74	66	72
3151	Apparel knitting mills .....	73	76	73	65	78
31511	Hosiery & sock mills .....	74	75	71	75	78
315111	Sheer hosiery mills .....	71	70	62	80	77
315119	Other hosiery & sock mills .....	75	78	74	73	77
31519	Other apparel knitting mills .....	71	78	79	<sup>a54</sup>	<sup>a77</sup>
315191	Outerwear knitting mills .....	69	80	84	<sup>a52</sup>	<sup>a75</sup>
315192	Underwear & nightwear knitting mills .....	86	75	65	68	<sup>a91</sup>
3152	Cut & sew apparel mfg .....	71	70	75	66	<sup>a72</sup>
31521	Cut & sew apparel contractors .....	54	47	50	68	69
315211	Men's & boys' cut & sew apparel contractors .....	67	60	69	79	75
315212	Women's, girls', & infants' cut & sew apparel contractors .....	51	<sup>a44</sup>	45	63	66
31522	Men's & boys' cut & sew apparel mfg .....	78	79	84	<sup>a67</sup>	75
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	80	81	<sup>a81</sup>	<sup>a71</sup>	<sup>a60</sup>
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	81	81	79	<sup>a50</sup>	<sup>a60</sup>
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	76	80	<sup>a73</sup>	<sup>a70</sup>	<sup>a73</sup>
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	<sup>a73</sup>	77	86	69	80
315225	Men's & boys' cut & sew work clothing mfg .....	86	81	86	90	88
315228	Men's & boys' cut & sew other outerwear mfg .....	73	75	88	<sup>a57</sup>	77
31523	Women's & girls' cut & sew apparel mfg .....	80	79	83	<sup>a65</sup>	<sup>a70</sup>
315231	Women's & girls' cut & sew lingerie & nightwear mfg .....	<sup>a72</sup>	<sup>a64</sup>	<sup>a96</sup>	45	<sup>a63</sup>
315232	Women's & girls' cut & sew blouse & shirt mfg .....	<sup>a78</sup>	<sup>a89</sup>	<sup>a71</sup>	82	83
315233	Women's & girls' cut & sew dress mfg .....	82	<sup>a82</sup>	<sup>a72</sup>	<sup>a51</sup>	<sup>a58</sup>
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	96	<sup>a71</sup>	<sup>a82</sup>	<sup>a60</sup>	<sup>a61</sup>
315239	Women's & girls' cut & sew other outerwear mfg .....	83	82	92	<sup>a87</sup>	<sup>a78</sup>
31529	Other cut & sew apparel mfg .....	69	<sup>a72</sup>	<sup>a60</sup>	69	<sup>a78</sup>
315291	Infants' cut & sew apparel mfg .....	47	88	<sup>a88</sup>	92	(NA)
315292	Fur & leather apparel mfg .....	59	56	54	<sup>a78</sup>	<sup>a61</sup>
315299	All other cut & sew apparel mfg .....	72	<sup>a72</sup>	<sup>a58</sup>	61	<sup>a60</sup>
3159	Apparel accessories & other apparel mfg .....	69	70	72	61	64
31599	Apparel accessories & other apparel mfg .....	69	70	72	61	64
315991	Hat, cap, & millinery mfg .....	68	67	67	59	59
315992	Glove & mitten mfg .....	63	79	71	37	<sup>a51</sup>
315993	Men's & boys' neckwear mfg .....	<sup>a77</sup>	89	82	71	76
315999	Other apparel accessories & other apparel mfg .....	68	<sup>a65</sup>	71	66	68

See footnotes at end of table.

Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
316	Leather & allied product mfg .....	67	65	68	58	54
3161	Leather & hide tanning & finishing .....	84	65	71	70	63
31611	Leather & hide tanning & finishing .....	84	65	71	70	63
316110	Leather & hide tanning & finishing .....	84	65	71	70	63
3162	Footwear mfg .....	59	59	62	52	<sup>a</sup> 48
31621	Footwear mfg .....	59	59	62	52	<sup>a</sup> 48
316211	Rubber & plastics footwear mfg .....	55	57	51	54	<sup>a</sup> 41
316212	House slipper mfg .....	<sup>a</sup> 70	(D)	(NA)	69	57
316213	Men's footwear (except athletic) mfg .....	61	57	71	59	61
316214	Women's footwear (except athletic) mfg .....	<sup>a</sup> 64	<sup>a</sup> 65	<sup>a</sup> 56	<sup>a</sup> 27	<sup>a</sup> 26
316219	Other footwear mfg .....	62	70	60	<sup>a</sup> 69	<sup>a</sup> 79
3169	Other leather & allied product mfg .....	69	73	72	57	56
31699	Other leather & allied product mfg .....	69	73	72	57	56
316991	Luggage mfg .....	74	77	75	47	48
316992	Women's handbag & purse mfg .....	86	84	75	69	62
316993	Personal leather good (except women's handbag & purse) mfg .....	<sup>a</sup> 32	<sup>a</sup> 41	<sup>a</sup> 56	<sup>a</sup> 74	<sup>a</sup> 55
316999	All other leather good mfg .....	81	82	81	<sup>a</sup> 73	78
321	Wood product mfg .....	65	70	73	70	67
3211	Sawmills & wood preservation .....	75	82	83	73	75
32111	Sawmills & wood preservation .....	75	82	83	73	75
321113	Sawmills .....	76	83	85	74	75
321114	Wood preservation .....	72	70	73	66	71
3212	Veneer, plywood, & engineered wood product mfg .....	65	80	78	76	66
32121	Veneer, plywood, & engineered wood product mfg .....	65	80	78	76	66
321211	Hardwood veneer & plywood mfg .....	75	82	79	69	67
321212	Softwood veneer & plywood mfg .....	73	86	78	88	86
321213	Engineered wood member (except truss) mfg .....	63	83	89	73	64
321214	Truss mfg .....	66	81	82	68	54
321219	Reconstituted wood product mfg .....	58	75	72	83	72
3219	Other wood product mfg .....	62	62	67	67	65
32191	Millwork .....	64	66	67	75	73
321911	Wood window & door mfg .....	60	61	62	73	72
321912	Cut stock, resawing lumber, & planing .....	70	75	75	79	77
321918	Other millwork (including flooring) .....	70	73	77	77	73
32192	Wood container & pallet mfg .....	80	52	97	65	59
321920	Wood container & pallet mfg .....	80	52	97	65	59
32199	All other wood product mfg .....	55	61	61	58	58
321991	Manufactured home (mobile home) mfg .....	55	71	63	55	54
321992	Prefabricated wood building mfg .....	56	55	66	69	65
321999	All other miscellaneous wood product mfg .....	54	58	56	56	59
322	Paper mfg .....	79	75	77	81	81
3221	Pulp, paper, & paperboard mills .....	91	84	90	89	90
32211	Pulp mills .....	94	92	93	89	87
322110	Pulp mills .....	94	92	93	89	87
32212	Paper mills .....	88	80	88	87	89
322121	Paper (except newsprint) mills .....	89	80	89	86	90
322122	Newsprint mills .....	81	82	81	95	86
32213	Paperboard mills .....	98	95	94	94	93
322130	Paperboard mills .....	98	95	94	94	93
3222	Converted paper product mfg .....	69	68	68	74	73
32221	Paperboard container mfg .....	70	68	67	76	74
322211	Corrugated & solid fiber box mfg .....	67	65	63	83	78
322212	Folding paperboard box mfg .....	78	77	79	86	79
322213	Setup paperboard box mfg .....	70	73	77	64	68
322214	Fiber can, tube, drum, & similar products mfg .....	63	64	65	<sup>a</sup> 35	<sup>a</sup> 44
322215	Nonfolding sanitary food container mfg .....	76	80	73	70	69
32222	Paper bag & coated & treated paper mfg .....	67	68	66	69	71
322221	Coated & laminated packaging paper & plastics film mfg .....	34	32	28	65	65
322222	Coated & laminated packaging paper & plastics film mfg .....	70	74	72	67	69
322223	Plastics, foil, & coated paper bag mfg .....	77	78	74	73	73
322224	Uncoated paper & multiwall bag mfg .....	68	67	70	72	79
322225	Laminated aluminum foil mfg for flexible packaging uses .....	77	77	77	72	81
322226	Surface-coated paperboard mfg .....	78	66	78	78	84
32223	Stationery product mfg .....	68	72	75	69	65
322231	Die-cut paper & paperboard office supplies mfg .....	71	74	75	76	79
322232	Envelope mfg .....	72	79	77	73	75
322233	Stationery, tablet, & related product mfg .....	58	57	70	58	44
32229	Other converted paper product mfg .....	72	68	68	77	76
322291	Sanitary paper product mfg .....	74	68	72	80	79
322299	All other converted paper product mfg .....	68	67	59	72	73
323	Printing & related support activities .....	71	73	75	68	69
3231	Printing & related support activities .....	71	73	75	68	69
32311	Printing .....	71	73	75	68	69
323110	Commercial lithographic printing .....	74	79	81	72	72
323111	Commercial gravure printing .....	93	65	74	88	84
323112	Commercial flexographic printing .....	63	71	76	75	74
323113	Commercial screen printing .....	59	66	65	66	<sup>a</sup> 57
323114	Quick printing .....	73	73	75	67	69
323115	Digital printing .....	69	75	68	82	<sup>a</sup> 71
323116	Manifold business form printing .....	60	55	63	52	64
323117	Book printing .....	89	<sup>a</sup> 77	82	59	64
323118	Blankbook, looseleaf binder, & device mfg .....	45	<sup>a</sup> 59	<sup>a</sup> 43	51	58
323119	Other commercial printing .....	74	73	82	68	70
32312	Support activities for printing .....	70	73	71	72	69
323121	Tradebinding & related work .....	63	64	75	66	66
323122	Prepress services .....	76	80	69	75	71

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
324	Petroleum & coal products mfg .....	81	76	86	80	80
3241	Petroleum & coal products mfg .....	81	76	86	80	80
32411	Petroleum refineries .....	85	78	93	90	91
324110	Petroleum refineries .....	85	78	93	90	91
32412	Asphalt paving, roofing, & saturated materials mfg .....	57	66	68	44	43
324121	Asphalt paving mixture & block mfg .....	51	51	56	33	32
324122	Asphalt shingle & coating materials mfg .....	63	86	88	67	66
32419	Other petroleum & coal products mfg .....	59	71	64	56	59
324191	Petroleum lubricating oil & grease mfg .....	57	69	62	55	59
324199	All other petroleum & coal products mfg .....	76	83	79	63	60
325	Chemical mfg .....	67	68	67	63	63
3251	Basic chemical mfg .....	75	74	76	75	72
32511	Petrochemical mfg .....	84	85	92	80	75
325110	Petrochemical mfg .....	84	85	92	80	75
32512	Industrial gas mfg .....	78	78	76	72	75
325120	Industrial gas mfg .....	78	78	76	72	75
32513	Dye & pigment mfg .....	76	79	79	76	81
325131	Inorganic dye & pigment mfg .....	77	81	79	83	86
325132	Synthetic organic dye & pigment mfg .....	74	75	77	68	76
32518	Other basic inorganic chemical mfg .....	65	64	64	65	64
325181	Alkalies & chlorine mfg .....	77	85	94	75	76
325182	Carbon black mfg .....	74	79	<sup>a92</sup> 83	<sup>a78</sup> 83	<sup>a78</sup> 76
325188	All other basic inorganic chemical mfg .....	62	60	59	63	62
32519	Other basic organic chemical mfg .....	74	73	81	83	76
325191	Gum & wood chemical mfg .....	61	67	69	72	80
325192	Cyclic crude & intermediate mfg .....	79	75	88	73	<sup>a83</sup> 75
325193	Ethyl alcohol mfg .....	98	94	96	97	86
325199	All other basic organic chemical mfg .....	72	72	80	84	75
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	77	79	87	78	75
32521	Resin & synthetic rubber mfg .....	77	79	87	77	75
325211	Plastics material & resin mfg .....	77	79	87	80	79
325212	Synthetic rubber mfg .....	76	81	86	60	54
32522	Artificial & synthetic fibers & filaments mfg .....	73	78	88	85	77
325221	Cellulosic organic fiber mfg .....	<sup>a66</sup> 74	<sup>a64</sup> 80	83	90	84
325222	Noncellulosic organic fiber mfg .....	74	80	89	84	76
3253	Pesticide, fertilizer, & other agricultural chemical mfg .....	54	73	64	61	60
32531	Fertilizer mfg .....	69	74	70	63	66
325311	Nitrogenous fertilizer mfg .....	85	85	74	83	86
325312	Phosphatic fertilizer mfg .....	75	83	93	85	83
325314	Fertilizer (mixing only) mfg .....	53	59	55	41	45
32532	Pesticide & other agricultural chemical mfg .....	49	73	61	59	57
325320	Pesticide & other agricultural chemical mfg .....	49	73	61	59	57
3254	Pharmaceutical & medicine mfg .....	67	69	68	56	58
32541	Pharmaceutical & medicine mfg .....	67	69	68	56	58
325411	Medicinal & botanical mfg .....	61	60	67	73	80
325412	Pharmaceutical preparation mfg .....	67	70	68	52	54
325413	In-vitro diagnostic substance mfg .....	70	67	65	79	<sup>a84</sup> 72
325414	Biological product (except diagnostic) mfg .....	77	63	64	69	72
3255	Paint, coating, & adhesive mfg .....	64	66	66	67	58
32551	Paint & coating mfg .....	63	66	66	69	61
325510	Paint & coating mfg .....	63	66	66	69	61
32552	Adhesive mfg .....	68	67	66	63	53
325520	Adhesive mfg .....	68	67	66	63	53
3256	Soap, cleaning compound, & toilet preparation mfg .....	53	52	51	62	67
32561	Soap & cleaning compound mfg .....	65	64	63	64	66
325611	Soap & other detergent mfg .....	66	64	67	59	68
325612	Polish & other sanitation good mfg .....	66	65	58	70	61
325613	Surface active agent mfg .....	56	61	57	73	76
32562	Toilet preparation mfg .....	45	45	44	60	68
325620	Toilet preparation mfg .....	45	45	44	60	68
3259	Other chemical product mfg .....	71	74	70	68	66
32591	Printing ink mfg .....	58	55	59	76	60
325910	Printing ink mfg .....	58	55	59	76	60
32592	Explosives mfg .....	65	66	56	70	69
325920	Explosives mfg .....	65	66	56	70	69
32599	All other chemical product & preparation mfg .....	73	77	72	67	67
325991	Custom compounding of purchased resin .....	63	71	71	71	69
325992	Photographic film, paper, plate, & chemical mfg .....	84	89	82	72	69
325998	All other miscellaneous chemical product & preparation mfg .....	68	71	65	61	63
326	Plastics & rubber products mfg .....	69	75	76	73	68
3261	Plastics product mfg .....	69	75	74	72	66
32611	Unsupported plastics film, sheet, & bag mfg .....	77	79	80	72	70
326111	Unsupported plastics bag mfg .....	69	73	73	73	65
326112	Unsupported plastics packaging film & sheet mfg .....	81	82	82	67	70
326113	Unsupported plastics film & sheet (except packaging) mfg .....	80	82	84	73	73
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	74	76	69	72	69
326121	Unsupported plastics profile shape mfg .....	71	70	60	70	69
326122	Plastics pipe & pipe fitting mfg .....	77	87	85	74	69
32613	Laminated plastics plate, sheet, & shape mfg .....	63	77	75	70	62
326130	Laminated plastics plate, sheet, & shape mfg .....	<sup>a63</sup> 76	77	75	70	62
32614	Polystyrene foam product mfg .....	76	84	78	77	78
326140	Polystyrene foam product mfg .....	76	84	78	77	78
32615	Urethane & other foam product (except polystyrene) mfg .....	66	71	74	69	71
326150	Urethane & other foam product (except polystyrene) mfg .....	66	71	74	69	71
32616	Plastics bottle mfg .....	73	83	75	77	79
326160	Plastics bottle mfg .....	73	83	75	77	79
32619	Other plastics product mfg .....	65	72	73	72	63
326191	Plastics plumbing fixture mfg .....	52	66	67	56	54
326192	Resilient floor covering mfg .....	60	74	69	67	62
326199	All other plastics product mfg .....	66	73	73	73	63

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
326	Plastics & rubber products mfg—Con.					
3262	Rubber product mfg	68	77	82	77	74
32621	Tire mfg	67	81	90	85	85
326211	Tire mfg (except retreading)	66	82	92	85	87
326212	Tire retreading	72	76	69	89	61
32622	Rubber & plastics hoses & belting mfg	82	79	84	66	61
326220	Rubber & plastics hoses & belting mfg	82	79	84	66	61
32629	Other rubber product mfg	66	72	75	73	70
326291	Rubber product mfg for mechanical use	63	69	72	75	74
326299	All other rubber product mfg	70	75	78	71	66
327	Nonmetallic mineral product mfg	67	72	70	61	66
3271	Clay product & refractory mfg	77	78	79	69	70
32711	Pottery, ceramics, & plumbing fixture mfg	71	72	74	64	66
327111	Vitreous china plumbing fixture & bathroom accessories mfg	74	83	84	<sup>a</sup> 89	92
327112	Vitreous china, fine earthenware, & other pottery product mfg	75	68	72	52	58
327113	Porcelain electrical supply mfg	64	65	68	61	59
32712	Clay building material & refractories mfg	82	83	82	74	74
327121	Brick & structural clay tile mfg	94	94	95	91	88
327122	Ceramic wall & floor tile mfg	74	81	79	72	65
327123	Other structural clay product mfg	73	82	79	72	85
327124	Clay refractory mfg	67	66	67	57	64
327125	Nonclay refractory mfg	79	78	77	65	<sup>a</sup> 67
3272	Glass & glass product mfg	73	78	80	74	73
32721	Glass & glass product mfg	73	78	80	74	73
327211	Flat glass mfg	84	86	88	83	79
327212	Other pressed & blown glass & glassware mfg	76	83	84	67	68
327213	Glass container mfg	92	92	91	94	95
327215	Glass product mfg made of purchased glass	64	70	72	70	68
3273	Cement & concrete product mfg	59	65	62	50	59
32731	Cement mfg	92	92	93	88	84
327310	Cement mfg	92	92	93	88	84
32732	Ready-mix concrete mfg	46	52	48	35	47
327320	Ready-mix concrete mfg	46	52	48	35	47
32733	Concrete pipe, brick, & block mfg	69	74	71	74	77
327331	Concrete block & brick mfg	71	71	72	76	79
327332	Concrete pipe mfg	67	79	69	72	75
32739	Other concrete product mfg	66	75	76	64	63
327390	Other concrete product mfg	66	75	76	64	63
3274	Lime & gypsum product mfg	79	87	86	84	76
32741	Lime mfg	90	88	90	82	75
327410	Lime mfg	90	88	90	82	75
32742	Gypsum product mfg	77	87	85	84	77
327420	Gypsum product mfg	77	87	85	84	77
3279	Other nonmetallic mineral product mfg	76	77	72	74	71
32791	Abrasive product mfg	73	73	67	65	67
327910	Abrasive product mfg	73	73	67	65	67
32799	All other nonmetallic mineral product mfg	76	78	74	78	73
327991	Cut stone & stone product mfg	71	68	61	70	69
327992	Ground or treated mineral & earth mfg	71	75	71	77	70
327993	Mineral wool mfg	87	94	85	85	85
327999	All other miscellaneous nonmetallic mineral product mfg	68	66	75	75	59
331	Primary metal mfg	73	79	74	72	71
3311	Iron & steel mills & ferroalloy mfg	79	88	85	86	88
33111	Iron & steel mills & ferroalloy mfg	79	88	85	86	88
331111	Iron & steel mills	79	88	85	87	89
331112	Electrometallurgical ferroalloy product mfg	89	92	<sup>a</sup> 90	70	77
3312	Steel product mfg from purchased steel	67	71	68	67	65
33121	Iron & steel pipes & tubes mfg from purchased steel	64	67	64	64	65
331210	Iron & steel pipes & tubes mfg from purchased steel	64	67	64	64	65
33122	Rolling & drawing of purchased steel	71	74	71	70	66
331221	Cold-rolled steel shape mfg	74	72	67	71	66
331222	Steel wire drawing	67	76	76	69	66
3313	Alumina & aluminum production & processing	72	82	85	76	74
33131	Alumina & aluminum production & processing	72	82	85	76	74
331311	Alumina refining	75	91	93	76	<sup>a</sup> 79
331312	Primary aluminum production	57	84	92	72	<sup>a</sup> 70
331314	Secondary smelting & alloying of aluminum	75	79	77	75	75
331315	Aluminum sheet, plate, & foil mfg	86	86	90	86	<sup>a</sup> 87
331316	Aluminum extruded product mfg	66	76	77	71	66
331319	Other aluminum rolling & drawing	80	75	81	<sup>a</sup> 70	65
3314	Nonferrous metal (except aluminum) production & processing	69	74	69	70	67
33141	Nonferrous metal (except aluminum) smelting & refining	62	70	70	66	73
331411	Primary smelting & refining of copper	51	66	64	56	68
331419	Other nonferrous metal primary smelting & refining	77	75	74	78	78
33142	Copper rolling, drawing, extruding, & alloying	70	80	78	75	76
331421	Copper rolling, drawing, & extruding	63	79	76	75	78
331422	Copper wire (except mechanical) drawing	74	81	80	80	80
331423	Secondary smelting, refining, & alloying of copper	83	85	86	68	<sup>a</sup> 60
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	72	71	61	69	60
331491	Other nonferrous metal rolling, drawing, & extruding	79	77	68	64	61
331492	Other nonferrous metal secondary smelting, refining, & alloying	65	65	55	83	<sup>a</sup> 56
3315	Foundries	68	70	64	63	63
33151	Ferrous metal foundries	72	72	68	63	62
331511	Iron foundries	67	69	66	63	65
331512	Steel investment foundries	77	72	74	65	54
331513	Steel foundries (except investment)	85	83	70	64	58
33152	Nonferrous metal foundries	64	66	60	63	65
331521	Aluminum die-casting foundries	62	69	65	66	67
331522	Nonferrous (except aluminum) die-casting foundries	63	62	49	64	61
331524	Aluminum foundries (except die-casting)	65	67	63	60	64
331525	Copper foundries (except die-casting)	57	54	51	56	58
331528	Other nonferrous foundries (except die-casting)	85	79	76	76	75

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
332	Fabricated metal product mfg .....	70	68	66	61	59
3321	Forging & stamping .....	64	63	62	58	56
33211	Forging & stamping .....	64	63	62	58	56
332111	Iron & steel forging .....	72	73	69	56	57
332112	Nonferrous forging .....	68	73	68	67	60
332114	Custom roll forming .....	69	65	64	60	53
332115	Crown & closure mfg .....	55	59	59	62	53
332116	Metal stamping .....	59	58	59	56	55
332117	Powder metallurgy part mfg .....	68	70	67	73	68
3322	Cutlery & handtool mfg .....	63	64	66	61	62
33221	Cutlery & handtool mfg .....	63	64	66	61	62
332211	Cutlery & flatware (except precious) mfg .....	<sup>a</sup> 40	<sup>a</sup> 60	63	54	65
332212	Hand & edge tool mfg .....	73	64	65	61	58
332213	Saw blade & handsaw mfg .....	66	70	77	73	72
332214	Kitchen utensil, pot, & pan mfg .....	76	64	65	<sup>a</sup> 71	67
3323	Architectural & structural metals mfg .....	67	67	63	58	57
33231	Plate work & fabricated structural product mfg .....	72	72	68	59	58
332311	Prefabricated metal building & component mfg .....	65	64	64	59	60
332312	Fabricated structural metal mfg .....	74	73	70	60	58
332313	Plate work mfg .....	75	78	67	56	53
33232	Ornamental & architectural metal products mfg .....	63	64	59	58	56
332321	Metal window & door mfg .....	69	67	54	61	60
332322	Sheet metal work mfg .....	60	61	60	54	53
332323	Ornamental & architectural metal work mfg .....	67	67	66	66	59
3324	Boiler, tank, & shipping container mfg .....	76	72	69	67	64
33241	Power boiler & heat exchanger mfg .....	75	66	70	62	54
332410	Power boiler & heat exchanger mfg .....	75	66	70	62	54
33242	Metal tank (heavy gauge) mfg .....	75	71	67	56	58
332420	Metal tank (heavy gauge) mfg .....	75	71	67	56	58
33243	Metal can, box, & other metal container (light gauge) mfg .....	77	74	70	76	75
332431	Metal can mfg .....	83	82	79	79	77
332439	Other metal container mfg .....	63	60	52	68	66
3325	Hardware mfg .....	65	69	68	62	67
33251	Hardware mfg .....	65	69	68	62	67
332510	Hardware mfg .....	65	69	68	62	67
3326	Spring & wire product mfg .....	69	65	65	64	65
33261	Spring & wire product mfg .....	69	65	65	64	65
332611	Spring (heavy gauge) mfg .....	64	60	57	64	71
332612	Spring (light gauge) mfg .....	66	67	67	65	64
332618	Other fabricated wire product mfg .....	71	65	65	64	65
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	74	70	71	58	53
33271	Machine shops .....	80	73	75	57	50
332710	Machine shops .....	80	73	75	57	50
33272	Turned product & screw, nut, & bolt mfg .....	65	66	65	61	59
332721	Precision turned product mfg .....	67	66	66	58	54
332722	Bolt, nut, screw, rivet, & washer mfg .....	61	65	65	65	65
3328	Coating, engraving, heat treating, & allied activities .....	79	72	67	63	61
33281	Coating, engraving, heat treating, & allied activities .....	79	72	67	63	61
332811	Metal heat treating .....	87	85	83	71	65
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	85	72	62	70	71
332813	Electroplating, plating, polishing, anodizing, & coloring .....	68	66	67	55	52
3329	Other fabricated metal product mfg .....	70	69	66	65	64
33291	Metal valve mfg .....	71	67	65	65	64
332911	Industrial valve mfg .....	72	63	61	63	63
332912	Fluid power valve & hose fitting mfg .....	74	71	71	67	64
332913	Plumbing fixture fitting & trim mfg .....	68	64	65	67	66
332919	Other metal valve & pipe fitting mfg .....	64	74	63	65	62
33299	All other fabricated metal product mfg .....	69	70	67	66	64
332991	Ball & roller bearing mfg .....	82	83	78	71	68
332992	Small arms ammunition mfg .....	85	78	71	63	69
332993	Ammunition (except small arms) mfg .....	58	70	58	52	52
332994	Small arms mfg .....	58	63	64	71	72
332995	Other ordnance & accessories mfg .....	65	68	<sup>a</sup> 56	63	67
332996	Fabricated pipe & pipe fitting mfg .....	79	75	73	62	63
332997	Industrial pattern mfg .....	53	68	70	55	69
332998	Enameled iron & metal sanitary ware mfg .....	72	62	72	72	68
332999	All other miscellaneous fabricated metal product mfg .....	64	65	64	66	62
333	Machinery mfg .....	66	67	66	59	57
3331	Agriculture, construction, & mining machinery mfg .....	69	73	72	60	55
33311	Agricultural implement mfg .....	63	68	74	57	52
333111	Farm machinery & equipment mfg .....	63	70	80	55	53
333112	Lawn & garden tractor & home lawn & garden equipment mfg .....	63	63	60	63	50
33312	Construction machinery mfg .....	70	75	68	65	57
333120	Construction machinery mfg .....	70	75	68	65	57
33313	Mining & oil & gas field machinery mfg .....	86	79	76	57	54
333131	Mining machinery & equipment mfg .....	79	77	74	57	53
333132	Oil & gas field machinery & equipment mfg .....	88	80	76	57	54
3332	Industrial machinery mfg .....	64	57	64	52	51
33321	Sawmill & woodworking machinery mfg .....	70	74	70	56	49
333210	Sawmill & woodworking machinery mfg .....	70	74	70	56	49
33322	Plastics & rubber industry machinery mfg .....	67	62	62	57	56
333220	Plastics & rubber industry machinery mfg .....	67	62	62	57	56
33329	Other industrial machinery mfg .....	63	56	64	52	50
333291	Paper industry machinery mfg .....	66	69	71	68	62
333292	Textile machinery mfg .....	56	52	46	<sup>a</sup> 57	<sup>a</sup> 57
333293	Printing machinery & equipment mfg .....	57	67	67	65	58
333294	Food product machinery mfg .....	70	71	73	55	52
333295	Semiconductor machinery mfg .....	67	49	58	43	44
333298	All other industrial machinery mfg .....	58	64	67	56	54

