

# Survey of Plant Capacity: 2003

Issued December 2004

MQ-C1(03)

## Current Industrial Reports



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U.S. Department of Commerce  
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# Introduction

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## SUMMARY OF 2003 SURVEY RESULTS

U.S. domestic manufacturing plants used an estimated 64 percent ( $\pm 1$  percentage point) of their full production capacity for the fourth quarter of 2003 and 63 percent ( $\pm 1$  percentage point) for the fourth quarter of 2002. The durable goods industries fourth quarter 2003 rate of 61 percent ( $\pm 1$  percentage point) was significantly lower than the rate of 69 percent ( $\pm 1$  percentage point) estimated for 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 include 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 include nondurables goods industries.

The advanced processing industries fourth quarter rate of 62 percent ( $\pm 1$  percentage point) was significantly lower than the rate of 70 percent ( $\pm 1$  percentage point) 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, 323, 324, 326, 327, and 331 include 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 include advance processing industries.

Among the manufacturing subsectors with the lowest utilization rates of their full production capacity in the fourth quarter of 2003 were computer and electronic product manufacturing (NAICS 334) at 53 percent and leather and allied product manufacturing (NAICS 316) at 58 percent. Among the manufacturing subsectors with the highest utilization rates for 2003 were paper manufacturing (NAICS 322) at 81 percent and petroleum and coal products manufacturing (NAICS 324) at 80 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 2003 were apparel manufacturing (NAICS 315) at 32 percent and leather and allied product manufacturing (NAICS 316) at 33 percent. Among the manufacturing subsectors with the highest utilization rates of 2003 were paper manufacturing (NAICS 322) at 73 percent and petroleum and coal products manufacturing (NAICS 324) at 70 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 1999 through 2003. Table 2 shows both full and emergency production utilization rates, standard errors, and the standard error of the change in utilization rates from 2002 to 2003 at the three-, four-, five-, and six-digit NAICS industry levels, for fourth quarters 2002 and 2003. 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 qualification of the data; and Appendix C contains a description of the survey sample and estimating procedure.

## INDUSTRIAL CLASSIFICATION

The industrial classification definitions are based on the 1997 edition of the North American Industry Classification System (NAICS) Manual published by the 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

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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 1999 Through 2003**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
<b>31-33</b>	<b>Manufacturing<sup>1</sup></b>	<b>64</b>	<b>63</b>	<b>64</b>	<b>71</b>	<b>74</b>
	<b>Durable goods industries<sup>1</sup></b>	<b>61</b>	<b>59</b>	<b>61</b>	<b>70</b>	<b>72</b>
	<b>Nondurable goods industries<sup>1</sup></b>	<b>69</b>	<b>69</b>	<b>70</b>	<b>73</b>	<b>76</b>
	<b>Advanced processing industries<sup>1</sup></b>	<b>62</b>	<b>61</b>	<b>63</b>	<b>70</b>	<b>72</b>
	<b>Primary processing industries<sup>1</sup></b>	<b>70</b>	<b>68</b>	<b>68</b>	<b>73</b>	<b>77</b>
311	Food mfg	74	73	72	73	74
3111	Animal food mfg	71	73	69	76	79
31111	Animal food mfg	71	73	69	76	79
311111	Dog & cat food mfg	81	80	75	76	77
311119	Other animal food mfg	63	68	63	76	80
3112	Grain & oilseed milling	84	79	79	76	76
31121	Flour milling & malt mfg	79	78	77	77	78
311211	Flour milling	79	79	75	72	75
311212	Rice milling	78	74	89	95	92
311213	Malt mfg	82	75	75	82	74
31122	Starch & vegetable fats & oils mfg	90	91	89	87	84
311221	Wet corn milling	95	93	94	91	91
311222	Soybean processing	94	96	92	96	85
311223	Other oilseed processing	76	70	80	69	80
311225	Fats & oils refining & blending	80	84	81	<sup>a75</sup>	72
31123	Breakfast cereal mfg	81	<sup>a72</sup>	73	69	70
311230	Breakfast cereal mfg	81	<sup>a72</sup>	73	69	70
3113	Sugar & confectionery product mfg	70	69	71	74	72
31131	Sugar mfg	93	93	90	91	92
311311	Sugarcane mills	98	93	98	97	98
311312	Cane sugar refining	<sup>a71</sup>	<sup>a79</sup>	<sup>a76</sup>	80	85
311313	Beet sugar mfg	99	97	97	95	92
31132	Chocolate & confectionery mfg from cacao beans	83	81	76	78	75
311320	Chocolate & confectionery mfg from cacao beans	83	81	76	78	75
31133	Confectionery mfg from purchased chocolate	64	63	65	66	64
311330	Confectionery mfg from purchased chocolate	64	63	65	66	64
31134	Nonchocolate confectionery mfg	66	63	70	77	74
311340	Nonchocolate confectionery mfg	66	63	70	77	74
3114	Fruit & vegetable preserving & specialty food mfg	62	64	63	65	69
31141	Frozen food mfg	77	77	77	82	82
311411	Frozen fruit, juice, & vegetable mfg	85	79	81	79	82
311412	Frozen specialty food mfg	72	76	74	84	82
31142	Fruit & vegetable canning, pickling, & drying	54	57	55	57	61
311421	Fruit & vegetable canning	49	51	52	54	59
311422	Specialty canning	64	66	63	<sup>a60</sup>	61
311423	Dried & dehydrated food mfg	67	68	50	60	74
3115	Dairy product mfg	79	77	78	77	78
31151	Dairy product (except frozen) mfg	81	78	78	78	79
311511	Fluid milk mfg	85	82	82	81	82
311512	Creamery butter mfg	74	72	71	79	81
311513	Cheese mfg	79	81	80	77	78
311514	Dry, condensed, & evaporated dairy product mfg	75	69	71	74	75
31152	Ice cream & frozen dessert mfg	<sup>a73</sup>	69	79	72	69
311520	Ice cream & frozen dessert mfg	<sup>a73</sup>	69	79	72	69
3116	Meat product mfg	82	83	83	85	85
31161	Animal slaughtering & processing	82	83	83	85	85
311611	Animal (except poultry) slaughtering	84	88	88	87	88
311612	Meat processed from carcasses	75	77	77	76	78
311613	Rendering & meat byproduct processing	78	76	75	<sup>a77</sup>	<sup>a82</sup>
311615	Poultry processing	87	86	86	91	90
3117	Seafood product preparation & packaging	61	56	60	61	62
31171	Seafood product preparation & packaging	61	56	60	61	62
311711	Seafood canning	69	64	64	79	66
311712	Fresh & frozen seafood processing	60	55	60	58	61
3118	Bakeries & tortilla mfg	72	73	69	71	73
31181	Bread & bakery product mfg	76	76	68	71	76
311811	Retail bakeries	<sup>a58</sup>	<sup>a65</sup>	66	64	74
311812	Commercial bakeries	78	76	68	72	76
311813	Frozen cakes, pies, & other pastries mfg	80	78	79	73	76
31182	Cookie, cracker, & pasta mfg	64	68	69	69	67
311821	Cookie & cracker mfg	62	66	69	67	63
311822	Flour mixes & dough mfg from purchased flour	69	72	72	76	80
311823	Dry pasta mfg	63	77	68	67	70
31183	Tortilla mfg	81	79	76	77	78
311830	Tortilla mfg	81	79	76	77	78
3119	Other food mfg	74	73	71	68	68
31191	Snack food mfg	85	80	77	78	<sup>a76</sup>
311911	Roasted nuts & peanut butter mfg	72	76	71	70	82
311919	Other snack food mfg	89	81	78	80	<sup>a74</sup>
31192	Coffee & tea mfg	<sup>a71</sup>	71	71	77	77
311920	Coffee & tea mfg	<sup>a71</sup>	71	71	77	77
31193	Flavoring syrup & concentrate mfg	72	70	69	63	61
311930	Flavoring syrup & concentrate mfg	72	70	69	63	61
31194	Seasoning & dressing mfg	67	67	64	58	61
311941	Mayonnaise, dressing, & other prepared sauce mfg	74	74	69	61	58
311942	Spice & extract mfg	61	62	59	56	65
31199	All other food mfg	70	71	71	68	68
311991	Perishable prepared food mfg	68	67	66	67	67
311999	All other miscellaneous food mfg	70	72	73	69	68

See footnotes at end of table.



**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
312	Beverage & tobacco product mfg .....	64	65	68	71	75
3121	Beverage mfg .....	68	65	66	68	70
31211	Soft drink & ice mfg .....	63	57	56	61	63
312111	Soft drink mfg .....	70	60	58	62	64
312112	Bottled water mfg .....	32	50	51	49	56
312113	Ice mfg .....	28	23	27	40	<sup>a40</sup>
31212	Breweries .....	78	81	82	82	85
312120	Breweries .....	78	81	82	82	85
31213	Wineries .....	63	66	69	65	71
312130	Wineries .....	63	66	69	65	71
31214	Distilleries .....	69	66	68	65	55
312140	Distilleries .....	69	66	68	65	55
3122	Tobacco mfg .....	61	65	69	73	81
31221	Tobacco stemming & redrying .....	77	59	75	81	77
312210	Tobacco stemming & redrying .....	77	59	75	81	77
31222	Tobacco product mfg .....	61	65	69	73	81
312221	Cigarette mfg .....	61	65	70	73	82
312229	Other tobacco product mfg .....	69	66	60	66	73
313	Textile mills .....	64	66	68	77	80
3131	Fiber, yarn, & thread mills .....	77	74	69	80	82
31311	Fiber, yarn, & thread mills .....	77	74	69	80	82
313111	Yarn spinning mills .....	82	78	70	82	83
313112	Yarn texturing, throwing, & twisting mills .....	68	69	68	74	79
313113	Thread mills .....	<sup>a72</sup>	66	69	82	85
3132	Fabric mills .....	66	65	70	78	81
31321	Broadwoven fabric mills .....	69	66	72	84	85
313210	Broadwoven fabric mills .....	69	66	72	84	85
31322	Narrow fabric mills & schiffli machine embroidery .....	64	68	63	70	75
313221	Narrow fabric mills .....	68	69	63	70	77
313222	Schiffli machine embroidery .....	53	66	62	71	69
31323	Nonwoven fabric mills .....	60	62	74	74	83
313230	Nonwoven fabric mills .....	60	62	74	74	83
31324	Knit fabric mills .....	62	63	61	68	71
313241	Weft knit fabric mills .....	71	71	60	69	73
313249	Other knit fabric & lace mills .....	58	59	63	67	69
3133	Textile & fabric finishing & fabric coating mills .....	58	64	64	72	76
31331	Textile & fabric finishing mills .....	58	65	65	74	77
313311	Broadwoven fabric finishing mills .....	55	71	67	74	79
313312	Textile & fabric finishing mills .....	63	55	<sup>a59</sup>	74	74
31332	Fabric coating mills .....	61	59	58	62	67
313320	Fabric coating mills .....	61	59	58	62	67
314	Textile product mills .....	73	66	70	71	76
3141	Textile furnishings mills .....	76	73	78	79	83
31411	Carpet & rug mills .....	78	75	77	79	83
314110	Carpet & rug mills .....	78	75	77	79	83
31412	Curtain & linen mills .....	73	72	79	79	82
314121	Curtain & drapery mills .....	<sup>a72</sup>	77	76	74	74
314129	Other household textile product mills .....	73	70	80	81	87
3149	Other textile product mills .....	69	57	61	62	66
31491	Textile bag & canvas mills .....	59	61	61	60	60
314911	Textile bag mills .....	<sup>a49</sup>	67	60	54	53
314912	Canvas & related product mills .....	66	59	61	65	65
31499	All other textile product mills .....	73	55	61	62	69
314991	Rope, cordage, & twine mills .....	61	61	<sup>a56</sup>	<sup>a66</sup>	61
314992	Tire cord & tire fabric mills .....	89	83	80	83	89
314999	All other miscellaneous textile product mills .....	73	53	60	60	68
315	Apparel mfg .....	66	72	69	75	77
3151	Apparel knitting mills .....	65	78	78	78	84
31511	Hosiery & sock mills .....	75	78	77	78	81
315111	Sheer hosiery mills .....	80	77	67	69	78
315119	Other hosiery & sock mills .....	73	78	81	83	83
31519	Other apparel knitting mills .....	<sup>a54</sup>	<sup>a77</sup>	80	77	86
315191	Outerwear knitting mills .....	<sup>a52</sup>	<sup>a75</sup>	78	76	90
315192	Underwear & nightwear knitting mills .....	68	<sup>a91</sup>	<sup>a88</sup>	82	72
3152	Cut & sew apparel mfg .....	66	<sup>a72</sup>	<sup>a68</sup>	<sup>a75</sup>	<sup>a76</sup>
31521	Cut & sew apparel contractors .....	68	69	71	<sup>a66</sup>	78
315211	Men's & boys' cut & sew apparel contractors .....	79	75	<sup>a77</sup>	<sup>a76</sup>	75
315212	Women's, girls', & infants' cut & sew apparel contractors .....	63	66	68	<sup>a63</sup>	<sup>a79</sup>
31522	Men's & boys' cut & sew apparel mfg .....	67	75	71	<sup>a80</sup>	<sup>a81</sup>
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	<sup>a71</sup>	<sup>a60</sup>	<sup>a54</sup>	<sup>a70</sup>	<sup>a69</sup>
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	<sup>a50</sup>	<sup>a60</sup>	71	<sup>a76</sup>	83
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	<sup>a70</sup>	<sup>a73</sup>	65	<sup>a72</sup>	69
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	69	80	76	<sup>a91</sup>	<sup>a91</sup>
315225	Men's & boys' cut & sew work clothing mfg .....	90	88	89	88	86
315228	Men's & boys' cut & sew other outerwear mfg .....	<sup>a57</sup>	77	<sup>a75</sup>	<sup>a76</sup>	79
31523	Women's & girls' cut & sew apparel mfg .....	65	<sup>a70</sup>	<sup>a65</sup>	<sup>a73</sup>	<sup>a73</sup>
315231	Women's & girls' cut/ sew lingerie & nightwear mfg .....	<sup>a45</sup>	<sup>a63</sup>	53	73	73
315232	Women's & girls' cut & sew blouse & shirt mfg .....	82	83	<sup>a78</sup>	<sup>a82</sup>	<sup>a97</sup>
315233	Women's & girls' cut & sew dress mfg .....	<sup>a51</sup>	<sup>a58</sup>	<sup>a49</sup>	<sup>a64</sup>	<sup>a68</sup>
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	<sup>a60</sup>	<sup>a61</sup>	<sup>a75</sup>	<sup>a73</sup>	<sup>a40</sup>
315239	Women's & girls' cut & sew other outerwear mfg .....	<sup>a87</sup>	<sup>a78</sup>	<sup>a76</sup>	<sup>a98</sup>	<sup>a98</sup>
31529	Other cut & sew apparel mfg .....	69	<sup>a78</sup>	74	75	68
315291	Infants' cut & sew apparel mfg .....	92	(NA)	<sup>a91</sup>	<sup>a85</sup>	79
315292	Fur & leather apparel mfg .....	<sup>a78</sup>	<sup>a61</sup>	<sup>a68</sup>	68	<sup>a71</sup>
315299	All other cut & sew apparel mfg .....	61	<sup>a60</sup>	68	69	61
3159	Apparel accessories & other apparel mfg .....	61	64	<sup>a62</sup>	70	72
31599	Apparel accessories & other apparel mfg .....	61	64	<sup>a62</sup>	70	72
315991	Hat, cap, & millinery mfg .....	59	59	<sup>a59</sup>	72	71
315992	Glove & mitten mfg .....	37	<sup>a51</sup>	56	77	73
315993	Men's & boys' neckwear mfg .....	71	76	70	69	77
315999	Other apparel accessories & other apparel mfg .....	66	68	64	68	71

See footnotes at end of table.

Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
316	Leather & allied product mfg .....	58	54	56	65	72
3161	Leather & hide tanning & finishing .....	70	63	<sup>a</sup> 57	70	74
31611	Leather & hide tanning & finishing .....	70	63	<sup>a</sup> 57	70	74
316110	Leather & hide tanning & finishing .....	70	63	<sup>a</sup> 57	70	74
3162	Footwear mfg .....	52	<sup>a</sup> 48	<sup>a</sup> 56	64	67
31621	Footwear mfg .....	52	48	<sup>a</sup> 56	64	67
316211	Rubber & plastics footwear mfg .....	54	44	<sup>a</sup> 55	65	72
316212	House slipper mfg .....	69	57	62	69	64
316213	Men's footwear (except athletic) mfg .....	59	61	61	59	67
316214	Women's footwear (except athletic) mfg .....	<sup>a</sup> 27	<sup>a</sup> 26	<sup>a</sup> 37	<sup>a</sup> 70	54
316219	Other footwear mfg .....	<sup>a</sup> 69	<sup>a</sup> 79	<sup>a</sup> 69	<sup>a</sup> 74	83
3169	Other leather & allied product mfg .....	57	56	54	63	<sup>a</sup> 76
31699	Other leather & allied product mfg .....	57	56	54	63	<sup>a</sup> 76
316991	Luggage mfg .....	47	48	45	53	<sup>a</sup> 71
316992	Women's handbag & purse mfg .....	69	62	<sup>a</sup> 77	80	<sup>a</sup> 80
316993	Personal leather good (except women's handbag & purse) mfg .....	<sup>a</sup> 74	<sup>a</sup> 55	<sup>a</sup> 53	86	79
316999	All other leather good mfg .....	<sup>a</sup> 73	78	79	81	84
321	Wood product mfg .....	70	67	66	69	75
3211	Sawmills & wood preservation .....	73	75	69	74	81
32111	Sawmills & wood preservation .....	73	75	69	74	81
321113	Sawmills .....	74	75	70	75	81
321114	Wood preservation .....	66	71	64	64	73
3212	Veneer, plywood, & engineered wood product mfg .....	76	66	66	75	81
32121	Veneer, plywood, & engineered wood product mfg .....	76	66	66	75	81
321211	Hardwood veneer & plywood mfg .....	69	67	62	75	83
321212	Softwood veneer & plywood mfg .....	88	86	84	81	83
321213	Engineered wood member (except truss) mfg .....	73	64	63	73	73
321214	Truss mfg .....	68	54	55	71	84
321219	Reconstituted wood product mfg .....	83	72	69	76	79
3219	Other wood product mfg .....	67	65	65	64	70
32191	Millwork .....	75	73	73	70	73
321911	Wood window & door mfg .....	73	72	74	76	78
321912	Cut stock, resawing lumber, & planing .....	79	77	77	70	70
321918	Other millwork (including flooring) .....	77	73	68	60	67
32192	Wood container & pallet mfg .....	65	59	57	67	69
321920	Wood container & pallet mfg .....	65	59	57	67	69
32199	All other wood product mfg .....	58	58	59	59	68
321991	Manufactured home (mobile home) mfg .....	55	54	58	54	69
321992	Prefabricated wood building mfg .....	69	65	56	61	59
321999	All other miscellaneous wood product mfg .....	56	59	64	70	72
322	Paper mfg .....	81	81	76	79	83
3221	Pulp, paper, & paperboard mills .....	89	90	83	87	91
32211	Pulp mills .....	89	87	90	88	91
322110	Pulp mills .....	89	87	90	88	91
32212	Paper mills .....	87	89	81	87	90
322121	Paper (except newsprint) mills .....	86	90	80	86	89
322122	Newsprint mills .....	95	86	88	96	97
32213	Paperboard mills .....	94	93	87	87	93
322130	Paperboard mills .....	94	93	87	87	93
3222	Converted paper product mfg .....	74	73	70	73	76
32221	Paperboard container mfg .....	76	74	69	73	75
322211	Corrugated & solid fiber box mfg .....	83	78	70	75	77
322212	Folding paperboard box mfg .....	86	79	73	70	72
322213	Setup paperboard box mfg .....	64	68	69	74	72
322214	Fiber can, tube, drum, & similar products mfg .....	<sup>a</sup> 35	<sup>a</sup> 44	51	63	71
322215	Nonfolding sanitary food container mfg .....	69	69	71	78	77
32222	Paper bag & coated & treated paper mfg .....	69	71	73	74	76
322221	Coated & laminated packaging paper & plastics film mfg .....	69	65	63	64	68
322222	Coated & laminated packaging paper & plastics film mfg .....	67	69	72	73	78
322223	Plastics, foil, & coated paper bag mfg .....	73	73	71	69	56
322224	Uncoated paper & multiwall bag mfg .....	72	79	79	82	77
322225	Laminated aluminum foil mfg for flexible packaging uses .....	72	81	82	81	82
322226	Surface-coated paperboard mfg .....	78	84	82	75	74
32223	Stationery product mfg .....	69	65	66	65	68
322231	Die-cut paper & paperboard office supplies mfg .....	76	79	76	75	77
322232	Envelope mfg .....	73	75	69	76	79
322233	Stationery, tablet, & related product mfg .....	58	44	55	<sup>a</sup> 47	49
32229	Other converted paper product mfg .....	77	76	70	77	83
322291	Sanitary paper product mfg .....	80	79	76	85	88
322299	All other converted paper product mfg .....	72	73	63	65	72
323	Printing & related support activities .....	68	69	71	75	76
3231	Printing & related support activities .....	68	69	71	75	76
32311	Printing .....	68	69	71	75	76
323110	Commercial lithographic printing .....	72	72	76	81	80
323111	Commercial gravure printing .....	88	84	78	83	82
323112	Commercial flexographic printing .....	75	74	70	75	79
323113	Commercial screen printing .....	66	<sup>a</sup> 57	63	63	69
323114	Quick printing .....	67	69	66	68	73
323115	Digital printing .....	82	<sup>a</sup> 71	70	63	65
323116	Manifold business form printing .....	52	64	68	68	67
323117	Book printing .....	59	64	58	69	72
323118	Blankbook, looseleaf binder, & device mfg .....	51	58	52	56	75
323119	Other commercial printing .....	68	70	71	68	77
32312	Support activities for printing .....	72	69	68	72	76
323121	Tradebinding & related work .....	66	66	65	72	74
323122	Prepress services .....	75	71	69	72	77

See footnotes at end of table.

Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
324	Petroleum & coal products mfg .....	80	80	80	83	81
3241	Petroleum & coal products mfg .....	80	80	80	83	81
32411	Petroleum refineries .....	90	91	91	94	93
324110	Petroleum refineries .....	90	91	91	94	93
32412	Asphalt paving, roofing, & saturated materials mfg .....	44	43	44	48	55
324121	Asphalt paving mixture & block mfg .....	33	32	31	36	44
324122	Asphalt shingle & coating materials mfg .....	67	66	72	<sup>a</sup> 69	<sup>a</sup> 73
32419	Other petroleum & coal products mfg .....	56	59	57	67	67
324191	Petroleum lubricating oil & grease mfg .....	55	59	57	63	64
324199	All other petroleum & coal products mfg .....	63	60	58	85	86
325	Chemical mfg .....	63	63	68	71	76
3251	Basic chemical mfg .....	75	72	69	76	82
32511	Petrochemical mfg .....	80	75	77	92	92
325110	Petrochemical mfg .....	80	75	77	92	92
32512	Industrial gas mfg .....	72	75	67	<sup>a</sup> 79	79
325120	Industrial gas mfg .....	72	75	67	<sup>a</sup> 79	79
32513	Dye & pigment mfg .....	76	81	71	78	81
325131	Inorganic dye & pigment mfg .....	83	86	78	87	90
325132	Synthetic organic dye & pigment mfg .....	68	76	64	69	70
32518	Other basic inorganic chemical mfg .....	65	64	66	68	74
325181	Alkalies & chlorine mfg .....	75	76	70	78	85
325182	Carbon black mfg .....	83	<sup>a</sup> 78	74	84	92
325188	All other basic inorganic chemical mfg .....	63	62	65	67	72
32519	Other basic organic chemical mfg .....	83	76	69	81	87
325191	Gum & wood chemical mfg .....	72	80	78	81	74
325192	Cyclic crude & intermediate mfg .....	73	<sup>a</sup> 83	<sup>a</sup> 72	77	77
325193	Ethyl alcohol mfg .....	97	86	90	85	85
325199	All other basic organic chemical mfg .....	84	75	67	81	88
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	78	75	72	79	87
32521	Resin & synthetic rubber mfg .....	77	75	72	79	87
325211	Plastics material & resin mfg .....	80	79	77	82	89
325212	Synthetic rubber mfg .....	60	54	51	65	72
32522	Artificial & synthetic fibers & filaments mfg .....	85	77	72	81	88
325221	Cellulosic organic fiber mfg .....	90	84	78	<sup>a</sup> 80	<sup>a</sup> 70
325222	Noncellulosic organic fiber mfg .....	84	76	72	81	90
3253	Pesticide, fertilizer, & other agricultural chemical mfg .....	61	60	69	76	72
32531	Fertilizer mfg .....	63	66	74	77	85
325311	Nitrogenous fertilizer mfg .....	83	86	89	81	93
325312	Phosphatic fertilizer mfg .....	85	83	94	89	89
325314	Fertilizer (mixing only) mfg .....	41	45	51	<sup>a</sup> 62	<sup>a</sup> 70
32532	Pesticide & other agricultural chemical mfg .....	59	57	66	76	65
325320	Pesticide & other agricultural chemical mfg .....	59	57	66	76	65
3254	Pharmaceutical & medicine mfg .....	56	58	70	69	77
32541	Pharmaceutical & medicine mfg .....	56	58	70	69	77
325411	Medicinal & botanical mfg .....	73	80	88	<sup>a</sup> 85	<sup>a</sup> 85
325412	Pharmaceutical preparation mfg .....	52	54	66	66	75
325413	In-vitro diagnostic substance mfg .....	79	<sup>a</sup> 84	<sup>a</sup> 85	<sup>a</sup> 81	<sup>a</sup> 89
325414	Biological product (except diagnostic) mfg .....	69	72	86	76	77
3255	Paint, coating, & adhesive mfg .....	67	58	56	63	66
32551	Paint & coating mfg .....	69	61	55	64	69
325510	Paint & coating mfg .....	69	61	55	64	69
32552	Adhesive mfg .....	63	53	57	61	59
325520	Adhesive mfg .....	63	53	57	61	59
3256	Soap, cleaning compound, & toilet preparation mfg .....	62	67	64	62	68
32561	Soap & cleaning compound mfg .....	64	66	67	64	71
325611	Soap & other detergent mfg .....	59	68	66	68	69
325612	Polish & other sanitation good mfg .....	70	61	66	53	66
325613	Surface active agent mfg .....	73	76	75	76	84
32562	Toilet preparation mfg .....	60	68	62	61	64
325620	Toilet preparation mfg .....	60	68	62	61	64
3259	Other chemical product mfg .....	68	66	64	71	75
32591	Printing ink mfg .....	76	60	60	<sup>a</sup> 59	64
325910	Printing ink mfg .....	76	60	60	<sup>a</sup> 59	64
32592	Explosives mfg .....	70	69	71	68	63
325920	Explosives mfg .....	70	69	71	68	63
32599	All other chemical product & preparation mfg .....	67	67	65	72	77
325991	Custom compounding of purchased resin .....	71	69	66	73	80
325992	Photographic film, paper, plate, & chemical mfg .....	72	69	65	80	85
325998	All other miscellaneous chemical product & preparation mfg .....	61	63	64	66	70
326	Plastics & rubber products mfg .....	73	68	66	71	76
3261	Plastics product mfg .....	72	66	65	69	74
32611	Unsupported plastics film, sheet, & bag mfg .....	72	70	67	74	78
326111	Unsupported plastics bag mfg .....	73	65	69	<sup>a</sup> 70	78
326112	Unsupported plastics packaging film & sheet mfg .....	67	70	70	73	78
326113	Unsupported plastics film & sheet (except packaging) mfg .....	73	73	66	77	79
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	72	69	66	74	81
326121	Unsupported plastics profile shape mfg .....	70	69	69	75	76
326122	Plastics pipe & pipe fitting mfg .....	74	69	64	72	88
32613	Laminated plastics plate, sheet, & shape mfg .....	70	62	64	59	63
326130	Laminated plastics plate, sheet, & shape mfg .....	70	62	64	59	63
32614	Polystyrene foam product mfg .....	77	78	76	80	79
326140	Polystyrene foam product mfg .....	77	78	76	80	79
32615	Urethane & other foam product (except polystyrene) mfg .....	69	71	66	67	68
326150	Urethane & other foam product (except polystyrene) mfg .....	69	71	66	67	68
32616	Plastics bottle mfg .....	77	79	67	75	77
326160	Plastics bottle mfg .....	77	79	67	75	77
32619	Other plastics product mfg .....	72	63	63	66	73
326191	Plastics plumbing fixture mfg .....	56	54	57	61	63
326192	Resilient floor covering mfg .....	67	62	69	71	73
326199	All other plastics product mfg .....	73	63	64	66	73

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
326	Plastics & rubber products mfg—Con.					
3262	Rubber product mfg	77	74	72	79	84
32621	Tire mfg	85	85	81	87	93
326211	Tire mfg (except retreading)	85	87	82	88	95
326212	Tire retreading	89	61	67	67	68
32622	Rubber & plastics hoses & belting mfg	66	61	66	72	75
326220	Rubber & plastics hoses & belting mfg	66	61	66	72	75
32629	Other rubber product mfg	73	70	67	75	79
326291	Rubber product mfg for mechanical use	75	74	68	77	81
326299	All other rubber product mfg	71	66	67	73	78
327	Nonmetallic mineral product mfg	61	66	66	70	76
3271	Clay product & refractory mfg	69	70	69	74	75
32711	Pottery, ceramics, & plumbing fixture mfg	64	66	68	78	76
327111	Vitreous china plumbing fixture & bathroom accessories mfg	<sup>a</sup> 89	92	82	89	90
327112	Vitreous china, fine earthenware, & other pottery product mfg	52	58	64	74	71
327113	Porcelain electrical supply mfg	61	59	60	73	71
32712	Clay building material & refractories mfg	74	74	70	71	73
327121	Brick & structural clay tile mfg	91	88	88	89	89
327122	Ceramic wall & floor tile mfg	72	65	62	63	70
327123	Other structural clay product mfg	72	85	77	79	70
327124	Clay refractory mfg	57	64	52	53	66
327125	Nonclay refractory mfg	65	<sup>a</sup> 67	69	70	66
3272	Glass & glass product mfg	74	73	65	80	85
32721	Glass & glass product mfg	74	73	65	80	85
327211	Flat glass mfg	83	79	76	82	89
327212	Other pressed & blown glass & glassware mfg	67	68	57	78	82
327213	Glass container mfg	94	95	94	92	91
327215	Glass product mfg made of purchased glass	70	68	59	76	84
3273	Cement & concrete product mfg	50	59	63	62	70
32731	Cement mfg	88	84	83	84	87
327310	Cement mfg	88	84	83	84	87
32732	Ready-mix concrete mfg	35	47	52	50	62
327320	Ready-mix concrete mfg	35	47	52	50	62
32733	Concrete pipe, brick, & block mfg	74	77	71	72	71
327331	Concrete block & brick mfg	76	79	73	75	75
327332	Concrete pipe mfg	72	75	70	68	66
32739	Other concrete product mfg	64	63	71	73	75
327390	Other concrete product mfg	64	63	71	73	75
3274	Lime & gypsum product mfg	84	76	76	83	87
32741	Lime mfg	82	75	71	72	74
327410	Lime mfg	82	75	71	72	74
32742	Gypsum product mfg	84	77	77	86	92
327420	Gypsum product mfg	84	77	77	86	92
3279	Other nonmetallic mineral product mfg	74	71	71	71	76
32791	Abrasive product mfg	65	67	66	62	67
327910	Abrasive product mfg	65	67	66	62	67
32799	All other nonmetallic mineral product mfg	70	73	74	77	82
327991	Cut stone & stone product mfg	70	69	76	60	67
327992	Ground or treated mineral & earth mfg	77	70	59	82	88
327993	Mineral wool mfg	85	85	86	83	88
327999	All other miscellaneous nonmetallic mineral product mfg	75	59	70	73	73
331	Primary metal mfg	72	71	70	74	81
3311	Iron & steel mills & ferroalloy mfg	86	88	79	74	89
33111	Iron & steel mills & ferroalloy mfg	86	88	79	74	89
331111	Iron & steel mills	87	89	79	74	90
331112	Electrometallurgical ferroalloy product mfg	70	77	68	71	85
3312	Steel product mfg from purchased steel	67	65	61	70	78
33121	Iron & steel pipes & tubes mfg from purchased steel	64	63	63	69	76
331210	Iron & steel pipes & tubes mfg from purchased steel	64	63	63	69	76
33122	Rolling & drawing of purchased steel	70	66	59	72	79
331221	Cold-rolled steel shape mfg	71	66	53	68	76
331222	Steel wire drawing	69	66	66	75	82
3313	Alumina & aluminum production & processing	76	74	<sup>a</sup> 70	79	85
33131	Alumina & aluminum production & processing	76	74	<sup>a</sup> 70	79	85
331311	Alumina refining	76	<sup>a</sup> 79	<sup>a</sup> 84	<sup>a</sup> 72	71
331312	Primary aluminum production	72	<sup>a</sup> 70	<sup>a</sup> 64	79	86
331314	Secondary smelting & alloying of aluminum	75	75	74	74	85
331315	Aluminum sheet, plate, & foil mfg	86	<sup>a</sup> 87	<sup>a</sup> 75	83	89
331316	Aluminum extruded product mfg	71	66	67	76	81
331319	Other aluminum rolling & drawing	<sup>a</sup> 70	65	59	74	80
3314	Nonferrous metal (except aluminum) production & processing	70	67	71	79	77
33141	Nonferrous metal (except aluminum) smelting & refining	66	73	73	81	78
331411	Primary smelting & refining of copper	56	68	73	77	81
331419	Other nonferrous metal primary smelting & refining	78	73	73	83	76
33142	Copper rolling, drawing, extruding, & alloying	75	76	74	86	89
331421	Copper rolling, drawing, & extruding	75	78	73	86	91
331422	Copper wire (except mechanical) drawing	80	80	82	89	93
331423	Secondary smelting, refining, & alloying of copper	68	<sup>a</sup> 60	67	79	72
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	69	60	69	73	70
331491	Other nonferrous metal rolling, drawing, & extruding	64	61	71	74	70
331492	Other nonferrous metal secondary smelting, refining, & alloying	83	<sup>a</sup> 56	64	71	69
3315	Foundries	63	63	64	72	74
33151	Ferrous metal foundries	63	62	65	72	72
331511	Iron foundries	63	65	68	75	76
331512	Steel investment foundries	65	54	64	68	66
331513	Steel foundries (except investment)	64	58	55	66	66
33152	Nonferrous metal foundries	63	65	62	71	76
331521	Aluminum die-casting foundries	66	67	65	74	81
331522	Nonferrous (except aluminum) die-casting foundries	64	61	59	69	73
331524	Aluminum foundries (except die-casting)	60	64	62	70	75
331525	Copper foundries (except die-casting)	56	58	56	64	69
331528	Other nonferrous foundries (except die-casting)	76	75	<sup>a</sup> 75	78	79

See footnotes at end of table.

Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
332	Fabricated metal product mfg .....	61	59	60	68	70
3321	Forging & stamping .....	58	56	57	65	68
33211	Forging & stamping .....	58	56	57	65	68
332111	Iron & steel forging .....	56	57	57	66	67
332112	Nonferrous forging .....	67	60	65	65	72
332114	Custom roll forming .....	60	53	54	60	64
332115	Crown & closure mfg .....	62	53	57	67	69
332116	Metal stamping .....	56	55	57	64	67
332117	Powder metallurgy part mfg .....	73	68	66	77	81
3322	Cutlery & handtool mfg .....	61	62	63	71	73
33221	Cutlery & handtool mfg .....	61	62	63	71	73
332211	Cutlery & flatware (except precious) mfg .....	54	65	57	72	74
332212	Hand & edge tool mfg .....	61	58	63	71	72
332213	Saw blade & handsaw mfg .....	73	72	69	75	75
332214	Kitchen utensil, pot, & pan mfg .....	67	67	63	64	71
3323	Architectural & structural metals mfg .....	58	57	60	65	67
33231	Plate work & fabricated structural product mfg .....	59	58	65	68	73
332311	Prefabricated metal building & component mfg .....	59	60	64	69	71
332312	Fabricated structural metal mfg .....	60	58	67	69	76
332313	Plate work mfg .....	56	53	58	64	63
33232	Ornamental & architectural metal products mfg .....	58	56	58	63	64
332321	Metal window & door mfg .....	61	60	58	60	63
332322	Sheet metal work mfg .....	54	53	56	65	64
332323	Ornamental & architectural metal work mfg .....	66	59	61	66	65
3324	Boiler, tank, & shipping container mfg .....	67	64	66	70	71
33241	Power boiler & heat exchanger mfg .....	62	54	60	60	63
332410	Power boiler & heat exchanger mfg .....	62	54	60	60	63
33242	Metal tank (heavy gauge) mfg .....	56	58	57	63	66
332420	Metal tank (heavy gauge) mfg .....	56	58	57	63	66
33243	Metal can, box, & other metal container (light gauge) mfg .....	76	75	74	79	79
332431	Metal can mfg .....	79	77	76	84	84
332439	Other metal container mfg .....	68	66	68	65	66
3325	Hardware mfg .....	62	67	69	73	74
33251	Hardware mfg .....	62	67	69	73	74
332510	Hardware mfg .....	62	67	69	73	74
3326	Spring & wire product mfg .....	64	65	62	69	73
33261	Spring & wire product mfg .....	64	65	62	69	73
332611	Spring (heavy gauge) mfg .....	64	71	66	67	70
332612	Spring (light gauge) mfg .....	65	64	61	67	72
332618	Other fabricated wire product mfg .....	64	65	62	70	74
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	58	53	53	66	70
33271	Machine shops .....	57	50	51	66	71
332710	Machine shops .....	57	50	51	66	71
33272	Turned product & screw, nut, & bolt mfg .....	61	59	59	67	70
332721	Precision turned product mfg .....	58	54	55	64	67
332722	Bolt, nut, screw, rivet, & washer mfg .....	65	65	65	70	73
3328	Coating, engraving, heat treating, & allied activities .....	63	61	63	71	74
33281	Coating, engraving, heat treating, & allied activities .....	63	61	63	71	74
332811	Metal heat treating .....	71	65	65	87	80
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	70	71	71	69	73
332813	Electroplating, plating, polishing, anodizing, & coloring .....	55	52	55	66	71
3329	Other fabricated metal product mfg .....	65	64	65	70	71
33291	Metal valve mfg .....	65	64	64	68	68
332911	Industrial valve mfg .....	63	63	63	65	67
332912	Fluid power valve & hose fitting mfg .....	67	64	65	71	68
332913	Plumbing fixture fitting & trim mfg .....	67	66	67	69	69
332919	Other metal valve & pipe fitting mfg .....	65	62	62	70	74
33299	All other fabricated metal product mfg .....	66	64	66	71	74
332991	Ball & roller bearing mfg .....	71	68	69	73	80
332992	Small arms ammunition mfg .....	63	69	66	64	69
332993	Ammunition (except small arms) mfg .....	52	52	65	55	59
332994	Small arms mfg .....	71	72	66	76	77
332995	Other ordnance & accessories mfg .....	63	67	69	66	66
332996	Fabricated pipe & pipe fitting mfg .....	62	63	67	70	69
332997	Industrial pattern mfg .....	55	69	61	71	77
332998	Enameled iron & metal sanitary ware mfg .....	72	68	81	88	90
332999	All other miscellaneous fabricated metal product mfg .....	66	62	62	72	73
333	Machinery mfg .....	59	57	54	66	66
3331	Agriculture, construction, & mining machinery mfg .....	60	55	58	64	62
33311	Agricultural implement mfg .....	57	52	53	66	59
333111	Farm machinery & equipment mfg .....	55	53	54	66	56
333112	Lawn & garden tractor & home lawn & garden equipment mfg .....	63	50	51	65	71
33312	Construction machinery mfg .....	65	57	62	66	66
333120	Construction machinery mfg .....	65	57	62	66	66
33313	Mining & oil & gas field machinery mfg .....	57	54	61	59	60
333131	Mining machinery & equipment mfg .....	57	53	59	57	64
333132	Oil & gas field machinery & equipment mfg .....	57	54	62	60	59
3332	Industrial machinery mfg .....	52	51	45	71	65
33321	Sawmill & woodworking machinery mfg .....	56	49	53	63	68
333210	Sawmill & woodworking machinery mfg .....	56	49	53	63	68
33322	Plastics & rubber industry machinery mfg .....	57	56	60	72	75
333220	Plastics & rubber industry machinery mfg .....	57	56	60	72	75
33329	Other industrial machinery mfg .....	52	50	44	71	63
333291	Paper industry machinery mfg .....	68	62	58	64	60
333292	Textile machinery mfg .....	<sup>a5</sup> 57	<sup>a5</sup> 57	<sup>a5</sup> 51	<sup>a6</sup> 62	56
333293	Printing machinery & equipment mfg .....	65	58	55	69	67
333294	Food product machinery mfg .....	55	52	62	67	72
333295	Semiconductor machinery mfg .....	43	44	36	<sup>a8</sup> 80	<sup>a5</sup> 59
333298	All other industrial machinery mfg .....	56	54	58	66	68

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
333	Machinery mfg—Con.					
3333	Commercial & service industry machinery mfg . . . . .	58	55	54	62	66
33331	Commercial & service industry machinery mfg . . . . .	58	55	54	62	66
333311	Automatic vending machine mfg . . . . .	44	41	<sup>a</sup> 40	60	64
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	33	<sup>a</sup> 28	33	62	69
333313	Office machinery mfg . . . . .	<sup>a</sup> 43	<sup>a</sup> 56	<sup>a</sup> 51	70	65
333314	Optical instrument & lens mfg . . . . .	71	66	64	70	69
333315	Photographic & photocopying equipment mfg . . . . .	70	59	54	53	62
333319	Other commercial & service industry machinery mfg . . . . .	60	55	56	69	69
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	60	59	66	67
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	60	59	66	67
333411	Air purification equipment mfg . . . . .	62	59	60	67	62
333412	Industrial & commercial fan & blower mfg . . . . .	64	55	57	65	65
333414	Heating equipment (except warm air furnaces) mfg . . . . .	59	59	58	64	67
333415	AC & warm air heating & commercial/industrial refig equip mfg . . . . .	62	60	59	66	67
3335	Metalworking machinery mfg . . . . .	58	57	51	68	70
33351	Metalworking machinery mfg . . . . .	58	57	51	68	70
333511	Industrial mold mfg . . . . .	58	64	38	72	74
333512	Machine tool (metal cutting types) mfg . . . . .	49	47	47	61	68
333513	Machine tool (metal forming types) mfg . . . . .	49	46	50	66	68
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	60	57	58	67	71
333515	Cutting tool & machine tool accessory mfg . . . . .	67	60	60	72	68
333516	Rolling mill machinery & equipment mfg . . . . .	56	58	55	65	68
333518	Other metalworking machinery mfg . . . . .	57	58	58	70	66
3336	Engine, turbine, & power transmission equipment mfg . . . . .	67	61	59	66	67
33361	Engine, turbine, & power transmission equipment mfg . . . . .	67	61	59	66	67
333611	Turbine & turbine generator set unit mfg . . . . .	<sup>a</sup> 78	<sup>a</sup> 88	88	75	53
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	53	53	53	63	64
333613	Mechanical power transmission equipment mfg . . . . .	51	50	51	54	61
333618	Other engine equipment mfg . . . . .	67	53	55	67	77
3339	Other general-purpose machinery mfg . . . . .	59	58	60	66	67
33391	Pump & compressor mfg . . . . .	59	63	62	61	62
333911	Pump & pumping equipment mfg . . . . .	64	67	62	58	60
333912	Air & gas compressor mfg . . . . .	52	56	62	66	64
333913	Measuring & dispensing pump mfg . . . . .	<sup>a</sup> 74	<sup>a</sup> 70	<sup>a</sup> 63	<sup>a</sup> 58	67
33392	Material handling equipment mfg . . . . .	59	55	55	67	71
333921	Elevator & moving stairway mfg . . . . .	66	70	73	75	78
333922	Conveyor & conveying equipment mfg . . . . .	58	55	57	69	71
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	49	49	50	65	73
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	58	52	51	64	67
33399	All other general-purpose machinery mfg . . . . .	59	58	61	68	68
333991	Power-driven handtool mfg . . . . .	75	75	75	79	80
333992	Welding & soldering equipment mfg . . . . .	41	50	57	69	72
333993	Packaging machinery mfg . . . . .	60	62	60	62	67
333994	Industrial process furnace & oven mfg . . . . .	54	49	51	67	63
333995	Fluid power cylinder & actuator mfg . . . . .	66	62	66	69	67
333996	Fluid power pump & motor mfg . . . . .	64	62	63	67	76
333997	Scale & balance (except laboratory) mfg . . . . .	58	50	49	56	66
333999	All other miscellaneous general-purpose machinery mfg . . . . .	61	55	61	66	62
334	Computer & electronic product mfg . . . . .	53	52	57	73	73
3341	Computer & peripheral equipment mfg . . . . .	65	62	<sup>a</sup> 62	66	69
33411	Computer & peripheral equipment mfg . . . . .	65	62	<sup>a</sup> 62	66	69
334111	Electronic computer mfg . . . . .	67	65	<sup>a</sup> 66	<sup>a</sup> 64	66
334112	Computer storage device mfg . . . . .	55	<sup>a</sup> 51	<sup>a</sup> 49	65	82
334113	Computer terminal mfg . . . . .	<sup>a</sup> 94	51	<sup>a</sup> 38	44	<sup>a</sup> 45
334119	Other computer peripheral equipment mfg . . . . .	71	<sup>a</sup> 66	69	77	78
3342	Communications equipment mfg . . . . .		<sup>a</sup> 35	<sup>a</sup> 52	75	77
33421	Telephone apparatus mfg . . . . .		<sup>a</sup> 24	<sup>a</sup> 27	<sup>a</sup> 46	82
334210	Telephone apparatus mfg . . . . .		<sup>a</sup> 24	<sup>a</sup> 27	<sup>a</sup> 46	82
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	52	<sup>a</sup> 56	<sup>a</sup> 65	<sup>a</sup> 73	71
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	52	<sup>a</sup> 56	<sup>a</sup> 65	<sup>a</sup> 73	71
33429	Other communications equipment mfg . . . . .	63	66	66	71	78
334290	Other communications equipment mfg . . . . .	63	66	66	71	78
3343	Audio & video equipment mfg . . . . .	57	54	58	57	58
33431	Audio & video equipment mfg . . . . .	57	54	58	57	58
334310	Audio & video equipment mfg . . . . .	57	54	58	57	58
3344	Semiconductor & other electronic component mfg . . . . .	70	58	<sup>a</sup> 56	82	81
33441	Semiconductor & other electronic component mfg . . . . .	70	58	<sup>a</sup> 56	82	81
334411	Electron tube mfg . . . . .	74	73	64	80	77
334412	Bare printed circuit board mfg . . . . .	60	51	<sup>a</sup> 49	77	78
334413	Semiconductor & related device mfg . . . . .	79	65	<sup>a</sup> 57	<sup>a</sup> 87	<sup>a</sup> 86
334414	Electronic capacitor mfg . . . . .	57	51	<sup>a</sup> 44	86	83
334415	Electronic resistor mfg . . . . .	50	47	45	67	63
334416	Electronic coil, transformer, & other inductor mfg . . . . .	50	45	51	67	67
334417	Electronic connector mfg . . . . .	65	53	64	75	67
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	<sup>a</sup> 63	47	<sup>a</sup> 62	75	69
334419	Other electronic component mfg . . . . .	49	48	48	72	68
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	63	60	61	65	64
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	63	60	61	65	64
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	75	79	75	75	70
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	<sup>a</sup> 67	59	59	59	61
334512	Automatic environmental control mfg . . . . .	62	49	67	71	74
334513	Industrial process control instrument mfg . . . . .	55	58	58	66	62
334514	Totalizing fluid meter & counting device mfg . . . . .	70	60	70	70	74
334515	Electricity measuring & testing instrument mfg . . . . .	52	51	55	69	68
334516	Analytical laboratory instrument mfg . . . . .	59	62	63	66	61
334517	Irradiation apparatus mfg . . . . .	77	79	71	75	72
334518	Watch, clock, & part mfg . . . . .	46	51	<sup>a</sup> 55	61	62
334519	Other measuring & controlling device mfg . . . . .	53	59	57	64	61
3346	Mfg & reproducing magnetic & optical media . . . . .	67	73	79	76	73
33461	Mfg & reproducing magnetic & optical media . . . . .	67	73	79	76	73
334611	Software reproducing . . . . .	78	81	75	70	<sup>a</sup> 77
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	63	72	78	84	72
334613	Magnetic & optical recording media mfg . . . . .	81	77	80	69	73

See footnotes at end of table.

**Table 1a. Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
335	Electrical equipment, appliance, & component mfg .....	64	60	62	70	72
3351	Electric lighting equipment mfg .....	60	58	59	66	68
33511	Electric lamp bulb & part mfg .....	61	67	63	75	74
335110	Electric lamp bulb & part mfg .....	61	67	63	75	74
33512	Lighting fixture mfg .....	60	56	57	64	66
335121	Residential electric lighting fixture mfg .....	<sup>a62</sup>	<sup>a52</sup>	46	59	58
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	55	54	58	63	66
335129	Other lighting equipment mfg .....	67	62	66	69	73
3352	Household appliance mfg .....	78	72	70	70	75
33521	Small electrical appliance mfg .....	84	68	69	68	70
335211	Electric housewares & household fan mfg .....	88	65	64	61	66
335212	Household vacuum cleaner mfg .....	80	71	74	77	73
33522	Major appliance mfg .....	76	74	71	71	77
335221	Household cooking appliance mfg .....	57	56	50	55	59
335222	Household refrigerator & home freezer mfg .....	84	81	83	75	81
335224	Household laundry equipment mfg .....	85	87	90	88	87
335228	Other major household appliance mfg .....	81	74	71	71	83
3353	Electrical equipment mfg .....	59	59	61	67	70
33531	Electrical equipment mfg .....	59	59	61	67	70
335311	Power, distribution, & specialty transformer mfg .....	61	63	71	75	78
335312	Motor & generator mfg .....	62	60	61	63	70
335313	Switchgear & switchboard apparatus mfg .....	63	64	66	77	74
335314	Relay & industrial control mfg .....	53	54	54	62	64
3359	Other electrical equipment & component mfg .....	64	58	62	74	75
33591	Battery mfg .....	65	57	64	71	81
335911	Storage battery mfg .....	63	<sup>a52</sup>	<sup>a62</sup>	76	80
335912	Primary battery mfg .....	68	64	67	65	81
33592	Communication & energy wire & cable mfg .....	64	53	62	83	80
335921	Fiber optic cable mfg .....	<sup>a52</sup>	<sup>a45</sup>	<sup>a60</sup>	84	81
335929	Other communication & energy wire mfg .....	72	58	63	83	80
33593	Wiring device mfg .....	64	66	68	73	74
335931	Current-carrying wiring device mfg .....	65	67	68	71	72
335932	Noncurrent-carrying wiring device mfg .....	64	64	67	75	77
33599	All other electrical equipment & component mfg .....	63	57	54	69	68
335991	Carbon & graphite product mfg .....	66	53	54	64	72
335999	All other miscellaneous electrical equipment & component mfg .....	<sup>a62</sup>	57	<sup>a54</sup>	70	67
336	Transportation equipment mfg .....	66	64	64	68	73
3361	Motor vehicle mfg .....	82	83	76	79	86
33611	Automobile & light duty motor vehicle mfg .....	83	85	81	80	86
336111	Automobile mfg .....	80	82	78	84	85
336112	Light truck & utility vehicle mfg .....	87	89	84	78	87
33612	Heavy duty truck mfg .....	61	52	43	66	92
336120	Heavy duty truck mfg .....	61	52	43	66	92
3362	Motor vehicle body & trailer mfg .....	61	61	54	60	71
33621	Motor vehicle body & trailer mfg .....	61	61	54	60	71
336211	Motor vehicle body mfg .....	64	65	68	70	72
336212	Truck trailer mfg .....	54	54	39	61	77
336213	Motor home mfg .....	61	55	71	51	65
336214	Travel trailer & camper mfg .....	63	64	50	54	67
3363	Motor vehicle parts mfg .....	73	72	71	75	81
33631	Motor vehicle gasoline engine & engine parts mfg .....	74	73	73	78	85
336311	Carburetor, piston, piston ring, & valve mfg .....	82	80	76	79	88
336312	Gasoline engine & engine parts mfg .....	72	71	73	78	85
33632	Motor vehicle electrical & electronic equipment mfg .....	64	60	59	73	79
336321	Vehicular lighting equipment mfg .....	79	71	69	68	79
336322	Other motor vehicle electrical & electronic equipment mfg .....	62	59	58	73	79
33633	Motor vehicle steering & suspension component (except spring) mfg ..	70	72	69	70	82
336330	Motor vehicle steering & suspension component (except spring) mfg .....	70	72	69	70	82
33634	Motor vehicle brake system mfg .....	78	75	70	66	72
336340	Motor vehicle brake system mfg .....	78	75	70	66	72
33635	Motor vehicle transmission & power train parts mfg .....	77	81	76	74	86
336350	Motor vehicle transmission & power train parts mfg .....	77	81	76	74	86
33636	Motor vehicle seating & interior trim mfg .....	84	83	80	84	79
336360	Motor vehicle seating & interior trim mfg .....	84	83	80	84	79
33637	Motor vehicle metal stamping .....	76	75	73	74	82
336370	Motor vehicle metal stamping .....	76	75	73	74	82
33639	Other motor vehicle parts mfg .....	72	71	70	76	80
336391	Motor vehicle air-conditioning mfg .....	73	76	76	68	80
336399	All other motor vehicle parts mfg .....	72	70	70	77	80
3364	Aerospace product & parts mfg .....	55	52	54	56	61
33641	Aerospace product & parts mfg .....	55	52	54	56	61
336411	Aircraft mfg .....	47	50	64	61	68
336412	Aircraft engine & engine parts mfg .....	<sup>a63</sup>	61	63	66	70
336413	Other aircraft part & auxiliary equipment mfg .....	57	58	64	69	68
336414	Guided missile & space vehicle mfg .....	87	<sup>a45</sup>	<sup>a25</sup>	<sup>a33</sup>	<sup>a37</sup>
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	43	45	36	45	48
336419	Other guided missile & space vehicle parts & auxiliary equip mfg .....	44	46	47	73	65
3365	Railroad rolling stock mfg .....	50	45	<sup>a54</sup>	69	76
33651	Railroad rolling stock mfg .....	50	45	<sup>a54</sup>	69	76
336510	Railroad rolling stock mfg .....	50	45	<sup>a54</sup>	69	76
3366	Ship & boat building .....	52	53	52	56	55
33661	Ship & boat building .....	52	53	52	56	55
336611	Ship building & repairing .....	<sup>a48</sup>	51	49	53	53
336612	Boat building .....	61	59	<sup>a56</sup>	62	63
3369	Other transportation equipment mfg .....	58	61	57	65	68
33699	Other transportation equipment mfg .....	58	61	57	65	68
336991	Motorcycle, bicycle, & parts mfg .....	<sup>a57</sup>	<sup>a59</sup>	<sup>a54</sup>	<sup>a76</sup>	79
336992	Military armored vehicle, tank, & tank component mfg .....	44	42	42	39	42
336999	All other transportation equipment mfg .....	65	74	70	74	78

See footnotes at end of table.