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
333	Machinery mfg—Con.					
3333	Commercial & service industry machinery mfg . . . . .	68	72	67	58	55
33331	Commercial & service industry machinery mfg . . . . .	68	72	67	58	55
333311	Automatic vending machine mfg . . . . .	66	53	61	44	41
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	83	78	81	33	a28
333313	Office machinery mfg . . . . .	60	a78	79	a43	a56
333314	Optical instrument & lens mfg . . . . .	75	68	70	71	66
333315	Photographic & photocopying equipment mfg . . . . .	74	85	41	70	59
333319	Other commercial & service industry machinery mfg . . . . .	67	73	73	60	55
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	66	61	62	60
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	66	61	62	60
333411	Air purification equipment mfg . . . . .	70	71	65	62	59
333412	Industrial & commercial fan & blower mfg . . . . .	61	65	64	64	55
333414	Heating equipment (except warm air furnaces) mfg . . . . .	54	65	62	59	59
333415	AC & warm air heating & commercial/industrial refrig equip mfg . . . . .	63	66	60	62	60
3335	Metalworking machinery mfg . . . . .	66	68	66	58	57
33351	Metalworking machinery mfg . . . . .	66	68	66	58	57
333511	Industrial mold mfg . . . . .	68	71	73	58	64
333512	Machine tool (metal cutting types) mfg . . . . .	72	66	61	49	47
333513	Machine tool (metal forming types) mfg . . . . .	64	57	61	49	46
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	66	71	67	60	57
333515	Cutting tool & machine tool accessory mfg . . . . .	67	68	68	67	60
333516	Rolling mill machinery & equipment mfg . . . . .	74	72	67	56	58
333518	Other metalworking machinery mfg . . . . .	53	61	56	57	58
3336	Engine, turbine, & power transmission equipment mfg . . . . .	68	68	65	67	61
33361	Engine, turbine, & power transmission equipment mfg . . . . .	68	68	65	67	61
333611	Turbine & turbine generator set unit mfg . . . . .	a49	a53	a58	a78	a88
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	72	72	64	53	53
333613	Mechanical power transmission equipment mfg . . . . .	70	75	75	51	50
333618	Other engine equipment mfg . . . . .	79	74	73	67	53
3339	Other general-purpose machinery mfg . . . . .	67	66	66	59	58
33391	Pump & compressor mfg . . . . .	67	64	68	59	63
333911	Pump & pumping equipment mfg . . . . .	71	71	72	64	67
333912	Air & gas compressor mfg . . . . .	65	60	58	52	56
333913	Measuring & dispensing pump mfg . . . . .	a43	a42	a82	a74	a70
33392	Material handling equipment mfg . . . . .	67	64	65	59	55
333921	Elevator & moving stairway mfg . . . . .	80	76	73	66	70
333922	Conveyor & conveying equipment mfg . . . . .	62	58	63	58	55
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	a74	83	73	59	49
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	67	59	60	58	52
33399	All other general-purpose machinery mfg . . . . .	67	68	66	59	58
333991	Power-driven handtool mfg . . . . .	54	a60	a61	75	75
333992	Welding & soldering equipment mfg . . . . .	75	75	76	41	50
333993	Packaging machinery mfg . . . . .	69	70	66	60	62
333994	Industrial process furnace & oven mfg . . . . .	61	60	69	54	49
333995	Fluid power cylinder & actuator mfg . . . . .	73	69	67	66	62
333996	Fluid power pump & motor mfg . . . . .	65	66	65	64	62
333997	Scale & balance (except laboratory) mfg . . . . .	71	67	57	58	50
333999	All other miscellaneous general-purpose machinery mfg . . . . .	66	68	66	61	55
334	Computer & electronic product mfg . . . . .	72	69	67	53	52
3341	Computer & peripheral equipment mfg . . . . .	69	66	a71	65	62
33411	Computer & peripheral equipment mfg . . . . .	69	66	a71	65	62
334111	Electronic computer mfg . . . . .	a67	a66	a76	67	65
334112	Computer storage device mfg . . . . .	78	61	57	55	a51
334113	Computer terminal mfg . . . . .	a85	a67	87	a94	51
334119	Other computer peripheral equipment mfg . . . . .	72	70	69	71	a66
3342	Communications equipment mfg . . . . .	74	a58	a56	a32	a35
33421	Telephone apparatus mfg . . . . .	a74	a57	a58	a24	a27
334210	Telephone apparatus mfg . . . . .	a74	a57	a58	a24	a27
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	74	59	54	52	a56
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	74	59	54	52	a56
33429	Other communications equipment mfg . . . . .	68	60	63	63	66
334290	Other communications equipment mfg . . . . .	68	60	63	63	66
3343	Audio & video equipment mfg . . . . .	76	76	71	57	54
33431	Audio & video equipment mfg . . . . .	76	76	71	57	54
334310	Audio & video equipment mfg . . . . .	76	76	71	57	54
3344	Semiconductor & other electronic component mfg . . . . .	79	79	74	70	58
33441	Semiconductor & other electronic component mfg . . . . .	79	79	74	70	58
334411	Electron tube mfg . . . . .	43	43	47	74	73
334412	Bare printed circuit board mfg . . . . .	57	59	56	60	51
334413	Semiconductor & related device mfg . . . . .	89	88	83	79	65
334414	Electronic capacitor mfg . . . . .	58	58	56	57	51
334415	Electronic resistor mfg . . . . .	67	56	50	47	47
334416	Electronic coil, transformer, & other inductor mfg . . . . .	71	60	64	50	45
334417	Electronic connector mfg . . . . .	60	61	60	65	53
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	60	71	65	a63	47
334419	Other electronic component mfg . . . . .	62	63	61	49	48
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	67	65	63	63	60
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	67	65	63	63	60
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	75	75	73	75	79
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	61	62	56	a67	59
334512	Automatic environmental control mfg . . . . .	69	68	66	62	49
334513	Industrial process control instrument mfg . . . . .	71	70	64	55	58
334514	Totalizing fluid meter & counting device mfg . . . . .	70	a67	71	70	60
334515	Electricity measuring & testing instrument mfg . . . . .	58	53	57	52	51
334516	Analytical laboratory instrument mfg . . . . .	86	81	84	59	62
334517	Irradiation apparatus mfg . . . . .	73	79	75	77	79
334518	Watch, clock, & part mfg . . . . .	73	56	82	46	51
334519	Other measuring & controlling device mfg . . . . .	71	63	67	53	59
3346	Mfg & reproducing magnetic & optical media . . . . .	74	76	78	67	73
33461	Mfg & reproducing magnetic & optical media . . . . .	74	76	78	67	73
334611	Software reproducing . . . . .	70	a83	a58	78	81
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	80	77	a83	63	72
334613	Magnetic & optical recording media mfg . . . . .	a62	72	75	81	77

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
335	Electrical equipment, appliance, & component mfg .....	69	68	69	64	60
3351	Electric lighting equipment mfg .....	62	63	63	60	58
33511	Electric lamp bulb & part mfg .....	64	62	71	61	67
335110	Electric lamp bulb & part mfg .....	64	62	71	61	67
33512	Lighting fixture mfg .....	61	63	61	60	56
335121	Residential electric lighting fixture mfg .....	72	62	55	<sup>a62</sup>	<sup>a52</sup>
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	63	61	63	55	54
335129	Other lighting equipment mfg .....	55	66	63	67	62
3352	Household appliance mfg .....	77	74	76	78	72
33521	Small electrical appliance mfg .....	68	67	75	84	68
335211	Electric housewares & household fan mfg .....	69	63	75	88	65
335212	Household vacuum cleaner mfg .....	65	74	75	80	71
33522	Major appliance mfg .....	79	76	77	76	74
335221	Household cooking appliance mfg .....	65	57	61	57	56
335222	Household refrigerator & home freezer mfg .....	88	92	92	84	81
335224	Household laundry equipment mfg .....	80	79	77	85	87
335228	Other major household appliance mfg .....	83	78	77	81	74
3353	Electrical equipment mfg .....	67	<sup>a64</sup>	69	59	59
33531	Electrical equipment mfg .....	67	<sup>a64</sup>	69	59	59
335311	Power, distribution, & specialty transformer mfg .....	69	66	63	61	63
335312	Motor & generator mfg .....	70	<sup>a59</sup>	75	62	60
335313	Switchgear & switchboard apparatus mfg .....	71	69	66	63	64
335314	Relay & industrial control mfg .....	60	65	68	53	54
3359	Other electrical equipment & component mfg .....	70	71	67	64	58
33591	Battery mfg .....	75	75	67	65	57
335911	Storage battery mfg .....	78	80	66	63	<sup>a52</sup>
335912	Primary battery mfg .....	71	70	69	68	64
33592	Communication & energy wire & cable mfg .....	72	78	76	64	53
335921	Fiber optic cable mfg .....	74	67	<sup>a61</sup>	<sup>a52</sup>	<sup>a45</sup>
335929	Other communication & energy wire mfg .....	72	80	78	72	58
33593	Wiring device mfg .....	69	66	65	64	66
335931	Current-carrying wiring device mfg .....	66	63	66	65	67
335932	Noncurrent-carrying wiring device mfg .....	72	71	61	64	64
33599	All other electrical equipment & component mfg .....	66	70	64	63	57
335991	Carbon & graphite product mfg .....	66	68	75	66	53
335999	All other miscellaneous electrical equipment & component mfg .....	66	70	61	<sup>a62</sup>	57
336	Transportation equipment mfg .....	68	73	70	66	64
3361	Motor vehicle mfg .....	71	81	81	82	83
33611	Automobile & light duty motor vehicle mfg .....	70	81	82	83	85
336111	Automobile mfg .....	79	89	82	80	82
336112	Light truck & utility vehicle mfg .....	66	78	81	87	89
33612	Heavy duty truck mfg .....	78	74	71	61	52
336120	Heavy duty truck mfg .....	78	74	71	61	52
3362	Motor vehicle body & trailer mfg .....	59	65	67	61	61
33621	Motor vehicle body & trailer mfg .....	59	65	67	61	61
336211	Motor vehicle body mfg .....	73	76	77	64	65
336212	Truck trailer mfg .....	74	75	70	54	54
336213	Motor home mfg .....	41	45	50	61	55
336214	Travel trailer & camper mfg .....	53	69	67	63	64
3363	Motor vehicle parts mfg .....	69	73	74	73	72
33631	Motor vehicle gasoline engine & engine parts mfg .....	64	71	71	74	73
336311	Carburetor, piston, piston ring, & valve mfg .....	77	85	83	82	80
336312	Gasoline engine & engine parts mfg .....	70	70	70	72	71
33632	Motor vehicle electrical & electronic equipment mfg .....	72	75	74	64	60
336321	Vehicular lighting equipment mfg .....	75	75	71	79	71
336322	Other motor vehicle electrical & electronic equipment mfg .....	71	75	75	62	59
33633	Motor vehicle steering & suspension component (except spring) mfg ..	78	77	74	70	72
336330	Motor vehicle steering & suspension component (except spring) mfg .....	78	77	74	70	72
33634	Motor vehicle brake system mfg .....	63	71	71	78	75
336340	Motor vehicle brake system mfg .....	63	71	71	78	75
33635	Motor vehicle transmission & power train parts mfg .....	73	79	81	77	81
336350	Motor vehicle transmission & power train parts mfg .....	73	79	81	77	81
33636	Motor vehicle seating & interior trim mfg .....	<sup>a70</sup>	72	72	84	83
336360	Motor vehicle seating & interior trim mfg .....	<sup>a70</sup>	72	72	84	83
33637	Motor vehicle metal stamping .....	64	68	70	76	75
336370	Motor vehicle metal stamping .....	64	68	70	76	75
33639	Other motor vehicle parts mfg .....	71	72	74	72	71
336391	Motor vehicle air-conditioning mfg .....	74	73	70	73	76
336399	All other motor vehicle parts mfg .....	71	72	74	72	70
3364	Aerospace product & parts mfg .....	69	68	57	55	52
33641	Aerospace product & parts mfg .....	69	68	57	55	52
336411	Aircraft mfg .....	67	64	52	47	50
336412	Aircraft engine & engine parts mfg .....	76	71	64	<sup>a63</sup>	61
336413	Other aircraft part & auxiliary equipment mfg .....	68	69	62	57	58
336414	Guided missile & space vehicle mfg .....	72	83	<sup>a63</sup>	87	<sup>a45</sup>
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	55	56	49	43	45
336419	Other guided missile & space vehicle parts & auxiliary equip mfg .....	73	63	58	44	46
3365	Railroad rolling stock mfg .....	<sup>a52</sup>	79	69	50	45
33651	Railroad rolling stock mfg .....	<sup>a52</sup>	79	69	50	45
336510	Railroad rolling stock mfg .....	<sup>a52</sup>	79	69	50	45
3366	Ship & boat building .....	69	72	<sup>a71</sup>	52	53
33661	Ship & boat building .....	69	72	<sup>a71</sup>	52	53
336611	Ship building & repairing .....	<sup>a77</sup>	<sup>a80</sup>	<sup>a76</sup>	<sup>a48</sup>	51
336612	Boat building .....	58	60	62	61	59
3369	Other transportation equipment mfg .....	67	65	77	58	61
33699	Other transportation equipment mfg .....	67	65	77	58	61
336991	Motorcycle, bicycle, & parts mfg .....	85	98	<sup>a95</sup>	<sup>a57</sup>	<sup>a59</sup>
336992	Military armored vehicle, tank, & tank component mfg .....	68	<sup>a43</sup>	65	44	42
336999	All other transportation equipment mfg .....	58	60	70	65	74

See footnotes at end of table.

Table 1a. **Full Production Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production rate				
		2006	2005	2004	2003	2002
337	Furniture & related product mfg .....	68	70	69	62	61
3371	Household & institutional furniture & kitchen cabinet mfg .....	71	73	73	64	66
33711	Wood kitchen cabinet & counter top mfg .....	76	80	92	72	73
337110	Wood kitchen cabinet & counter top mfg .....	76	80	92	72	73
33712	Household & institutional furniture mfg .....	68	69	66	61	63
337121	Upholstered household furniture mfg .....	82	86	88	71	74
337122	Nonupholstered wood household furniture mfg .....	62	60	54	63	65
337124	Metal household furniture mfg .....	66	66	64	<sup>a44</sup>	<sup>a47</sup>
337125	Household furniture (except wood & metal) mfg .....	59	65	60	44	42
337127	Institutional furniture mfg .....	64	66	76	61	59
337129	Wood television, radio, & sewing machine cabinet mfg .....	51	58	60	<sup>a39</sup>	67
3372	Office furniture (including fixtures) mfg .....	64	64	61	59	53
33721	Office furniture (including fixtures) mfg .....	64	64	61	59	53
337211	Wood office furniture mfg .....	56	71	65	<sup>a57</sup>	42
337212	Custom architectural woodwork & millwork mfg .....	75	68	73	73	66
337214	Office furniture (except wood) mfg .....	70	64	58	54	52
337215	Showcase, partition, shelving, & locker mfg .....	56	59	60	60	60
3379	Other furniture related product mfg .....	70	75	69	64	63
33791	Mattress mfg .....	74	79	76	63	63
337910	Mattress mfg .....	74	79	76	63	63
33792	Blind & shade mfg .....	62	68	58	65	63
337920	Blind & shade mfg .....	62	68	58	65	63
339	Miscellaneous mfg .....	67	69	67	66	64
3391	Medical equipment & supplies mfg .....	71	72	73	68	63
33911	Medical equipment & supplies mfg .....	71	72	73	68	63
339111	Laboratory apparatus & furniture mfg .....	73	67	71	68	68
339112	Surgical & medical instrument mfg .....	73	70	70	66	58
339113	Surgical appliance & supplies mfg .....	67	71	73	68	66
339114	Dental equipment & supplies mfg .....	77	75	76	76	74
339115	Ophthalmic goods mfg .....	77	78	75	63	52
339116	Dental laboratories .....	86	87	90	84	88
3399	Other miscellaneous mfg .....	61	66	61	63	65
33991	Jewelry & silverware mfg .....	66	66	64	64	59
339911	Jewelry (except costume) mfg .....	62	64	61	64	58
339912	Silverware & plated ware mfg .....	65	63	67	63	55
339913	Jewelers' material & lapidary work mfg .....	80	68	<sup>a79</sup>	77	68
339914	Costume jewelry & novelty mfg .....	<sup>a76</sup>	77	<sup>a66</sup>	60	64
33992	Sporting & athletic goods mfg .....	46	61	61	70	65
339920	Sporting & athletic goods mfg .....	46	61	61	70	65
33993	Doll, toy, & game mfg .....	61	65	<sup>a52</sup>	51	60
339931	Doll & stuffed toy mfg .....	<sup>a26</sup>	<sup>a50</sup>	<sup>a35</sup>	<sup>a16</sup>	<sup>a27</sup>
339932	Game, toy, & children's vehicle mfg .....	72	67	<sup>a54</sup>	66	69
33994	Office supplies (except paper) mfg .....	71	73	64	64	63
339941	Pen & mechanical pencil mfg .....	82	70	56	63	63
339942	Lead pencil & art good mfg .....	75	74	70	71	69
339943	Marking device mfg .....	52	72	69	55	<sup>a56</sup>
339944	Carbon paper & inked ribbon mfg .....	70	78	79	63	63
33995	Sign mfg .....	81	82	71	66	71
339950	Sign mfg .....	81	82	71	66	71
33999	All other miscellaneous mfg .....	63	64	57	60	65
339991	Gasket, packing, & sealing device mfg .....	68	71	74	69	70
339992	Musical instrument mfg .....	75	80	84	67	59
339993	Fastener, button, needle, & pin mfg .....	65	63	62	54	60
339994	Broom, brush, & mop mfg .....	72	74	67	68	66
339995	Burial casket mfg .....	35	33	43	74	63
339999	All other miscellaneous mfg .....	61	62	51	50	<sup>a65</sup>
5111	Newspaper, periodical, book, and database publishers .....	74	72	<sup>a76</sup>	<sup>a81</sup>	81

<sup>1</sup>Excluding NAICS 5111, Newspaper, periodical, book, and database publishers.



**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
<b>31-33</b>	<b>Manufacturing<sup>1</sup></b>	<b>51</b>	<b>53</b>	<b>51</b>	<b>47</b>	<b>45</b>
	<b>Durable goods industries<sup>1</sup></b>	<b>47</b>	<b>49</b>	<b>47</b>	<b>41</b>	<b>40</b>
	<b>Nondurable goods industries<sup>1</sup></b>	<b>56</b>	<b>59</b>	<b>59</b>	<b>56</b>	<b>52</b>
	<b>Advanced processing industries<sup>1</sup></b>	<b>48</b>	<b>52</b>	<b>49</b>	<b>45</b>	<b>43</b>
	<b>Primary processing industries<sup>1</sup></b>	<b>56</b>	<b>58</b>	<b>57</b>	<b>51</b>	<b>50</b>
311	Food mfg	54	59	61	61	58
3111	Animal food mfg	65	60	64	59	59
31111	Animal food mfg	65	60	64	59	59
311111	Dog & cat food mfg	66	64	65	71	73
311119	Other animal food mfg	63	56	61	50	48
3112	Grain & oilseed milling	66	74	72	76	73
31121	Flour milling & malt mfg	74	73	72	70	68
311211	Flour milling	74	73	71	70	71
311212	Rice milling	70	71	74	75	70
311213	Malt mfg	90	89	93	54	44
31122	Starch & vegetable fats & oils mfg	83	80	81	89	90
311221	Wet corn milling	94	93	92	95	93
311222	Soybean processing	78	76	81	94	96
311223	Other oilseed processing	78	82	72	76	70
311225	Fats & oils refining & blending	78	69	68	78	83
31123	Breakfast cereal mfg	52	68	64	69	<sup>a65</sup>
311230	Breakfast cereal mfg	52	68	64	69	<sup>a65</sup>
3113	Sugar & confectionery product mfg	54	55	54	56	56
31131	Sugar mfg	84	87	88	90	85
311311	Sugarcane mills	86	83	79	91	92
311312	Cane sugar refining	<sup>a68</sup>	<sup>a79</sup>	<sup>a81</sup>	<sup>a67</sup>	<sup>a53</sup>
311313	Beet sugar mfg	96	96	99	99	97
31132	Chocolate & confectionery mfg from cacao beans	62	62	62	79	76
311320	Chocolate & confectionery mfg from cacao beans	62	62	62	79	76
31133	Confectionery mfg from purchased chocolate	55	51	49	46	45
311330	Confectionery mfg from purchased chocolate	55	51	49	46	45
31134	Nonchocolate confectionery mfg	42	47	<sup>a45</sup>	54	55
311340	Nonchocolate confectionery mfg	42	47	<sup>a45</sup>	54	55
3114	Fruit & vegetable preserving & specialty food mfg	44	62	60	50	52
31141	Frozen food mfg	67	69	68	68	67
311411	Frozen fruit, juice, & vegetable mfg	66	67	71	78	72
311412	Frozen specialty food mfg	68	70	66	63	64
31142	Fruit & vegetable canning, pickling, & drying	35	58	55	42	45
311421	Fruit & vegetable canning	25	48	44	35	38
311422	Specialty canning	74	76	81	57	59
311423	Dried & dehydrated food mfg	65	69	70	56	53
3115	Dairy product mfg	62	65	65	71	67
31151	Dairy product (except frozen) mfg	65	68	69	75	70
311511	Fluid milk mfg	67	67	68	78	72
311512	Creamery butter mfg	64	70	68	71	62
311513	Cheese mfg	74	72	75	74	74
311514	Dry, condensed, & evaporated dairy product mfg	53	63	66	70	63
31152	Ice cream & frozen dessert mfg	53	55	52	<sup>a57</sup>	54
311520	Ice cream & frozen dessert mfg	53	55	52	<sup>a57</sup>	54
3116	Meat product mfg	65	65	65	66	63
31161	Animal slaughtering & processing	65	65	65	66	63
311611	Animal (except poultry) slaughtering	68	65	62	69	70
311612	Meat processed from carcasses	56	60	61	61	62
311613	Rendering & meat byproduct processing	64	67	62	55	59
311615	Poultry processing	68	69	69	69	61
3117	Seafood product preparation & packaging	23	46	47	36	35
31171	Seafood product preparation & packaging	23	46	47	36	35
311711	Seafood canning	37	35	43	60	56
311712	Fresh & frozen seafood processing	22	48	48	34	34
3118	Bakeries & tortilla mfg	47	51	61	62	55
31181	Bread & bakery product mfg	44	48	66	66	62
311811	Retail bakeries	10	14	61	<sup>a43</sup>	<sup>a33</sup>
311812	Commercial bakeries	71	70	68	70	68
311813	Frozen cakes, pies, & other pastries mfg	55	57	54	67	61
31182	Cookie, cracker, & pasta mfg	55	55	55	55	44
311821	Cookie & cracker mfg	51	51	53	54	40
311822	Flour mixes & dough mfg from purchased flour	62	63	59	57	60
311823	Dry pasta mfg	73	71	66	61	73
31183	Tortilla mfg	73	73	66	66	66
311830	Tortilla mfg	73	73	66	66	66
3119	Other food mfg	50	53	56	58	55
31191	Snack food mfg	59	75	73	72	66
311911	Roasted nuts & peanut butter mfg	57	65	68	71	64
311919	Other snack food mfg	60	77	74	72	67
31192	Coffee & tea mfg	39	53	57	<sup>a39</sup>	39
311920	Coffee & tea mfg	39	53	57	<sup>a39</sup>	39
31193	Flavoring syrup & concentrate mfg	39	35	43	56	54
311930	Flavoring syrup & concentrate mfg	39	35	43	56	54
31194	Seasoning & dressing mfg	52	53	56	58	57
311941	Mayonnaise, dressing, & other prepared sauce mfg	60	61	60	65	65
311942	Spice & extract mfg	46	48	52	53	50
31199	All other food mfg	54	52	52	54	51
311991	Perishable prepared food mfg	51	57	51	62	61
311999	All other miscellaneous food mfg	56	50	53	53	49

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
312	Beverage & tobacco product mfg .....	55	57	53	53	50
3121	Beverage mfg .....	52	58	55	59	53
31211	Soft drink & ice mfg .....	44	52	48	54	44
312111	Soft drink mfg .....	51	56	56	59	47
312112	Bottled water mfg .....	<sup>a27</sup> 27	<sup>a41</sup> 27	27	31	30
312113	Ice mfg .....	13	24	24	24	20
31212	Breweries .....	82	82	82	77	80
312120	Breweries .....	82	82	82	77	80
31213	Wineries .....	54	58	52	49	55
312130	Wineries .....	54	58	52	49	55
31214	Distilleries .....	37	34	35	53	43
312140	Distilleries .....	37	34	35	53	43
3122	Tobacco mfg .....	58	57	51	50	48
31221	Tobacco stemming & redrying .....	(D)	(NA)	47	61	45
312210	Tobacco stemming & redrying .....	(D)	(NA)	47	61	45
31222	Tobacco product mfg .....	58	56	51	50	48
312221	Cigarette mfg .....	56	55	49	50	48
312229	Other tobacco product mfg .....	72	70	79	53	54
313	Textile mills .....	52	61	65	55	56
3131	Fiber, yarn, & thread mills .....	65	70	75	73	65
31311	Fiber, yarn, & thread mills .....	65	70	75	73	65
313111	Yarn spinning mills .....	69	77	80	79	71
313112	Yarn texturing, throwing, & twisting mills .....	63	62	69	62	58
313113	Thread mills .....	37	60	<sup>a62</sup> 69	<sup>a70</sup> 62	53
3132	Fabric mills .....	53	60	64	55	56
31321	Broadwoven fabric mills .....	59	61	72	60	60
313210	Broadwoven fabric mills .....	<sup>a59</sup> 59	61	72	60	60
31322	Narrow fabric mills & schiffli machine embroidery .....	49	55	56	51	54
313221	Narrow fabric mills .....	50	56	57	53	56
313222	Schiffli machine embroidery .....	<sup>a44</sup> 49	<sup>a47</sup> 55	55	42	46
31323	Nonwoven fabric mills .....	64	60	58	51	52
313230	Nonwoven fabric mills .....	64	60	58	51	52
31324	Knit fabric mills .....	30	58	59	50	50
313241	Weft knit fabric mills .....	<sup>a24</sup> 30	<sup>a62</sup> 58	<sup>a71</sup> 59	53	53
313249	Other knit fabric & lace mills .....	41	54	51	48	48
3133	Textile & fabric finishing & fabric coating mills .....	43	56	61	49	52
31331	Textile & fabric finishing mills .....	43	57	63	49	52
313311	Broadwoven fabric finishing mills .....	40	53	62	49	54
313312	Textile & fabric finishing mills .....	47	61	63	49	49
31332	Fabric coating mills .....	45	52	55	48	48
313320	Fabric coating mills .....	45	52	55	48	48
314	Textile product mills .....	51	53	57	52	46
3141	Textile furnishings mills .....	59	62	63	51	49
31411	Carpet & rug mills .....	68	69	77	66	61
314110	Carpet & rug mills .....	68	69	77	66	61
31412	Curtain & linen mills .....	48	51	50	42	40
314121	Curtain & drapery mills .....	48	46	47	<sup>a44</sup> 44	44
314129	Other household textile product mills .....	48	53	51	41	39
3149	Other textile product mills .....	41	43	48	54	41
31491	Textile bag & canvas mills .....	43	39	46	40	40
314911	Textile bag mills .....	35	29	43	<sup>a30</sup> 34	34
314912	Canvas & related product mills .....	45	<sup>a43</sup> 46	46	48	43
31499	All other textile product mills .....	40	45	49	63	42
314991	Rope, cordage, & twine mills .....	54	62	60	55	38
314992	Tire cord & tire fabric mills .....	68	83	86	89	81
314999	All other miscellaneous textile product mills .....	37	41	46	62	40
315	Apparel mfg .....	43	48	47	32	31
3151	Apparel knitting mills .....	66	61	49	47	52
31511	Hosiery & sock mills .....	66	63	58	59	50
315111	Sheer hosiery mills .....	66	66	55	58	46
315119	Other hosiery & sock mills .....	66	62	59	59	52
31519	Other apparel knitting mills .....	64	56	36	<sup>a35</sup> 54	<sup>a54</sup> 54
315191	Outerwear knitting mills .....	62	53	33	<sup>a32</sup> 52	<sup>a49</sup> 49
315192	Underwear & nightwear knitting mills .....	81	63	52	68	<sup>a91</sup> 91
3152	Cut & sew apparel mfg .....	40	47	47	30	<sup>a29</sup> 29
31521	Cut & sew apparel contractors .....	28	35	40	18	11
315211	Men's & boys' cut & sew apparel contractors .....	37	33	46	54	43
315212	Women's, girls', & infants' cut & sew apparel contractors .....	26	<sup>a36</sup> 36	38	13	8
31522	Men's & boys' cut & sew apparel mfg .....	45	42	46	<sup>a29</sup> 29	33
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	53	52	<sup>a57</sup> 57	<sup>a53</sup> 53	<sup>a48</sup> 48
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	44	37	41	<sup>a36</sup> 36	<sup>a35</sup> 35
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	65	66	<sup>a60</sup> 60	<sup>a49</sup> 49	<sup>a54</sup> 54
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	<sup>a52</sup> 45	39	45	23	27
315225	Men's & boys' cut & sew work clothing mfg .....	29	36	40	27	27
315228	Men's & boys' cut & sew other outerwear mfg .....	46	53	61	<sup>a31</sup> 31	35
31523	Women's & girls' cut & sew apparel mfg .....	49	68	56	<sup>a41</sup> 41	<sup>a43</sup> 43
315231	Women's & girls' cut & sew lingerie & nightwear mfg .....	<sup>a46</sup> 46	<sup>a55</sup> 55	<sup>a51</sup> 51	34	<sup>a42</sup> 42
315232	Women's & girls' cut & sew blouse & shirt mfg .....	<sup>a51</sup> 49	<sup>a59</sup> 59	<sup>a55</sup> 55	50	53
315233	Women's & girls' cut & sew dress mfg .....	78	<sup>a69</sup> 69	<sup>a39</sup> 39	<sup>a48</sup> 48	<sup>a48</sup> 48
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	93	<sup>a74</sup> 74	<sup>a82</sup> 82	<sup>a27</sup> 27	<sup>a30</sup> 30
315239	Women's & girls' cut & sew other outerwear mfg .....	34	82	71	<sup>a42</sup> 42	<sup>a42</sup> 42
31529	Other cut & sew apparel .....	38	<sup>a31</sup> 31	<sup>a30</sup> 30	20	<sup>a31</sup> 31
315291	Infants' cut & sew apparel mfg .....	11	22	<sup>a46</sup> 46	31	(NA)
315292	Fur & leather apparel mfg .....	36	34	42	<sup>a53</sup> 53	<sup>a44</sup> 44
315299	All other cut & sew apparel mfg .....	45	<sup>a32</sup> 32	<sup>a28</sup> 28	16	<sup>a21</sup> 21
3159	Apparel accessories & other apparel mfg .....	41	43	48	40	35
31599	Apparel accessories & other apparel mfg .....	41	43	48	40	35
315991	Hat, cap, & millinery mfg .....	42	45	43	37	31
315992	Glove & mitten mfg .....	37	51	58	25	<sup>a20</sup> 20
315993	Men's & boys' neckwear mfg .....	<sup>a47</sup> 47	74	71	40	47
315999	Other apparel accessories & other apparel mfg .....	39	<sup>a35</sup> 35	44	46	40

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
316	Leather & allied product mfg .....	38	42	40	33	27
3161	Leather & hide tanning & finishing .....	75	62	68	64	52
31611	Leather & hide tanning & finishing .....	75	62	68	64	52
316110	Leather & hide tanning & finishing .....	75	62	68	64	52
3162	Footwear mfg .....	31	35	35	31	<sup>a</sup> 26
31621	Footwear mfg .....	31	35	35	31	<sup>a</sup> 26
316211	Rubber & plastics footwear mfg .....	40	45	40	38	<sup>a</sup> 30
316212	House slipper mfg .....	<sup>a</sup> 34	(D)	(NA)	36	19
316213	Men's footwear (except athletic) mfg .....	28	30	38	34	35
316214	Women's footwear (except athletic) mfg .....	<sup>a</sup> 30	<sup>a</sup> 41	<sup>a</sup> 23	<sup>a</sup> 12	<sup>a</sup> 10
316219	Other footwear mfg .....	28	34	38	<sup>a</sup> 54	<sup>a</sup> 65
3169	Other leather & allied product mfg .....	39	41	35	27	20
31699	Other leather & allied product mfg .....	39	41	35	27	20
316991	Luggage mfg .....	67	64	48	22	24
316992	Women's handbag & purse mfg .....	42	60	31	34	29
316993	Personal leather good (except women's handbag & purse) mfg .....	<sup>a</sup> 11	<sup>a</sup> 16	<sup>a</sup> 17	<sup>a</sup> 34	<sup>a</sup> 9
316999	All other leather good mfg .....	46	39	47	<sup>a</sup> 35	27
321	Wood product mfg .....	44	48	48	43	42
3211	Sawmills & wood preservation .....	51	54	53	51	50
32111	Sawmills & wood preservation .....	51	54	53	51	50
321113	Sawmills .....	51	54	53	51	52
321114	Wood preservation .....	55	54	53	53	41
3212	Veneer, plywood, & engineered wood product mfg .....	43	61	57	53	43
32121	Veneer, plywood, & engineered wood product mfg .....	43	61	57	53	43
321211	Hardwood veneer & plywood mfg .....	57	61	51	42	43
321212	Softwood veneer & plywood mfg .....	67	81	75	83	81
321213	Engineered wood member (except truss) mfg .....	46	65	81	61	51
321214	Truss mfg .....	41	61	60	47	33
321219	Reconstituted wood product mfg .....	35	53	46	54	42
3219	Other wood product mfg .....	42	42	44	38	39
32191	Millwork .....	46	48	45	52	49
321911	Wood window & door mfg .....	43	46	44	59	59
321912	Cut stock, resawing lumber, & planing .....	54	53	54	38	46
321918	Other millwork (including flooring) .....	45	48	43	56	37
32192	Wood container & pallet mfg .....	66	34	94	45	39
321920	Wood container & pallet mfg .....	66	34	94	45	39
32199	All other wood product mfg .....	34	37	36	26	30
321991	Manufactured home (mobile home) mfg .....	34	36	34	20	25
321992	Prefabricated wood building mfg .....	32	38	39	38	37
321999	All other miscellaneous wood product mfg .....	35	37	35	32	37
322	Paper mfg .....	66	64	68	73	71
3221	Pulp, paper, & paperboard mills .....	86	78	87	86	87
32211	Pulp mills .....	93	92	93	81	78
322110	Pulp mills .....	93	92	93	81	78
32212	Paper mills .....	82	73	84	83	87
322121	Paper (except newsprint) mills .....	82	72	84	82	87
322122	Newsprint mills .....	81	82	81	95	85
32213	Paperboard mills .....	97	93	93	93	87
322130	Paperboard mills .....	97	93	93	93	87
3222	Converted paper product mfg .....	53	55	57	63	60
32221	Paperboard container mfg .....	51	53	57	65	64
322211	Corrugated & solid fiber box mfg .....	50	49	54	72	68
322212	Folding paperboard box mfg .....	73	66	68	73	70
322213	Setup paperboard box mfg .....	50	52	55	43	45
322214	Fiber can, tube, drum, & similar products mfg .....	23	45	48	<sup>a</sup> 28	<sup>a</sup> 32
322215	Nonfolding sanitary food container mfg .....	72	78	69	63	62
32222	Paper bag & coated & treated paper mfg .....	61	62	58	60	58
322221	Coated & laminated packaging paper & plastics film mfg .....	31	30	26	53	51
322222	Coated & laminated packaging paper & plastics film mfg .....	63	66	64	61	56
322223	Plastics, foil, & coated paper bag mfg .....	69	72	68	50	53
322224	Uncoated paper & multiwall bag mfg .....	60	60	51	57	63
322225	Laminated aluminum foil mfg for flexible packaging uses .....	76	75	70	65	71
322226	Surface-coated paperboard mfg .....	75	64	73	68	69
32223	Stationery product mfg .....	59	55	62	59	51
322231	Die-cut paper & paperboard office supplies mfg .....	66	63	63	71	58
322232	Envelope mfg .....	63	59	60	60	62
322233	Stationery, tablet, & related product mfg .....	44	42	63	48	35
32229	Other converted paper product mfg .....	48	52	54	65	59
322291	Sanitary paper product mfg .....	64	59	62	73	71
322299	All other converted paper product mfg .....	32	41	40	53	45
323	Printing & related support activities .....	52	54	51	53	52
3231	Printing & related support activities .....	52	54	51	53	52
32311	Printing .....	53	55	51	55	53
323110	Commercial lithographic printing .....	55	62	53	61	61
323111	Commercial gravure printing .....	94	58	67	79	73
323112	Commercial flexographic printing .....	44	55	52	62	61
323113	Commercial screen printing .....	41	35	42	44	<sup>a</sup> 36
323114	Quick printing .....	48	46	46	50	32
323115	Digital printing .....	50	52	54	71	<sup>a</sup> 56
323116	Manifold business form printing .....	50	48	50	44	53
323117	Book printing .....	83	<sup>a</sup> 65	77	55	58
323118	Blankbook, looseleaf binder, & device mfg .....	31	<sup>a</sup> 45	<sup>a</sup> 34	30	31
323119	Other commercial printing .....	62	58	46	46	46
32312	Support activities for printing .....	48	45	46	41	42
323121	Tradebinding & related work .....	43	33	40	28	30
323122	Prepress services .....	52	57	51	52	51

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
324	Petroleum & coal products mfg .....	76	73	81	70	68
3241	Petroleum & coal products mfg .....	76	73	81	70	68
32411	Petroleum refineries .....	82	77	92	90	89
324110	Petroleum refineries .....	82	77	92	90	89
32412	Asphalt paving, roofing, & saturated materials mfg .....	45	52	55	27	25
324121	Asphalt paving mixture & block mfg .....	35	36	42	18	17
324122	Asphalt shingle & coating materials mfg .....	59	82	83	63	50
32419	Other petroleum & coal products mfg .....	51	61	54	42	43
324191	Petroleum lubricating oil & grease mfg .....	49	59	51	41	43
324199	All other petroleum & coal products mfg .....	69	72	73	45	44
325	Chemical mfg .....	53	57	56	51	46
3251	Basic chemical mfg .....	69	67	67	69	64
32511	Petrochemical mfg .....	83	82	92	80	75
325110	Petrochemical mfg .....	83	82	92	80	75
32512	Industrial gas mfg .....	77	74	69	71	62
325120	Industrial gas mfg .....	77	74	69	71	62
32513	Dye & pigment mfg .....	72	75	74	70	74
325131	Inorganic dye & pigment mfg .....	75	79	77	81	78
325132	Synthetic organic dye & pigment mfg .....	66	66	69	60	70
32518	Other basic inorganic chemical mfg .....	54	51	51	52	50
325181	Alkalies & chlorine mfg .....	76	77	93	75	76
325182	Carbon black mfg .....	72	80	<sup>a90</sup> 76	76	<sup>a72</sup> 76
325188	All other basic inorganic chemical mfg .....	49	47	46	50	47
32519	Other basic organic chemical mfg .....	68	68	74	81	74
325191	Gum & wood chemical mfg .....	58	64	59	71	78
325192	Cyclic crude & intermediate mfg .....	79	75	88	73	<sup>a72</sup> 78
325193	Ethyl alcohol mfg .....	98	94	94	97	62
325199	All other basic organic chemical mfg .....	65	66	71	82	74
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	74	74	82	71	71
32521	Resin & synthetic rubber mfg .....	74	75	82	69	71
325211	Plastics material & resin mfg .....	75	75	84	72	75
325212	Synthetic rubber mfg .....	68	72	72	55	52
32522	Artificial & synthetic fibers & filaments mfg .....	71	67	84	81	73
325221	Cellulosic organic fiber mfg .....	<sup>a49</sup> 74	<sup>a36</sup> 71	71	81	73
325222	Noncellulosic organic fiber mfg .....	74	75	85	81	73
3253	Pesticide, fertilizer, & other agricultural chemical mfg .....	37	44	44	43	39
32531	Fertilizer mfg .....	59	63	62	54	53
325311	Nitrogenous fertilizer mfg .....	80	72	74	83	85
325312	Phosphatic fertilizer mfg .....	71	83	91	83	81
325314	Fertilizer (mixing only) mfg .....	41	46	42	31	30
32532	Pesticide & other agricultural chemical mfg .....	31	37	38	39	34
325320	Pesticide & other agricultural chemical mfg .....	31	37	38	39	34
3254	Pharmaceutical & medicine mfg .....	55	60	57	44	38
32541	Pharmaceutical & medicine mfg .....	55	60	57	44	38
325411	Medicinal & botanical mfg .....	47	48	47	61	61
325412	Pharmaceutical preparation mfg .....	55	62	58	41	44
325413	In-vitro diagnostic substance mfg .....	53	50	44	49	<sup>a14</sup> 49
325414	Biological product (except diagnostic) mfg .....	71	61	60	67	68
3255	Paint, coating, & adhesive mfg .....	47	48	47	52	42
32551	Paint & coating mfg .....	47	49	48	53	42
325510	Paint & coating mfg .....	47	49	48	53	42
32552	Adhesive mfg .....	48	47	47	51	41
325520	Adhesive mfg .....	48	47	47	51	41
3256	Soap, cleaning compound, & toilet preparation mfg .....	33	43	43	53	54
32561	Soap & cleaning compound mfg .....	55	54	54	52	51
325611	Soap & other detergent mfg .....	60	58	60	50	54
325612	Polish & other sanitation good mfg .....	51	48	47	49	43
325613	Surface active agent mfg .....	49	54	54	70	72
32562	Toilet preparation mfg .....	24	37	37	53	57
325620	Toilet preparation mfg .....	24	37	37	53	57
3259	Other chemical product mfg .....	56	56	53	45	44
32591	Printing ink mfg .....	40	32	40	26	25
325910	Printing ink mfg .....	40	32	40	26	25
32592	Explosives mfg .....	37	38	37	36	37
325920	Explosives mfg .....	37	38	37	36	37
32599	All other chemical product & preparation mfg .....	60	62	56	51	49
325991	Custom compounding of purchased resin .....	51	57	59	64	62
325992	Photographic film, paper, plate, & chemical mfg .....	80	79	76	65	64
325998	All other miscellaneous chemical product & preparation mfg .....	51	51	44	39	38
326	Plastics & rubber products mfg .....	58	63	59	63	57
3261	Plastics product mfg .....	58	62	57	64	56
32611	Unsupported plastics film, sheet, & bag mfg .....	70	71	73	68	65
326111	Unsupported plastics bag mfg .....	62	65	66	70	63
326112	Unsupported plastics packaging film & sheet mfg .....	72	72	73	59	61
326113	Unsupported plastics film & sheet (except packaging) mfg .....	75	74	78	70	67
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	59	71	62	66	66
326121	Unsupported plastics profile shape mfg .....	50	65	54	64	67
326122	Plastics pipe & pipe fitting mfg .....	71	82	79	69	64
32613	Laminated plastics plate, sheet, & shape mfg .....	50	60	59	50	44
326130	Laminated plastics plate, sheet, & shape mfg .....	<sup>a50</sup> 50	60	59	50	44
32614	Polystyrene foam product mfg .....	51	59	56	64	63
326140	Polystyrene foam product mfg .....	51	59	56	64	63
32615	Urethane & other foam product (except polystyrene) mfg .....	58	54	53	45	50
326150	Urethane & other foam product (except polystyrene) mfg .....	58	54	53	45	50
32616	Plastics bottle mfg .....	70	80	73	73	73
326160	Plastics bottle mfg .....	70	80	73	73	73
32619	Other plastics product mfg .....	55	59	52	64	53
326191	Plastics plumbing fixture mfg .....	32	40	45	43	35
326192	Resilient floor covering mfg .....	46	66	53	61	54
326199	All other plastics product mfg .....	58	60	53	65	54

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
326	Plastics & rubber products mfg—Con.					
3262	Rubber product mfg	56	64	68	61	60
32621	Tire mfg	54	70	77	71	75
326211	Tire mfg (except retreading)	56	76	85	78	82
326212	Tire retreading	37	33	32	31	34
32622	Rubber & plastics hoses & belting mfg	63	64	71	51	47
326220	Rubber & plastics hoses & belting mfg	63	64	71	51	47
32629	Other rubber product mfg	56	58	60	55	54
326291	Rubber product mfg for mechanical use	53	59	60	61	60
326299	All other rubber product mfg	60	57	59	50	49
327	Nonmetallic mineral product mfg	33	45	47	43	41
3271	Clay product & refractory mfg	65	63	63	62	61
32711	Pottery, ceramics, & plumbing fixture mfg	60	58	63	57	62
327111	Vitreous china plumbing fixture & bathroom accessories mfg	73	86	83	<sup>a</sup> 87	91
327112	Vitreous china, fine earthenware, & other pottery product mfg	60	51	55	46	54
327113	Porcelain electrical supply mfg	47	48	55	53	52
32712	Clay building material & refractories mfg	67	65	64	66	61
327121	Brick & structural clay tile mfg	94	82	82	90	84
327122	Ceramic wall & floor tile mfg	68	64	60	70	57
327123	Other structural clay product mfg	69	79	75	67	72
327124	Clay refractory mfg	42	48	45	39	39
327125	Nonclay refractory mfg	56	54	58	54	<sup>a</sup> 53
3272	Glass & glass product mfg	49	55	57	66	62
32721	Glass & glass product mfg	49	55	57	66	62
327211	Flat glass mfg	81	85	85	75	70
327212	Other pressed & blown glass & glassware mfg	62	72	70	63	59
327213	Glass container mfg	92	89	88	91	93
327215	Glass product mfg made of purchased glass	35	39	42	59	54
3273	Cement & concrete product mfg	23	35	38	31	29
32731	Cement mfg	91	92	92	83	62
327310	Cement mfg	91	92	92	83	62
32732	Ready-mix concrete mfg	19	22	26	19	19
327320	Ready-mix concrete mfg	19	22	26	19	19
32733	Concrete pipe, brick, & block mfg	11	50	46	46	49
327331	Concrete block & brick mfg	50	50	48	43	46
327332	Concrete pipe mfg	5	51	44	52	53
32739	Other concrete product mfg	52	56	55	50	44
327390	Other concrete product mfg	52	56	55	50	44
3274	Lime & gypsum product mfg	73	79	78	82	72
32741	Lime mfg	79	81	80	80	72
327410	Lime mfg	79	81	80	80	72
32742	Gypsum product mfg	72	78	78	83	72
327420	Gypsum product mfg	72	78	78	83	72
3279	Other nonmetallic mineral product mfg	54	56	52	57	56
32791	Abrasive product mfg	52	50	45	48	47
327910	Abrasive product mfg	52	50	45	48	47
32799	All other nonmetallic mineral product mfg	55	58	54	62	60
327991	Cut stone & stone product mfg	40	41	38	46	43
327992	Ground or treated mineral & earth mfg	66	62	61	67	59
327993	Mineral wool mfg	79	85	77	77	81
327999	All other miscellaneous nonmetallic mineral product mfg	39	43	44	52	52
331	Primary metal mfg	63	69	62	60	58
3311	Iron & steel mills & ferroalloy mfg	74	82	79	83	85
33111	Iron & steel mills & ferroalloy mfg	74	82	79	83	85
331111	Iron & steel mills	74	82	79	84	86
331112	Electrometallurgical ferroalloy product mfg	88	90	<sup>a</sup> 86	62	70
3312	Steel product mfg from purchased steel	59	58	59	57	56
33121	Iron & steel pipes & tubes mfg from purchased steel	55	51	52	54	53
331210	Iron & steel pipes & tubes mfg from purchased steel	55	51	52	54	53
33122	Rolling & drawing of purchased steel	63	64	64	60	58
331221	Cold-rolled steel shape mfg	69	63	63	67	58
331222	Steel wire drawing	56	64	66	56	57
3313	Alumina & aluminum production & processing	67	77	74	70	65
33131	Alumina & aluminum production & processing	67	77	74	70	65
331311	Alumina refining	75	91	93	75	<sup>a</sup> 79
331312	Primary aluminum production	57	84	88	68	<sup>a</sup> 67
331314	Secondary smelting & alloying of aluminum	73	75	75	70	63
331315	Aluminum sheet, plate, & foil mfg	81	80	82	81	<sup>a</sup> 80
331316	Aluminum extruded product mfg	55	67	57	60	52
331319	Other aluminum rolling & drawing	77	68	68	<sup>a</sup> 69	61
3314	Nonferrous metal (except aluminum) production & processing	55	61	55	61	57
33141	Nonferrous metal (except aluminum) smelting & refining	57	59	57	58	59
331411	Primary smelting & refining of copper	51	65	61	56	65
331419	Other nonferrous metal primary smelting & refining	65	54	55	59	55
33142	Copper rolling, drawing, extruding, & alloying	60	73	71	69	68
331421	Copper rolling, drawing, & extruding	57	71	71	71	71
331422	Copper wire (except mechanical) drawing	60	74	71	69	71
331423	Secondary smelting, refining, & alloying of copper	73	77	71	53	<sup>a</sup> 44
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	51	52	44	58	50
331491	Other nonferrous metal rolling, drawing, & extruding	56	52	43	56	53
331492	Other nonferrous metal secondary smelting, refining, & alloying	46	53	46	63	<sup>a</sup> 45
3315	Foundries	50	56	49	46	44
33151	Ferrous metal foundries	55	59	54	45	43
331511	Iron foundries	52	56	51	44	43
331512	Steel investment foundries	67	66	65	48	43
331513	Steel foundries (except investment)	59	65	59	48	46
33152	Nonferrous metal foundries	44	52	44	48	45
331521	Aluminum die-casting foundries	53	61	54	52	50
331522	Nonferrous (except aluminum) die-casting foundries	32	48	41	45	42
331524	Aluminum foundries (except die-casting)	44	48	38	50	45
331525	Copper foundries (except die-casting)	41	39	34	33	34
331528	Other nonferrous foundries (except die-casting)	60	64	62	65	59

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
332	Fabricated metal product mfg .....	49	49	47	36	36
3321	Forging & stamping .....	44	45	46	46	42
33211	Forging & stamping .....	44	45	46	46	42
332111	Iron & steel forging .....	57	49	57	43	43
332112	Nonferrous forging .....	61	65	60	57	44
332114	Custom roll forming .....	49	51	47	46	41
332115	Crown & closure mfg .....	52	56	54	50	42
332116	Metal stamping .....	35	37	40	45	40
332117	Powder metallurgy part mfg .....	57	59	57	58	54
3322	Cutlery & handtool mfg .....	48	52	52	45	44
33221	Cutlery & handtool mfg .....	48	52	52	45	44
332211	Cutlery & flatware (except precious) mfg .....	<sup>a30</sup>	<sup>a56</sup>	59	45	44
332212	Hand & edge tool mfg .....	54	50	50	42	41
332213	Saw blade & handsaw mfg .....	45	49	55	58	54
332214	Kitchen utensil, pot, & pan mfg .....	70	60	51	<sup>a57</sup>	58
3323	Architectural & structural metals mfg .....	45	46	43	22	29
33231	Plate work & fabricated structural product mfg .....	46	47	43	37	34
332311	Prefabricated metal building & component mfg .....	45	49	47	44	43
332312	Fabricated structural metal mfg .....	46	46	42	36	33
332313	Plate work mfg .....	50	50	44	34	30
33232	Ornamental & architectural metal products mfg .....	45	46	43	17	27
332321	Metal window & door mfg .....	46	50	44	37	35
332322	Sheet metal work mfg .....	44	44	44	12	22
332323	Ornamental & architectural metal work mfg .....	45	45	40	37	38
3324	Boiler, tank, & shipping container mfg .....	60	56	54	45	50
33241	Power boiler & heat exchanger mfg .....	54	47	50	46	40
332410	Power boiler & heat exchanger mfg .....	54	47	50	46	40
33242	Metal tank (heavy gauge) mfg .....	54	50	46	37	42
332420	Metal tank (heavy gauge) mfg .....	54	50	46	37	42
33243	Metal can, box, & other metal container (light gauge) mfg .....	66	63	62	51	62
332431	Metal can mfg .....	79	76	75	53	70
332439	Other metal container mfg .....	46	44	41	45	43
3325	Hardware mfg .....	46	47	49	46	48
33251	Hardware mfg .....	46	47	49	46	48
332510	Hardware mfg .....	46	47	49	46	48
3326	Spring & wire product mfg .....	53	48	50	50	45
33261	Spring & wire product mfg .....	53	48	50	50	45
332611	Spring (heavy gauge) mfg .....	54	45	39	50	57
332612	Spring (light gauge) mfg .....	49	42	53	52	49
332618	Other fabricated wire product mfg .....	56	50	50	50	42
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	49	46	43	37	28
33271	Machine shops .....	52	48	48	37	25
332710	Machine shops .....	52	48	48	37	25
33272	Turned product & screw, nut, & bolt mfg .....	43	43	36	38	35
332721	Precision turned product mfg .....	42	40	30	34	30
332722	Bolt, nut, screw, rivet, & washer mfg .....	46	48	48	44	42
3328	Coating, engraving, heat treating, & allied activities .....	64	61	54	48	47
33281	Coating, engraving, heat treating, & allied activities .....	64	61	54	48	47
332811	Metal heat treating .....	68	71	76	56	54
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	75	67	51	58	59
332813	Electroplating, plating, polishing, anodizing, & coloring .....	51	51	51	39	37
3329	Other fabricated metal product mfg .....	51	51	49	47	45
33291	Metal valve mfg .....	57	53	51	48	45
332911	Industrial valve mfg .....	59	49	47	46	42
332912	Fluid power valve & hose fitting mfg .....	59	55	54	49	46
332913	Plumbing fixture fitting & trim mfg .....	49	51	50	53	52
332919	Other metal valve & pipe fitting mfg .....	56	66	55	52	49
33299	All other fabricated metal product mfg .....	47	49	48	46	44
332991	Ball & roller bearing mfg .....	60	78	67	55	51
332992	Small arms ammunition mfg .....	54	48	37	47	55
332993	Ammunition (except small arms) mfg .....	31	36	37	40	28
332994	Small arms mfg .....	52	54	55	52	52
332995	Other ordnance & accessories mfg .....	48	50	<sup>a41</sup>	59	58
332996	Fabricated pipe & pipe fitting mfg .....	55	53	53	38	39
332997	Industrial pattern mfg .....	40	47	49	37	43
332998	Enameled iron & metal sanitary ware mfg .....	49	45	55	43	37
332999	All other miscellaneous fabricated metal product mfg .....	42	42	43	46	43
333	Machinery mfg .....	45	48	47	39	37
3331	Agriculture, construction, & mining machinery mfg .....	43	53	53	38	36
33311	Agricultural implement mfg .....	33	46	52	34	33
333111	Farm machinery & equipment mfg .....	31	47	58	36	33
333112	Lawn & garden tractor & home lawn & garden equipment mfg .....	38	43	42	29	34
33312	Construction machinery mfg .....	53	59	53	43	39
333120	Construction machinery mfg .....	53	59	53	43	39
33313	Mining & oil & gas field machinery mfg .....	68	60	59	40	40
333131	Mining machinery & equipment mfg .....	61	63	61	43	41
333132	Oil & gas field machinery & equipment mfg .....	70	59	58	40	39
3332	Industrial machinery mfg .....	44	44	46	35	29
33321	Sawmill & woodworking machinery mfg .....	45	47	40	35	28
333210	Sawmill & woodworking machinery mfg .....	45	47	40	35	28
33322	Plastics & rubber industry machinery mfg .....	54	43	42	38	32
333220	Plastics & rubber industry machinery mfg .....	54	43	42	38	32
33329	Other industrial machinery mfg .....	43	44	47	35	29
333291	Paper industry machinery mfg .....	52	54	58	37	34
333292	Textile machinery mfg .....	37	38	35	<sup>a32</sup>	<sup>a31</sup>
333293	Printing machinery & equipment mfg .....	38	46	38	32	29
333294	Food product machinery mfg .....	43	40	40	33	35
333295	Semiconductor machinery mfg .....	62	45	54	40	34
333298	All other industrial machinery mfg .....	29	42	46	30	23