Table 1a. **Full Production Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	Full production rate				
		2003	2002	2001	2000	1999
337	Furniture & related product mfg .....	62	61	62	68	73
3371	Household & institutional furniture & kitchen cabinet mfg .....	64	66	67	69	76
33711	Wood kitchen cabinet & counter top mfg .....	72	73	72	65	72
337110	Wood kitchen cabinet & counter top mfg .....	72	73	72	65	72
33712	Household & institutional furniture mfg .....	61	63	66	70	77
337121	Upholstered household furniture mfg .....	71	74	74	81	87
337122	Nonupholstered wood household furniture mfg .....	63	65	67	73	80
337124	Metal household furniture mfg .....	<sup>a44</sup>	<sup>a47</sup>	50	54	58
337125	Household furniture (except wood & metal) mfg .....	44	42	48	72	73
337127	Institutional furniture mfg .....	61	59	64	62	71
337129	Wood television, radio, & sewing machine cabinet mfg .....	<sup>a39</sup>	67	69	71	73
3372	Office furniture (including fixtures) mfg .....	59	53	55	68	69
33721	Office furniture (including fixtures) mfg .....	59	53	55	68	69
337211	Wood office furniture mfg .....	<sup>a57</sup>	42	46	76	70
337212	Custom architectural woodwork & millwork mfg .....	73	66	69	71	78
337214	Office furniture (except wood) mfg .....	54	52	56	73	71
337215	Showcase, partition, shelving, & locker mfg .....	60	60	56	59	64
3379	Other furniture related product mfg .....	64	63	57	66	73
33791	Mattress mfg .....	63	63	58	69	75
337910	Mattress mfg .....	63	63	58	69	75
33792	Blind & shade mfg .....	65	63	56	60	70
337920	Blind & shade mfg .....	65	63	56	60	70
339	Miscellaneous mfg .....	66	64	65	69	70
3391	Medical equipment & supplies mfg .....	68	63	67	71	71
33911	Medical equipment & supplies mfg .....	68	63	67	71	71
339111	Laboratory apparatus & furniture mfg .....	68	68	66	72	70
339112	Surgical & medical instrument mfg .....	66	58	67	68	66
339113	Surgical appliance & supplies mfg .....	68	66	65	72	76
339114	Dental equipment & supplies mfg .....	76	74	74	74	79
339115	Ophthalmic goods mfg .....	63	52	63	67	73
339116	Dental laboratories .....	84	88	85	86	87
3399	Other miscellaneous mfg .....	63	65	63	67	69
33991	Jewelry & silverware mfg .....	64	59	63	69	69
339911	Jewelry (except costume) mfg .....	64	58	64	73	74
339912	Silverware & plated ware mfg .....	63	55	64	63	64
339913	Jewelers' material & lapidary work mfg .....	77	68	60	67	80
339914	Costume jewelry & novelty mfg .....	60	64	<sup>a60</sup>	60	58
33992	Sporting & athletic goods mfg .....	70	65	64	61	65
339920	Sporting & athletic goods mfg .....	70	65	64	61	65
33993	Doll, toy, & game mfg .....	51	60	59	63	72
339931	Doll & stuffed toy mfg .....	<sup>a16</sup>	<sup>a27</sup>	<sup>a57</sup>	<sup>a59</sup>	62
339932	Game, toy, & children's vehicle mfg .....	66	69	59	64	73
33994	Office supplies (except paper) mfg .....	64	63	63	65	69
339941	Pen & mechanical pencil mfg .....	63	63	58	70	67
339942	Lead pencil & art good mfg .....	71	69	78	75	74
339943	Marking device mfg .....	55	<sup>a56</sup>	55	52	62
339944	Carbon paper & inked ribbon mfg .....	63	63	68	60	71
33995	Sign mfg .....	66	71	65	74	81
339950	Sign mfg .....	66	71	65	74	81
33999	All other miscellaneous mfg .....	60	65	63	68	67
339991	Gasket, packing, & sealing device mfg .....	69	70	68	73	75
339992	Musical instrument mfg .....	54	59	59	60	58
339993	Fastener, button, needle, & pin mfg .....	67	60	60	72	75
339994	Broom, brush, & mop mfg .....	68	66	62	66	68
339995	Burial casket mfg .....	74	63	69	71	71
339999	All other miscellaneous mfg .....	50	<sup>a65</sup>	<sup>a61</sup>	65	63
5111	Newspaper, periodical, book, and database publishers .....	<sup>a81</sup>	81	(NA)	(NA)	(NA)

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



**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
<b>31-33</b>	<b>Manufacturing<sup>1</sup></b>	<b>47</b>	<b>45</b>	<b>45</b>	<b>52</b>	<b>56</b>
	<b>Durable goods industries<sup>1</sup></b>	<b>41</b>	<b>40</b>	<b>40</b>	<b>49</b>	<b>52</b>
	<b>Nondurable goods industries<sup>1</sup></b>	<b>56</b>	<b>52</b>	<b>55</b>	<b>58</b>	<b>62</b>
	<b>Advanced processing industries<sup>1</sup></b>	<b>45</b>	<b>43</b>	<b>43</b>	<b>51</b>	<b>54</b>
	<b>Primary processing industries<sup>1</sup></b>	<b>51</b>	<b>50</b>	<b>52</b>	<b>57</b>	<b>62</b>
311	Food mfg	61	58	55	57	61
3111	Animal food mfg	59	59	59	66	64
31111	Animal food mfg	59	59	59	66	64
311111	Dog & cat food mfg	71	73	68	70	59
311119	Other animal food mfg	50	48	50	62	69
3112	Grain & oilseed milling	76	73	73	69	69
31121	Flour milling & malt mfg	70	68	68	69	70
311211	Flour milling	70	71	67	65	71
311212	Rice milling	75	70	81	89	86
311213	Malt mfg	54	44	45	50	45
31122	Starch & vegetable fats & oils mfg	89	90	88	85	82
311221	Wet corn milling	95	93	94	90	88
311222	Soybean processing	94	96	91	95	84
311223	Other oilseed processing	76	70	73	64	74
311225	Fats & oils refining & blending	78	83	78	<sup>a</sup> 73	71
31123	Breakfast cereal mfg	69	<sup>a</sup> 65	66	62	61
311230	Breakfast cereal mfg	69	<sup>a</sup> 65	66	62	61
3113	Sugar & confectionery product mfg	56	56	58	59	60
31131	Sugar mfg	90	85	78	79	82
311311	Sugarcane mills	91	92	94	93	97
311312	Cane sugar refining	<sup>a</sup> 67	<sup>a</sup> 53	<sup>a</sup> 53	56	57
311313	Beet sugar mfg	99	97	97	92	96
31132	Chocolate & confectionery mfg from cacao beans	79	76	71	73	70
311320	Chocolate & confectionery mfg from cacao beans	79	76	71	73	70
31133	Confectionery mfg from purchased chocolate	46	45	48	48	50
311330	Confectionery mfg from purchased chocolate	46	45	48	48	50
31134	Nonchocolate confectionery mfg	54	55	61	63	60
311340	Nonchocolate confectionery mfg	54	55	61	63	60
3114	Fruit & vegetable preserving & specialty food mfg	50	52	46	44	59
31141	Frozen food mfg	68	67	68	69	73
311411	Frozen fruit, juice, & vegetable mfg	78	72	73	69	76
311412	Frozen specialty food mfg	63	64	64	69	70
31142	Fruit & vegetable canning, pickling, & drying	42	45	37	35	52
311421	Fruit & vegetable canning	35	38	30	27	47
311422	Specialty canning	57	59	58	<sup>a</sup> 56	58
311423	Dried & dehydrated food mfg	56	53	36	39	58
3115	Dairy product mfg	71	67	69	68	68
31151	Dairy product (except frozen) mfg	75	70	70	69	69
311511	Fluid milk mfg	78	72	71	72	73
311512	Creamery butter mfg	71	62	57	72	75
311513	Cheese mfg	74	74	77	71	74
311514	Dry, condensed, & evaporated dairy product mfg	70	63	64	64	58
31152	Ice cream & frozen dessert mfg	<sup>a</sup> 57	54	64	61	58
311520	Ice cream & frozen dessert mfg	<sup>a</sup> 57	54	64	61	58
3116	Meat product mfg	66	63	59	64	61
31161	Animal slaughtering & processing	66	63	59	64	61
311611	Animal (except poultry) slaughtering	69	70	53	71	72
311612	Meat processed from carcasses	61	62	60	56	43
311613	Rendering & meat byproduct processing	55	59	59	<sup>a</sup> 45	<sup>a</sup> 44
311615	Poultry processing	69	61	63	67	77
3117	Seafood product preparation & packaging	36	35	37	34	33
31171	Seafood product preparation & packaging	36	35	37	34	33
311711	Seafood canning	60	56	53	58	42
311712	Fresh & frozen seafood processing	34	34	36	32	32
3118	Bakeries & tortilla mfg	62	55	44	55	62
31181	Bread & bakery product mfg	66	62	55	53	65
311811	Retail bakeries	<sup>a</sup> 43	<sup>a</sup> 33	25	23	52
311812	Commercial bakeries	70	68	62	60	67
311813	Frozen cakes, pies, & other pastries mfg	67	61	61	60	64
31182	Cookie, cracker, & pasta mfg	55	44	30	58	58
311821	Cookie & cracker mfg	54	40	25	55	55
311822	Flour mixes & dough mfg from purchased flour	57	60	60	68	64
311823	Dry pasta mfg	61	73	66	62	71
31183	Tortilla mfg	66	66	63	64	66
311830	Tortilla mfg	66	66	63	64	66
3119	Other food mfg	58	55	57	57	58
31191	Snack food mfg	72	66	64	63	<sup>a</sup> 64
311911	Roasted nuts & peanut butter mfg	71	64	60	51	63
311919	Other snack food mfg	72	67	65	67	<sup>a</sup> 64
31192	Coffee & tea mfg	<sup>a</sup> 39	39	57	67	64
311920	Coffee & tea mfg	<sup>a</sup> 39	39	57	67	64
31193	Flavoring syrup & concentrate mfg	56	54	55	55	52
311930	Flavoring syrup & concentrate mfg	56	54	55	55	52
31194	Seasoning & dressing mfg	58	57	55	50	53
311941	Mayonnaise, dressing, & other prepared sauce mfg	65	65	58	52	52
311942	Spice & extract mfg	53	50	51	48	53
31199	All other food mfg	54	51	53	54	58
311991	Perishable prepared food mfg	62	61	57	56	53
311999	All other miscellaneous food mfg	53	49	52	53	60

See footnotes at end of table.

Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
312	Beverage & tobacco product mfg .....	53	50	58	56	62
3121	Beverage mfg .....	59	53	57	52	59
31211	Soft drink & ice mfg .....	54	44	48	42	53
312111	Soft drink mfg .....	59	47	51	43	54
312112	Bottled water mfg .....	31	30	31	38	36
312113	Ice mfg .....	24	20	23	29	<sup>a33</sup>
31212	Breweries .....	77	80	82	82	86
312120	Breweries .....	77	80	82	82	86
31213	Wineries .....	49	55	59	48	49
312130	Wineries .....	49	55	59	48	49
31214	Distilleries .....	53	43	45	42	41
312140	Distilleries .....	53	43	45	42	41
3122	Tobacco mfg .....	50	48	59	60	65
31221	Tobacco stemming & redrying .....	61	45	64	70	65
312210	Tobacco stemming & redrying .....	61	45	64	70	65
31222	Tobacco product mfg .....	50	48	59	60	65
312221	Cigarette mfg .....	50	48	60	61	67
312229	Other tobacco product mfg .....	53	54	49	49	55
313	Textile mills .....	55	56	58	68	70
3131	Fiber, yarn, & thread mills .....	73	65	61	70	77
31311	Fiber, yarn, & thread mills .....	73	65	61	70	77
313111	Yarn spinning mills .....	79	71	62	72	79
313112	Yarn texturing, throwing, & twisting mills .....	62	58	61	65	71
313113	Thread mills .....	<sup>a70</sup>	53	55	78	82
3132	Fabric mills .....	55	56	63	71	72
31321	Broadwoven fabric mills .....	60	60	70	79	79
313210	Broadwoven fabric mills .....	60	60	70	79	79
31322	Narrow fabric mills & schiffli machine embroidery .....	51	54	49	57	60
313221	Narrow fabric mills .....	53	56	51	58	64
313222	Schiffli machine embroidery .....	42	46	41	48	45
31323	Nonwoven fabric mills .....	51	52	63	68	73
313230	Nonwoven fabric mills .....	51	52	63	68	73
31324	Knit fabric mills .....	50	50	53	57	56
313241	Weft knit fabric mills .....	53	53	51	59	64
313249	Other knit fabric & lace mills .....	48	48	55	54	50
3133	Textile & fabric finishing & fabric coating mills .....	49	52	50	62	65
31331	Textile & fabric finishing mills .....	49	52	50	63	66
313311	Broadwoven fabric finishing mills .....	49	54	50	62	67
313312	Textile & fabric finishing mills .....	49	49	<sup>a50</sup>	64	65
31332	Fabric coating mills .....	48	48	52	54	59
313320	Fabric coating mills .....	48	48	52	54	59
314	Textile product mills .....	52	46	50	51	53
3141	Textile furnishings mills .....	51	49	54	55	58
31411	Carpet & rug mills .....	66	61	62	65	69
314110	Carpet & rug mills .....	66	61	62	65	69
31412	Curtain & linen mills .....	42	40	49	48	48
314121	Curtain & drapery mills .....	<sup>a44</sup>	44	38	37	37
314129	Other household textile product mills .....	41	39	55	53	55
3149	Other textile product mills .....	54	41	45	46	47
31491	Textile bag & canvas mills .....	40	40	39	33	35
314911	Textile bag mills .....	<sup>a30</sup>	34	34	28	29
314912	Canvas & related product mills .....	48	43	43	37	40
31499	All other textile product mills .....	63	42	47	53	54
314991	Rope, cordage, & twine mills .....	55	38	<sup>a47</sup>	<sup>a50</sup>	46
314992	Tire cord & tire fabric mills .....	89	81	79	83	88
314999	All other miscellaneous textile product mills .....	62	40	44	51	53
315	Apparel mfg .....	32	31	36	45	47
3151	Apparel knitting mills .....	47	52	52	49	59
31511	Hosiery & sock mills .....	59	50	49	64	65
315111	Sheer hosiery mills .....	58	46	46	60	64
315119	Other hosiery & sock mills .....	59	52	50	66	65
31519	Other apparel knitting mills .....	<sup>a35</sup>	<sup>a54</sup>	57	37	54
315191	Outerwear knitting mills .....	<sup>a32</sup>	<sup>a49</sup>	54	35	54
315192	Underwear & nightwear knitting mills .....	68	<sup>a91</sup>	<sup>a76</sup>	51	55
3152	Cut & sew apparel mfg .....	30	<sup>a29</sup>	<sup>a35</sup>	<sup>a46</sup>	<sup>a47</sup>
31521	Cut & sew apparel contractors .....	18	11	40	<sup>a37</sup>	40
315211	Men's & boys' cut & sew apparel contractors .....	54	43	<sup>a51</sup>	<sup>a40</sup>	40
315212	Women's, girls', & infants' cut & sew apparel contractors .....	13	8	36	<sup>a36</sup>	<sup>a40</sup>
31522	Men's & boys' cut & sew apparel mfg .....	<sup>a29</sup>	33	47	<sup>a54</sup>	<sup>a51</sup>
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	<sup>a53</sup>	<sup>a48</sup>	<sup>a38</sup>	<sup>a50</sup>	<sup>a50</sup>
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	<sup>a36</sup>	<sup>a35</sup>	41	<sup>a47</sup>	61
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	<sup>a49</sup>	<sup>a54</sup>	45	<sup>a52</sup>	60
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	23	27	69	<sup>a82</sup>	<sup>a63</sup>
315225	Men's & boys' cut & sew work clothing mfg .....	27	27	36	45	38
315228	Men's & boys' cut & sew other outerwear mfg .....	<sup>a31</sup>	35	<sup>a30</sup>	<sup>a25</sup>	24
31523	Women's & girls' cut & sew apparel mfg .....	34	<sup>a43</sup>	<sup>a27</sup>	<sup>a43</sup>	<sup>a51</sup>
315231	Women's & girls' cut/ sew lingerie & nightwear mfg .....	<sup>a41</sup>	<sup>a42</sup>	29	41	39
315232	Women's & girls' cut & sew blouse & shirt mfg .....	50	53	<sup>a58</sup>	<sup>a48</sup>	<sup>a57</sup>
315233	Women's & girls' cut & sew dress mfg .....	<sup>a48</sup>	<sup>a48</sup>	<sup>a45</sup>	<sup>a61</sup>	<sup>a65</sup>
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	<sup>a27</sup>	<sup>a30</sup>	<sup>a30</sup>	<sup>a37</sup>	<sup>a26</sup>
315239	Women's & girls' cut & sew other outerwear mfg .....	<sup>a42</sup>	<sup>a42</sup>	<sup>a19</sup>	<sup>a38</sup>	<sup>a78</sup>
31529	Other cut & sew apparel mfg .....	20	<sup>a31</sup>	39	39	29
315291	Infants' cut & sew apparel mfg .....	31	(NA)	<sup>a49</sup>	<sup>a43</sup>	41
315292	Fur & leather apparel mfg .....	<sup>a53</sup>	<sup>a44</sup>	<sup>a40</sup>	50	<sup>a50</sup>
315299	All other cut & sew apparel mfg .....	16	<sup>a21</sup>	35	34	23
3159	Apparel accessories & other apparel mfg .....	40	35	<sup>a31</sup>	35	37
31599	Apparel accessories & other apparel mfg .....	40	35	<sup>a31</sup>	35	37
315991	Hat, cap, & millinery mfg .....	37	31	<sup>a30</sup>	42	40
315992	Glove & mitten mfg .....	25	<sup>a20</sup>	22	36	38
315993	Men's & boys' neckwear mfg .....	40	47	39	40	38
315999	Other apparel accessories & other apparel mfg .....	46	40	32	31	35