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
333	Machinery mfg—Con.					
3333	Commercial & service industry machinery mfg . . . . .	47	51	45	37	33
33331	Commercial & service industry machinery mfg . . . . .	47	51	45	37	33
333311	Automatic vending machine mfg . . . . .	56	46	36	32	30
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	59	61	62	28	<sup>a25</sup>
333313	Office machinery mfg . . . . .	49	<sup>a42</sup>	57	<sup>a33</sup>	<sup>a30</sup>
333314	Optical instrument & lens mfg . . . . .	56	51	55	43	34
333315	Photographic & photocopying equipment mfg . . . . .	34	55	37	57	46
333319	Other commercial & service industry machinery mfg . . . . .	47	53	43	32	32
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	44	50	42	47	42
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	44	50	42	47	42
333411	Air purification equipment mfg . . . . .	54	52	50	41	37
333412	Industrial & commercial fan & blower mfg . . . . .	45	52	45	46	38
333414	Heating equipment (except warm air furnaces) mfg . . . . .	36	37	39	43	46
333415	AC & warm air heating & commercial/industrial refrigeration equip mfg . . . . .	45	53	42	48	42
3335	Metalworking machinery mfg . . . . .	45	47	44	32	35
33351	Metalworking machinery mfg . . . . .	45	47	44	32	35
333511	Industrial mold mfg . . . . .	49	51	54	29	39
333512	Machine tool (metal cutting types) mfg . . . . .	52	47	43	32	34
333513	Machine tool (metal forming types) mfg . . . . .	47	42	33	31	28
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	43	44	41	33	35
333515	Cutting tool & machine tool accessory mfg . . . . .	50	51	51	36	41
333516	Rolling mill machinery & equipment mfg . . . . .	43	43	36	29	28
333518	Other metalworking machinery mfg . . . . .	35	41	33	29	31
3336	Engine, turbine, & power transmission equipment mfg . . . . .	53	52	52	51	45
33361	Engine, turbine, & power transmission equipment mfg . . . . .	53	52	52	51	45
333611	Turbine & turbine generator set unit mfg . . . . .	<sup>a47</sup>	<sup>a50</sup>	<sup>a55</sup>	<sup>a62</sup>	<sup>a70</sup>
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	50	52	42	41	29
333613	Mechanical power transmission equipment mfg . . . . .	50	56	52	39	38
333618	Other engine equipment mfg . . . . .	57	52	49	49	41
3339	Other general-purpose machinery mfg . . . . .	45	46	45	38	38
33391	Pump & compressor mfg . . . . .	47	46	46	43	44
333911	Pump & pumping equipment mfg . . . . .	53	51	49	46	50
333912	Air & gas compressor mfg . . . . .	41	40	37	40	39
333913	Measuring & dispensing pump mfg . . . . .	<sup>a36</sup>	<sup>a40</sup>	<sup>a77</sup>	<sup>a40</sup>	<sup>a37</sup>
33392	Material handling equipment mfg . . . . .	46	45	43	34	33
333921	Elevator & moving stairway mfg . . . . .	59	56	52	47	50
333922	Conveyor & conveying equipment mfg . . . . .	46	38	42	28	28
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	<sup>a46</sup>	57	44	38	34
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	44	46	41	41	38
33399	All other general-purpose machinery mfg . . . . .	44	46	46	39	38
333991	Power-driven handtool mfg . . . . .	39	<sup>a45</sup>	<sup>a53</sup>	56	59
333992	Welding & soldering equipment mfg . . . . .	60	57	59	27	36
333993	Packaging machinery mfg . . . . .	44	44	38	36	39
333994	Industrial process furnace & oven mfg . . . . .	42	41	40	35	30
333995	Fluid power cylinder & actuator mfg . . . . .	51	41	42	41	39
333996	Fluid power pump & motor mfg . . . . .	45	45	49	42	41
333997	Scale & balance (except laboratory) mfg . . . . .	49	47	41	44	20
333999	All other miscellaneous general-purpose machinery mfg . . . . .	39	47	49	41	37
334	Computer & electronic product mfg . . . . .	49	51	45	38	38
3341	Computer & peripheral equipment mfg . . . . .	38	51	<sup>a46</sup>	45	43
33411	Computer & peripheral equipment mfg . . . . .	38	51	<sup>a46</sup>	45	43
334111	Electronic computer mfg . . . . .	<sup>a35</sup>	<sup>a50</sup>	<sup>a45</sup>	49	44
334112	Computer storage device mfg . . . . .	75	56	47	34	<sup>a36</sup>
334113	Computer terminal mfg . . . . .	<sup>a60</sup>	<sup>a41</sup>	39	<sup>a31</sup>	50
334119	Other computer peripheral equipment mfg . . . . .	39	53	50	56	<sup>a51</sup>
3342	Communications equipment mfg . . . . .	50	<sup>a41</sup>	<sup>a36</sup>	<sup>a24</sup>	<sup>a26</sup>
33421	Telephone apparatus mfg . . . . .	<sup>a57</sup>	<sup>a39</sup>	<sup>a36</sup>	<sup>a19</sup>	<sup>a21</sup>
334210	Telephone apparatus mfg . . . . .	<sup>a57</sup>	<sup>a39</sup>	<sup>a36</sup>	<sup>a19</sup>	<sup>a21</sup>
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	49	44	37	34	<sup>a38</sup>
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	49	44	37	34	<sup>a38</sup>
33429	Other communications equipment mfg . . . . .	40	38	37	41	39
334290	Other communications equipment mfg . . . . .	40	38	37	41	39
3343	Audio & video equipment mfg . . . . .	55	50	47	41	40
33431	Audio & video equipment mfg . . . . .	55	50	47	41	40
334310	Audio & video equipment mfg . . . . .	55	50	47	41	40
3344	Semiconductor & other electronic component mfg . . . . .	66	64	60	56	46
33441	Semiconductor & other electronic component mfg . . . . .	66	64	60	56	46
334411	Electron tube mfg . . . . .	29	32	33	48	55
334412	Bare printed circuit board mfg . . . . .	41	42	36	48	38
334413	Semiconductor & related device mfg . . . . .	86	80	79	74	56
334414	Electronic capacitor mfg . . . . .	45	47	41	45	36
334415	Electronic resistor mfg . . . . .	38	35	27	29	29
334416	Electronic coil, transformer, & other inductor mfg . . . . .	18	32	33	32	29
334417	Electronic connector mfg . . . . .	39	27	42	46	40
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	47	52	47	<sup>a47</sup>	39
334419	Other electronic component mfg . . . . .	42	43	36	27	26
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	41	45	37	39	40
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	41	45	37	39	40
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	49	47	50	55	57
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	36	48	34	<sup>a44</sup>	43
334512	Automatic environmental control mfg . . . . .	46	38	37	40	37
334513	Industrial process control instrument mfg . . . . .	40	41	40	34	29
334514	Totalizing fluid meter & counting device mfg . . . . .	39	<sup>a51</sup>	55	52	47
334515	Electricity measuring & testing instrument mfg . . . . .	38	41	37	31	36
334516	Analytical laboratory instrument mfg . . . . .	42	39	23	28	32
334517	Irradiation apparatus mfg . . . . .	55	49	45	42	49
334518	Watch, clock, & part mfg . . . . .	34	33	68	34	27
334519	Other measuring & controlling device mfg . . . . .	43	38	44	34	32
3346	Mfg & reproducing magnetic & optical media . . . . .	52	69	73	56	55
33461	Mfg & reproducing magnetic & optical media . . . . .	52	69	73	56	55
334611	Software reproducing . . . . .	69	<sup>a68</sup>	<sup>a47</sup>	63	69
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	77	70	<sup>a78</sup>	51	50
334613	Magnetic & optical recording media mfg . . . . .	<sup>a24</sup>	66	71	79	75

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
335	Electrical equipment, appliance, & component mfg .....	50	50	49	46	44
3351	Electric lighting equipment mfg .....	42	39	43	41	37
33511	Electric lamp bulb & part mfg .....	48	46	53	52	53
335110	Electric lamp bulb & part mfg .....	48	46	53	52	53
33512	Lighting fixture mfg .....	41	38	41	39	35
335121	Residential electric lighting fixture mfg .....	32	25	28	<sup>a41</sup>	<sup>a24</sup>
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	43	40	44	35	35
335129	Other lighting equipment mfg .....	49	50	51	43	44
3352	Household appliance mfg .....	57	55	58	59	52
33521	Small electrical appliance mfg .....	49	49	67	58	43
335211	Electric housewares & household fan mfg .....	47	53	67	64	45
335212	Household vacuum cleaner mfg .....	55	44	67	53	41
33522	Major appliance mfg .....	59	56	56	60	56
335221	Household cooking appliance mfg .....	37	35	37	43	43
335222	Household refrigerator & home freezer mfg .....	72	73	81	61	58
335224	Household laundry equipment mfg .....	69	64	55	71	71
335228	Other major household appliance mfg .....	64	60	59	65	52
3353	Electrical equipment mfg .....	50	<sup>a50</sup>	46	38	43
33531	Electrical equipment mfg .....	50	<sup>a50</sup>	46	38	43
335311	Power, distribution, & specialty transformer mfg .....	63	60	52	46	46
335312	Motor & generator mfg .....	53	<sup>a53</sup>	41	37	46
335313	Switchgear & switchboard apparatus mfg .....	52	54	51	45	45
335314	Relay & industrial control mfg .....	42	44	45	33	38
3359	Other electrical equipment & component mfg .....	52	52	51	50	44
33591	Battery mfg .....	58	60	53	55	49
335911	Storage battery mfg .....	60	63	51	55	<sup>a45</sup>
335912	Primary battery mfg .....	55	57	56	56	54
33592	Communication & energy wire & cable mfg .....	65	68	67	54	41
335921	Fiber optic cable mfg .....	65	56	<sup>a56</sup>	<sup>a50</sup>	<sup>a34</sup>
335929	Other communication & energy wire mfg .....	64	70	69	57	47
33593	Wiring device mfg .....	46	42	43	50	51
335931	Current-carrying wiring device mfg .....	40	36	39	49	50
335932	Noncurrent-carrying wiring device mfg .....	58	58	51	50	51
33599	All other electrical equipment & component mfg .....	48	53	50	41	37
335991	Carbon & graphite product mfg .....	35	64	66	56	43
335999	All other miscellaneous electrical equipment & component mfg .....	53	51	47	<sup>a39</sup>	36
336	Transportation equipment mfg .....	48	50	47	47	45
3361	Motor vehicle mfg .....	44	49	48	52	52
33611	Automobile & light duty motor vehicle mfg .....	44	50	48	52	53
336111	Automobile mfg .....	47	53	48	47	48
336112	Light truck & utility vehicle mfg .....	42	48	48	60	59
33612	Heavy duty truck mfg .....	52	48	48	44	35
336120	Heavy duty truck mfg .....	52	48	48	44	35
3362	Motor vehicle body & trailer mfg .....	31	26	24	36	36
33621	Motor vehicle body & trailer mfg .....	31	26	24	36	36
336211	Motor vehicle body mfg .....	49	52	52	41	35
336212	Truck trailer mfg .....	48	47	41	38	36
336213	Motor home mfg .....	20	24	28	37	33
336214	Travel trailer & camper mfg .....	22	15	12	29	38
3363	Motor vehicle parts mfg .....	52	56	58	56	54
33631	Motor vehicle gasoline engine & engine parts mfg .....	46	53	53	56	56
336311	Carburetor, piston, piston ring, & valve mfg .....	65	75	75	70	68
336312	Gasoline engine & engine parts mfg .....	44	52	52	54	54
33632	Motor vehicle electrical & electronic equipment mfg .....	61	62	62	48	43
336321	Vehicular lighting equipment mfg .....	57	55	51	64	59
336322	Other motor vehicle electrical & electronic equipment mfg .....	62	64	64	46	41
33633	Motor vehicle steering & suspension component (except spring) mfg ..	57	63	64	54	59
336330	Motor vehicle steering & suspension component (except spring) mfg .....	57	63	64	54	59
33634	Motor vehicle brake system mfg .....	48	54	55	59	60
336340	Motor vehicle brake system mfg .....	48	54	55	59	60
33635	Motor vehicle transmission & power train parts mfg .....	57	56	64	64	66
336350	Motor vehicle transmission & power train parts mfg .....	57	56	64	64	66
33636	Motor vehicle seating & interior trim mfg .....	<sup>a49</sup>	49	49	60	48
336360	Motor vehicle seating & interior trim mfg .....	<sup>a49</sup>	49	49	60	48
33637	Motor vehicle metal stamping .....	47	53	54	59	57
336370	Motor vehicle metal stamping .....	47	53	54	59	57
33639	Other motor vehicle parts mfg .....	54	56	61	54	53
336391	Motor vehicle air-conditioning mfg .....	63	61	58	63	62
336399	All other motor vehicle parts mfg .....	53	56	61	53	52
3364	Aerospace product & parts mfg .....	53	52	43	41	38
33641	Aerospace product & parts mfg .....	53	52	43	41	38
336411	Aircraft mfg .....	49	48	38	34	35
336412	Aircraft engine & engine parts mfg .....	65	59	55	<sup>a50</sup>	42
336413	Other aircraft part & auxiliary equipment mfg .....	50	47	42	41	44
336414	Guided missile & space vehicle mfg .....	59	82	<sup>a62</sup>	85	<sup>a38</sup>
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	43	44	32	25	27
336419	Other guided missile & space vehicle parts & auxiliary equip mfg ....	55	50	48	39	37
3365	Railroad rolling stock mfg .....	<sup>a40</sup>	62	55	41	37
33651	Railroad rolling stock mfg .....	<sup>a40</sup>	62	55	41	37
336510	Railroad rolling stock mfg .....	<sup>a40</sup>	62	55	41	37
3366	Ship & boat building .....	50	54	<sup>a37</sup>	38	37
33661	Ship & boat building .....	50	54	<sup>a37</sup>	38	37
336611	Ship building & repairing .....	<sup>a59</sup>	<sup>a63</sup>	<sup>a34</sup>	<sup>a38</sup>	40
336612	Boat building .....	39	42	46	39	34
3369	Other transportation equipment mfg .....	44	48	49	27	29
33699	Other transportation equipment mfg .....	44	48	49	27	29
336991	Motorcycle, bicycle, & parts mfg .....	61	65	<sup>a49</sup>	<sup>a17</sup>	<sup>a18</sup>
336992	Military armored vehicle, tank, & tank component mfg .....	58	<sup>a38</sup>	48	39	37
336999	All other transportation equipment mfg .....	34	44	48	42	47

See footnotes at end of table.



Table 1b. **National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 2002 Through 2006—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	National emergency rate				
		2006	2005	2004	2003	2002
337	Furniture & related product mfg .....	44	42	44	36	36
3371	Household & institutional furniture & kitchen cabinet mfg .....	44	42	48	36	34
33711	Wood kitchen cabinet & counter top mfg .....	45	45	70	46	43
337110	Wood kitchen cabinet & counter top mfg .....	45	45	70	46	43
33712	Household & institutional furniture mfg .....	43	40	40	32	31
337121	Upholstered household furniture mfg .....	57	54	56	44	39
337122	Nonupholstered wood household furniture mfg .....	38	36	36	28	28
337124	Metal household furniture mfg .....	35	29	28	<sup>a</sup> 22	<sup>a</sup> 24
337125	Household furniture (except wood & metal) mfg .....	35	41	39	36	32
337127	Institutional furniture mfg .....	42	40	37	36	32
337129	Wood television, radio, & sewing machine cabinet mfg .....	32	20	23	<sup>a</sup> 30	44
3372	Office furniture (including fixtures) mfg .....	44	40	39	35	39
33721	Office furniture (including fixtures) mfg .....	44	40	39	35	39
337211	Wood office furniture mfg .....	47	41	38	<sup>a</sup> 31	31
337212	Custom architectural woodwork & millwork mfg .....	43	36	41	47	40
337214	Office furniture (except wood) mfg .....	64	48	41	30	39
337215	Showcase, partition, shelving, & locker mfg .....	32	36	36	43	42
3379	Other furniture related product mfg .....	48	49	43	44	40
33791	Mattress mfg .....	49	49	47	42	40
337910	Mattress mfg .....	49	49	47	42	40
33792	Blind & shade mfg .....	47	48	37	48	40
337920	Blind & shade mfg .....	47	48	37	48	40
339	Miscellaneous mfg .....	41	43	41	43	40
3391	Medical equipment & supplies mfg .....	47	48	48	48	44
33911	Medical equipment & supplies mfg .....	47	48	48	48	44
339111	Laboratory apparatus & furniture mfg .....	43	35	34	33	38
339112	Surgical & medical instrument mfg .....	57	51	49	46	40
339113	Surgical appliance & supplies mfg .....	39	46	46	52	48
339114	Dental equipment & supplies mfg .....	44	39	50	50	48
339115	Ophthalmic goods mfg .....	66	66	66	50	43
339116	Dental laboratories .....	56	55	56	56	66
3399	Other miscellaneous mfg .....	35	38	35	37	36
33991	Jewelry & silverware mfg .....	40	38	28	33	33
339911	Jewelry (except costume) mfg .....	41	37	25	34	35
339912	Silverware & plated ware mfg .....	44	38	42	28	27
339913	Jewelers' material & lapidary work mfg .....	34	37	<sup>a</sup> 44	57	50
339914	Costume jewelry & novelty mfg .....	<sup>a</sup> 39	44	<sup>a</sup> 36	28	28
33992	Sporting & athletic goods mfg .....	25	38	35	34	30
339920	Sporting & athletic goods mfg .....	25	38	35	34	30
33993	Doll, toy, & game mfg .....	13	15	<sup>a</sup> 34	38	45
339931	Doll & stuffed toy mfg .....	<sup>a</sup> 21	<sup>a</sup> 17	<sup>a</sup> 32	<sup>a</sup> 14	<sup>a</sup> 24
339932	Game, toy, & children's vehicle mfg .....	12	14	<sup>a</sup> 34	46	50
33994	Office supplies (except paper) mfg .....	50	49	42	49	43
339941	Pen & mechanical pencil mfg .....	57	45	32	42	41
339942	Lead pencil & art good mfg .....	54	45	46	63	64
339943	Marking device mfg .....	31	55	56	44	<sup>a</sup> 31
339944	Carbon paper & inked ribbon mfg .....	64	70	77	58	40
33995	Sign mfg .....	59	60	47	45	41
339950	Sign mfg .....	59	60	47	45	41
33999	All other miscellaneous mfg .....	41	40	33	36	36
339991	Gasket, packing, & sealing device mfg .....	54	48	57	45	45
339992	Musical instrument mfg .....	32	31	26	17	14
339993	Fastener, button, needle, & pin mfg .....	50	35	55	31	39
339994	Broom, brush, & mop mfg .....	55	55	48	36	35
339995	Burial casket mfg .....	32	29	31	46	45
339999	All other miscellaneous mfg .....	37	39	28	40	<sup>a</sup> 45
5111	Newspaper, periodical, book, and database publishers .....	60	56	<sup>a</sup> 52	<sup>a</sup> 76	69

<sup>1</sup>Excluding NAICS 5111, Newspaper, periodical, book, and database publishers.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production			National emergency production		
						Level		2005 to 2006 change	Level		2005 to 2006 change
						2006	2005		2006	2005	
<b>31-33</b>	<b>Manufacturing<sup>2</sup></b> .....	<b>70</b>	<b>71</b>	<b>51</b>	<b>53</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Durable goods industries<sup>2</sup></b> .....	<b>69</b>	<b>70</b>	<b>47</b>	<b>49</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Nondurable goods industries<sup>2</sup></b> ..	<b>71</b>	<b>71</b>	<b>56</b>	<b>59</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>
	<b>Advanced processing industries<sup>2</sup></b> .....	<b>68</b>	<b>70</b>	<b>48</b>	<b>52</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
	<b>Primary processing industries<sup>2</sup></b> ..	<b>72</b>	<b>73</b>	<b>56</b>	<b>58</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>2</b>
311	Food mfg .....	71	73	54	59	1	1	1	2	2	3
3111	Animal food mfg .....	77	72	65	60	4	4	5	4	3	5
31111	Animal food mfg .....	77	72	65	60	4	4	5	4	3	5
311111	Dog & cat food mfg .....	74	70	66	64	6	6	3	5	5	2
311119	Other animal food mfg .....	81	75	63	56	2	3	2	5	3	4
3112	Grain & oilseed milling .....	74	81	66	74	5	2	5	4	2	5
31121	Flour milling & malt mfg .....	80	80	74	73	3	3	4	4	4	5
311211	Flour milling .....	82	81	74	73	4	4	2	4	5	2
311212	Rice milling .....	73	74	70	71	2	2	1	2	2	1
311213	Malt mfg .....	91	91	90	89	3	3	1	4	4	1
31122	Starch & vegetable fats & oils mfg .....	89	87	83	80	1	1	2	5	4	6
311221	Wet corn milling .....	94	94	94	93	2	1	1	2	2	1
311222	Soybean processing .....	91	88	78	76	2	3	2	10	9	2
311223	Other oilseed processing .....	85	87	78	82	1	1	1	2	1	1
311225	Fats & oils refining & blending .....	79	73	78	69	2	2	2	2	2	3
31123	Breakfast cereal mfg .....	60	76	52	68	8	3	8	6	2	6
311230	Breakfast cereal mfg .....	60	76	52	68	8	3	8	6	2	6
3113	Sugar & confectionery product mfg .....	67	69	54	55	2	2	3	2	2	3
31131	Sugar mfg .....	87	92	84	87	2	2	2	2	2	2
311311	Sugarcane mills .....	89	87	86	83	3	3	1	3	3	1
311312	Cane sugar refining .....	<sup>a73</sup> 97	<sup>a90</sup> 96	<sup>a68</sup> 96	<sup>a79</sup> 96	1	1	1	1	1	1
311313	Beet sugar mfg .....	97	96	96	96	3	3	1	3	4	2
31132	Chocolate & confectionery mfg from cacao beans .....	68	70	62	62	3	3	4	2	2	3
311320	Chocolate & confectionery mfg from cacao beans .....	68	70	62	62	3	3	1	2	2	2
31133	Confectionery mfg from purchased chocolate .....	67	66	55	51	3	3	4	3	3	4
311330	Confectionery mfg from purchased chocolate .....	67	66	55	51	3	3	2	3	3	1
31134	Nonchocolate confectionery mfg .....	59	66	42	47	5	4	6	4	3	5
311340	Nonchocolate confectionery mfg .....	59	66	42	47	5	4	3	4	3	3
3114	Fruit & vegetable preserving & specialty food mfg .....	67	71	44	62	3	3	4	6	3	6
31141	Frozen food mfg .....	81	79	67	69	2	2	3	3	3	4
311411	Frozen fruit, juice, & vegetable mfg ..	77	75	66	67	4	3	4	4	4	4
311412	Frozen specialty food mfg .....	84	83	68	70	3	2	2	4	4	3
31142	Fruit & vegetable canning, pickling, & drying .....	59	66	35	58	4	4	5	6	4	7
311421	Fruit & vegetable canning .....	49	56	25	48	4	5	4	6	5	5
311422	Specialty canning .....	82	84	74	76	6	5	2	5	5	2
311423	Dried & dehydrated food mfg .....	73	78	65	69	4	3	2	4	3	2
3115	Dairy product mfg .....	72	71	62	65	1	2	2	2	2	3
31151	Dairy product (except frozen) mfg .....	74	73	65	68	2	2	2	3	3	2
311511	Fluid milk mfg .....	74	74	67	67	3	2	2	3	3	2
311512	Creamery butter mfg .....	67	72	64	70	4	3	4	5	3	4
311513	Cheese mfg .....	80	78	74	72	2	3	3	2	3	3
311514	Dry, condensed, & evaporated dairy product mfg .....	65	64	53	63	2	2	2	6	2	6
31152	Ice cream & frozen dessert mfg .....	64	67	53	55	2	2	3	2	2	3
311520	Ice cream & frozen dessert mfg .....	64	67	53	55	2	2	2	2	2	2
3116	Meat product mfg .....	82	81	65	65	2	2	2	2	2	3
31161	Animal slaughtering & processing .....	82	81	65	65	2	2	2	2	2	3
311611	Animal (except poultry) slaughtering ..	80	76	68	65	4	3	2	4	4	1
311612	Meat processed from carcasses .....	69	70	56	60	3	3	3	3	3	3
311613	Rendering & meat byproduct processing .....	71	73	64	67	4	5	3	4	4	3
311615	Poultry processing .....	92	91	68	69	2	2	2	3	3	2
3117	Seafood product preparation & packaging .....	57	60	23	46	2	3	4	5	3	5
31171	Seafood product preparation & packaging .....	57	60	23	46	2	3	4	5	3	5
311711	Seafood canning .....	52	52	37	35	3	3	2	3	3	3
311712	Fresh & frozen seafood processing ..	58	62	22	48	3	4	2	5	3	3
3118	Bakeries & tortilla mfg .....	71	72	47	51	3	2	4	8	5	9
31181	Bread & bakery product mfg .....	74	76	44	48	2	2	2	10	7	12
311811	Retail bakeries .....	71	74	10	14	4	3	3	6	6	1
311812	Commercial bakeries .....	76	77	71	70	2	2	2	2	2	2
311813	Frozen cakes, pies, & other pastries mfg .....	66	72	55	57	3	4	3	4	4	4
31182	Cookie, cracker, & pasta mfg .....	65	65	55	55	6	5	8	5	4	6
311821	Cookie & cracker mfg .....	63	63	51	51	8	6	2	6	5	2
311822	Flour mixes & dough mfg from purchased flour .....	71	70	62	63	4	5	3	3	3	3
311823	Dry pasta mfg .....	73	70	73	71	1	2	2	1	2	2
31183	Tortilla mfg .....	86	84	73	73	3	2	3	3	3	3
311830	Tortilla mfg .....	86	84	73	73	3	2	1	3	3	1

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
311	Food mfg—Con.												
3119	Other food mfg	63	66	50	53	1	1	2	1	2	2	2	2
31191	Snack food mfg	69	85	59	75	2	2	2	2	2	2	2	2
311911	Roasted nuts & peanut butter mfg	63	73	57	65	2	2	2	2	2	2	1	1
311919	Other snack food mfg	70	88	60	77	2	3	2	2	2	2	2	2
31192	Coffee & tea mfg	50	60	39	53	4	5	6	3	6	6	3	6
311920	Coffee & tea mfg	50	60	39	53	4	5	2	3	6	3	3	3
31193	Flavoring syrup & concentrate mfg	54	49	39	35	1	1	1	1	1	1	1	1
311930	Flavoring syrup & concentrate mfg	54	49	39	35	1	1	1	1	1	1	1	1
31194	Seasoning & dressing mfg	65	64	52	53	2	2	3	3	2	3	2	3
311941	Mayonnaise, dressing, & other prepared sauce mfg	70	69	60	61	3	3	1	3	3	3	2	2
311942	Spice & extract mfg	61	60	46	48	2	2	2	4	2	3	2	3
31199	All other food mfg	66	69	54	52	3	4	5	3	4	5	5	5
311991	Perishable prepared food mfg	68	73	51	57	4	4	2	5	6	2	6	2
311999	All other miscellaneous food mfg	66	67	56	50	4	5	4	4	4	4	4	3
312	Beverage & tobacco product mfg	70	69	55	57	1	2	2	2	2	2	2	2
3121	Beverage mfg	67	67	52	58	2	2	3	2	2	2	3	3
31211	Soft drink & ice mfg	58	59	44	52	3	3	4	3	4	4	4	4
312111	Soft drink mfg	65	64	51	56	4	4	3	4	4	4	3	3
312112	Bottled water mfg	<sup>a</sup> 38	<sup>a</sup> 42	<sup>a</sup> 27	<sup>a</sup> 41	1	2	2	3	2	2	3	3
312113	Ice mfg	25	30	13	24	3	3	2	2	2	2	4	4
31212	Breweries	82	82	82	82	2	2	3	2	2	2	3	3
312120	Breweries	82	82	82	82	2	2	1	2	2	2	1	1
31213	Wineries	70	63	54	58	6	4	7	4	3	5	5	5
312130	Wineries	70	63	54	58	6	4	3	4	3	3	3	3
31214	Distilleries	66	68	37	34	2	2	3	3	2	4	4	4
312140	Distilleries	66	68	37	34	2	2	1	3	2	2	2	2
3122	Tobacco mfg	73	72	58	57	1	1	1	3	2	3	3	3
31221	Tobacco stemming & redrying	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)	(D)	(NA)	(D)	(D)	(D)
312210	Tobacco stemming & redrying	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)	(D)	(NA)	(D)	(D)	(D)
31222	Tobacco product mfg	73	71	58	56	1	1	1	3	2	3	3	3
312221	Cigarette mfg	72	71	56	55	1	1	1	3	2	2	1	1
312229	Other tobacco product mfg	84	74	72	70	2	3	2	3	3	3	4	4
313	Textile mills	63	69	52	61	2	2	2	2	2	2	2	2
3131	Fiber, yarn, & thread mills	70	75	65	70	3	2	3	3	3	3	4	4
31311	Fiber, yarn, & thread mills	70	75	65	70	3	2	3	3	3	3	4	4
313111	Yarn spinning mills	74	82	69	77	5	3	4	5	4	4	4	4
313112	Yarn texturing, throwing, & twisting mills	67	68	63	62	3	3	3	3	4	3	3	3
313113	Thread mills	52	70	37	60	3	5	3	1	3	2	2	2
3132	Fabric mills	66	69	53	60	2	2	3	2	2	2	3	3
31321	Broadwoven fabric mills	67	71	59	61	4	3	4	4	3	5	5	5
313210	Broadwoven fabric mills	<sup>a</sup> 67	71	<sup>a</sup> 59	61	4	3	3	4	3	3	3	3
31322	Narrow fabric mills & schiffli machine embroidery	63	68	49	55	2	2	3	2	2	2	3	3
313221	Narrow fabric mills	64	69	50	56	3	2	2	2	2	2	2	2
313222	Schiffli machine embroidery	<sup>a</sup> 56	<sup>a</sup> 63	<sup>a</sup> 44	<sup>a</sup> 47	2	2	2	1	1	2	2	2
31323	Nonwoven fabric mills	70	69	64	60	5	4	6	6	5	7	7	7
313230	Nonwoven fabric mills	70	69	64	60	5	4	2	6	5	5	1	1
31324	Knit fabric mills	53	63	30	58	2	2	3	2	3	3	3	3
313241	Weft knit fabric mills	<sup>a</sup> 64	<sup>a</sup> 68	<sup>a</sup> 24	<sup>a</sup> 62	5	4	4	2	2	5	5	5
313249	Other knit fabric & lace mills	45	59	41	54	2	2	2	1	1	2	2	2
3133	Textile & fabric finishing & fabric coating mills	56	66	43	56	4	3	5	3	2	3	3	3
31331	Textile & fabric finishing mills	54	64	43	57	4	3	5	3	3	4	4	4
313311	Broadwoven fabric finishing mills	46	58	40	53	6	5	3	4	4	3	3	3
313312	Textile & fabric finishing mills	67	73	47	61	3	3	3	3	3	3	3	3
31332	Fabric coating mills	64	71	45	52	4	3	5	5	3	6	6	6
313320	Fabric coating mills	64	71	45	52	4	3	3	5	3	3	3	3
314	Textile product mills	70	72	51	53	3	3	4	3	3	3	4	4
3141	Textile furnishings mills	77	79	59	62	4	4	5	5	5	6	6	6
31411	Carpet & rug mills	80	82	68	69	6	6	8	8	8	11	11	11
314110	Carpet & rug mills	80	82	68	69	6	6	3	8	8	3	3	3
31412	Curtain & linen mills	72	74	48	51	3	4	5	4	5	6	6	6
314121	Curtain & drapery mills	85	84	48	46	3	4	3	5	4	3	3	3
314129	Other household textile product mills	69	72	48	53	3	5	4	4	7	5	5	5
3149	Other textile product mills	61	62	41	43	5	2	6	3	3	4	4	4
31491	Textile bag & canvas mills	70	65	43	39	5	3	5	3	5	6	6	6
314911	Textile bag mills	53	60	35	29	10	6	9	6	11	12	12	12
314912	Canvas & related product mills	75	<sup>a</sup> 67	45	<sup>a</sup> 43	5	3	5	4	3	3	3	3
31499	All other textile product mills	57	61	40	45	7	3	7	4	2	5	5	5
314991	Rope, cordage, & twine mills	67	73	54	62	2	3	2	3	3	3	3	3
314992	Tire cord & tire fabric mills	70	91	68	83	5	1	5	5	2	5	5	5
314999	All other miscellaneous textile product mills	55	57	37	41	8	3	7	5	3	4	4	4
315	Apparel mfg	71	71	43	48	3	2	3	3	4	5	5	5
3151	Apparel knitting mills	73	76	66	61	2	2	3	3	2	3	3	3
31511	Hosiery & sock mills	74	75	66	63	3	3	4	3	2	4	4	4
315111	Sheer hosiery mills	71	70	66	66	3	3	4	4	3	3	3	3
315119	Other hosiery & sock mills	75	78	66	62	4	3	2	4	3	3	3	3
31519	Other apparel knitting mills	71	78	64	56	3	2	4	3	4	5	5	5
315191	Outerwear knitting mills	69	80	62	53	4	3	4	3	5	5	5	5
315192	Underwear & nightwear knitting mills	86	75	81	63	1	1	1	1	1	1	1	1

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
315	Apparel mfg—Con.												
3152	Cut & sew apparel mfg .....	71	70	40	47	4	3	4	4	5	6		
31521	Cut & sew apparel contractors .....	54	47	28	35	4	3	4	4	3	5		
315211	Men's & boys' cut & sew apparel contractors .....	67	60	37	33	3	6	7	3	3	3		
315212	Women's, girls', & infants' cut & sew apparel contractors .....	51	<sup>a44</sup> 79	26	<sup>a36</sup> 42	4	3	5	4	3	6		
31522	Men's & boys' cut & sew apparel mfg ..	78	79	45	42	2	7	7	2	10	10		
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	80	81	53	52	7	6	6	5	5	4		
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	81	81	44	37	6	10	5	7	5	3		
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	76	80	65	66	7	6	2	4	10	6		
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	<sup>a73</sup>	77	<sup>a52</sup>	39	1	15	15	1	22	22		
315225	Men's & boys' cut & sew work clothing mfg .....	86	81	29	36	1	3	3	1	5	5		
315228	Men's & boys' cut & sew other outerwear mfg .....	73	75	46	53	2	2	2	4	4	1		
31523	Women's & girls' cut & sew apparel mfg .....	80	79	49	68	1	1	1	1	2	2		
315231	Women's & girls' cut & sew lingerie & nightwear mfg .....	<sup>a72</sup>	<sup>a64</sup>	<sup>a46</sup>	<sup>a55</sup>	1	1	1	1	1	1		
315232	Women's & girls' cut & sew blouse & shirt mfg .....	<sup>a78</sup>	<sup>a89</sup>	<sup>a51</sup>	<sup>a59</sup>	1	2	2	3	3	5		
315233	Women's & girls' cut & sew dress mfg .....	82	<sup>a82</sup>	78	<sup>a69</sup>	2	2	2	3	9	9		
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	96	<sup>a71</sup>	93	<sup>a74</sup>	2	2	4	4	3	6		
315239	Women's & girls' cut & sew other outerwear mfg .....	83	82	34	82	1	1	1	1	1	1		
31529	Other cut & sew apparel mfg .....	69	<sup>a72</sup>	38	<sup>a31</sup> 43	14	14	45	40	3	40		
315291	Infants' cut & sew apparel mfg .....	47	88	11	22	—	1	1	1	2	2		
315292	Fur & leather apparel mfg .....	59	56	36	34	8	6	3	7	5	3		
315299	All other cut & sew apparel mfg .....	72	<sup>a72</sup>	45	<sup>a32</sup>	53	16	38	65	3	62		
3159	Apparel accessories & other apparel mfg .....	69	70	41	43	4	2	4	3	2	3		
31599	Apparel accessories & other apparel mfg .....	69	70	41	43	4	2	4	3	2	3		
315991	Hat, cap, & millinery mfg .....	68	67	42	45	3	2	2	3	3	2		
315992	Glove & mitten mfg .....	63	79	37	51	5	5	7	9	11	5		
315993	Men's & boys' neckwear mfg .....	<sup>a77</sup>	89	<sup>a47</sup>	74	1	1	1	2	4	4		
315999	Other apparel accessories & other apparel mfg .....	68	<sup>a65</sup>	39	<sup>a35</sup>	7	4	4	4	2	4		
316	Leather & allied product mfg .....	67	65	38	42	2	2	3	2	2	3		
3161	Leather & hide tanning & finishing .....	84	65	75	62	2	5	6	2	5	5		
31611	Leather & hide tanning & finishing .....	84	65	75	62	2	5	6	2	5	5		
316110	Leather & hide tanning & finishing .....	84	65	75	62	2	5	5	2	5	5		
3162	Footwear mfg .....	59	59	31	35	3	3	4	2	3	3		
31621	Footwear mfg .....	59	59	31	35	3	3	4	2	3	3		
316211	Rubber & plastics footwear mfg .....	55	57	40	45	2	2	1	3	2	2		
316212	House slipper mfg .....	<sup>a70</sup>	(D)	<sup>a34</sup>	(D)	1	(D)	2	1	(D)	2		
316213	Men's footwear (except athletic) mfg .....	61	57	28	30	7	4	4	2	4	3		
316214	Women's footwear (except athletic) mfg .....	<sup>a64</sup>	<sup>a65</sup>	<sup>a30</sup>	<sup>a41</sup>	2	2	2	3	5	3		
316219	Other footwear mfg .....	62	70	28	34	2	3	2	2	1	1		
3169	Other leather & allied product mfg .....	69	73	39	41	3	3	4	2	3	4		
31699	Other leather & allied product mfg .....	69	73	39	41	3	3	4	2	3	4		
316991	Luggage mfg .....	74	77	67	64	7	9	3	10	13	5		
316992	Women's handbag & purse mfg .....	86	84	42	60	1	1	1	3	7	5		
316993	Personal leather good (except women's handbag & purse) mfg .....	<sup>a32</sup>	<sup>a11</sup>	<sup>a16</sup>	<sup>a10</sup>	2	1	2	1	2	1		
316999	All other leather good mfg .....	81	82	46	39	4	6	4	3	6	5		
321	Wood product mfg .....	65	70	44	48	2	2	3	2	2	3		
3211	Sawmills & wood preservation .....	75	82	51	54	3	2	3	3	3	4		
32111	Sawmills & wood preservation .....	75	82	51	54	3	2	3	3	3	4		
321113	Sawmills .....	76	83	51	54	3	2	3	3	3	3		
321114	Wood preservation .....	72	70	55	54	2	3	3	3	3	3		
3212	Veneer, plywood, & engineered wood product mfg .....	65	80	43	61	3	4	5	6	9	11		
32121	Veneer, plywood, & engineered wood product mfg .....	65	80	43	61	3	4	5	6	9	11		
321211	Hardwood veneer & plywood mfg .....	75	82	57	61	6	5	3	6	6	4		
321212	Softwood veneer & plywood mfg .....	73	86	67	81	7	6	5	6	6	5		
321213	Engineered wood member (except truss) mfg .....	63	84	46	65	3	2	2	9	8	3		
321214	Truss mfg .....	66	81	41	61	6	3	4	6	5	5		
321219	Reconstituted wood product mfg .....	58	75	35	53	6	7	4	11	17	8		
3219	Other wood product mfg .....	62	62	42	42	3	2	3	2	2	3		
32191	Millwork .....	64	66	46	48	4	4	5	3	3	4		
321911	Wood window & door mfg .....	60	61	43	46	6	5	3	4	3	3		
321912	Cut stock, resawing lumber, & planing .....	70	75	54	53	8	7	2	7	6	6		
321918	Other millwork (including flooring) .....	70	73	45	48	4	4	4	4	5	3		
32192	Wood container & pallet mfg .....	80	52	66	34	6	5	8	12	3	12		
321920	Wood container & pallet mfg .....	80	52	66	34	6	5	7	12	3	12		
32199	All other wood product mfg .....	55	61	34	37	3	3	4	3	3	4		
321991	Manufactured home (mobile home) mfg .....	55	71	34	36	5	3	4	4	3	4		
321992	Prefabricated wood building mfg .....	56	55	32	38	5	6	5	4	5	3		
321999	All other miscellaneous wood product mfg .....	54	58	35	37	4	5	3	4	5	2		

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production			National emergency production		
						Level		2005 to 2006 change	Level		2005 to 2006 change
						2006	2005		2006	2005	
322	Paper mfg .....	79	75	66	64	2	2	3	2	2	3
3221	Pulp, paper, & paperboard mills .....	91	84	86	78	2	3	4	3	4	5
32211	Pulp mills .....	94	92	93	92	2	2	2	2	2	3
322110	Pulp mills .....	94	92	93	92	2	2	2	2	2	2
32212	Paper mills .....	88	80	82	73	3	5	5	4	5	6
322121	Paper (except newsprint) mills .....	89	80	82	72	3	5	4	4	5	4
322122	Newsprint mills .....	81	82	81	82	15	15	2	15	15	2
32213	Paperboard mills .....	98	95	97	93	1	2	2	2	2	3
322130	Paperboard mills .....	98	95	97	93	1	2	2	2	2	1
3222	Converted paper product mfg .....	69	68	53	55	2	2	3	3	2	3
32221	Paperboard container mfg .....	70	68	51	53	3	3	4	4	3	5
322211	Corrugated & solid fiber box mfg .....	67	65	50	49	5	4	3	5	4	3
322212	Folding paperboard box mfg .....	78	77	73	66	3	2	3	4	4	3
322213	Setup paperboard box mfg .....	70	73	50	52	5	5	2	5	4	2
322214	Fiber can, tube, drum, & similar products mfg .....	63	64	23	45	6	6	4	8	4	9
322215	Nonfolding sanitary food container mfg .....	76	80	72	78	4	4	2	4	4	2
32222	Paper bag & coated & treated paper mfg .....	67	68	61	62	4	4	6	4	4	6
322221	Coated & laminated packaging paper & plastics film mfg .....	34	32	31	30	13	14	3	10	12	3
322222	Coated & laminated paper mfg .....	70	74	63	66	4	4	2	5	5	2
322223	Plastics, foil, & coated paper bag mfg .....	77	78	69	72	2	3	3	3	4	3
322224	Uncoated paper & multiwall bag mfg .....	68	67	60	60	6	6	2	5	6	2
322225	Laminated aluminum foil mfg for flexible packaging uses .....	77	77	76	75	2	3	3	2	2	3
322226	Surface-coated paperboard mfg .....	78	66	75	64	5	5	4	4	4	3
32223	Stationery product mfg .....	68	72	59	55	3	2	4	4	4	5
322231	Die-cut paper & paperboard office supplies mfg .....	71	74	66	63	3	3	2	5	6	6
322232	Envelope mfg .....	72	79	63	59	4	3	4	6	6	4
322233	Stationery, tablet, & related product mfg .....	58	57	44	42	6	5	3	7	6	3
32229	Other converted paper product mfg .....	72	68	48	52	4	3	4	6	3	6
322291	Sanitary paper product mfg .....	74	68	64	59	3	3	2	4	4	3
322299	All other converted paper product mfg .....	68	67	32	41	7	6	3	7	4	6
323	Printing & related support activities .....	71	73	52	54	3	2	3	3	2	3
3231	Printing & related support activities .....	71	73	52	54	3	2	3	3	2	3
32311	Printing .....	71	73	53	55	3	3	3	2	4	4
323110	Commercial lithographic printing .....	74	79	55	62	4	3	4	4	3	4
323111	Commercial gravure printing .....	93	65	94	58	2	7	7	2	7	7
323112	Commercial flexographic printing .....	63	71	44	55	7	4	8	6	5	6
323113	Commercial screen printing .....	59	66	41	35	11	5	7	8	6	8
323114	Quick printing .....	73	73	48	46	6	2	7	7	4	5
323115	Digital printing .....	69	75	50	52	3	4	3	6	7	3
323116	Manifold business form printing .....	60	55	50	48	8	5	4	7	5	5
323117	Book printing .....	89	<sup>a</sup> 77	83	<sup>a</sup> 65	3	1	3	6	2	6
323118	Blankbook, looseleaf binder, & device mfg .....	45	<sup>a</sup> 59	31	<sup>a</sup> 45	7	8	7	7	7	8
323119	Other commercial printing .....	74	73	62	58	5	3	3	5	5	6
32312	Support activities for printing .....	70	73	48	45	3	3	4	5	6	8
323121	Tradebinding & related work .....	63	64	43	33	5	4	3	5	9	5
323122	Prepress services .....	76	80	52	57	3	3	3	8	5	8
324	Petroleum & coal products mfg .....	81	76	76	73	5	7	8	5	7	8
3241	Petroleum & coal products mfg .....	81	76	76	73	5	7	8	5	7	8
32411	Petroleum refineries .....	85	78	82	77	6	8	10	6	9	10
324110	Petroleum refineries .....	85	78	82	77	6	8	10	6	9	10
32412	Asphalt paving, roofing, & saturated materials mfg .....	57	66	45	52	6	6	9	7	8	11
324121	Asphalt paving mixture & block mfg .....	51	51	35	36	10	9	6	10	8	5
324122	Asphalt shingle & coating materials mfg .....	63	86	59	82	4	2	5	4	3	5
32419	Other petroleum & coal products mfg .....	59	71	51	61	3	4	5	3	4	5
324191	Petroleum lubricating oil & grease mfg .....	57	69	49	59	3	4	4	3	4	3
324199	All other petroleum & coal products mfg .....	76	83	69	72	4	4	2	5	9	9
325	Chemical mfg .....	67	68	53	57	2	2	3	4	2	4
3251	Basic chemical mfg .....	75	74	69	67	2	2	2	2	2	2
32511	Petrochemical mfg .....	84	85	83	82	3	3	4	2	3	3
325110	Petrochemical mfg .....	84	85	83	82	3	3	1	2	3	1
32512	Industrial gas mfg .....	78	78	77	74	2	2	2	2	2	2
325120	Industrial gas mfg .....	78	78	77	74	2	2	2	2	2	2
32513	Dye & pigment mfg .....	76	79	72	75	2	2	3	2	2	3
325131	Inorganic dye & pigment mfg .....	77	81	75	79	3	3	1	3	3	1
325132	Synthetic organic dye & pigment mfg .....	74	75	66	66	2	2	2	2	2	2
32518	Other basic inorganic chemical mfg .....	65	64	54	51	4	5	6	3	4	5
325181	Alkalies & chlorine mfg .....	77	85	76	77	1	1	1	1	1	1
325182	Carbon black mfg .....	74	79	72	80	1	1	1	1	1	1
325188	All other basic inorganic chemical mfg .....	62	60	49	47	5	5	2	4	4	2
32519	Other basic organic chemical mfg .....	74	73	68	68	2	1	2	3	2	3
325191	Gum & wood chemical mfg .....	61	67	58	64	2	2	1	3	3	2
325192	Cyclic crude & intermediate mfg .....	79	75	79	75	1	1	1	1	1	1
325193	Ethyl alcohol mfg .....	98	94	98	94	1	1	1	1	2	1
325199	All other basic organic chemical mfg .....	72	72	65	66	2	2	1	3	2	2

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production		2005 to 2006 change	National emergency production		2005 to 2006 change
						Level			2006	2005	
						2006	2005				
325	Chemical mfg—Con.										
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg	77	79	74	74	2	1	2	2	2	2
32521	Resin & synthetic rubber mfg	77	79	74	75	2	2	2	2	2	2
325211	Plastics material & resin mfg	77	79	75	75	2	2	2	2	2	2
325212	Synthetic rubber mfg	76	81	68	72	2	1	2	2	2	2
32522	Artificial & synthetic fibers & filaments mfg	73	78	71	67	1	1	1	1	1	1
325221	Cellulosic organic fiber mfg	<sup>a</sup> 66	<sup>a</sup> 64	<sup>a</sup> 49	<sup>a</sup> 36	1	1	1	2	1	2
325222	Noncellulosic organic fiber mfg	74	80	74	75	1	1	1	1	1	1
3253	Pesticide, fertilizer, & other agricultural chemical mfg	54	73	37	44	2	3	3	3	3	4
32531	Fertilizer mfg	69	74	59	63	3	2	3	3	3	4
325311	Nitrogenous fertilizer mfg	85	85	80	72	3	2	3	3	3	3
325312	Phosphatic fertilizer mfg	75	83	71	83	3	3	3	3	3	3
325314	Fertilizer (mixing only) mfg	53	59	41	46	4	3	2	4	4	2
32532	Pesticide & other agricultural chemical mfg	49	73	31	37	2	4	4	3	3	4
325320	Pesticide & other agricultural chemical mfg	49	73	31	37	2	4	3	3	3	3
3254	Pharmaceutical & medicine mfg	67	69	55	60	2	2	2	2	2	3
32541	Pharmaceutical & medicine mfg	67	69	55	60	2	2	2	2	2	3
325411	Medicinal & botanical mfg	61	60	47	48	6	4	3	5	4	2
325412	Pharmaceutical preparation mfg	67	70	55	62	2	2	1	3	3	1
325413	In-vitro diagnostic substance mfg	70	67	53	50	2	3	2	3	3	3
325414	Biological product (except diagnostic) mfg	77	63	71	61	2	2	2	3	2	2
3255	Paint, coating, & adhesive mfg	64	66	47	48	2	2	3	2	2	3
32551	Paint & coating mfg	63	66	47	49	2	2	3	2	2	3
325510	Paint & coating mfg	63	66	47	49	2	2	1	2	2	2
32552	Adhesive mfg	68	67	48	47	4	3	5	6	6	8
325520	Adhesive mfg	68	67	48	47	4	3	2	6	6	2
3256	Soap, cleaning compound, & toilet preparation mfg	53	52	33	43	8	7	11	10	5	11
32561	Soap & cleaning compound mfg	65	64	55	54	1	1	2	2	2	2
325611	Soap & other detergent mfg	66	64	60	58	2	2	1	2	2	1
325612	Polish & other sanitation good mfg	66	65	51	48	2	2	2	3	3	2
325613	Surface active agent mfg	56	61	49	54	4	4	2	3	4	2
32562	Toilet preparation mfg	45	45	24	37	11	10	15	10	7	12
325620	Toilet preparation mfg	45	45	24	37	11	10	2	10	7	4
3259	Other chemical product mfg	71	74	56	56	2	2	2	2	2	3
32591	Printing ink mfg	58	55	40	32	5	4	6	6	3	7
325910	Printing ink mfg	58	55	40	32	5	4	3	6	3	5
32592	Explosives mfg	65	66	37	38	3	2	4	4	4	5
325920	Explosives mfg	65	66	37	38	3	2	4	4	4	1
32599	All other chemical product & preparation mfg	73	77	60	62	2	2	3	3	2	3
325991	Custom compounding of purchased resin	63	71	51	57	3	2	2	3	3	2
325992	Photographic film, paper, plate, & chemical mfg	84	89	80	79	5	2	4	5	4	3
325998	All other miscellaneous chemical product & preparation mfg	68	71	51	51	3	2	2	4	2	4
326	Plastics & rubber products mfg	69	75	58	63	2	2	2	2	2	2
3261	Plastics product mfg	69	75	58	62	2	2	2	2	2	2
32611	Unsupported plastics film, sheet, & bag mfg	77	79	70	71	2	3	4	2	2	3
326111	Unsupported plastics bag mfg	69	73	62	65	5	4	3	4	4	3
326112	Unsupported plastics packaging film & sheet mfg	81	82	72	72	2	11	11	4	4	6
326113	Unsupported plastics film & sheet (except packaging) mfg	80	82	75	74	3	3	3	3	3	3
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg	74	76	59	71	3	3	4	2	3	4
326121	Unsupported plastics profile shape mfg	71	70	50	65	5	3	5	2	4	4
326122	Plastics pipe & pipe fitting mfg	77	87	71	82	4	4	3	5	5	3
32613	Laminated plastics plate, sheet, & shape mfg	63	77	50	60	1	2	2	2	3	4
326130	Laminated plastics plate, sheet, & shape mfg	<sup>a</sup> 63	77	<sup>a</sup> 50	60	1	2	2	2	3	3
32614	Polystyrene foam product mfg	76	84	51	59	5	5	7	8	10	13
326140	Polystyrene foam product mfg	76	84	51	59	5	5	4	8	10	7
32615	Urethane & other foam product (except polystyrene) mfg	66	71	58	54	5	5	7	5	4	6
326150	Urethane & other foam product (except polystyrene) mfg	66	71	58	54	5	5	4	5	4	4
32616	Plastics bottle mfg	73	83	70	80	6	2	6	5	3	6
326160	Plastics bottle mfg	73	83	70	80	6	2	5	5	3	5
32619	Other plastics product mfg	65	72	55	59	3	2	3	2	3	3
326191	Plastics plumbing fixture mfg	52	66	32	40	7	4	6	5	6	5
326192	Resilient floor covering mfg	60	74	56	66	1	2	2	1	2	2
326199	All other plastics product mfg	66	73	58	60	3	2	3	2	3	3
3262	Rubber product mfg	68	77	56	64	4	3	4	3	3	4
32621	Tire mfg	67	81	54	70	6	4	7	4	3	5
326211	Tire mfg (except retreading)	66	82	56	76	7	4	7	5	4	6
326212	Tire retreading	72	76	37	33	3	3	4	4	4	2
32622	Rubber & plastics hoses & belting mfg	82	79	63	64	5	5	7	5	6	8
326220	Rubber & plastics hoses & belting mfg	82	79	63	64	5	5	4	5	6	4
32629	Other rubber product mfg	66	72	56	58	4	4	5	4	5	6
326291	Rubber product mfg for mechanical use	63	69	53	59	5	5	3	6	5	3
326299	All other rubber product mfg	70	75	60	57	6	5	6	5	7	8