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
316	Leather & allied product mfg .....	33	27	27	35	41
3161	Leather & hide tanning & finishing .....	64	52	<sup>a</sup> 50	58	59
31611	Leather & hide tanning & finishing .....	64	52	<sup>a</sup> 50	58	59
316110	Leather & hide tanning & finishing .....	64	52	<sup>a</sup> 50	58	59
3162	Footwear mfg .....	31	<sup>a</sup> 26	<sup>a</sup> 25	30	34
31621	Footwear mfg .....	31	<sup>a</sup> 26	<sup>a</sup> 25	30	34
316211	Rubber & plastics footwear mfg .....	38	<sup>a</sup> 30	<sup>a</sup> 29	33	36
316212	House slipper mfg .....	36	19	27	36	33
316213	Men's footwear (except athletic) mfg .....	34	35	37	29	34
316214	Women's footwear (except athletic) mfg .....	<sup>a</sup> 12	<sup>a</sup> 10	<sup>a</sup> 8	<sup>a</sup> 25	27
316219	Other footwear mfg .....	<sup>a</sup> 54	<sup>a</sup> 65	<sup>a</sup> 50	<sup>a</sup> 43	44
3169	Other leather & allied product mfg .....	27	20	22	33	<sup>a</sup> 43
31699	Other leather & allied product mfg .....	27	20	22	33	<sup>a</sup> 43
316991	Luggage mfg .....	22	24	24	33	<sup>a</sup> 42
316992	Women's handbag & purse mfg .....	34	29	<sup>a</sup> 47	50	<sup>a</sup> 53
316993	Personal leather good (except women's handbag & purse) mfg .....	<sup>a</sup> 34	<sup>a</sup> 9	<sup>a</sup> 9	19	34
316999	All other leather good mfg .....	<sup>a</sup> 35	27	33	42	46
321	Wood product mfg .....	43	42	41	41	48
3211	Sawmills & wood preservation .....	51	50	46	42	52
32111	Sawmills & wood preservation .....	51	50	46	42	52
321113	Sawmills .....	51	52	46	42	52
321114	Wood preservation .....	53	41	44	47	57
3212	Veneer, plywood, & engineered wood product mfg .....	53	43	46	52	62
32121	Veneer, plywood, & engineered wood product mfg .....	53	43	46	52	62
321211	Hardwood veneer & plywood mfg .....	42	43	44	61	73
321212	Softwood veneer & plywood mfg .....	83	81	79	66	74
321213	Engineered wood member (except truss) mfg .....	61	51	53	57	60
321214	Truss mfg .....	47	33	39	48	55
321219	Reconstituted wood product mfg .....	54	42	42	45	59
3219	Other wood product mfg .....	38	39	38	37	42
32191	Millwork .....	52	49	47	50	54
321911	Wood window & door mfg .....	59	59	61	59	59
321912	Cut stock, resawing lumber, & planing .....	38	46	46	48	51
321918	Other millwork (including flooring) .....	56	37	32	40	48
32192	Wood container & pallet mfg .....	45	39	35	45	45
321920	Wood container & pallet mfg .....	45	39	35	45	45
32199	All other wood product mfg .....	26	30	30	28	34
321991	Manufactured home (mobile home) mfg .....	20	25	26	22	29
321992	Prefabricated wood building mfg .....	38	37	31	35	35
321999	All other miscellaneous wood product mfg .....	32	37	39	50	52
322	Paper mfg .....	73	71	67	71	74
3221	Pulp, paper, & paperboard mills .....	86	87	78	84	89
32211	Pulp mills .....	81	78	88	86	90
322110	Pulp mills .....	81	78	88	86	90
32212	Paper mills .....	83	87	75	84	89
322121	Paper (except newsprint) mills .....	82	87	75	83	88
322122	Newsprint mills .....	95	85	85	96	97
32213	Paperboard mills .....	93	87	81	84	91
322130	Paperboard mills .....	93	87	81	84	91
3222	Converted paper product mfg .....	63	60	59	61	64
32221	Paperboard container mfg .....	65	64	57	59	62
322211	Corrugated & solid fiber box mfg .....	72	68	57	59	62
322212	Folding paperboard box mfg .....	73	70	62	62	66
322213	Setup paperboard box mfg .....	43	45	45	48	51
322214	Fiber can, tube, drum, & similar products mfg .....	<sup>a</sup> 28	<sup>a</sup> 32	39	46	54
322215	Nonfolding sanitary food container mfg .....	63	62	62	61	62
32222	Paper bag & coated & treated paper mfg .....	60	58	61	62	63
322221	Coated & laminated packaging paper & plastics film mfg .....	53	51	50	55	58
322222	Coated & laminated packaging paper & plastics film mfg .....	61	56	62	64	66
322223	Plastics, foil, & coated paper bag mfg .....	50	53	43	55	44
322224	Uncoated paper & multiwall bag mfg .....	57	63	61	65	62
322225	Laminated aluminum foil mfg for flexible packaging uses .....	65	71	70	69	70
322226	Surface-coated paperboard mfg .....	68	69	55	44	44
32223	Stationery product mfg .....	59	51	56	55	57
322231	Die-cut paper & paperboard office supplies mfg .....	71	58	58	54	56
322232	Envelope mfg .....	60	62	62	66	66
322233	Stationery, tablet, & related product mfg .....	48	35	46	<sup>a</sup> 43	46
32229	Other converted paper product mfg .....	65	59	64	71	74
322291	Sanitary paper product mfg .....	73	71	74	84	87
322299	All other converted paper product mfg .....	53	45	52	55	52
323	Printing & related support activities .....	53	52	50	54	58
3231	Printing & related support activities .....	53	52	50	54	58
32311	Printing .....	55	53	51	55	59
323110	Commercial lithographic printing .....	61	61	59	66	64
323111	Commercial gravure printing .....	79	73	72	63	76
323112	Commercial flexographic printing .....	62	61	54	59	64
323113	Commercial screen printing .....	44	<sup>a</sup> 36	38	37	44
323114	Quick printing .....	50	32	26	33	48
323115	Digital printing .....	71	<sup>a</sup> 56	50	43	48
323116	Manifold business form printing .....	44	53	57	52	50
323117	Book printing .....	55	58	44	55	54
323118	Blankbook, looseleaf binder, & device mfg .....	30	31	34	39	49
323119	Other commercial printing .....	46	46	52	50	59
32312	Support activities for printing .....	41	42	40	46	56
323121	Tradebinding & related work .....	28	30	32	39	55
323122	Prepress services .....	52	51	45	50	57

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
324	Petroleum & coal products mfg .....	70	68	67	71	68
3241	Petroleum & coal products mfg .....	70	68	67	71	68
32411	Petroleum refineries .....	90	89	89	92	91
324110	Petroleum refineries .....	90	89	89	92	91
32412	Asphalt paving, roofing, & saturated materials mfg .....	27	25	24	29	33
324121	Asphalt paving mixture & block mfg .....	18	17	16	18	24
324122	Asphalt shingle & coating materials mfg .....	63	50	54	<sup>a</sup> 63	<sup>a</sup> 59
32419	Other petroleum & coal products mfg .....	42	43	41	50	51
324191	Petroleum lubricating oil & grease mfg .....	41	43	41	45	47
324199	All other petroleum & coal products mfg .....	45	44	43	79	79
325	Chemical mfg .....	51	46	55	58	62
3251	Basic chemical mfg .....	69	64	65	73	77
32511	Petrochemical mfg .....	80	75	77	92	92
325110	Petrochemical mfg .....	80	75	77	92	92
32512	Industrial gas mfg .....	71	62	57	<sup>a</sup> 65	64
325120	Industrial gas mfg .....	71	62	57	<sup>a</sup> 65	64
32513	Dye & pigment mfg .....	70	74	61	69	75
325131	Inorganic dye & pigment mfg .....	81	78	71	83	86
325132	Synthetic organic dye & pigment mfg .....	60	70	53	57	63
32518	Other basic inorganic chemical mfg .....	52	50	61	64	68
325181	Alkalies & chlorine mfg .....	75	76	70	78	85
325182	Carbon black mfg .....	76	<sup>a</sup> 72	67	75	83
325188	All other basic inorganic chemical mfg .....	50	47	59	63	66
32519	Other basic organic chemical mfg .....	81	74	66	80	86
325191	Gum & wood chemical mfg .....	71	78	74	77	72
325192	Cyclic crude & intermediate mfg .....	73	<sup>a</sup> 72	<sup>a</sup> 65	76	76
325193	Ethyl alcohol mfg .....	97	62	64	84	85
325199	All other basic organic chemical mfg .....	82	74	66	81	88
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg .....	71	71	68	76	85
32521	Resin & synthetic rubber mfg .....	69	71	68	75	85
325211	Plastics material & resin mfg .....	72	75	73	77	88
325212	Synthetic rubber mfg .....	55	52	48	62	70
32522	Artificial & synthetic fibers & filaments mfg .....	81	73	68	78	86
325221	Cellulosic organic fiber mfg .....	81	73	76	<sup>a</sup> 77	<sup>a</sup> 70
325222	Noncellulosic organic fiber mfg .....	81	73	68	78	87
3253	Pesticide, fertilizer, & other agricultural chemical mfg .....	43	39	48	56	57
32531	Fertilizer mfg .....	54	53	59	65	73
325311	Nitrogenous fertilizer mfg .....	83	85	87	80	93
325312	Phosphatic fertilizer mfg .....	83	81	91	87	87
325314	Fertilizer (mixing only) mfg .....	31	30	34	<sup>a</sup> 42	<sup>a</sup> 45
32532	Pesticide & other agricultural chemical mfg .....	39	34	44	52	50
325320	Pesticide & other agricultural chemical mfg .....	39	34	44	52	50
3254	Pharmaceutical & medicine mfg .....	44	38	56	53	60
32541	Pharmaceutical & medicine mfg .....	44	38	56	53	60
325411	Medicinal & botanical mfg .....	61	61	68	<sup>a</sup> 56	<sup>a</sup> 61
325412	Pharmaceutical preparation mfg .....	41	44	53	52	58
325413	In-vitro diagnostic substance mfg .....	49	<sup>a</sup> 14	<sup>a</sup> 63	<sup>a</sup> 63	<sup>a</sup> 69
325414	Biological product (except diagnostic) mfg .....	67	68	75	64	65
3255	Paint, coating, & adhesive mfg .....	52	42	40	51	44
32551	Paint & coating mfg .....	53	42	40	52	48
325510	Paint & coating mfg .....	53	42	40	52	48
32552	Adhesive mfg .....	51	41	41	48	36
325520	Adhesive mfg .....	51	41	41	48	36
3256	Soap, cleaning compound, & toilet preparation mfg .....	53	54	49	51	54
32561	Soap & cleaning compound mfg .....	52	51	50	53	58
325611	Soap & other detergent mfg .....	50	54	50	59	55
325612	Polish & other sanitation good mfg .....	49	43	44	41	52
325613	Surface active agent mfg .....	70	72	71	72	81
32562	Toilet preparation mfg .....	53	57	49	48	50
325620	Toilet preparation mfg .....	53	57	49	48	50
3259	Other chemical product mfg .....	45	44	44	49	52
32591	Printing ink mfg .....	26	25	27	<sup>a</sup> 29	33
325910	Printing ink mfg .....	26	25	27	<sup>a</sup> 29	33
32592	Explosives mfg .....	36	37	36	30	32
325920	Explosives mfg .....	36	37	36	30	32
32599	All other chemical product & preparation mfg .....	51	49	47	54	57
325991	Custom compounding of purchased resin .....	64	62	51	69	73
325992	Photographic film, paper, plate, & chemical mfg .....	65	64	58	70	75
325998	All other miscellaneous chemical product & preparation mfg .....	39	38	38	40	43
326	Plastics & rubber products mfg .....	63	57	53	59	65
3261	Plastics product mfg .....	64	56	52	58	63
32611	Unsupported plastics film, sheet, & bag mfg .....	68	65	62	67	74
326111	Unsupported plastics bag mfg .....	70	63	66	<sup>a</sup> 66	74
326112	Unsupported plastics packaging film & sheet mfg .....	59	61	61	63	65
326113	Unsupported plastics film & sheet (except packaging) mfg .....	70	67	60	69	75
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg .....	66	66	58	61	65
326121	Unsupported plastics profile shape mfg .....	64	67	63	62	56
326122	Plastics pipe & pipe fitting mfg .....	69	64	52	60	81
32613	Laminated plastics plate, sheet, & shape mfg .....	50	44	44	48	50
326130	Laminated plastics plate, sheet, & shape mfg .....	50	44	44	48	50
32614	Polystyrene foam product mfg .....	64	63	47	76	74
326140	Polystyrene foam product mfg .....	64	63	47	76	74
32615	Urethane & other foam product (except polystyrene) mfg .....	45	50	50	52	51
326150	Urethane & other foam product (except polystyrene) mfg .....	45	50	50	52	51
32616	Plastics bottle mfg .....	73	73	62	74	77
326160	Plastics bottle mfg .....	73	73	62	74	77
32619	Other plastics product mfg .....	64	53	49	54	61
326191	Plastics plumbing fixture mfg .....	43	35	34	35	51
326192	Resilient floor covering mfg .....	61	54	63	65	64
326199	All other plastics product mfg .....	65	54	49	55	61

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
326	Plastics & rubber products mfg—Con.					
3262	Rubber product mfg	61	60	60	65	70
32621	Tire mfg	71	75	73	78	82
326211	Tire mfg (except retreading)	78	82	77	83	88
326212	Tire retreading	31	34	35	36	38
32622	Rubber & plastics hoses & belting mfg	51	47	53	55	62
326220	Rubber & plastics hoses & belting mfg	51	47	53	55	62
32629	Other rubber product mfg	55	54	52	60	64
326291	Rubber product mfg for mechanical use	61	60	56	67	71
326299	All other rubber product mfg	50	49	49	54	58
327	Nonmetallic mineral product mfg	43	41	45	48	57
3271	Clay product & refractory mfg	62	61	57	60	62
32711	Pottery, ceramics, & plumbing fixture mfg	57	62	60	64	63
327111	Vitreous china plumbing fixture & bathroom accessories mfg	<sup>a</sup> 87	91	80	89	90
327112	Vitreous china, fine earthenware, & other pottery product mfg	46	54	54	53	53
327113	Porcelain electrical supply mfg	53	52	55	65	61
32712	Clay building material & refractories mfg	66	61	55	57	61
327121	Brick & structural clay tile mfg	90	84	84	88	90
327122	Ceramic wall & floor tile mfg	70	57	38	42	47
327123	Other structural clay product mfg	67	72	60	63	57
327124	Clay refractory mfg	39	39	37	39	49
327125	Nonclay refractory mfg	54	<sup>a</sup> 53	56	58	59
3272	Glass & glass product mfg	66	62	56	68	78
32721	Glass & glass product mfg	66	62	56	68	78
327211	Flat glass mfg	75	70	72	77	85
327212	Other pressed & blown glass & glassware mfg	63	59	52	72	78
327213	Glass container mfg	91	93	91	88	87
327215	Glass product mfg made of purchased glass	59	54	48	58	72
3273	Cement & concrete product mfg	31	29	34	35	44
32731	Cement mfg	83	62	64	66	74
327310	Cement mfg	83	62	64	66	74
32732	Ready-mix concrete mfg	19	19	24	24	33
327320	Ready-mix concrete mfg	19	19	24	24	33
32733	Concrete pipe, brick, & block mfg	46	49	49	48	47
327331	Concrete block & brick mfg	43	46	51	50	44
327332	Concrete pipe mfg	52	53	47	46	50
32739	Other concrete product mfg	40	44	44	51	60
327390	Other concrete product mfg	50	44	44	51	60
3274	Lime & gypsum product mfg	82	72	70	75	82
32741	Lime mfg	80	72	69	69	71
327410	Lime mfg	80	72	69	69	71
32742	Gypsum product mfg	83	72	71	77	85
327420	Gypsum product mfg	83	72	71	77	85
3279	Other nonmetallic mineral product mfg	57	56	51	57	60
32791	Abrasive product mfg	48	47	37	45	48
327910	Abrasive product mfg	48	47	37	45	48
32799	All other nonmetallic mineral product mfg	62	60	61	66	69
327991	Cut stone & stone product mfg	46	43	44	45	46
327992	Ground or treated mineral & earth mfg	67	59	54	77	86
327993	Mineral wool mfg	77	81	80	76	77
327999	All other miscellaneous nonmetallic mineral product mfg	52	52	56	60	59
331	Primary metal mfg	60	58	59	61	70
3311	Iron & steel mills & ferroalloy mfg	83	85	76	64	86
33111	Iron & steel mills & ferroalloy mfg	83	85	76	64	86
331111	Iron & steel mills	84	86	77	64	87
331112	Electrometallurgical ferroalloy product mfg	62	70	56	68	73
3312	Steel product mfg from purchased steel	57	56	54	62	70
33121	Iron & steel pipes & tubes mfg from purchased steel	54	53	54	58	65
331210	Iron & steel pipes & tubes mfg from purchased steel	54	53	54	58	65
33122	Rolling & drawing of purchased steel	60	58	54	66	75
331221	Cold-rolled steel shape mfg	67	58	50	64	73
331222	Steel wire drawing	56	57	58	68	76
3313	Alumina & aluminum production & processing	70	65	<sup>a</sup> 63	73	78
33131	Alumina & aluminum production & processing	70	65	<sup>a</sup> 63	73	78
331311	Alumina refining	75	<sup>a</sup> 79	<sup>a</sup> 84	<sup>a</sup> 72	71
331312	Primary aluminum production	68	<sup>a</sup> 67	<sup>a</sup> 64	79	86
331314	Secondary smelting & alloying of aluminum	70	63	65	69	83
331315	Aluminum sheet, plate, & foil mfg	81	<sup>a</sup> 80	<sup>a</sup> 67	77	85
331316	Aluminum extruded product mfg	60	52	55	64	63
331319	Other aluminum rolling & drawing	<sup>a</sup> 69	61	55	70	77
3314	Nonferrous metal (except aluminum) production & processing	61	57	61	64	68
33141	Nonferrous metal (except aluminum) smelting & refining	58	59	58	54	70
331411	Primary smelting & refining of copper	56	65	70	41	75
331419	Other nonferrous metal primary smelting & refining	59	55	51	66	66
33142	Copper rolling, drawing, extruding, & alloying	69	68	66	80	84
331421	Copper rolling, drawing, & extruding	71	71	68	83	89
331422	Copper wire (except mechanical) drawing	69	71	69	72	81
331423	Secondary smelting, refining, & alloying of copper	53	<sup>a</sup> 44	46	64	62
33149	Other nonferrous metal rolling, drawing, extruding, & alloying	58	50	59	62	59
331491	Other nonferrous metal rolling, drawing, & extruding	56	53	61	64	59
331492	Other nonferrous metal secondary smelting, refining, & alloying	63	<sup>a</sup> 45	54	56	59
3315	Foundries	46	44	46	51	54
33151	Ferrous metal foundries	45	43	45	52	52
331511	Iron foundries	44	43	45	51	53
331512	Steel investment foundries	48	43	52	56	50
331513	Steel foundries (except investment)	48	46	39	51	49
33152	Nonferrous metal foundries	48	45	47	50	57
331521	Aluminum die-casting foundries	45	50	50	56	72
331522	Nonferrous (except aluminum) die-casting foundries	52	42	40	46	58
331524	Aluminum foundries (except die-casting)	50	45	49	47	50
331525	Copper foundries (except die-casting)	33	34	36	40	43
331528	Other nonferrous foundries (except die-casting)	65	59	<sup>a</sup> 65	70	70

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
332	Fabricated metal product mfg .....	36	36	40	48	50
3321	Forging & stamping .....	46	42	43	50	52
33211	Forging & stamping .....	46	42	43	50	52
332111	Iron & steel forging .....	43	43	37	48	51
332112	Nonferrous forging .....	57	44	54	54	57
332114	Custom roll forming .....	46	41	44	46	47
332115	Crown & closure mfg .....	50	42	41	49	37
332116	Metal stamping .....	45	40	43	49	53
332117	Powder metallurgy part mfg .....	58	54	54	65	70
3322	Cutlery & handtool mfg .....	45	44	49	56	56
33221	Cutlery & handtool mfg .....	45	44	49	56	56
332211	Cutlery & flatware (except precious) mfg .....	45	44	46	61	62
332212	Hand & edge tool mfg .....	42	41	48	54	53
332213	Saw blade & handsaw mfg .....	58	54	53	61	66
332214	Kitchen utensil, pot, & pan mfg .....	<sup>a57</sup> 57	58	57	56	56
3323	Architectural & structural metals mfg .....	22	29	38	44	45
33231	Plate work & fabricated structural product mfg .....	37	34	37	45	46
332311	Prefabricated metal building & component mfg .....	44	43	50	53	52
332312	Fabricated structural metal mfg .....	36	33	36	44	47
332313	Plate work mfg .....	34	30	32	39	38
33232	Ornamental & architectural metal products mfg .....	17	27	38	43	44
332321	Metal window & door mfg .....	37	35	40	44	49
332322	Sheet metal work mfg .....	12	22	37	43	42
332323	Ornamental & architectural metal work mfg .....	37	38	38	44	46
3324	Boiler, tank, & shipping container mfg .....	45	50	51	52	53
33241	Power boiler & heat exchanger mfg .....	46	40	46	43	42
332410	Power boiler & heat exchanger mfg .....	46	40	46	43	42
33242	Metal tank (heavy gauge) mfg .....	37	42	42	44	49
332420	Metal tank (heavy gauge) mfg .....	37	42	42	44	49
33243	Metal can, box, & other metal container (light gauge) mfg .....	51	62	61	63	63
332431	Metal can mfg .....	53	70	68	72	73
332439	Other metal container mfg .....	45	43	45	43	45
3325	Hardware mfg .....	46	48	47	49	47
33251	Hardware mfg .....	46	48	47	49	47
332510	Hardware mfg .....	46	48	47	49	47
3326	Spring & wire product mfg .....	50	45	45	53	54
33261	Spring & wire product mfg .....	50	45	45	53	54
332611	Spring (heavy gauge) mfg .....	50	57	50	50	52
332612	Spring (light gauge) mfg .....	52	49	41	56	61
332618	Other fabricated wire product mfg .....	50	42	48	53	51
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	37	28	31	43	46
33271	Machine shops .....	37	25	29	44	47
332710	Machine shops .....	37	25	29	44	47
33272	Turned product & screw, nut, & bolt mfg .....	38	35	36	42	45
332721	Precision turned product mfg .....	34	30	31	40	41
332722	Bolt, nut, screw, rivet, & washer mfg .....	44	42	44	45	50
3328	Coating, engraving, heat treating, & allied activities .....	48	47	46	51	57
33281	Coating, engraving, heat treating, & allied activities .....	48	47	46	51	57
332811	Metal heat treating .....	56	54	53	52	62
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	58	59	58	55	60
332813	Electroplating, plating, polishing, anodizing, & coloring .....	39	37	36	46	53
3329	Other fabricated metal product mfg .....	47	45	47	53	54
33291	Metal valve mfg .....	48	45	46	51	53
332911	Industrial valve mfg .....	46	42	44	49	48
332912	Fluid power valve & hose fitting mfg .....	49	46	44	51	55
332913	Plumbing fixture fitting & trim mfg .....	53	52	52	53	55
332919	Other metal valve & pipe fitting mfg .....	52	49	50	58	62
33299	All other fabricated metal product mfg .....	46	44	49	54	55
332991	Ball & roller bearing mfg .....	55	51	58	61	75
332992	Small arms ammunition mfg .....	47	55	46	51	56
332993	Ammunition (except small arms) mfg .....	40	28	36	29	31
332994	Small arms mfg .....	52	52	44	55	56
332995	Other ordnance & accessories mfg .....	59	58	57	56	59
332996	Fabricated pipe & pipe fitting mfg .....	38	39	52	56	41
332997	Industrial pattern mfg .....	37	43	38	49	52
332998	Enameled iron & metal sanitary ware mfg .....	43	37	45	59	64
332999	All other miscellaneous fabricated metal product mfg .....	46	43	54	56	57
333	Machinery mfg .....	39	37	29	45	46
3331	Agriculture, construction, & mining machinery mfg .....	38	36	41	46	46
33311	Agricultural implement mfg .....	34	33	36	46	42
333111	Farm machinery & equipment mfg .....	36	33	36	48	42
333112	Lawn & garden tractor & home lawn & garden equipment mfg .....	29	34	34	43	42
33312	Construction machinery mfg .....	43	39	45	47	50
333120	Construction machinery mfg .....	43	39	45	47	50
33313	Mining & oil & gas field machinery mfg .....	40	40	46	45	47
333131	Mining machinery & equipment mfg .....	43	41	44	39	47
333132	Oil & gas field machinery & equipment mfg .....	40	39	47	49	47
3332	Industrial machinery mfg .....	35	29	14	46	39
33321	Sawmill & woodworking machinery mfg .....	35	28	32	32	35
333210	Sawmill & woodworking machinery mfg .....	35	28	32	32	35
33322	Plastics & rubber industry machinery mfg .....	38	32	33	51	53
333220	Plastics & rubber industry machinery mfg .....	38	32	33	51	53
33329	Other industrial machinery mfg .....	35	29	13	46	38
333291	Paper industry machinery mfg .....	37	34	35	43	38
333292	Textile machinery mfg .....	<sup>a32</sup> 32	<sup>a31</sup> 31	<sup>a25</sup> 25	<sup>a35</sup> 35	29
333293	Printing machinery & equipment mfg .....	32	29	30	41	42
333294	Food product machinery mfg .....	33	35	40	41	43
333295	Semiconductor machinery mfg .....	40	34	18	<sup>a36</sup> 36	<sup>a36</sup> 36
333298	All other industrial machinery mfg .....	30	23	6	39	38

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
333	Machinery mfg—Con.					
3333	Commercial & service industry machinery mfg . . . . .	37	33	34	41	45
33331	Commercial & service industry machinery mfg . . . . .	37	33	34	41	45
333311	Automatic vending machine mfg . . . . .	32	30	<sup>#26</sup> 26	34	36
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	28	<sup>#25</sup> 25	29	50	59
333313	Office machinery mfg . . . . .	<sup>#33</sup> 33	<sup>#30</sup> 30	<sup>#30</sup> 30	44	47
333314	Optical instrument & lens mfg . . . . .	43	34	32	42	45
333315	Photographic & photocopying equipment mfg . . . . .	57	46	41	38	43
333319	Other commercial & service industry machinery mfg . . . . .	32	32	30	45	47
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	47	42	37	44	46
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	47	42	37	44	46
333411	Air purification equipment mfg . . . . .	41	37	34	40	42
333412	Industrial & commercial fan & blower mfg . . . . .	46	38	39	44	43
333414	Heating equipment (except warm air furnaces) mfg . . . . .	43	46	45	48	49
333415	AC & warm air heating & commercial/industrial refig equip mfg . . . . .	48	42	36	43	47
3335	Metalworking machinery mfg . . . . .	32	35	32	45	49
33351	Metalworking machinery mfg . . . . .	32	35	32	45	49
333511	Industrial mold mfg . . . . .	29	39	26	40	46
333512	Machine tool (metal cutting types) mfg . . . . .	32	34	33	43	49
333513	Machine tool (metal forming types) mfg . . . . .	31	30	30	45	48
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	33	35	34	44	47
333515	Cutting tool & machine tool accessory mfg . . . . .	36	41	41	59	57
333516	Rolling mill machinery & equipment mfg . . . . .	29	28	30	35	45
333518	Other metalworking machinery mfg . . . . .	29	31	31	46	48
3336	Engine, turbine, & power transmission equipment mfg . . . . .	51	45	46	52	53
33361	Engine, turbine, & power transmission equipment mfg . . . . .	51	45	46	52	53
333611	Turbine & turbine generator set unit mfg . . . . .	<sup>#62</sup> 62	<sup>#70</sup> 70	70	61	49
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	41	29	41	50	53
333613	Mechanical power transmission equipment mfg . . . . .	39	38	41	43	45
333618	Other engine equipment mfg . . . . .	49	41	43	52	57
3339	Other general-purpose machinery mfg . . . . .	38	38	38	43	45
33391	Pump & compressor mfg . . . . .	43	44	42	44	46
333911	Pump & pumping equipment mfg . . . . .	46	50	42	44	47
333912	Air & gas compressor mfg . . . . .	40	39	42	44	44
333913	Measuring & dispensing pump mfg . . . . .	<sup>#40</sup> 40	<sup>#37</sup> 37	<sup>#45</sup> 45	<sup>#44</sup> 44	50
33392	Material handling equipment mfg . . . . .	34	33	33	43	45
333921	Elevator & moving stairway mfg . . . . .	47	50	53	51	56
333922	Conveyor & conveying equipment mfg . . . . .	28	28	29	41	42
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	38	34	34	40	44
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	41	38	35	46	45
33399	All other general-purpose machinery mfg . . . . .	39	38	39	43	45
333991	Power-driven handtool mfg . . . . .	56	59	52	59	68
333992	Welding & soldering equipment mfg . . . . .	27	36	40	46	47
333993	Packaging machinery mfg . . . . .	35	39	34	34	41
333994	Industrial process furnace & oven mfg . . . . .	36	30	34	46	42
333995	Fluid power cylinder & actuator mfg . . . . .	41	39	41	40	43
333996	Fluid power pump & motor mfg . . . . .	42	41	42	47	46
333997	Scale & balance (except laboratory) mfg . . . . .	44	20	20	22	44
333999	All other miscellaneous general-purpose machinery mfg . . . . .	41	37	39	44	43
334	Computer & electronic product mfg . . . . .	38	38	40	53	56
3341	Computer & peripheral equipment mfg . . . . .	45	43	<sup>#40</sup> 40	47	50
33411	Computer & peripheral equipment mfg . . . . .	45	43	<sup>#40</sup> 40	47	50
334111	Electronic computer mfg . . . . .	49	44	<sup>#42</sup> 42	<sup>#48</sup> 48	49
334112	Computer storage device mfg . . . . .	34	<sup>#36</sup> 36	<sup>#29</sup> 29	36	43
334113	Computer terminal mfg . . . . .	<sup>#31</sup> 31	50	<sup>#30</sup> 30	29	<sup>#33</sup> 33
334119	Other computer peripheral equipment mfg . . . . .	56	<sup>#51</sup> 51	50	61	59
3342	Communications equipment mfg . . . . .		<sup>#26</sup> 26	<sup>#39</sup> 39	56	61
33421	Telephone apparatus mfg . . . . .	<sup>#19</sup> 19	<sup>#21</sup> 21	<sup>#36</sup> 36	59	70
334210	Telephone apparatus mfg . . . . .	<sup>#19</sup> 19	<sup>#21</sup> 21	<sup>#36</sup> 36	59	70
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	34	<sup>#38</sup> 38	<sup>#42</sup> 42	<sup>#54</sup> 54	54
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	34	<sup>#38</sup> 38	<sup>#42</sup> 42	<sup>#54</sup> 54	54
33429	Other communications equipment mfg . . . . .	41	39	43	47	53
334290	Other communications equipment mfg . . . . .	41	39	43	47	53
3343	Audio & video equipment mfg . . . . .	41	40	42	37	39
33431	Audio & video equipment mfg . . . . .	41	40	42	37	39
334310	Audio & video equipment mfg . . . . .	41	40	42	37	39
3344	Semiconductor & other electronic component mfg . . . . .	56	46	<sup>#40</sup> 40	64	69
33441	Semiconductor & other electronic component mfg . . . . .	56	46	<sup>#40</sup> 40	64	69
334411	Electron tube mfg . . . . .	48	55	58	70	63
334412	Bare printed circuit board mfg . . . . .	48	38	<sup>#34</sup> 34	53	60
334413	Semiconductor & related device mfg . . . . .	74	56	<sup>#41</sup> 41	<sup>#69</sup> 69	<sup>#84</sup> 84
334414	Electronic capacitor mfg . . . . .	45	36	<sup>#35</sup> 35	78	77
334415	Electronic resistor mfg . . . . .	29	29	28	45	40
334416	Electronic coil, transformer, & other inductor mfg . . . . .	32	29	34	47	46
334417	Electronic connector mfg . . . . .	46	40	47	54	50
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	<sup>#47</sup> 47	39	<sup>#51</sup> 51	64	54
334419	Other electronic component mfg . . . . .	27	26	27	42	37
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	39	40	40	42	45
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	39	40	40	42	45
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	55	57	49	54	54
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	<sup>#44</sup> 44	43	43	40	46
334512	Automatic environmental control mfg . . . . .	40	37	47	51	56
334513	Industrial process control instrument mfg . . . . .	34	29	31	38	42
334514	Totalizing fluid meter & counting device mfg . . . . .	52	47	52	52	53
334515	Electricity measuring & testing instrument mfg . . . . .	31	36	35	47	45
334516	Analytical laboratory instrument mfg . . . . .	28	32	33	31	34
334517	Irradiation apparatus mfg . . . . .	42	49	49	47	44
334518	Watch, clock, & part mfg . . . . .	34	27	<sup>#24</sup> 24	30	31
334519	Other measuring & controlling device mfg . . . . .	34	32	36	43	37
3346	Mfg & reproducing magnetic & optical media . . . . .	56	55	64	58	62
33461	Mfg & reproducing magnetic & optical media . . . . .	56	55	64	58	62
334611	Software reproducing . . . . .	63	69	68	48	<sup>#47</sup> 47
334612	Prerecorded CD (except software), tape, & record reproducing . . . . .	51	50	58	59	63
334613	Magnetic & optical recording media mfg . . . . .	79	75	77	64	71

See footnotes at end of table.