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production		2005 to 2006 change	National emergency production		2005 to 2006 change
						Level			2006	2005	
						2006	2005				
327	Nonmetallic mineral product mfg . . . . .	67	72	33	45	2	2	3	3	4	4
3271	Clay product & refractory mfg . . . . .	77	78	65	63	2	2	2	3	3	4
32711	Pottery, ceramics, & plumbing fixture mfg . . . . .	71	72	60	58	2	2	3	3	3	4
327111	Vitreous china plumbing fixture & bathroom accessories mfg . . . . .	74	83	73	86	1	1	2	1	1	2
327112	Vitreous china, fine earthenware, & other pottery product mfg . . . . .	75	68	60	51	4	3	2	5	5	4
327113	Porcelain electrical supply mfg . . . . .	64	65	47	48	4	4	3	4	3	3
32712	Clay building material & refractories mfg . . . . .	82	83	67	65	2	2	3	4	4	5
327121	Brick & structural clay tile mfg . . . . .	94	94	94	82	3	3	1	3	9	9
327122	Ceramic wall & floor tile mfg . . . . .	74	81	68	64	4	3	3	3	6	6
327123	Other structural clay product mfg . . . . .	73	82	69	79	2	2	2	3	2	3
327124	Clay refractory mfg . . . . .	67	66	42	48	5	6	3	4	5	3
327125	Nonclay refractory mfg . . . . .	79	78	56	54	4	3	2	9	8	1
3272	Glass & glass product mfg . . . . .	73	78	49	55	3	3	4	6	7	10
32721	Glass & glass product mfg . . . . .	73	78	49	55	3	3	4	6	7	10
327211	Flat glass mfg . . . . .	84	86	81	85	2	2	2	2	2	2
327212	Other pressed & blown glass & glassware mfg . . . . .	76	83	62	72	7	4	4	18	20	4
327213	Glass container mfg . . . . .	94	92	92	89	1	2	2	1	1	1
327215	Glass product mfg made of purchased glass . . . . .	64	70	35	39	4	4	2	7	8	3
3273	Cement & concrete product mfg . . . . .	59	65	23	35	3	3	4	3	4	5
32731	Cement mfg . . . . .	92	92	91	92	3	2	3	3	2	3
327310	Cement mfg . . . . .	92	92	91	92	3	2	2	3	2	2
32732	Ready-mix concrete mfg . . . . .	46	52	19	22	4	5	6	4	4	5
327320	Ready-mix concrete mfg . . . . .	46	52	19	22	4	5	3	4	4	4
32733	Concrete pipe, brick, & block mfg . . . . .	69	74	11	50	3	2	4	2	3	4
327331	Concrete block & brick mfg . . . . .	71	71	50	50	5	3	4	6	4	5
327332	Concrete pipe mfg . . . . .	67	79	5	51	3	3	3	1	3	3
32739	Other concrete product mfg . . . . .	66	75	52	56	4	3	5	4	4	6
327390	Other concrete product mfg . . . . .	66	75	52	56	4	3	4	4	4	3
3274	Lime & gypsum product mfg . . . . .	79	87	73	79	3	3	4	4	4	5
32741	Lime mfg . . . . .	90	88	79	81	2	2	2	2	1	2
327410	Lime mfg . . . . .	90	88	79	81	2	2	2	1	1	2
32742	Gypsum product mfg . . . . .	77	87	72	78	3	4	4	4	5	7
327420	Gypsum product mfg . . . . .	77	87	72	78	3	4	2	4	5	3
3279	Other nonmetallic mineral product mfg . . . . .	76	77	54	56	3	3	4	4	4	6
32791	Abrasive product mfg . . . . .	73	73	52	50	7	7	10	9	9	12
327910	Abrasive product mfg . . . . .	73	73	52	50	7	7	2	9	9	3
32799	All other nonmetallic mineral product mfg . . . . .	76	78	55	58	3	3	4	5	5	7
327991	Cut stone & stone product mfg . . . . .	71	68	40	41	6	6	4	9	10	4
327992	Ground or treated mineral & earth mfg . . . . .	71	75	66	62	4	2	4	4	2	3
327993	Mineral wool mfg . . . . .	87	94	79	85	5	4	3	7	7	3
327999	All other miscellaneous nonmetallic mineral product mfg . . . . .	68	66	39	43	5	6	5	6	4	5
331	Primary metal mfg . . . . .	73	79	63	69	2	1	2	2	2	3
3311	Iron & steel mills & ferroalloy mfg . . . . .	79	88	74	82	2	2	3	3	2	3
33111	Iron & steel mills & ferroalloy mfg . . . . .	79	88	74	82	2	2	3	3	2	3
331111	Iron & steel mills . . . . .	79	88	74	82	2	2	3	3	3	3
331112	Electrometallurgical ferroalloy product mfg . . . . .	89	92	88	90	2	2	1	3	3	1
3312	Steel product mfg from purchased steel . . . . .	67	71	59	58	1	2	2	2	2	3
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	64	67	55	51	2	2	3	2	3	4
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	64	67	55	51	2	2	2	2	3	3
33122	Rolling & drawing of purchased steel . . . . .	71	74	63	64	2	2	2	2	3	4
331221	Cold-rolled steel shape mfg . . . . .	74	72	69	63	2	2	2	3	4	4
331222	Steel wire drawing . . . . .	67	76	56	64	3	3	2	3	4	2
3313	Alumina & aluminum production & processing . . . . .	72	82	67	77	5	3	5	5	4	6
33131	Alumina & aluminum production & processing . . . . .	72	82	67	77	5	3	5	5	4	6
331311	Alumina refining . . . . .	75	91	75	91	2	2	1	2	2	1
331312	Primary aluminum production . . . . .	57	84	57	84	15	9	18	15	9	18
331314	Secondary smelting & alloying of aluminum . . . . .	75	79	73	75	3	3	3	3	4	3
331315	Aluminum sheet, plate, & foil mfg . . . . .	86	86	81	80	3	3	4	4	2	5
331316	Aluminum extruded product mfg . . . . .	66	76	55	67	6	5	3	6	8	4
331319	Other aluminum rolling & drawing . . . . .	80	75	77	68	3	5	2	3	4	3
3314	Nonferrous metal (except aluminum) production & processing . . . . .	69	74	55	61	3	3	4	4	5	6
33141	Nonferrous metal (except aluminum) smelting & refining . . . . .	62	70	57	59	3	4	4	8	11	13
331411	Primary smelting & refining of copper . . . . .	51	66	51	65	1	1	1	1	1	1
331419	Other nonferrous metal primary smelting & refining . . . . .	77	75	65	54	8	8	8	19	19	9
33142	Copper rolling, drawing, extruding, & alloying . . . . .	70	80	60	73	3	3	4	3	4	5
331421	Copper rolling, drawing, & extruding . . . . .	63	79	57	71	6	4	3	5	7	5
331422	Copper wire (except mechanical) drawing . . . . .	74	81	60	74	4	5	3	3	4	3
331423	Secondary smelting, refining, & alloying of copper . . . . .	83	85	73	77	2	2	2	3	2	2

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
331	Primary metal mfg—Con.												
3314	Nonferrous metal (except aluminum) production & processing—Con.												
33149	Other nonferrous metal rolling, drawing, extruding, & alloying .....	72	71	51	52	5	5	7	6	6	9		
331491	Other nonferrous metal rolling, drawing, & extruding .....	79	77	56	52	2	5	5	8	9	3		
331492	Other nonferrous metal secondary smelting, refining, & alloying .....	65	65	46	53	8	9	3	9	9	3		
3315	Foundries .....	68	70	50	56	3	2	4	4	4	6		
33151	Ferrous metal foundries .....	72	72	55	59	5	4	6	7	6	9		
331511	Iron foundries .....	67	69	52	56	6	5	3	9	8	3		
331512	Steel investment foundries .....	77	72	67	66	3	2	3	5	2	4		
331513	Steel foundries (except investment) .....	85	83	59	65	2	3	2	7	6	7		
33152	Nonferrous metal foundries .....	64	66	44	52	2	2	3	4	3	5		
331521	Aluminum die-casting foundries .....	62	69	53	61	3	2	2	3	3	3		
331522	Nonferrous (except aluminum) die-casting foundries .....	63	62	32	48	5	6	4	9	4	10		
331524	Aluminum foundries (except die-casting) .....	65	67	44	48	3	4	3	5	6	5		
331525	Copper foundries (except die-casting) .....	57	54	41	39	5	4	3	4	3	2		
331528	Other nonferrous foundries (except die-casting) .....	85	79	60	64	3	4	3	11	8	4		
332	Fabricated metal product mfg .....	70	68	49	49	1	1	1	1	1	2		
3321	Forging & stamping .....	64	63	44	45	2	2	3	3	2	3		
33211	Forging & stamping .....	64	63	44	45	2	2	3	3	2	3		
332111	Iron & steel forging .....	72	73	57	49	3	4	2	3	6	6		
332112	Nonferrous forging .....	68	73	61	65	3	3	2	3	3	2		
332114	Custom roll forming .....	69	65	49	51	4	3	4	9	4	8		
332115	Crown & closure mfg .....	55	59	52	56	4	4	2	3	4	2		
332116	Metal stamping .....	59	58	35	37	3	3	3	3	3	2		
332117	Powder metallurgy part mfg .....	68	70	57	59	4	3	3	4	3	3		
3322	Cutlery & handtool mfg .....	63	64	48	52	2	3	3	2	2	3		
33221	Cutlery & handtool mfg .....	63	64	48	52	2	3	3	2	2	3		
332211	Cutlery & flatware (except precious) mfg .....	<sup>a</sup> 40	<sup>a</sup> 60	<sup>a</sup> 30	<sup>a</sup> 56	3	4	5	4	4	5		
332212	Hand & edge tool mfg .....	73	64	54	50	2	4	3	3	2	3		
332213	Saw blade & handsaw mfg .....	66	70	45	49	3	3	1	5	5	2		
332214	Kitchen utensil, pot, & pan mfg .....	76	64	70	60	2	4	4	2	2	3		
3323	Architectural & structural metals mfg .....	67	67	45	46	2	2	2	2	2	2		
33231	Plate work & fabricated structural product mfg .....	72	72	46	47	2	2	3	2	2	3		
332311	Prefabricated metal building & component mfg .....	65	64	45	49	3	3	3	4	3	4		
332312	Fabricated structural metal mfg .....	74	73	46	46	2	3	3	3	3	3		
332313	Plate work mfg .....	75	78	50	50	4	3	3	6	5	2		
33232	Ornamental & architectural metal products mfg .....	63	64	45	46	2	2	3	2	3	3		
332321	Metal window & door mfg .....	69	67	46	50	2	4	4	3	3	3		
332322	Sheet metal work mfg .....	60	61	44	44	3	3	3	4	4	3		
332323	Ornamental & architectural metal work mfg .....	67	67	45	45	5	3	3	4	3	2		
3324	Boiler, tank, & shipping container mfg .....	76	72	60	56	2	2	2	2	2	2		
33241	Power boiler & heat exchanger mfg .....	75	66	54	47	2	2	3	3	2	3		
332410	Power boiler & heat exchanger mfg .....	75	66	54	47	2	2	2	3	2	2		
33242	Metal tank (heavy gauge) mfg .....	75	71	54	50	2	2	3	2	2	2		
332420	Metal tank (heavy gauge) mfg .....	75	71	54	50	2	2	1	2	2	2		
33243	Metal can, box, & other metal container (light gauge) mfg .....	77	74	66	63	3	3	4	3	3	4		
332431	Metal can mfg .....	83	82	79	76	3	3	2	3	4	2		
332439	Other metal container mfg .....	63	60	46	44	5	4	3	3	3	2		
3325	Hardware mfg .....	65	69	46	47	3	3	5	4	4	6		
33251	Hardware mfg .....	65	69	46	47	3	3	5	4	4	6		
332510	Hardware mfg .....	65	69	46	47	3	3	2	4	4	3		
3326	Spring & wire product mfg .....	69	65	53	48	3	3	4	3	2	4		
33261	Spring & wire product mfg .....	69	65	53	48	3	3	4	3	2	4		
332611	Spring (heavy gauge) mfg .....	64	60	54	45	3	4	3	3	6	6		
332612	Spring (light gauge) mfg .....	66	67	49	42	4	3	2	4	4	4		
332618	Other fabricated wire product mfg .....	71	65	56	50	4	4	5	5	3	5		
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	74	70	49	46	3	2	3	4	2	5		
33271	Machine shops .....	80	73	52	48	5	2	5	7	3	7		
332710	Machine shops .....	80	73	52	48	5	2	5	7	3	7		
33272	Turned product & screw, nut, & bolt mfg .....	65	66	43	43	2	2	2	2	2	3		
332721	Precision turned product mfg .....	68	67	42	40	2	2	1	3	3	2		
332722	Bolt, nut, screw, rivet, & washer mfg .....	61	65	46	48	3	2	2	2	2	2		
3328	Coating, engraving, heat treating, & allied activities .....	79	72	64	61	2	3	3	3	3	4		
33281	Coating, engraving, heat treating, & allied activities .....	79	72	64	61	2	3	3	3	3	4		
332811	Metal heat treating .....	87	85	68	71	2	2	1	5	4	2		
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	85	72	75	67	3	4	5	4	4	5		
332813	Electroplating, plating, polishing, anodizing, & coloring .....	68	66	51	51	4	4	3	4	4	3		

See footnotes at end of table.



**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
332	Fabricated metal product mfg—Con.												
3329	Other fabricated metal product mfg . . . . .	70	69	51	51	2	1	2	2	1	2	2	3
33291	Metal valve mfg . . . . .	71	67	57	53	2	2	3	2	2	3	2	3
332911	Industrial valve mfg . . . . .	72	63	59	49	3	4	3	3	3	3	3	3
332912	Fluid power valve & hose fitting mfg . . . . .	74	71	59	55	3	3	1	2	2	1	2	1
332913	Plumbing fixture fitting & trim mfg . . . . .	68	64	49	51	2	4	4	4	3	3	4	3
332919	Other metal valve & pipe fitting mfg . . . . .	64	74	56	66	4	3	4	3	2	3	2	3
33299	All other fabricated metal product mfg . . . . .	69	70	47	48	2	2	3	2	2	2	2	2
332991	Ball & roller bearing mfg . . . . .	82	83	60	78	8	3	5	7	5	5	5	5
332992	Small arms ammunition mfg . . . . .	85	78	54	48	4	4	2	6	5	1	5	1
332993	Ammunition (except small arms) mfg . . . . .	58	70	31	36	1	2	2	2	2	1	2	1
332994	Small arms mfg . . . . .	58	63	52	54	10	5	8	8	4	6	4	6
332995	Other ordnance & accessories mfg . . . . .	65	68	48	50	1	2	3	2	2	2	2	2
332996	Fabricated pipe & pipe fitting mfg . . . . .	79	75	55	53	3	3	2	4	4	3	4	3
332997	Industrial pattern mfg . . . . .	53	68	40	47	3	3	3	2	4	3	4	3
332998	Enameled iron & metal sanitary ware mfg . . . . .	72	62	49	45	2	3	4	6	5	4	6	4
332999	All other miscellaneous fabricated metal product mfg . . . . .	64	65	42	42	3	2	2	3	2	2	3	2
333	Machinery mfg . . . . .	66	67	45	48	1	1	1	1	1	1	1	1
3331	Agriculture, construction, & mining machinery mfg . . . . .	69	73	43	53	2	2	3	2	2	3	2	3
33311	Agricultural implement mfg . . . . .	63	68	33	46	3	2	4	2	3	3	2	3
333111	Farm machinery & equipment mfg . . . . .	63	70	31	47	3	2	4	2	3	3	2	3
333112	Lawn & garden tractor & home lawn & garden equipment mfg . . . . .	63	63	38	43	5	6	2	7	6	3	6	3
33312	Construction machinery mfg . . . . .	70	75	53	59	3	3	4	3	3	4	3	4
333120	Construction machinery mfg . . . . .	70	75	53	59	3	3	3	3	3	3	3	3
33313	Mining & oil & gas field machinery mfg . . . . .	86	79	68	60	2	2	2	3	3	4	3	4
333131	Mining machinery & equipment mfg . . . . .	79	77	61	63	4	4	2	5	4	6	4	6
333132	Oil & gas field machinery & equipment mfg . . . . .	88	80	70	59	1	2	2	3	3	3	3	3
3332	Industrial machinery mfg . . . . .	64	57	44	44	2	2	2	3	2	3	2	3
33321	Sawmill & woodworking machinery mfg . . . . .	70	74	45	47	3	4	5	4	6	7	4	7
333210	Sawmill & woodworking machinery mfg . . . . .	70	74	45	47	3	4	3	4	6	5	4	5
33322	Plastics & rubber industry machinery mfg . . . . .	67	62	54	43	3	2	4	4	3	5	4	5
333220	Plastics & rubber industry machinery mfg . . . . .	67	62	54	43	3	2	3	4	3	4	3	4
33329	Other industrial machinery mfg . . . . .	63	56	43	44	2	2	2	3	2	4	2	4
333291	Paper industry machinery mfg . . . . .	66	69	52	54	6	5	3	5	5	2	5	2
333292	Textile machinery mfg . . . . .	56	52	37	38	3	3	3	2	2	1	2	1
333293	Printing machinery & equipment mfg . . . . .	57	67	38	46	4	4	3	4	5	2	4	2
333294	Food product machinery mfg . . . . .	70	71	43	40	4	3	3	3	4	3	4	3
333295	Semiconductor machinery mfg . . . . .	67	49	62	45	2	2	2	2	2	2	2	2
333298	All other industrial machinery mfg . . . . .	58	64	29	42	4	3	4	5	5	5	5	5
3333	Commercial & service industry machinery mfg . . . . .	68	72	47	51	3	2	3	2	2	3	2	3
33331	Commercial & service industry machinery mfg . . . . .	68	72	47	51	3	2	3	2	2	3	2	3
333311	Automatic vending machine mfg . . . . .	66	53	56	46	4	4	2	3	4	3	4	3
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	83	78	59	61	1	1	1	3	3	1	3	1
333313	Office machinery mfg . . . . .	60	<sup>a</sup> 78	49	<sup>a</sup> 42	2	2	1	5	3	3	5	3
333314	Optical instrument & lens mfg . . . . .	75	68	56	51	4	4	3	3	3	3	3	3
333315	Photographic & photocopying equipment mfg . . . . .	74	85	34	55	5	6	7	1	11	11	1	11
333319	Other commercial & service industry machinery mfg . . . . .	67	73	47	53	4	3	2	4	4	2	4	2
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	66	44	50	3	3	4	2	3	3	2	3
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	66	44	50	3	3	4	2	3	3	2	3
333411	Air purification equipment mfg . . . . .	70	71	54	52	3	4	5	4	5	6	4	6
333412	Industrial & commercial fan & blower mfg . . . . .	61	65	45	52	3	3	5	4	3	5	4	5
333414	Heating equipment (except warm air furnaces) mfg . . . . .	54	65	36	37	2	1	2	2	2	1	2	1
333415	AC & warm air heating & commercial/industrial refig equip mfg . . . . .	63	66	45	53	4	4	2	3	4	3	4	3
3335	Metalworking machinery mfg . . . . .	66	68	45	47	2	1	2	2	1	2	2	2
33351	Metalworking machinery mfg . . . . .	66	68	45	47	2	1	2	2	1	2	2	2
333511	Industrial mold mfg . . . . .	68	71	49	51	4	3	4	4	3	4	4	4
333512	Machine tool (metal cutting types) mfg . . . . .	72	66	52	47	4	5	2	5	5	2	5	2
333513	Machine tool (metal forming types) mfg . . . . .	64	57	47	42	3	2	3	4	3	3	4	3
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	66	71	43	44	2	2	2	2	2	2	2	2
333515	Cutting tool & machine tool accessory mfg . . . . .	67	68	50	51	4	2	4	3	3	3	4	3
333516	Rolling mill machinery & equipment mfg . . . . .	74	72	43	43	8	10	3	15	16	3	15	3
333518	Other metalworking machinery mfg . . . . .	53	61	35	41	5	3	5	5	3	4	5	4

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production		2005 to 2006 change	National emergency production		2005 to 2006 change
						Level			2006	2005	
						2006	2005				
333	Machinery mfg—Con.										
3336	Engine, turbine, & power transmission equipment mfg	68	68	53	52	2	2	2	3	3	4
33361	Engine, turbine, & power transmission equipment mfg	68	68	53	52	2	2	2	3	3	4
333611	Turbine & turbine generator set unit mfg	<sup>a</sup> 49	<sup>a</sup> 53	<sup>a</sup> 47	<sup>a</sup> 50	3	3	1	2	3	2
333612	Speed changer, industrial high-speed drive, & gear mfg	72	72	50	52	2	3	2	5	5	1
333613	Mechanical power transmission equipment mfg	70	75	50	56	4	4	2	3	3	2
333618	Other engine equipment mfg	79	74	57	52	2	2	2	5	5	2
3339	Other general-purpose machinery mfg	67	66	45	46	2	1	2	2	2	2
33391	Pump & compressor mfg	67	64	47	46	2	2	3	3	3	4
333911	Pump & pumping equipment mfg	71	71	53	51	4	3	3	3	3	2
333912	Air & gas compressor mfg	65	60	41	40	2	3	2	4	5	2
333913	Measuring & dispensing pump mfg	<sup>a</sup> 43	<sup>a</sup> 42	<sup>a</sup> 36	<sup>a</sup> 40	1	1	1	1	1	1
33392	Material handling equipment mfg	67	64	46	45	3	3	3	2	2	3
333921	Elevator & moving stairway mfg	80	76	59	56	1	3	3	4	4	3
333922	Conveyor & conveying equipment mfg	62	58	46	38	5	4	4	3	3	3
333923	Overhead traveling crane, hoist, & monorail system mfg	<sup>a</sup> 74	83	<sup>a</sup> 46	57	2	2	2	2	3	2
333924	Industrial truck, tractor, trailer, & stacker machinery mfg	67	59	44	46	3	3	2	3	3	2
33399	All other general-purpose machinery mfg	67	68	44	46	3	2	3	3	2	3
333991	Power-driven handtool mfg	75	<sup>a</sup> 60	39	<sup>a</sup> 45	3	3	3	3	3	3
333992	Welding & soldering equipment mfg	54	75	60	57	2	2	2	3	2	2
333993	Packaging machinery mfg	69	70	44	44	3	3	2	3	2	2
333994	Industrial process furnace & oven mfg	61	60	42	41	4	7	4	3	3	2
333995	Fluid power cylinder & actuator mfg	73	69	51	41	3	2	2	6	3	6
333996	Fluid power pump & motor mfg	65	66	45	45	3	3	1	4	4	2
333997	Scale & balance (except laboratory) mfg	71	67	49	47	3	2	2	3	3	1
333999	All other miscellaneous general-purpose machinery mfg	66	68	39	47	7	4	7	5	4	6
334	Computer & electronic product mfg	72	69	49	51	1	1	1	2	1	2
3341	Computer & peripheral equipment mfg	69	66	38	51	1	1	2	2	2	3
33411	Computer & peripheral equipment mfg	69	66	38	51	1	1	2	2	2	3
334111	Electronic computer mfg	<sup>a</sup> 67	<sup>a</sup> 66	<sup>a</sup> 35	<sup>a</sup> 50	1	1	1	1	3	2
334112	Computer storage device mfg	78	61	75	56	1	2	2	3	3	1
334113	Computer terminal mfg	<sup>a</sup> 85	<sup>a</sup> 67	<sup>a</sup> 60	<sup>a</sup> 41	1	1	1	2	1	2
334119	Other computer peripheral equipment mfg	72	70	39	53	4	4	3	8	4	9
3342	Communications equipment mfg	74	<sup>a</sup> 58	50	<sup>a</sup> 41	3	2	4	4	3	5
33421	Telephone apparatus mfg	<sup>a</sup> 74	<sup>a</sup> 57	<sup>a</sup> 57	<sup>a</sup> 39	2	4	4	2	5	5
334210	Telephone apparatus mfg	<sup>a</sup> 74	<sup>a</sup> 57	<sup>a</sup> 57	<sup>a</sup> 39	2	4	4	2	5	6
33422	Radio & TV broadcasting & wireless communications equipment mfg	74	59	49	44	5	3	5	6	3	7
334220	Radio & TV broadcasting & wireless communications equipment mfg	74	59	49	44	5	3	5	6	3	7
33429	Other communications equipment mfg	68	60	40	38	3	2	3	4	3	5
334290	Other communications equipment mfg	68	60	40	38	3	2	2	4	3	3
3343	Audio & video equipment mfg	76	76	55	50	1	1	1	1	1	2
33431	Audio & video equipment mfg	76	76	55	50	1	1	1	2	1	2
334310	Audio & video equipment mfg	76	76	55	50	1	1	1	2	1	1
3344	Semiconductor & other electronic component mfg	79	79	66	64	1	1	2	1	2	3
33441	Semiconductor & other electronic component mfg	79	79	66	64	1	1	2	1	2	3
334411	Electron tube mfg	43	43	29	32	2	1	1	1	1	1
334412	Bare printed circuit board mfg	57	59	41	42	2	2	1	3	2	1
334413	Semiconductor & related device mfg	89	88	86	80	2	2	2	2	3	3
334414	Electronic capacitor mfg	58	58	45	47	37	31	6	4	23	22
334415	Electronic resistor mfg	67	56	38	35	4	3	2	5	4	2
334416	Electronic coil, transformer, & other inductor mfg	71	60	18	32	3	13	15	2	7	9
334417	Electronic connector mfg	60	61	39	27	6	4	3	4	7	8
334418	Printed circuit assembly (electronic assembly) mfg	60	71	47	52	2	2	1	3	3	1
334419	Other electronic component mfg	62	63	42	43	3	3	2	2	3	2
3345	Navigational, measuring, medical, & control instruments mfg	67	65	41	45	2	2	2	2	1	3
33451	Navigational, measuring, medical, & control instruments mfg	67	65	41	45	2	2	2	2	1	3
334510	Electromedical & electrotherapeutic apparatus mfg	75	75	49	47	2	2	2	2	2	2
334511	Search, detection, navigation, & guidance instrument mfg	61	62	36	48	2	2	3	4	1	4
334512	Automatic environmental control mfg	69	68	46	38	4	6	3	3	4	5
334513	Industrial process control instrument mfg	71	70	40	41	3	3	2	5	4	4
334514	Totalizing fluid meter & counting device mfg	70	<sup>a</sup> 67	39	<sup>a</sup> 51	3	3	3	3	3	4
334515	Electricity measuring & testing instrument mfg	58	53	38	41	6	5	3	4	3	3
334516	Analytical laboratory instrument mfg	86	81	42	39	2	2	2	3	3	2
334517	Irradiation apparatus mfg	73	79	55	49	2	2	2	4	2	2
334518	Watch, clock, & part mfg	73	56	34	33	2	1	1	2	2	1

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2006	2005	2006	2005	Full production		2005 to 2006 change	National emergency production		2005 to 2006 change
						Level			2006	2005	
						2006	2005				
334	Computer & electronic product mfg—Con.										
3345	Navigational, measuring, medical, & control instruments mfg—Con.										
33451	Navigational, measuring, medical, & control instruments mfg—Con.										
334519	Other measuring & controlling device mfg .....	71	63	43	38	4	3	2	5	4	2
3346	Mfg & reproducing magnetic & optical media .....	74	76	52	69	1	1	2	6	1	6
33461	Mfg & reproducing magnetic & optical media .....	74	76	52	69	1	1	2	6	1	6
334611	Software reproducing .....	70	<sup>a</sup> 83	69	<sup>a</sup> 68	3	1	3	3	1	3
334612	Prerecorded CD (except software), tape, & record reproducing .....	80	77	77	70	2	2	2	1	2	2
334613	Magnetic & optical recording media mfg .....	<sup>a</sup> 62	72	<sup>a</sup> 24	66	2	2	2	6	2	6
335	Electrical equipment, appliance, & component mfg .....	69	68	50	50	2	2	2	2	2	2
3351	Electric lighting equipment mfg .....	62	63	42	39	3	2	4	2	2	3
33511	Electric lamp bulb & part mfg .....	64	62	48	46	4	3	5	3	2	3
335110	Electric lamp bulb & part mfg .....	64	62	48	46	4	3	2	3	2	2
33512	Lighting fixture mfg .....	61	63	41	38	3	3	4	2	2	3
335121	Residential electric lighting fixture mfg .....	72	62	32	25	3	5	5	4	3	3
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	63	61	43	40	2	3	2	2	2	2
335129	Other lighting equipment mfg .....	55	66	49	50	6	6	3	5	5	6
3352	Household appliance mfg .....	77	74	57	55	2	2	2	3	3	4
33521	Small electrical appliance mfg .....	68	67	49	49	2	3	3	7	5	9
335211	Electric housewares & household fan mfg .....	69	63	47	53	3	4	3	9	4	5
335212	Household vacuum cleaner mfg .....	65	74	55	44	2	3	3	3	9	9
33522	Major appliance mfg .....	79	76	59	56	2	2	3	3	3	4
335221	Household cooking appliance mfg .....	65	57	37	35	5	4	2	5	3	3
335222	Household refrigerator & home freezer mfg .....	88	92	72	73	2	2	2	4	4	2
335224	Household laundry equipment mfg ..	80	79	69	64	1	2	2	3	6	4
335228	Other major household appliance mfg .....	83	78	64	60	5	5	3	7	7	2
3353	Electrical equipment mfg .....	67	<sup>a</sup> 64	50	<sup>a</sup> 50	3	2	3	3	2	4
33531	Electrical equipment mfg .....	67	<sup>a</sup> 64	50	<sup>a</sup> 50	3	2	3	3	2	4
335311	Power, distribution, & specialty transformer mfg .....	69	66	63	60	5	2	5	4	2	5
335312	Motor & generator mfg .....	70	<sup>a</sup> 59	53	<sup>a</sup> 53	2	1	2	3	1	3
335313	Switchgear & switchboard apparatus mfg .....	71	69	52	54	3	4	3	6	5	2
335314	Relay & industrial control mfg .....	60	65	42	44	5	5	4	5	5	3
3359	Other electrical equipment & component mfg .....	70	71	52	52	3	3	4	3	3	4
33591	Battery mfg .....	75	75	58	60	3	3	4	3	4	5
335911	Storage battery mfg .....	78	80	60	63	5	6	2	6	7	3
335912	Primary battery mfg .....	71	70	55	57	2	1	1	1	1	1
33592	Communication & energy wire & cable mfg .....	72	78	65	68	5	8	9	5	6	8
335921	Fiber optic cable mfg .....	74	67	65	56	3	4	2	3	3	2
335929	Other communication & energy wire mfg .....	72	80	64	70	6	9	9	6	7	8
33593	Wiring device mfg .....	69	66	46	42	3	4	4	3	5	5
335931	Current-carrying wiring device mfg ..	66	63	40	36	3	5	5	3	5	3
335932	Noncurrent-carrying wiring device mfg .....	72	71	58	58	3	1	2	5	3	4
33599	All other electrical equipment & component mfg .....	66	70	48	53	6	5	8	6	7	9
335991	Carbon & graphite product mfg .....	66	68	35	64	6	7	3	15	8	15
335999	All other miscellaneous electrical equipment & component mfg .....	66	70	53	51	8	7	2	5	7	4
336	Transportation equipment mfg .....	68	73	48	50	1	1	1	1	2	2
3361	Motor vehicle mfg .....	71	81	44	49	3	3	4	2	4	4
33611	Automobile & light duty motor vehicle mfg .....	70	81	44	50	3	3	4	2	4	4
336111	Automobile mfg .....	79	89	47	53	3	4	4	2	10	10
336112	Light truck & utility vehicle mfg .....	66	78	42	48	4	3	4	3	3	3
33612	Heavy duty truck mfg .....	78	74	52	48	4	2	5	3	3	4
336120	Heavy duty truck mfg .....	78	74	52	48	4	2	3	3	3	3
3362	Motor vehicle body & trailer mfg .....	59	65	31	26	4	2	4	3	6	6
33621	Motor vehicle body & trailer mfg .....	59	65	31	26	4	2	4	3	6	6
336211	Motor vehicle body mfg .....	73	76	49	52	3	2	3	2	2	2
336212	Truck trailer mfg .....	74	75	48	47	21	12	9	12	4	10
336213	Motor home mfg .....	41	45	20	24	2	3	2	2	3	2
336214	Travel trailer & camper mfg .....	53	69	22	15	6	3	6	4	6	6
3363	Motor vehicle parts mfg .....	69	73	52	56	1	1	1	1	1	2
33631	Motor vehicle gasoline engine & engine parts mfg .....	64	71	46	53	1	1	2	2	2	2
336311	Carburetor, piston, piston ring, & valve mfg .....	77	85	65	75	2	2	2	4	2	3
336312	Gasoline engine & engine parts mfg ..	64	70	44	52	1	1	1	2	2	1
33632	Motor vehicle electrical & electronic equipment mfg .....	72	75	61	62	2	2	2	2	2	3
336321	Vehicle lighting equipment mfg .....	75	75	57	55	5	3	5	4	4	3
336322	Other motor vehicle electrical & electronic equipment mfg .....	71	75	62	64	2	2	2	2	2	2

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
336	Transportation equipment mfg—Con.												
3363	Motor vehicle parts mfg—Con.												
33633	Motor vehicle steering & suspension component (except spring) mfg .....	78	77	57	63	1	2	2	2	3	3		
336330	Motor vehicle steering & suspension component (except spring) mfg .....	78	77	57	63	1	2	2	2	3	1		
33634	Motor vehicle brake system mfg .....	63	71	48	54	4	2	5	3	2	4		
336340	Motor vehicle brake system mfg .....	63	71	48	54	4	2	4	3	2	3		
33635	Motor vehicle transmission & power train parts mfg .....	73	79	57	56	1	1	2	2	3	3		
336350	Motor vehicle transmission & power train parts mfg .....	73	79	57	56	1	1	1	2	3	3		
33636	Motor vehicle seating & interior trim mfg .....	<sup>a</sup> 70	72	<sup>a</sup> 49	49	2	3	3	2	3	3		
336360	Motor vehicle seating & interior trim mfg .....	<sup>a</sup> 70	72	<sup>a</sup> 49	49	2	3	3	2	3	3		
33637	Motor vehicle metal stamping .....	64	68	47	53	2	3	3	3	3	4		
336370	Motor vehicle metal stamping .....	64	68	47	53	2	3	3	3	3	3		
33639	Other motor vehicle parts mfg .....	71	72	54	56	3	2	3	3	3	4		
336391	Motor vehicle air-conditioning mfg .....	74	73	63	61	3	2	2	4	3	2		
336399	All other motor vehicle parts mfg .....	71	72	53	56	3	2	2	4	3	2		
3364	Aerospace product & parts mfg .....	69	68	53	52	1	1	1	1	1	1		
33641	Aerospace product & parts mfg .....	69	68	53	52	1	1	1	1	1	1		
336411	Aircraft mfg .....	67	64	49	48	1	1	1	1	1	1		
336412	Aircraft engine & engine parts mfg ..	76	71	65	59	2	2	1	3	2	1		
336413	Other aircraft part & auxiliary equipment mfg .....	68	69	50	47	3	1	3	2	2	1		
336414	Guided missile & space vehicle mfg .	72	83	59	82	1	1	1	1	1	1		
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	55	56	43	44	1	1	1	1	2	2		
336419	Other guided missile & space vehicle parts & auxiliary equip mfg .....	73	63	55	50	1	1	1	1	1	1		
3365	Railroad rolling stock mfg .....	<sup>a</sup> 52	79	<sup>a</sup> 40	62	4	5	6	2	4	4		
33651	Railroad rolling stock mfg .....	<sup>a</sup> 52	79	<sup>a</sup> 40	62	4	5	6	2	4	4		
336510	Railroad rolling stock mfg .....	<sup>a</sup> 52	79	<sup>a</sup> 40	62	4	5	5	2	4	3		
3366	Ship & boat building .....	69	72	50	54	2	2	3	2	2	3		
33661	Ship & boat building .....	69	72	50	54	2	2	3	2	2	3		
336611	Ship building & repairing .....	<sup>a</sup> 77	<sup>a</sup> 80	<sup>a</sup> 59	<sup>a</sup> 63	2	1	2	3	2	2		
336612	Boat building .....	58	60	39	42	3	3	2	3	3	3		
3369	Other transportation equipment mfg .....	67	65	44	48	4	4	5	3	2	4		
33699	Other transportation equipment mfg ..	67	65	44	48	4	4	5	3	2	4		
336991	Motorcycle, bicycle, & parts mfg .....	85	98	61	65	2	1	2	4	3	2		
336992	Military armored vehicle, tank, & tank component mfg .....	68	<sup>a</sup> 43	58	<sup>a</sup> 38	3	3	4	3	2	4		
336999	All other transportation equipment mfg .....	58	60	34	44	6	6	2	4	2	3		
337	Furniture & related product mfg .....	68	70	44	42	4	2	5	2	2	3		
3371	Household & institutional furniture & kitchen cabinet mfg .....	71	73	44	42	8	2	8	3	3	4		
33711	Wood kitchen cabinet & counter top mfg .....	76	80	45	45	4	3	5	4	4	6		
337110	Wood kitchen cabinet & counter top mfg .....	76	80	45	45	4	3	4	4	4	4		
33712	Household & institutional furniture mfg .	68	69	43	40	12	3	12	5	3	5		
337121	Upholstered household furniture mfg .....	82	86	57	54	2	5	5	7	7	8		
337122	Nonupholstered wood household furniture mfg .....	62	60	38	36	6	5	3	5	5	3		
337124	Metal household furniture mfg .....	66	66	35	29	7	6	2	3	3	3		
337125	Household furniture (except wood & metal) mfg .....	59	65	35	41	8	9	3	6	5	3		
337127	Institutional furniture mfg .....	64	66	42	40	53	6	53	18	5	17		
337129	Wood television, radio, & sewing machine cabinet mfg .....	51	58	32	20	11	3	8	10	2	8		
3372	Office furniture (including fixtures) mfg ...	64	64	44	40	2	3	3	3	3	4		
33721	Office furniture (including fixtures) mfg .	64	64	44	40	2	3	3	3	3	4		
337211	Wood office furniture mfg .....	56	71	47	41	5	6	6	5	6	3		
337212	Custom architectural woodwork & millwork mfg .....	75	68	43	36	6	5	4	5	4	4		
337214	Office furniture (except wood) mfg ..	70	64	64	48	2	4	4	3	5	5		
337215	Showcase, partition, shelving, & locker mfg .....	56	59	32	36	4	5	4	4	5	3		
3379	Other furniture related product mfg .....	70	75	48	49	3	3	4	3	3	5		
33791	Mattress mfg .....	74	79	49	49	4	4	5	4	4	6		
337910	Mattress mfg .....	74	79	49	49	4	4	2	4	4	3		
33792	Blind & shade mfg .....	62	68	47	48	5	5	7	5	5	7		
337920	Blind & shade mfg .....	62	68	47	48	5	5	2	5	5	2		
339	Miscellaneous mfg .....	67	69	41	43	2	2	2	2	2	3		
3391	Medical equipment & supplies mfg .....	71	72	47	48	3	2	3	2	3	3		
33911	Medical equipment & supplies mfg .....	71	72	47	48	3	2	3	2	3	3		
339111	Laboratory apparatus & furniture mfg .....	73	67	43	35	2	2	2	5	6	4		
339112	Surgical & medical instrument mfg ..	73	70	57	51	3	3	2	4	4	3		
339113	Surgical appliance & supplies mfg ..	67	71	39	46	5	3	3	3	4	2		
339114	Dental equipment & supplies mfg .....	77	75	44	39	3	3	3	5	5	2		
339115	Ophthalmic goods mfg .....	77	78	66	66	3	3	2	4	4	3		
339116	Dental laboratories .....	86	87	56	55	2	2	1	4	3	4		

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2006 and 2005—Con.**

[For meaning of abbreviations and symbols, see introductory text]

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2006	2005	2006	2005	Full production			National emergency production				
						Level		2005 to 2006 change	Level		2005 to 2006 change		
						2006	2005		2006	2005			
339	Miscellaneous mfg—Con.												
3399	Other miscellaneous mfg .....	61	66	35	38	3	2	3	3	3	3	4	
33991	Jewelry & silverware mfg .....	66	66	40	38	3	4	5	2	3	3	3	
339911	Jewelry (except costume) mfg .....	62	64	41	37	4	4	2	3	3	3	3	
339912	Silverware & plated ware mfg.....	65	63	44	38	10	6	5	15	9	9	6	
339913	Jewelers' material & lapidary work mfg .....	80	68	34	37	4	3	5	1	2	2	2	
339914	Costume jewelry & novelty mfg .....	<sup>a</sup> 76	77	<sup>a</sup> 39	44	3	7	7	3	8	7	7	
33992	Sporting & athletic goods mfg .....	46	61	25	38	6	4	7	3	4	5	5	
339920	Sporting & athletic goods mfg .....	46	61	25	38	6	4	4	3	4	5	5	
33993	Doll, toy, & game mfg .....	61	65	13	15	6	5	7	6	7	9	9	
339931	Doll & stuffed toy mfg .....	<sup>a</sup> 26	<sup>a</sup> 50	<sup>a</sup> 21	<sup>a</sup> 17	6	7	3	1	5	5	5	
339932	Game, toy, & children's vehicle mfg .	72	67	12	14	3	6	5	6	8	3	3	
33994	Office supplies (except paper) mfg ....	71	73	50	49	2	2	2	3	4	5	5	
339941	Pen & mechanical pencil mfg.....	82	70	57	45	3	3	5	3	4	6	6	
339942	Lead pencil & art good mfg.....	75	74	54	45	3	3	2	10	8	5	5	
339943	Marking device mfg .....	52	72	31	55	3	2	3	3	5	4	4	
339944	Carbon paper & inked ribbon mfg ...	70	78	64	70	2	3	3	2	3	3	3	
33995	Sign mfg.....	81	82	59	60	3	4	5	4	6	7	7	
339950	Sign mfg.....	81	82	59	60	3	4	3	4	6	6	6	
33999	All other miscellaneous mfg .....	63	64	41	40	3	4	4	3	3	5	5	
339991	Gasket, packing, & sealing device mfg .....	68	71	54	48	3	3	2	5	6	5	5	
339992	Musical instrument mfg .....	75	80	32	31	5	5	3	12	11	3	3	
339993	Fastener, button, needle, & pin mfg .	65	63	50	35	4	4	2	5	10	3	10	
339994	Broom, brush, & mop mfg .....	72	74	55	55	9	10	2	6	8	3	3	
339995	Burial casket mfg .....	35	33	32	29	7	7	1	4	4	1	1	
339999	All other miscellaneous mfg .....	61	62	37	39	4	5	6	4	5	4	4	
5111	Newspaper, periodical, book, and database publishers.....	74	72	60	56	4	3	3	3	3	3	3	

<sup>1</sup>A description of the standard error is given in Appendix B, "Qualifications of the Data" of the report.

<sup>2</sup>Excluding NAICS 5111, Newspaper, periodical, book, and database publishers.

# Appendix A.

## MQ-C1 Report Form and Instructions

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The MQ-C1 form and instructions are shown on the following pages.

FORM **MQ-C1**  
(11-20-2006)

U.S. DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. CENSUS BUREAU

**SURVEY OF PLANT CAPACITY UTILIZATION  
FOURTH QUARTER 2006 (October–December)**

Mail your completed form to:

**U.S. CENSUS BUREAU**  
1201 East 10th Street  
Jeffersonville, IN 47132-0001

The fax number is:  
**1-800-447-4613**

Please read the accompanying instructions and definitions before completing the form.

**Need help, a copy of the instructions, or have questions about filling out this form?**

Visit our Web site at  
www.census.gov/econhelp/pcu

In correspondence pertaining to this report refer to the ID number (ID) (11 digits)

Please correct errors in name, address, and ZIP Code. ENTER street and number if not shown.

**▶ Your response is required by law (Title 13, United States Code). By section 9 of Title 13, United States Code, YOUR REPORT IS CONFIDENTIAL.** It may be seen only by persons sworn to uphold the confidentiality of Census Bureau information and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

**Item 1 OPERATIONAL STATUS**

Mark (X) One box that best describes the status at the end of the quarter for the facility identified in the address box above.

012  In operation

013  Temporarily idle

015  Permanently ceased operations

Month	Year

→ Date closed? 016

014  Sold or leased to another company

Month	Year

→ Date sold or leased? 017

} SOLD OR LEASED TO ↗

Name		
Street		
City	State	ZIP Code
Country		

**CONTINUE WITH **Item 2** ON PAGE 2.**

**Item 2 VALUE OF PRODUCTION**

**A.** Report market value of **actual production** for the quarter.

**ACTUAL PRODUCTION** .....

4th Qtr 2006	023 \$	Mil.	Thou.
4th Qtr 2005			

**B.** Estimate the market value of production of this plant as if it had been operating at **full production capability** for the quarter.

Assume:

- only machinery and equipment **in place and ready to operate**.
- normal downtime.
- labor, materials, utilities, etc. **ARE FULLY AVAILABLE**.
- the number of shifts, hours of operation, and overtime pay that can be **sustained** under **normal** conditions and a **realistic** work schedule in the long run.
- the **same product mix** as the actual production.

**FULL PRODUCTION CAPABILITY** .....

4th Qtr 2006	034 \$	Mil.	Thou.
4th Qtr 2005			

**C.** Divide your **actual production estimate** by your **full production estimate**. Multiply this ratio by 100 to get a percentage .....

4th Qtr 2006	020	<b>Capacity Utilization</b>		%
4th Qtr 2005				

Is this a reasonable estimate of your utilization rate for this quarter?

Yes     No – Review item 2A and 2B

**Item 3 ACTUAL AND FULL PRODUCTION COMPARISONS**

**A.** Comparing full production capability between the current quarter and the previous reporting period.

If your estimate of fourth quarter **full production capability** has changed compared to the previous reporting period, mark (X) the primary reasons.

- |  |   |
|--|---|
| 35 <input type="checkbox"/> Building capital expenditures  | 41 <input type="checkbox"/> Change in method of operation                   |
| 36 <input type="checkbox"/> Machinery capital expenditures – <i>Include new, replaced, or enhanced machinery</i> | 42 <input type="checkbox"/> Change in product mix or product specifications |
| 37 <input type="checkbox"/> Building retirements   | 43 <input type="checkbox"/> Change in material input                        |
| 38 <input type="checkbox"/> Machinery retirements  | 48 <input type="checkbox"/> Other – <i>Specify</i> ↘                        |
| 39 <input type="checkbox"/> Price changed but product mix is the same  | 49 <input type="checkbox"/> _____   |
| 40 <input type="checkbox"/> Revised estimation assumption with no change in plant or operations                  |   |

**B. ACTUAL OPERATIONS VS FULL PRODUCTION CAPABILITY**

If this plant's **actual** production in the 4th quarter was **less** than **full production capability**, mark (X) the primary reasons:

- |  |  |  |
|--|--|--|
| 51 <input type="checkbox"/> Not most profitable to operate at full production capability | 55 <input type="checkbox"/> Lack of sufficient fuel or electric energy     | 60 <input type="checkbox"/> Strike or work stoppage    |
| 52 <input type="checkbox"/> Insufficient supply of materials                             | 56 <input type="checkbox"/> Equipment limitations                          | 61 <input type="checkbox"/> Seasonal operations        |
| 53 <input type="checkbox"/> Insufficient orders  | 57 <input type="checkbox"/> Storage limitations                            | 62 <input type="checkbox"/> Environmental restrictions |
| 54 <input type="checkbox"/> Insufficient supply of local labor force/skills              | 58 <input type="checkbox"/> Logistics/transportation constraints           | 68 <input type="checkbox"/> Other – <i>Specify</i> ↘   |
|  | 59 <input type="checkbox"/> Sufficient inventory of finished goods on hand | 69 <input type="checkbox"/> _____                      |

**C.** If **actual** operations in the 4th quarter were **less** than **full production capability**, how quickly could the plant increase to that level, if necessary? Assume sufficient demand for your product. Mark (X) the shortest amount of time the plant would require.

- 71  Less than 3 months    72  3 to 6 months    73  7 to 12 months    74  More than one year

**CONTINUE WITH Item 4 ON PAGE 3.**



**Item 4 WORK PATTERNS FOR THE QUARTER**

Report work patterns for **each shift of actual operations** in the quarter.

- If the plant did not operate a second or third shift, do not complete the corresponding columns.
- For Full Production Capability, report work patterns as if the plant operated at full production capability.
- Complete ALL items for each shift reported.

		Actual Production			Full Production Capability
		Shift 1	Shift 2	Shift 3	# Shifts
		916	917	918	915
<b>A.</b> Days per week-in-operation . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		926	927	928	925
<b>B.</b> Plant hours per week-in-operation . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		936	937	938	935
<b>C.</b> Weeks-in-operation in the quarter . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		946	947	948	945
<b>D.</b> Number of production workers in the 2nd week of the 2nd month of the quarter . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		956	957	958	955
<b>E.</b> Temporary production workers included in line d (not on the payroll and hired through temporary agencies or as their own agent) . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		966	967	968	965
<b>F.</b> Total hours worked by production workers . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		976	977	978	975
<b>G.</b> Hours worked by temporary production workers (included in line f) . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
		986	987	988	985
<b>H.</b> Overtime hours worked by production workers (included in line f) . . . . .	4 <sup>th</sup> Qtr 2006	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	4 <sup>th</sup> Qtr 2005	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Full Production Capability  
# Shifts  
900

CONTINUE WITH **Item 5** ON PAGE 4.

**Item 5 NATIONAL EMERGENCY PRODUCTION**

A. Estimate the value of production for this plant as if it had been operating under **national emergency** conditions for the quarter. . . . .

4th Qtr 2006	099 \$	Mil.	Thou.
4th Qtr 2005			

Assume:

- **full** use of **all** your machinery and equipment, including that requiring reconditioning.
- plant production **as close to 168 hours per week as possible**, including extra shifts.
- **minimal** downtime.
- funding, labor, materials, components, utilities, etc., **are fully available to you and your suppliers.**
- your product mix **is** permitted to change.
- you can sell **all** of your output

B. If **actual** operations in the 4th quarter were **less** than **national emergency production**, how quickly could the plant increase to the national emergency production level if given emergency priority by the government? Mark (X) the shortest amount of time the plant would require.

82  Less than 3 months    83  3 to 6 months    84  7 to 12 months    85  More than one year

911 Remarks

**Item 6 PERSON TO BE CONTACTED REGARDING THIS REPORT - Print name and telephone number.**

Name	Telephone →	Area code	Number
	( )		

**RETURN COMPLETED FORM TO**

**U.S. CENSUS BUREAU  
1201 EAST 10TH STREET  
JEFFERSONVILLE, IN 47132-0001**

FORM MQ-C1 (11-20-2006)

**INSTRUCTIONS FOR  
THE SURVEY OF PLANT CAPACITY UTILIZATION  
DURING THE FOURTH QUARTER 2006**

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U S C E N S U S B U R E A U

**AUTHORITY AND CONFIDENTIALITY** – Your response is required by law (Title 13, United States Code). By section 9 of the same law, your report is confidential. It may be seen only by persons sworn to uphold the confidentiality of Census Bureau information, and may be used only for statistical purposes. The law also provides that copies of your report retained in your files are immune from legal process. Response is not required to any information collection form unless it displays a valid approval number from the Office of Management and Budget. This 8-digit number appears in the upper right corner of the form.

**PUBLIC REPORTING**

Public reporting burden for this collection of information is estimated to average 2.25 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Paperwork Project 0607-0175, U.S. Census Bureau, 4700 Silver Hill Road, Stop 1500, Washington, DC 20233-1500. You may e-mail comments to Paperwork@census.gov; use "Paperwork Project 0607-0175" as the subject.

**WHO SHOULD REPORT?**

This report covers the manufacturing plant or publishing facility named in the address box of the form. If your company operates more than one location, REPORT ONLY FOR THOSE PLANTS SELECTED FOR THIS SAMPLE SURVEY. A report form and instruction sheet are enclosed for each plant selected. If the location in the address box is not a manufacturing plant or publishing facility, indicate this in the remarks section.

Since some of the information necessary to complete this form may not be in your records, CONSULT THE PLANT MANAGER on questions regarding full production capability and emergency production.

**WHAT TO REPORT?**

This survey form primarily asks for 3 levels of operating capability of this plant for the quarter:

- (1) the market value of actual goods produced;
- (2) the value of products that could have been produced if the plant was operating at full capacity during the quarter; and
- (3) the value of products that could have been produced if required in a national emergency.

If prior period data are NOT printed on the form, you do not need to enter data for that period.

**WHEN TO REPORT**

Complete the survey form and return it in the enclosed return envelope by the date printed on the top of the form. If you have misplaced the return envelope, mail the completed form to:

U.S. Census Bureau  
1201 East 10th Street  
Jeffersonville, IN 47132-0001

You can also fax the form to:  
1-800-447-4613

**HOW TO REPORT**

Answer all questions on the report form. Follow the instructions for each item given on this sheet.

Report market value of production figures in **thousands of dollars**. For example, if value of production is 1,125,788 dollars, enter the figure as follows:

Mil.	Thou.
1	126

**NAME AND ADDRESS**

Review the name and address of this plant printed in the top right corner of the report form. Line out any errors and make any necessary corrections or additions in the address box.

**Item 1 – OPERATIONAL STATUS**

Report the status of operations at this plant at the end of the quarter by marking the appropriate box. If:

**In Operation** – Complete items 2 through 6.

**Idle Plants** – Complete items 2 through 6.

- a. If this plant was temporarily idle during the **entire quarter** report actual operations as zero where appropriate.
- b. If this plant was temporarily idle during **only part of the quarter** report the actual operations for the time the plant was in operation.

### Item 1 – OPERATIONAL STATUS – Continued

For both cases, report full production and emergency production capabilities based on the plant's **peak** quarterly production during the year.

**Permanently Ceased Operations** – Indicate the month and year when operations ceased at this plant. If the plant was in operation at ANY time during the quarter, complete items 2 through 6. Report full production and emergency production capabilities, as if the plant operated the **entire** quarter.

**Sold or Leased Plant** – If this plant was sold or leased to another company, indicate the month and year this action took place, and the name and address of the new owner.

- a. If you still maintain records for this plant, complete items 2 through 6.
- b. If you do not have information about this plant, complete item 6 only and return the form.

#### SPECIAL NOTE:

##### Seasonal Operations

- a. If this plant is usually temporarily idle during the quarter *due to seasonal factors*, report as instructed for idle plants.
- b. If this plant was not temporarily idle during the quarter, but its operations vary substantially from quarter to quarter, *due to seasonal factors*, complete items 2 through 6, and report full production and national emergency production capabilities based on the plant's **peak** quarterly production during the year.

For both types of seasonal operations, check "Seasonal Operations" in item 3b if actual operations are less than full production capability.

### Item 2 – VALUE OF PRODUCTION

#### Item 2a – MARKET VALUE OF ACTUAL PRODUCTION

Report the value of production based on estimated sales price(s) of what was produced during the quarter, not quarter sales. If production at this plant consists of only interplant transfers, use method (2) below to calculate market value of production.

**Three methods** – to estimate market value of goods produced during the quarter:

- (1) Estimate the sales price(s) of item(s) produced, then multiply the sales price(s) by the total number of items produced during the quarter.
- (2) Use book figures of actual production costs plus an estimate of markup to cover overhead and profit.

- (3) Use quarter value of shipments f.o.b. (freight on board) from the plant (including the value of interplant transfers within a company, in addition to direct costs of production, but excluding resales and miscellaneous receipts) plus any additions or subtractions to the finished stock of inventories present before the current quarter (excluding materials and supplies). [Value of production = value of shipments + value of ending inventory – value of beginning inventory].

#### SPECIAL NOTE:

Do **not** include manufacturing contracted to others. If you contract out all of your manufacturing, please state this in the "Remarks" section, complete item 6, and return the form.

**Job shops and custom orders:** For actual production, report value of work done during the current quarter.

**Publishing/printing plants:** For actual production, report your printing sales only (NOT advertising sales) for the location named in the address box of the form. Do not include any printing that is contracted out. **If you do not perform any printing activities, please indicate so in the remarks section on the back of the form.**

### Item 2b – FULL PRODUCTION CAPABILITY

Read the definition and assumptions regarding full production capability. Estimate your market value of products that would have been produced if the plant was operating at full capacity during the quarter. Use one of the two methods suggested below or your own computations.

**Full Production Capability** – The maximum level of production that this establishment could reasonably expect to attain under **normal** and **realistic** operating conditions fully utilizing the machinery and equipment in place. In estimating market value at full production capability, consider the following:

- Assume **only** the machinery and equipment in place and ready to operate will be utilized. Do not include facilities or equipment that would require extensive reconditioning before they can be made operable.
- Assume **normal** downtime, maintenance, repair, and cleanup. If full production requires additional shifts or hours of operation, then appropriate downtime should be considered in the estimate.
- Assume number of shifts, hours of plant operations, and overtime pay that can be sustained under **normal** conditions and a **realistic** work schedule.
- Assume labor, materials, utilities, etc. are fully available.
- Assume a product mix that was **typical** or representative of your production during the quarter. If your plant is subject to short-run variation assume the same product mix as the actual production.

**Item 2b – FULL PRODUCTION CAPABILITY – Continued**

- Do not assume increased use of productive facilities outside the plant for services (such as contracting out subassembly work) in excess of the proportion that would be normal during the quarter.

**SPECIAL NOTE:**

**Job shops and custom orders:** For full production, estimate the market value of work that you could have accomplished under sustainable operating conditions and if you had sufficient orders.

**Publishing/printing plants:** For full production, report printing sales for this location as if it were running at peak circulation.

**Two Methods** to estimate market value of production when operating at full production capability:

- (1) If you have a reliable or accurate estimate of your plant’s sustainable capacity utilization rate: **Divide** your market value of production at **actual** operations (item 2a) by your current **rate of capacity** utilization (in decimal form). For example, if your value of actual operations for the quarter is \$1,200,000 and your plant is currently at 80% capacity, divide \$1,200,000 by 0.80 for a full production capability of \$1,500,000.

$$\frac{\text{Actual Value of Production}}{\text{Capacity Utilization Rate}} = \text{Market value of production at Full Capacity}$$

Your plant’s capacity utilization rate should be based on a capacity output measure that your plant could have sustained under **normal**, not emergency, conditions.

- (2) For each product, estimate the number of items that could have been produced if operating at full production, as defined by the assumptions given. Multiply the number of items produced by its sales price (or market value). For example, if you can produce 25,000 items in the quarter, under full production criteria, and the sales price (market value) for each item is \$4.50, then multiply 25,000 times \$4.50 for a full production capability of \$112,500.

$$\text{Number of items produced} \times \text{Sales price (Market Value)} = \text{Market value of production at Full Capacity}$$

If producing **more than one product**, **sum** the market values of production at full production estimated for each product (assuming the same product mix) for a **total** value of full production for the plant.

Enter your estimate for value of full production in item 2b.

**Item 2c – CAPACITY UTILIZATION**

- (1) Divide your estimate for actual production (Item 2a) by full production (Item 2b) capability. Multiply this number by 100. Enter this percentage in the box.
- (2) **Is this a reasonable estimate of your utilization rate for this quarter?** Mark (X) yes or no. If no, please review your full production capability estimate. If yes, continue with the next item.

**Item 3 – ACTUAL AND FULL PRODUCTION COMPARISONS**

**Item 3a – Comparing full production capability between the current quarter and the previous reporting period.**

If the value of full production for the current quarter differs from the previous reporting period, mark (X) the primary reasons for the change.

**Item 3b – ACTUAL OPERATIONS VS. FULL PRODUCTION CAPABILITY**

Compare the actual value of production to the estimated value of full production in the quarter. Mark (X) reasons why your actual operations were less than the estimated value of full production capability, if appropriate.

**Item 3c** – Select a time period that would have been reasonable to increase output to full production level.

**Item 4 – WORK PATTERNS FOR THE QUARTER**

**Actual Operations** – Report work patterns for the following characteristics covering each *production shift* of actual operations during the quarter. Report based on the average number of shifts per day during the quarter. Do not consider maintenance, administrative, or support operations as additional shifts. Do not consider overtime hours as additional shifts. If the plant did not operate a second or third shift, do not complete the corresponding columns. Complete all items for each shift reported.

**a. Days per week-in-operation** – For each shift, report the typical number of days per week-in-operation for the quarter. If your plant has departments or assembly lines that operate varied number of days *within a shift*, report days per week-in-operation for the department operating the greatest number of days per week for that shift. For example, if one production line operates 7 days per week during the first shift and a second production line operates 5 days per week during the first shift, report that the first shift operates 7 days per week.

**b. Plant hours per week-in-operation** – For each shift, report the typical number of **hours the plant was in operation** during a single week. If your plant has departments or assembly lines that operate at varied periods of time *within a shift*, report hours per week-in-operation for the production department operating the greatest number of hours per week for that shift. **Do not report the number of person hours worked (see below).**

**c. Weeks-in-operation in the quarter** – For each shift, report the total number of weeks the plant operated during the quarter. NOTE: The quarter covers 13 weeks.

**d. Number of production workers** – For each shift, report the number of production workers at this establishment, including both permanent (payroll) and temporary employees who were paid during the second week of the second month of the quarter. Include all persons on paid sick leave, paid holidays, paid vacation during this pay period.

#### Item 4 – WORK PATTERNS FOR THE QUARTER – Continued

NOTE: **Include** workers (up through the line-supervisor level) engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power plant), record keeping, and other closely associated services. Include truck drivers delivering ready-mixed concrete.

**Exclude** nonproduction personnel, including those engaged in supervision above line-supervisor level, sales, sales delivery (truck drivers and helpers), advertising, credit, collection, installation and servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional and technical.

**e. Number of temporary production workers** – For each shift, report the number of *temporary production workers* **not** on the payroll (hired through temporary help agencies or as their own agent) and working during the second week of the second month of the quarter. Include temporary production workers who perform the same tasks as listed above. **Do not include part-time workers.**

**f. Total hours worked by production workers** – For each shift, report number of hours worked by all production workers in the quarter (both those on the payroll and temporary production workers). Include overtime hours, but excluded paid vacations, holidays, and sick leave.

**g. Hours worked by temporary production workers** – For each shift, report number of hours worked by temporary production workers included in the total hours worked by production workers (line f). Include overtime hours worked by temporary production workers.

**h. Overtime hours worked by production workers** – For each shift, report number of overtime hours included in the total hours worked by production workers (line f).

Enter the number of shifts per day at full capacity in the box provided in the upper right hand corner. **See examples of responses to item 3 on page 6.**

**Full production capability** – Report work patterns for each characteristic as if the plant operated at full production capability during the quarter. Complete ALL items for Full Production Capability.

#### Item 5 – NATIONAL EMERGENCY PRODUCTION

Read the definition and assumptions regarding national emergency production. Estimate your value of production under national emergency conditions for the quarter. Use your own computations or methods similar to those described for estimating full production capability.

SPECIAL NOTE: Your value of production at national emergency levels should be **greater than or equal**

to your value of full production capability. If it is less than your full production capability, please review your computations.

**Item 5a – National Emergency Production** – The maximum level of production that this plant could expect to attain and sustain for one year or more under national emergency conditions.

National emergency conditions are situations, such as a military mobilization or natural disaster, which are likely to create widespread excess demand requiring additional work shifts.

For example, military mobilization may require increased production of food, clothing, building supplies, and conversion of plants to produce alternative products in addition to traditional defense hardware. Devastation from natural disasters, such as hurricanes, floods, earthquakes, or fire, may require increased production of similar goods as well as increased production to compensate for plants damaged or destroyed.

In estimating national emergency production, consider the following:

- Assume full use of **all** machinery and equipment in place (including machinery and equipment that would require extensive reconditioning before they could be made operable).
- Assume minimal downtime and **multi-work shift** operations.
- Assume plant production as close to 168 hours per week as possible, including extra shifts (e.g., operating 7 days per week, 24 hours per day less minimal downtime).
- Assume overtime pay, availability of labor, materials, utilities, etc., are **fully available** to you and your suppliers.
- Assume you can sell all your output.
- Assume your product mix can change.
- Assume increased use of productive facilities outside the plant for services (such as contracting out subassembly work) in excess of the proportion that would be normal during the quarter.

#### SPECIAL NOTE

**Jobs shops and custom orders:** For national emergency production, estimate the market value of work that could have been done if you received additional orders assuming maximum number of employees working multiple shifts that the facility can accommodate.

**Publishing/printing plants:** For national emergency production, report value of printing if operating machinery as close to 168 hours/week as possible.

**Item 5b** – Select a time period that would have been reasonable to increase output to emergency production level.

**If you have any questions concerning the definitions or instructions, please contact the Special Studies Branch of the Manufacturing and Construction Division on (301) 763-4667 or visit our help site at [www.census.gov/econhelp/pcu](http://www.census.gov/econhelp/pcu).**

**Example 1. A plant with one 8-hour shift operating 5 days/week**

- a. Days per week in operation . . . . .
- b. Plant hours per week in operation . . . . .
- c. Weeks in operation in the quarter . . . . .
- d. Total number of production workers . . . . .
- e. Temporary production workers included in line d (not on the payroll and hired through temporary agencies or as their own agent; see instructions). . . . .
- f. Total hours worked by production workers . . . . .
- g. Hours worked by temporary production workers (included in line f) . . . . .
- h. Overtime hours worked by production workers (included in line f) . . . . .

Actual Operations									Full Production Capability		
Shift one (1)			Shift two (2)			Shift three (3)			Number of shifts (4)		
5									7		
40									56		
13									13		
32									44		
2									4		
Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.
	15	880								17	680
		240									600
		0									0

**Example 2. A plant with Two Production Shifts and One Maintenance Shift**

- a. Days per week in operation . . . . .
- b. Plant hours per week in operation . . . . .
- c. Weeks in operation in the quarter . . . . .
- d. Total number of production workers . . . . .
- e. Temporary production workers included in line d (not on the payroll and hired through temporary agencies or as their own agent; see instructions). . . . .
- f. Total hours worked by production workers . . . . .
- g. Hours worked by temporary production workers (included in line f) . . . . .
- h. Overtime hours worked by production workers (included in line f) . . . . .

Actual Operations									Full Production Capability		
Shift one (1)			Shift two (2)			Shift three (3)			Number of shifts (4)		
7			5						7		
56			40						112		
13			13						13		
110			50						210		
10			0						0		
Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.
	53	200		24	800					117	000
	1	200			0						0
		0			0						0

**Example 3. A plant in Continuous Operation**

- a. Days per week in operation . . . . .
- b. Plant hours per week in operation . . . . .
- c. Weeks in operation in the quarter . . . . .
- d. Total number of production workers . . . . .
- e. Temporary production workers included in line d (not on the payroll and hired through temporary agencies or as their own agent; see instructions). . . . .
- f. Total hours worked by production workers . . . . .
- g. Hours worked by temporary production workers (included in line f) . . . . .
- h. Overtime hours worked by production workers (included in line f) . . . . .

Actual Operations									Full Production Capability		
Shift one (1)			Shift two (2)			Shift three (3)			Number of shifts (4)		
7			7			7			7		
56			56			56			168		
13			13			13			13		
360			360			200			1080		
0			0			0			0		
Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.
	168	480		168	480		104	000		505	440
		0			0			0			0
		200			200			0			0



# Appendix B.

## Qualifications of the Data

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### DEFINITIONS AND CONCEPTS

Although survey respondents were provided detailed instructions for estimating full production capacity and national emergency production capacity (see Appendix A), it is extremely difficult to translate the concept of plant capacity into a working definition which is applicable to all industries and situations. A host of problems are inherent in any attempt to measure capacity. Following are some of the more significant:

1. Telephone conversations with respondents have revealed that there are a variety of methods by which plants can measure their capacity. For example, it is customary for petroleum refineries to use an engineering concept of capacity based on maximum throughput during around-the-clock operations, with allowance made for maintenance or other necessary downtime. Other industries use different methods. They might base capacity on the maximum number of work hours of their labor force, on a past peak performance period, or on any number of other methods.

In order to improve the consistency of reporting across industries, the U.S. Census Bureau made an attempt to prescribe a standardized method for calculating levels of capacity and capacity utilization. Respondents across industries were asked to report production by the plant for actual, full production, and national emergency levels of production, in terms of market value of production, and given specific assumptions to follow in estimating each level of production (see Appendix A). The capacity utilization rates estimates produced in this report are calculated as a ratio of actual value of production to full production and national emergency values of production.

2. Full production limitations. Respondents were instructed as follows when estimating full production capacity: "Do not consider overtime pay, availability of labor, materials, utilities, etc., to be limiting factors." However, some respondents appear to be unrealistic in reporting their full production operations. For example, some establishments defined full production capacity as continuous operations (7 days a week, 24 hours a day) even though they were currently operating a single shift and admitted they could not expect realistically to operate continuously with their present plant and equipment or within their industry or locality. Census Bureau staff have discussed the most questionable estimates with respondents and adjusted the reports where appropriate; however, there is a distinct element of subjectivity, and it is apparent that not all plants have defined full production capacity in realistic terms.
3. National emergency production limitations. Some individual plants do not differentiate between their full production capacity and national emergency capacity. Therefore, for some individual plants, the levels of capacity and capacity utilization rates calculated for full production and national emergency are the same. For these plants, no measurable difference between full production and national emergency capacity levels or capacity utilization can be obtained.

Census Bureau staff have discussed the most questionable estimates with respondents and adjusted the reports where appropriate; however, there is a distinct element of subjectivity, and it is apparent that not all plants have defined national emergency capacity in realistic terms.

4. Year-to-year variations in reported data. There is considerable year-to-year change in reported capacity and capacity utilization for individual plants. Some of this reflects real change in capacity due to additions or retirements of plant and equipment, change in product mix, or change in productivity. Other changes, however, are the result of response variations that are

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part of the nonsampling errors described in the following section on sampling and nonsampling errors. These variations, which often result from different personnel completing the form, include different judgmental decisions about work patterns and what plant and equipment to include in estimating capacity. At the summary levels, the individual establishment changes (either up or down) have a tendency to cancel each other.

## **SAMPLING AND NONSAMPLING ERRORS**

The survey estimates presented in this report are subject to both sampling and nonsampling errors. Nonsampling errors include various response and operational errors; errors of collection, reporting, transcription, and bias due to nonresponse, etc. These errors would also occur if a complete canvass were conducted under the same conditions as this survey. Most of the important operational errors were detected and corrected in the course of the review of the data for reasonableness and consistency.

However, because of the definitional and conceptual problems associated with this survey, it is likely that the response errors are greater in magnitude than for other manufacturing surveys in which respondents are asked to report data that are generally kept as a matter of record. Explicit measures of the nonsampling errors are not available. As derived, the estimated standard error provides a measure of sampling error only. The total error will most likely exceed the standard errors shown.

The panel selected for this survey was sampled using probabilities proportionate to size. Independent samples were chosen for each sample industry, except for the publishing industry group, where the sample was controlled at the industry group only. Probabilities were assigned to control sampling allocation by industry subject to the constraint of a predetermined total sample size. These probabilities determined an expected sample size for each industry. The sampling procedure used ensured that this expected sample size was exactly realized. The particular sample selected was but one of the many probability samples of this size that could have resulted using this sampling methodology. Each of the possible samples would yield somewhat different sets of results. The sampling errors—the differences between the estimates obtained from the sample actually selected and the results theoretically obtainable from a comparable complete canvass of the same target universe—are unknown. However, the estimated standard errors of the utilization rates and the year-to-year changes are guides to the potential sizes of these sampling errors.

The estimated standard error of a utilization rate, or of a year-to-year change in a utilization rate, may be used to define a confidence interval about that rate or change such that the complete coverage result will be included within that interval with known probability. As examples:

1. The interval defined by one standard error below the estimated rate or change to one standard error above contains the complete coverage result with approximately 67-percent confidence.
2. The interval defined by two standard errors below and above the estimated rate or change contains the complete coverage result with approximately 95-percent confidence.
3. The interval defined by three standard errors below and above the estimated rate or change contains the complete coverage result with approximately 99-percent confidence.

Thus, an inference that the complete coverage result lies within the indicated intervals would, with the prescribed confidences, be correct. For example, if an estimated utilization rate is shown as 80 percent, with an associated standard error of 3 percent, there is approximately 67-percent confidence that the interval 77 percent to 83 percent includes the complete coverage rate, about 95-percent confidence that the interval 74 percent to 86 percent would include the complete coverage rate, and approximately 99-percent confidence that the interval 71 percent to 89 percent would include the complete coverage rate.

Note that the estimates of the standard errors are derived from the sample and are also subject to sampling error.

# Appendix C.

## Description of Survey Sample and Estimating Procedure

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### **SURVEY SAMPLE**

The 2006 survey estimates presented in this report are derived from a sample of about 17,000 establishments covering the manufacturing sector, North American Industry Classification System (NAICS) codes 31–33, and the publishing industry group, NAICS code 5111: Newspaper, Periodical, Book and Database Publishers. Data are collected from the publishing industry group so that the Federal Reserve Board (FRB), one of the funding agencies for the Survey of Plant Capacity Utilization (SPCU), can maintain continuity of production and capacity measures that are featured in their statistical release, “*G.17: Industrial Production and Capacity Utilization*,” a principal federal economic indicator. The original sample for the 2004 SPCU was selected using the 2002 Economic Census as the primary frame source. This sample is being maintained for a 5-year cycle and supplemented with birth establishments each survey year to account for sample attrition. In other words, a sample of birth establishments is selected each intermediate survey year to replace establishments from the previous survey cycle that are no longer active, thus preserving the desired sample size of roughly 17,000 establishments. When the original sample was selected for the 2004 SPCU, the primary frame source was supplemented with a universe of birth establishments that came into existence in 2003, subsequent to the 2002 Economic Census. For the 2006 SPCU, a universe of birth establishments that came into existence in 2005 was created and a sample of roughly 1,100 establishments was selected to supplement the ongoing sample for the 2006 survey. This birth sample was selected using a probability proportionate to size (pps) sample design, similar to that employed for the 2004 SPCU sample selection, which is described in detail below.

The sampling frame for the 2004 SPCU was limited to establishments that were actually mailed a census form. The remaining census cases were imputed based on administrative data obtained from Internal Revenue Service and/or Social Security Administration records. These small administrative record cases were excluded from the sampling frame for the 2004 SPCU. As a result, the census portion of the sampling frame consisted of roughly 217,500 establishments: almost 205,200 plants from the manufacturing sector and around 12,300 establishments from the publishing industry group. The supplemental birth universe consisted of almost 11,000 establishments.

The primary portion of the 2004 SPCU sample was selected using a pps sample design. The measure of size on which probabilities of selection were based for each establishment in the frame was the total value of receipts from the census. There was a small portion of this frame, less than 200 establishments, with zero receipts data that did not seem to be legitimate based on other data reported for these plants. This would have implied a zero measure of size for all of these establishments. Since there was some doubt about the validity of these zero data, a simple random sample of 50 establishments was selected from these plants. Simple random sampling was also employed to select a sample of 450 birth establishments from the birth universe.

As mentioned earlier, the primary portion of the 2004 SPCU sample was selected using a pps sample design with census total receipts used as the measure of size for each establishment in the frame. For every establishment in the frame, this measure of size was used to assign probabilities of selection for the 2004 SPCU sample. Establishments actually selected for the sample were assigned sampling weights equal to the inverse of their respective probabilities of selection.

Sampling was conducted independently for each NAICS-6 industry, so actual probabilities of selection were dependent on the final sample size determined for each industry. This determination was based upon a level of priority assigned to each industry and the overall constraint that the total sample size would be limited to around 17,000 establishments. Industry priority was based

on requirements specified by the survey sponsors, the FRB and the Department of Defense (DOD). Both the FRB and the DOD furnished lists of priority NAICS-6 industries, and these lists were merged together to provide one unduplicated master list of priority industries for sampling. In response to some external interest in industries with significant value-added data, research was also done to determine a preliminary set of important NAICS-3 industries in terms of value-added data obtained from the 2003 Annual Survey of Manufactures (ASM). Value added is defined as the difference between sales values and the cost of merchandise sold without any further manufacturing, processing, or assembly. NAICS-3 industries were deemed to be important if their value-added contribution was more than 5 percent of the U.S. value-added total. Under these criteria, there were six NAICS-3 industries identified as important value-added industries.

All of the aforementioned priority requirements were combined to determine the final NAICS-6 industry priorities for sampling purposes. All FRB and DOD priority NAICS-6 industries from the six important value-added NAICS-3 industries were designated as priority-1 industries. These 75 NAICS-6 industries were sampled under the tightest error constraints. The remaining FRB and DOD priority NAICS-6 industries, together with the balance of NAICS-6 industries from the six important value-added NAICS-3 industries, were designated as priority-2 industries. These 237 NAICS-6 industries were sampled under error constraints slightly looser than those enforced for the highest priority industries. All of the remaining 167 NAICS-6 industries were designated as priority-3 industries and were sampled under the loosest error constraints.

The 2004 SPCU sample selection was accomplished using Tillé sampling, a pps fixed sample size sampling methodology that ensured the exact desired sample size for each NAICS-6 industry was realized. This fixed sample size methodology was first used to select the entire SPCU sample for the 1999 survey. In previous sample selections, Poisson sampling was employed, which yielded sample sizes that, under repeated applications, varied from the expected sample sizes. The Tillé sampling methodology guarantees that the exact expected industry sample sizes resulting from the specified error constraints and sample selection probabilities are obtained. Therefore, under Tillé sampling, sample size is no longer a random variable, as it was under Poisson sampling, so any sample variance due to variation in sample size is eliminated.

Prior to sampling, an adjustment was made to all assigned probabilities that fell below some specified minimum probability. This adjustment, which reset the original selection probabilities to this minimum probability, helped guard against exceedingly large sample weights (inverse of the probability of selection). This was done to help prevent sample estimates from being so adversely affected by establishments reporting data much more significant than expected relative to their measures of size. The minimum probability for the 2004 SPCU was set to 0.02, thus ensuring a maximum sample weight of 50. This minimum probability rule resulted in a slight increase in the originally allocated industry sample sizes.

Working within the sample size constraints of roughly 17,000 establishments from the manufacturing sector and about 300 establishments from the publishing sector, and incorporating the NAICS-6 industry prioritization scheme described above, error constraints were established for each sample industry so as to ensure that the total sample size would be around the target of 17,300 establishments. Several iterations were performed to test various error constraints for each of the three priority industry groups to determine the set of error constraints that would yield the desired target sample size. As a result, sampling from the pps portion of the frame was controlled under error constraints of 0.05 for priority-1 NAICS-6 industries, 0.11 for priority-2 industries, and 0.20 for priority-3 industries. Under these error constraints, a sample of roughly 16,800 establishments was selected from the pps portion of the sampling frame. This sample, combined with the simple random samples of birth establishments and zero receipts cases, yielded a final total sample of about 17,300 establishments, about 17,000 from the manufacturing sector and roughly 300 from the publishing sector.

### **ESTIMATING PROCEDURE**

The estimated full production rates shown in this report for the 6-digit NAICS industries in Table 1a were computed in the following manner:

$$R_j = \frac{\sum_i WT_{ij} VPA_{ij}}{\sum_i WT_{ij} VPF_{ij}}$$

where  $R_j$  is the utilization rate for 6-digit NAICS industry  $j$ ;  $WT_{ij}$  is the sampling weight for establishment  $i$  in 6-digit industry  $j$ ;  $VPA_{ij}$  is the actual value of production for establishment  $i$  in 6-digit industry  $j$ ;  $VPF_{ij}$  is the value of production at the full production level; and the summations are for those establishments with reported or imputed value of production at both actual and full production level. National emergency production rates in Table 1b are computed similarly, by substituting national emergency production (VPE) for VPF in the above formula. Imputed nonrespondent data were included because the utilization rates for nonrespondents were not necessarily imputed at the average rate for respondents.

The estimated utilization rates for the higher level manufacturing industry groupings (total manufacturing sector, subsectors, industry groups, durable goods industries, nondurable goods industries, advance processing industries, and primary processing industries) were computed in the following manner:

$$R_{(K)} = \frac{\sum_j VA_j}{\sum_j \left( \frac{VA_j}{R_j} \right)}$$

where  $R_{(K)}$  is the utilization rate for industry group  $K$ ;  $VA_j$  is the value added for 6-digit industry  $j$  as published in the most recent ASM or economic census; and  $VA_j/R_j$  represents the value added for 6-digit industry  $j$  adjusted to full production or national emergency production levels of operation.

Value added is used when aggregating to higher levels to avoid duplication in figures of production that result when products of some establishments are also input materials for other establishments. Most users of industrial data consider value added to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas. Therefore, using value added in the methodology to derive utilization rate measures should provide better estimates.

In accord with the sample design, estimates for publishing are presented at the industry group level only. These estimates are not included in any of the aggregated manufacturing estimates. Since the value added concept is not applicable to the publishing industry, the industry group estimates are derived in the same manner as the 6-digit industry estimates described above for manufacturing, except that the summations range over all establishments within the industry group.

The estimated variances for the sample estimates based on the fixed sample size methodology are calculated as shown below. The equations shown refer to full production utilization rate variances. Similar calculations for emergency utilization rate variances are computed by substituting VPE for VPF. The variable  $\gamma_i$  is an establishment variable that arises from the use of the fixed sample size method. For the 6-digit NAICS industries and publishing industry group, the variances were computed as:

$$\sigma^2(R_j) = \sigma^2(A_j/B_j) = \frac{1}{B_j^2} [\sigma^2(A_j) + R_j^2 \sigma^2(B_j) - 2R_j \sigma(A_j B_j)] \quad (1)$$

where  $A_j = \sum_i WT_{ij} VPA_{ij}$

$B_j = \sum_i WT_{ij} VPF_{ij}$

$$\sigma^2(A_j) = \sum_i \gamma_i \left( i \sum_{l=1}^i (WT_{lj} VPA_{lj})^2 - \left( \sum_{l=1}^i WT_{lj} VPA_{lj} \right)^2 \right)$$

$$\sigma^2(B_j) = \sum_i \gamma_i \left( i \sum_{l=1}^i (WT_{lj} VPF_{lj})^2 - \left( \sum_{l=1}^i WT_{lj} VPF_{lj} \right)^2 \right)$$

$$\sigma^2(A_j B_j) = \sum_i \gamma_i \left( i \sum_{l=1}^i WT_{lj}^2 VPA_{lj} VPF_{lj} - \left( \sum_{l=1}^i WT_{lj} VPA_{lj} \right) \left( \sum_{l=1}^i WT_{lj} VPF_{lj} \right) \right)$$

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Estimates of variances of higher level manufacturing aggregates  $R_{(k)}$  were computed as follows:

$$\sigma^2(R_{(k)}) = \frac{1}{\left[\sum_j \frac{VA_j}{R_j}\right]^2} \left[ \sum_j \sigma^2(VA_j) + R_{(k)}^2 \left( \sum_j \left[ \left(\frac{1}{R_j^2}\right) \sigma^2(VA_j) + \left(\frac{VA_j^2}{R_j^4}\right) \sigma^2(R_j) \right] \right) - 2R_{(k)} \sum_j \left[ \left(\frac{1}{R_j}\right) \sigma^2(VA_j) \right] \right] \quad (2)$$

where  $\sigma^2(VA_j)$  is the ASM estimate of variance for value added in industry  $j$ , and where the summations range over the set of 6-digit industries comprising the higher level industry group  $K$ . When census year value added data are utilized, the variance terms  $\sigma^2(VA_j)$  reduce to zero.

Table 2 shows standard errors of the utilization rates. Standard errors are the square root of the corresponding variances. Estimated standard errors of the changes in utilization rates from 2005 to 2006 are also presented in Table 2. For more information regarding these estimates, contact the Special Studies Branch at 301-763-7657.

### **IMPUTATION**

The imputation methodology employed for the 2006 survey was first implemented in the 2003 survey. This methodology utilizes the industry average to impute data for the current year if the plant's response was not received in time to meet publication deadlines. Prior to 2003, the estimates for these cases were derived using reported data from the plant in the previous survey.