**Table 1b. National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
335	Electrical equipment, appliance, & component mfg .....	46	44	45	53	56
3351	Electric lighting equipment mfg .....	41	37	39	47	49
33511	Electric lamp bulb & part mfg .....	52	53	53	62	59
335110	Electric lamp bulb & part mfg .....	52	53	53	62	59
33512	Lighting fixture mfg .....	39	35	36	43	45
335121	Residential electric lighting fixture mfg .....	<sup>a41</sup>	<sup>a24</sup>	27	35	39
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	35	35	38	46	47
335129	Other lighting equipment mfg .....	43	44	40	46	49
3352	Household appliance mfg .....	59	52	51	52	57
33521	Small electrical appliance mfg .....	58	43	47	47	51
335211	Electric housewares & household fan mfg .....	64	45	44	43	55
335212	Household vacuum cleaner mfg .....	53	41	49	51	48
33522	Major appliance mfg .....	60	56	53	54	59
335221	Household cooking appliance mfg .....	43	43	38	41	43
335222	Household refrigerator & home freezer mfg .....	61	58	58	53	59
335224	Household laundry equipment mfg .....	71	71	77	75	75
335228	Other major household appliance mfg .....	65	52	54	54	64
3353	Electrical equipment mfg .....	38	43	42	51	54
33531	Electrical equipment mfg .....	38	43	42	51	54
335311	Power, distribution, & specialty transformer mfg .....	46	46	52	61	63
335312	Motor & generator mfg .....	37	46	45	49	61
335313	Switchgear & switchboard apparatus mfg .....	45	45	41	59	58
335314	Relay & industrial control mfg .....	33	38	38	45	44
3359	Other electrical equipment & component mfg .....	50	44	47	57	61
33591	Battery mfg .....	55	49	52	59	68
335911	Storage battery mfg .....	55	<sup>a45</sup>	<sup>a51</sup>	63	67
335912	Primary battery mfg .....	56	54	54	54	69
33592	Communication & energy wire & cable mfg .....	54	41	53	67	73
335921	Fiber optic cable mfg .....	<sup>a50</sup>	<sup>a34</sup>	<sup>a54</sup>	78	73
335929	Other communication & energy wire mfg .....	57	47	53	64	72
33593	Wiring device mfg .....	50	51	51	56	58
335931	Current-carrying wiring device mfg .....	49	50	51	55	55
335932	Noncurrent-carrying wiring device mfg .....	50	51	51	57	63
33599	All other electrical equipment & component mfg .....	41	37	36	48	50
335991	Carbon & graphite product mfg .....	56	43	44	54	63
335999	All other miscellaneous electrical equipment & component mfg .....	<sup>a39</sup>	36	<sup>a35</sup>	47	47
336	Transportation equipment mfg .....	47	45	45	48	54
3361	Motor vehicle mfg .....	52	52	51	55	62
33611	Automobile & light duty motor vehicle mfg .....	52	53	54	55	61
336111	Automobile mfg .....	47	48	49	55	57
336112	Light truck & utility vehicle mfg .....	60	59	61	56	64
33612	Heavy duty truck mfg .....	44	35	29	44	70
336120	Heavy duty truck mfg .....	44	35	29	44	70
3362	Motor vehicle body & trailer mfg .....	36	36	30	34	43
33621	Motor vehicle body & trailer mfg .....	36	36	30	34	43
336211	Motor vehicle body mfg .....	41	35	37	43	46
336212	Truck trailer mfg .....	38	36	26	36	54
336213	Motor home mfg .....	37	33	26	27	34
336214	Travel trailer & camper mfg .....	29	38	28	29	38
3363	Motor vehicle parts mfg .....	56	54	52	57	64
33631	Motor vehicle gasoline engine & engine parts mfg .....	56	56	56	59	66
336311	Carburetor, piston, piston ring, & valve mfg .....	70	68	50	61	64
336312	Gasoline engine & engine parts mfg .....	54	54	57	59	66
33632	Motor vehicle electrical & electronic equipment mfg .....	48	43	44	55	65
336321	Vehicular lighting equipment mfg .....	64	59	56	56	66
336322	Other motor vehicle electrical & electronic equipment mfg .....	46	41	43	55	64
33633	Motor vehicle steering & suspension component (except spring) mfg ..	54	59	57	60	69
336330	Motor vehicle steering & suspension component (except spring) mfg .....	54	59	57	60	69
33634	Motor vehicle brake system mfg .....	59	60	48	50	59
336340	Motor vehicle brake system mfg .....	59	60	48	50	59
33635	Motor vehicle transmission & power train parts mfg .....	64	66	63	60	75
336350	Motor vehicle transmission & power train parts mfg .....	64	66	63	60	75
33636	Motor vehicle seating & interior trim mfg .....	60	48	51	55	58
336360	Motor vehicle seating & interior trim mfg .....	60	48	51	55	58
33637	Motor vehicle metal stamping .....	59	57	56	58	65
336370	Motor vehicle metal stamping .....	59	57	56	58	65
33639	Other motor vehicle parts mfg .....	53	53	46	56	59
336391	Motor vehicle air-conditioning mfg .....	64	62	60	53	61
336399	All other motor vehicle parts mfg .....	53	52	45	56	59
3364	Aerospace product & parts mfg .....	41	38	39	40	45
33641	Aerospace product & parts mfg .....	41	38	39	40	45
336411	Aircraft mfg .....	34	35	47	44	51
336412	Aircraft engine & engine parts mfg .....	<sup>a50</sup>	42	39	42	41
336413	Other aircraft part & auxiliary equipment mfg .....	41	44	47	51	53
336414	Guided missile & space vehicle mfg .....	85	<sup>a38</sup>	<sup>a21</sup>	<sup>a27</sup>	<sup>a32</sup>
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	25	27	22	23	25
336419	Other guided missile & space vehicle parts & auxiliary equip mfg ....	39	37	36	50	45
3365	Railroad rolling stock mfg .....	41	37	<sup>a44</sup>	57	64
33651	Railroad rolling stock mfg .....	41	37	<sup>a44</sup>	57	64
336510	Railroad rolling stock mfg .....	41	37	<sup>a44</sup>	57	64
3366	Ship & boat building .....	38	37	36	39	40
33661	Ship & boat building .....	38	37	36	39	40
336611	Ship building & repairing .....	<sup>a38</sup>	40	38	40	42
336612	Boat building .....	39	34	<sup>a33</sup>	37	38
3369	Other transportation equipment mfg .....	27	29	34	40	48
33699	Other transportation equipment mfg .....	27	29	34	40	48
336991	Motorcycle, bicycle, & parts mfg .....	<sup>a17</sup>	<sup>a18</sup>	<sup>a24</sup>	<sup>a40</sup>	54
336992	Military armored vehicle, tank, & tank component mfg .....	39	37	36	26	37
336999	All other transportation equipment mfg .....	42	47	47	50	49

See footnotes at end of table.



Table 1b. **National Emergency Capacity Utilization Rates by Industry: Fourth Quarters 1999 Through 2003—Con.**

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

NAICS code	Industry	National emergency rate				
		2003	2002	2001	2000	1999
337	Furniture & related product mfg .....	36	36	36	41	46
3371	Household & institutional furniture & kitchen cabinet mfg .....	36	34	35	40	49
33711	Wood kitchen cabinet & counter top mfg .....	46	43	48	48	56
337110	Wood kitchen cabinet & counter top mfg .....	46	43	48	48	56
33712	Household & institutional furniture mfg .....	32	31	31	38	47
337121	Upholstered household furniture mfg .....	44	39	44	45	48
337122	Nonupholstered wood household furniture mfg .....	28	28	30	35	50
337124	Metal household furniture mfg .....	<sup>a22</sup> 28	<sup>a24</sup> 27	35	40	40
337125	Household furniture (except wood & metal) mfg .....	36	32	35	42	46
337127	Institutional furniture mfg .....	36	32	24	37	41
337129	Wood television, radio, & sewing machine cabinet mfg .....	<sup>a30</sup>	44	46	46	46
3372	Office furniture (including fixtures) mfg .....	35	39	38	43	45
33721	Office furniture (including fixtures) mfg .....	35	39	38	43	45
337211	Wood office furniture mfg .....	<sup>a31</sup>	31	34	37	41
337212	Custom architectural woodwork & millwork mfg .....	47	40	34	35	39
337214	Office furniture (except wood) mfg .....	30	39	43	53	50
337215	Showcase, partition, shelving, & locker mfg .....	43	42	37	40	42
3379	Other furniture related product mfg .....	44	40	36	38	42
33791	Mattress mfg .....	42	40	37	43	40
337910	Mattress mfg .....	42	40	37	43	40
33792	Blind & shade mfg .....	48	40	35	32	46
337920	Blind & shade mfg .....	48	40	35	32	46
339	Miscellaneous mfg .....	43	40	43	47	44
3391	Medical equipment & supplies mfg .....	48	44	49	53	45
33911	Medical equipment & supplies mfg .....	48	44	49	53	45
339111	Laboratory apparatus & furniture mfg .....	33	38	43	43	39
339112	Surgical & medical instrument mfg .....	46	40	46	51	46
339113	Surgical appliance & supplies mfg .....	52	48	51	60	63
339114	Dental equipment & supplies mfg .....	50	48	49	50	53
339115	Ophthalmic goods mfg .....	50	43	53	49	17
339116	Dental laboratories .....	56	66	55	56	61
3399	Other miscellaneous mfg .....	37	36	37	42	43
33991	Jewelry & silverware mfg .....	33	33	34	39	41
339911	Jewelry (except costume) mfg .....	34	35	35	42	42
339912	Silverware & plated ware mfg .....	28	27	30	45	51
339913	Jewelers' material & lapidary work mfg .....	57	50	46	30	40
339914	Costume jewelry & novelty mfg .....	28	28	<sup>a30</sup>	31	33
33992	Sporting & athletic goods mfg .....	34	30	34	35	39
339920	Sporting & athletic goods mfg .....	34	30	34	35	39
33993	Doll, toy, & game mfg .....	38	45	34	40	47
339931	Doll & stuffed toy mfg .....	<sup>a14</sup>	<sup>a24</sup>	<sup>a51</sup>	<sup>a44</sup>	56
339932	Game, toy, & children's vehicle mfg .....	46	50	33	40	46
33994	Office supplies (except paper) mfg .....	49	43	45	48	49
339941	Pen & mechanical pencil mfg .....	42	41	38	48	53
339942	Lead pencil & art good mfg .....	63	64	75	68	53
339943	Marking device mfg .....	44	<sup>a31</sup>	32	33	46
339944	Carbon paper & inked ribbon mfg .....	58	40	55	52	42
33995	Sign mfg .....	45	41	41	48	53
339950	Sign mfg .....	45	41	41	48	53
33999	All other miscellaneous mfg .....	36	36	38	43	42
339991	Gasket, packing, & sealing device mfg .....	45	45	49	57	49
339992	Musical instrument mfg .....	17	14	17	31	29
339993	Fastener, button, needle, & pin mfg .....	31	39	39	48	60
339994	Broom, brush, & mop mfg .....	36	35	36	39	38
339995	Burial casket mfg .....	46	45	50	53	49
339999	All other miscellaneous mfg .....	40	<sup>a45</sup>	<sup>a43</sup>	38	40
5111	Newspaper, periodical, book, and database publishers .....	<sup>a76</sup>	69	(NA)	(NA)	(NA)

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

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2003	2002	2003	2002	Full production			National emergency production		
						Level		2002 to 2003 change	Level		2002 to 2003 change
						2003	2002		2003	2002	
<b>31-33</b>	<b>Manufacturing<sup>2</sup></b> .....	<b>64</b>	<b>63</b>	<b>47</b>	<b>45</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>3</b>
	<b>Durable goods industries<sup>2</sup></b> .....	<b>61</b>	<b>59</b>	<b>41</b>	<b>40</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>3</b>
	<b>Nondurable goods industries<sup>2</sup></b> ..	<b>69</b>	<b>69</b>	<b>56</b>	<b>52</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>6</b>
	<b>Advanced processing industries<sup>2</sup></b> .....	<b>62</b>	<b>61</b>	<b>45</b>	<b>43</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>2</b>
	<b>Primary processing industries<sup>2</sup></b> ..	<b>70</b>	<b>68</b>	<b>51</b>	<b>50</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>2</b>
311	Food mfg .....	74	73	61	58	2	2	5	2	2	7
3111	Animal food mfg .....	71	73	59	59	7	5	2	5	4	2
31111	Animal food mfg .....	71	73	59	59	7	5	2	5	4	2
311111	Dog & cat food mfg .....	81	80	71	73	3	4	3	4	4	3
311119	Other animal food mfg .....	63	68	50	48	11	8	4	7	6	6
3112	Grain & oilseed milling .....	84	79	76	73	2	2	3	2	2	2
31121	Flour milling & malt mfg .....	79	78	70	68	4	4	2	6	6	2
311211	Flour milling .....	79	79	70	71	5	5	2	7	7	2
311212	Rice milling .....	78	74	75	70	2	2	3	3	2	2
311213	Malt mfg .....	82	75	54	44	12	12	2	23	20	5
31122	Starch & vegetable fats & oils mfg .....	90	91	89	90	2	2	3	2	2	3
311221	Wet corn milling .....	95	93	95	93	1	2	2	1	2	2
311222	Soybean processing .....	94	96	94	96	1	2	2	1	2	2
311223	Other oilseed processing .....	76	70	76	70	6	7	3	6	7	3
311225	Fats & oils refining & blending .....	80	84	78	83	5	5	2	5	5	2
31123	Breakfast cereal mfg .....	81	<sup>a72</sup> 69	<sup>a65</sup> 69	<sup>a65</sup> 65	2	<sup>a3</sup> 2	2	2	<sup>a2</sup> 2	2
311230	Breakfast cereal mfg .....	81	<sup>a72</sup> 69	<sup>a65</sup> 69	<sup>a65</sup> 65	2	<sup>a3</sup> 2	3	2	<sup>a2</sup> 2	2
3113	Sugar & confectionery product mfg .....	70	69	56	56	2	2	1	3	3	1
31131	Sugar mfg .....	93	93	90	85	1	1	3	2	1	5
311311	Sugarcane mills .....	98	93	91	92	2	2	3	4	2	5
311312	Cane sugar refining .....	<sup>a71</sup> 99	<sup>a79</sup> 97	<sup>a67</sup> 99	<sup>a53</sup> 97	<sup>a1</sup> 1	<sup>a1</sup> 1	<sup>a1</sup> 1	<sup>a1</sup> 1	<sup>a1</sup> 1	<sup>a1</sup> 1
311313	Beet sugar mfg .....	99	97	99	97	1	1	1	1	1	1
31132	Chocolate & confectionery mfg from cacao beans .....	83	81	79	76	1	1	1	1	1	1
311320	Chocolate & confectionery mfg from cacao beans .....	83	81	79	76	1	1	1	1	1	1
31133	Confectionery mfg from purchased chocolate .....	64	63	46	45	2	2	1	4	4	1
311330	Confectionery mfg from purchased chocolate .....	64	63	46	45	2	2	1	4	4	1
31134	Nonchocolate confectionery mfg .....	66	63	54	55	5	4	1	5	5	1
311340	Nonchocolate confectionery mfg .....	66	63	54	55	5	4	4	5	5	4
3114	Fruit & vegetable preserving & specialty food mfg .....	62	64	50	52	5	6	7	5	5	6
31141	Frozen food mfg .....	77	77	68	67	4	4	4	3	4	4
311411	Frozen fruit, juice, & vegetable mfg ..	85	79	78	72	3	3	2	3	2	2
311412	Frozen specialty food mfg .....	72	76	63	64	5	6	7	5	5	6
31142	Fruit & vegetable canning, pickling, & drying .....	54	57	42	45	7	8	2	6	7	2
311421	Fruit & vegetable canning .....	49	51	35	38	9	10	3	7	8	3
311422	Specialty canning .....	64	66	57	59	8	10	2	7	8	2
311423	Dried & dehydrated food mfg .....	67	68	56	53	6	5	2	5	5	2
3115	Dairy product mfg .....	79	77	71	67	2	3	2	2	3	2
31151	Dairy product (except frozen) mfg .....	81	78	75	70	2	3	3	3	3	3
311511	Fluid milk mfg .....	85	82	78	72	3	4	2	4	5	4
311512	Creamery butter mfg .....	74	72	71	62	3	3	2	2	2	2
311513	Cheese mfg .....	79	81	74	74	4	3	3	5	3	4
311514	Dry, condensed, & evaporated dairy product mfg .....	75	69	70	63	4	6	5	4	6	5
31152	Ice cream & frozen dessert mfg .....	<sup>a73</sup> 75	<sup>a73</sup> 69	<sup>a57</sup> 70	<sup>a54</sup> 63	<sup>a2</sup> 4	<sup>a2</sup> 4	<sup>a2</sup> 5	<sup>a2</sup> 4	<sup>a2</sup> 3	<sup>a2</sup> 4
311520	Ice cream & frozen dessert mfg .....	<sup>a73</sup> 75	<sup>a73</sup> 69	<sup>a57</sup> 70	<sup>a54</sup> 63	<sup>a2</sup> 4	<sup>a2</sup> 4	<sup>a4</sup> 4	<sup>a2</sup> 4	<sup>a2</sup> 3	<sup>a3</sup> 4
3116	Meat product mfg .....	82	83	66	63	2	2	2	2	3	2
31161	Animal slaughtering & processing .....	82	83	66	63	2	2	2	2	3	4
311611	Animal (except poultry) slaughtering ..	84	88	69	70	1	1	1	4	4	2
311612	Meat processed from carcasses .....	75	77	61	62	4	3	2	3	3	2
311613	Rendering & meat byproduct processing .....	78	76	55	59	5	4	6	5	8	8
311615	Poultry processing .....	87	86	69	61	3	4	2	3	6	5
3117	Seafood product preparation & packaging .....	61	56	36	35	8	8	5	5	6	5
31171	Seafood product preparation & packaging .....	61	56	36	35	8	8	3	5	6	4
311711	Seafood canning .....	69	64	60	56	2	3	1	2	2	2
311712	Fresh & frozen seafood processing ..	60	55	34	34	9	8	6	5	6	5
3118	Bakeries & tortilla mfg .....	72	73	62	55	3	2	6	2	5	8
31181	Bread & bakery product mfg .....	76	76	66	62	2	3	4	3	4	3
311811	Retail bakeries .....	<sup>a58</sup> 78	<sup>a65</sup> 76	<sup>a43</sup> 70	<sup>a33</sup> 68	<sup>a5</sup> 3	<sup>a4</sup> 3	<sup>a3</sup> 2	<sup>a4</sup> 4	<sup>a9</sup> 4	<sup>a10</sup> 2
311812	Commercial bakeries .....	78	76	70	68	3	3	2	4	4	2
311813	Frozen cakes, pies, & other pastries mfg .....	80	78	67	61	5	4	1	7	5	6
31182	Cookie, cracker, & pasta mfg .....	64	68	55	44	5	3	1	3	9	2
311821	Cookie & cracker mfg .....	62	66	54	40	6	3	5	4	10	7
311822	Flour mixes & dough mfg from purchased flour .....	69	72	57	60	7	6	3	7	6	4
311823	Dry pasta mfg .....	63	77	61	73	3	5	4	3	5	4
31183	Tortilla mfg .....	81	79	66	66	2	3	2	3	3	2
311830	Tortilla mfg .....	81	79	66	66	2	3	2	3	3	3

See footnotes at end of table.

Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change	
						Level			2003	2002		
						2003	2002					
311	Food mfg—Con.											
3119	Other food mfg	74	73	58	55	2	2	1	2	3		6
31191	Snack food mfg	85	80	72	66	2	2	2	3	3		5
311911	Roasted nuts & peanut butter mfg	72	76	71	64	2	6	5	2	6		5
311919	Other snack food mfg	89	81	72	67	3	2	3	3	3		2
31192	Coffee & tea mfg	<sup>a71</sup> 71	71	<sup>a39</sup> 39	39	<sup>a4</sup> 3	3	<sup>a1</sup> 3	<sup>a8</sup> 11	11		<sup>a2</sup> 2
311920	Coffee & tea mfg	<sup>a71</sup> 71	71	<sup>a39</sup> 39	39	<sup>a4</sup> 3	3	<sup>a1</sup> 3	<sup>a8</sup> 11	11		<sup>a10</sup> 10
31193	Flavoring syrup & concentrate mfg	72	70	56	54	1	3	6	3	6		5
311930	Flavoring syrup & concentrate mfg	72	70	56	54	1	3	3	3	6		5
31194	Seasoning & dressing mfg	67	67	58	57	4	5	3	4	5		10
311941	Mayonnaise, dressing, & other prepared sauce mfg	74	74	65	65	6	6	6	6	5		5
311942	Spice & extract mfg	61	62	53	50	5	7	9	4	7		7
31199	All other food mfg	70	71	54	51	4	4	2	5	5		2
311991	Perishable prepared food mfg	68	67	62	61	7	7	2	6	6		2
311999	All other miscellaneous food mfg	70	72	53	49	4	5	3	5	6		2
312	Beverage & tobacco product mfg	64	65	53	50	1	1	9	1	1		7
3121	Beverage mfg	68	65	59	53	2	2	3	2	3		2
31211	Soft drink & ice mfg	63	57	54	44	4	3	3	4	4		4
312111	Soft drink mfg	70	60	59	47	4	4	5	4	4		5
312112	Bottled water mfg	32	50	31	30	2	6	6	2	3		3
312113	Ice mfg	28	23	24	20	6	4	3	5	3		3
31212	Breweries	78	81	77	80	2	2	4	3	3		4
312120	Breweries	78	81	77	80	2	2	1	3	3		1
31213	Wineries	63	66	49	55	4	4	2	4	6		3
312130	Wineries	63	66	49	55	4	4	2	4	6		5
31214	Distilleries	69	66	53	43	1	3	5	2	6		5
312140	Distilleries	69	66	53	43	1	3	3	2	6		6
3122	Tobacco mfg	61	65	50	48	1	1	6	1	1		5
31221	Tobacco stemming & redrying	77	59	61	45	1	1	1	1	1		10
312210	Tobacco stemming & redrying	77	59	61	45	1	1	1	1	1		1
31222	Tobacco product mfg	61	65	50	48	1	1	3	1	1		5
312221	Cigarette mfg	61	65	50	48	1	1	1	1	1		1
312229	Other tobacco product mfg	69	66	53	54	10	7	5	12	8		4
313	Textile mills	64	66	55	56	2	2	5	2	2		4
3131	Fiber, yarn, & thread mills	77	74	73	65	3	4	3	3	5		2
31311	Fiber, yarn, & thread mills	77	74	73	65	3	4	2	3	5		2
313111	Yarn spinning mills	82	78	79	71	3	5	5	4	6		6
313112	Yarn texturing, throwing, & twisting mills	68	69	62	58	4	5	2	3	8		7
313113	Thread mills	<sup>a72</sup> 66	66	<sup>a70</sup> 53	53	<sup>a6</sup> 3	3	<sup>a6</sup> 3	<sup>a6</sup> 3	3		<sup>a7</sup> 7
3132	Fabric mills	66	65	55	56	2	3	2	3	3		5
31321	Broadwoven fabric mills	69	66	60	60	4	4	5	5	4		5
313210	Broadwoven fabric mills	69	66	60	60	4	4	4	5	4		3
31322	Narrow fabric mills & schiffli machine embroidery	64	68	51	54	3	3	6	2	3		3
313221	Narrow fabric mills	68	69	53	56	3	3	2	3	3		1
313222	Schiffli machine embroidery	53	66	42	46	3	3	4	2	6		6
31323	Nonwoven fabric mills	60	62	51	52	4	4	3	5	5		3
313230	Nonwoven fabric mills	60	62	51	52	4	4	3	5	5		3
31324	Knit fabric mills	62	63	50	50	3	3	1	3	3		1
313241	Weft knit fabric mills	71	71	53	53	8	7	5	5	7		4
313249	Other knit fabric & lace mills	58	59	48	48	2	3	1	3	3		1
3133	Textile & fabric finishing & fabric coating mills	58	64	49	52	4	3	1	4	3		1
31331	Textile & fabric finishing mills	58	65	49	52	5	3	3	4	4		6
313311	Broadwoven fabric finishing mills	55	71	49	54	6	4	5	6	5		5
313312	Textile & fabric finishing mills	63	55	49	49	6	4	5	6	4		5
31332	Fabric coating mills	61	59	48	48	6	4	1	4	3		1
313320	Fabric coating mills	61	59	48	48	6	4	3	4	3		2
314	Textile product mills	73	66	52	46	2	2	3	3	2		3
3141	Textile furnishings mills	76	73	51	49	2	3	6	4	3		7
31411	Carpet & rug mills	78	75	66	61	2	2	5	3	3		6
314110	Carpet & rug mills	78	75	66	61	2	2	2	3	3		2
31412	Curtain & linen mills	73	72	42	40	4	4	3	5	4		7
314121	Curtain & drapery mills	<sup>a72</sup> 77	77	<sup>a44</sup> 44	44	<sup>a3</sup> 3	3	<sup>a3</sup> 3	<sup>a6</sup> 6	6		<sup>a2</sup> 2
314129	Other household textile product mills	73	70	41	39	5	5	3	6	5		3
3149	Other textile product mills	69	57	54	41	3	3	4	4	3		6
31491	Textile bag & canvas mills	59	61	40	40	4	5	4	4	4		3
314911	Textile bag mills	<sup>a49</sup> 67	67	<sup>a30</sup> 34	34	<sup>a3</sup> 5	5	<sup>a5</sup> 5	<sup>a2</sup> 4	4		<sup>a3</sup> 3
314912	Canvas & related product mills	66	59	48	43	6	6	9	7	6		7
31499	All other textile product mills	73	55	63	42	4	3	2	7	4		1
314991	Rope, cordage, & twine mills	61	61	55	38	6	5	4	5	7		8
314992	Tire cord & tire fabric mills	89	83	89	81	3	4	2	3	4		2
314999	All other miscellaneous textile product mills	73	53	62	40	5	4	3	8	4		6
315	Apparel mfg	66	72	32	31	2	2	4	2	3		8
3151	Apparel knitting mills	65	78	47	52	5	2	5	4	4		5
31511	Hosiery & sock mills	75	78	59	50	3	2	5	3	5		4
315111	Sheer hosiery mills	80	77	58	46	4	3	4	8	6		6
315119	Other hosiery & sock mills	73	78	59	52	3	2	2	2	6		6
31519	Other apparel knitting mills	<sup>a54</sup> 77	<sup>a77</sup> 77	<sup>a35</sup> 54	<sup>a54</sup> 54	<sup>a8</sup> 8	<sup>a4</sup> 4	<sup>a1</sup> 1	<sup>a6</sup> 6	<sup>a7</sup> 7		<sup>a1</sup> 1
315191	Outerwear knitting mills	<sup>a52</sup> 77	<sup>a75</sup> 77	<sup>a32</sup> 54	<sup>a49</sup> 49	<sup>a9</sup> 9	<sup>a5</sup> 5	<sup>a6</sup> 6	<sup>a6</sup> 6	<sup>a8</sup> 8		<sup>a7</sup> 7
315192	Underwear & nightwear knitting mills	68	<sup>a91</sup> 72	68	<sup>a91</sup> 31	1	<sup>a1</sup> 2	2	1	<sup>a1</sup> 3		2

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production				
						Level			2003	2002	2002 to 2003 change		
						2003	2002	2003				2002	
315	Apparel mfg—Con.												
3152	Cut & sew apparel mfg .....	66	<sup>a</sup> 72	30	<sup>a</sup> 29	2	<sup>a</sup> 2	3	2	<sup>a</sup> 3	3		
31521	Cut & sew apparel contractors .....	68	69	18	11	3	3	5	4	3	5		
315211	Men's & boys' cut & sew apparel contractors .....	79	75	54	43	10	6	8	6	7	5		
315212	Women's, girls', & infants' cut & sew apparel contractors .....	63	66	13	8	3	2	2	3	3	1		
31522	Men's & boys' cut & sew apparel mfg ..	<sup>a</sup> 67	75	<sup>a</sup> 29	33	<sup>a</sup> 3	3	<sup>a</sup> 3	<sup>a</sup> 4	3	<sup>a</sup> 2		
315221	Men's & boys' cut & sew underwear & nightwear mfg .....	<sup>a</sup> 71	<sup>a</sup> 60	<sup>a</sup> 53	<sup>a</sup> 48	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1		
315222	Men's & boys' cut & sew suit, coat, & overcoat mfg .....	<sup>a</sup> 50	<sup>a</sup> 60	<sup>a</sup> 36	<sup>a</sup> 35	<sup>a</sup> 3	<sup>a</sup> 5	<sup>a</sup> 5	<sup>a</sup> 3	<sup>a</sup> 5	<sup>a</sup> 5		
315223	Men's & boys' cut & sew shirt (exc work shirt) mfg .....	<sup>a</sup> 70	<sup>a</sup> 73	<sup>a</sup> 49	<sup>a</sup> 54	<sup>a</sup> 2	<sup>a</sup> 10	<sup>a</sup> 10	<sup>a</sup> 3	<sup>a</sup> 6	<sup>a</sup> 4		
315224	Men's & boys' cut & sew trouser, slack, & jean mfg .....	69	80	23	27	6	4	9	5	4	3		
315225	Men's & boys' cut & sew work clothing mfg .....	90	88	27	27	2	2	2	2	2	1		
315228	Men's & boys' cut & sew other outerwear mfg .....	<sup>a</sup> 57	77	<sup>a</sup> 31	35	<sup>a</sup> 4	7	<sup>a</sup> 5	<sup>a</sup> 2	2	<sup>a</sup> 3		
31523	Women's & girls' cut & sew apparel mfg .....	<sup>a</sup> 65	<sup>a</sup> 70	<sup>a</sup> 41	<sup>a</sup> 43	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2		
315231	Women's & girls' cut/sew lingerie & nightwear mfg .....	45	<sup>a</sup> 63	34	<sup>a</sup> 42	3	<sup>a</sup> 3	2	3	<sup>a</sup> 6	7		
315232	Women's & girls' cut & sew blouse & shirt mfg .....	82	83	50	53	3	3	2	2	2	1		
315233	Women's & girls' cut & sew dress mfg .....	<sup>a</sup> 51	<sup>a</sup> 58	<sup>a</sup> 48	<sup>a</sup> 48	<sup>a</sup> 4	<sup>a</sup> 6	<sup>a</sup> 3	<sup>a</sup> 4	<sup>a</sup> 3	<sup>a</sup> 2		
315234	Women's & girls' cut & sew suit, coat, skirt mfg .....	<sup>a</sup> 60	<sup>a</sup> 61	<sup>a</sup> 27	<sup>a</sup> 30	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2		
315239	Women's & girls' cut & sew other outerwear mfg .....	<sup>a</sup> 87	<sup>a</sup> 78	<sup>a</sup> 42	<sup>a</sup> 42	<sup>a</sup> 1	<sup>a</sup> 4	<sup>a</sup> 4	<sup>a</sup> 1	<sup>a</sup> 3	<sup>a</sup> 3		
31529	Other cut & sew apparel mfg .....	69	<sup>a</sup> 78	20	<sup>a</sup> 31	5	<sup>a</sup> 5	3	5	<sup>a</sup> 5	2		
315291	Infants' cut & sew apparel mfg .....	92	(NA)	31	(NA)	1	(NA)	—	1	(NA)	—		
315292	Fur & leather apparel mfg .....	<sup>a</sup> 78	<sup>a</sup> 61	<sup>a</sup> 53	<sup>a</sup> 44	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 2		
315299	All other cut & sew apparel mfg .....	61	<sup>a</sup> 60	16	<sup>a</sup> 21	6	<sup>a</sup> 4	4	5	<sup>a</sup> 4	5		
3159	Apparel accessories & other apparel mfg .....	61	64	40	35	2	2	9	2	2	7		
31599	Apparel accessories & other apparel mfg .....	61	64	40	35	2	2	5	2	2	3		
315991	Hat, cap, & millinery mfg .....	59	59	37	31	3	3	2	2	2	2		
315992	Glove & mitten mfg .....	37	<sup>a</sup> 51	25	<sup>a</sup> 20	3	<sup>a</sup> 4	3	3	<sup>a</sup> 3	4		
315993	Men's & boys' neckwear mfg .....	71	76	40	47	2	3	5	6	5	4		
315999	Other apparel accessories & other apparel mfg .....	66	68	46	40	4	4	3	4	4	3		
316	Leather & allied product mfg .....	58	54	33	27	2	2	8	2	2	5		
3161	Leather & hide tanning & finishing .....	70	63	64	52	3	3	3	3	3	6		
31611	Leather & hide tanning & finishing .....	70	63	64	52	3	3	2	3	3	2		
316110	Leather & hide tanning & finishing .....	70	63	64	52	3	3	3	3	3	3		
3162	Footwear mfg .....	52	<sup>a</sup> 48	31	<sup>a</sup> 26	3	<sup>a</sup> 1	2	3	<sup>a</sup> 2	6		
31621	Footwear mfg .....	52	<sup>a</sup> 48	31	<sup>a</sup> 26	3	<sup>a</sup> 1	4	3	<sup>a</sup> 2	6		
316211	Rubber & plastics footwear mfg .....	54	<sup>a</sup> 41	38	<sup>a</sup> 30	8	<sup>a</sup> 1	9	8	<sup>a</sup> 2	9		
316212	House slipper mfg .....	69	57	36	19	1	1	1	1	2	2		
316213	Men's footwear (except athletic) mfg .....	59	61	34	35	2	2	2	4	4	4		
316214	Women's footwear (except athletic) mfg .....	<sup>a</sup> 27	<sup>a</sup> 26	<sup>a</sup> 12	<sup>a</sup> 10	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 1	<sup>a</sup> 1		
316219	Other footwear mfg .....	<sup>a</sup> 69	<sup>a</sup> 79	<sup>a</sup> 54	<sup>a</sup> 65	<sup>a</sup> 1	<sup>a</sup> 3	<sup>a</sup> 4	<sup>a</sup> 1	<sup>a</sup> 4	<sup>a</sup> 4		
3169	Other leather & allied product mfg .....	57	56	27	20	4	4	2	3	3	2		
31699	Other leather & allied product mfg .....	57	56	27	20	4	4	6	3	3	7		
316991	Luggage mfg .....	47	48	22	24	5	6	3	4	4	3		
316992	Women's handbag & purse mfg .....	69	62	34	29	7	7	1	8	7	2		
316993	Personal leather good (except women's handbag & purse) mfg ..	<sup>a</sup> 74	<sup>a</sup> 55	<sup>a</sup> 34	<sup>a</sup> 9	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 2	<sup>a</sup> 4	<sup>a</sup> 4		
316999	All other leather good mfg .....	<sup>a</sup> 73	78	<sup>a</sup> 35	27	<sup>a</sup> 1	4	<sup>a</sup> 4	<sup>a</sup> 3	3	<sup>a</sup> 3		
321	Wood product mfg .....	70	67	43	42	2	2	2	2	2	1		
3211	Sawmills & wood preservation .....	73	75	51	50	4	4	1	5	5	1		
32111	Sawmills & wood preservation .....	73	75	51	50	4	4	2	5	5	1		
321113	Sawmills .....	74	75	51	52	5	4	4	5	6	4		
321114	Wood preservation .....	66	71	53	41	4	6	4	5	9	9		
3212	Veneer, plywood, & engineered wood product mfg .....	76	66	53	43	3	4	10	5	5	4		
32121	Veneer, plywood, & engineered wood product mfg .....	76	66	53	43	3	4	5	5	5	5		
321211	Hardwood veneer & plywood mfg .....	69	67	42	43	4	4	3	5	5	3		
321212	Softwood veneer & plywood mfg .....	88	86	83	81	5	4	4	5	4	3		
321213	Engineered wood member (except truss) mfg .....	73	64	61	51	7	6	3	7	6	4		
321214	Truss mfg .....	68	54	47	33	5	8	8	4	4	5		
321219	Reconstituted wood product mfg .....	83	72	54	42	5	5	2	14	12	8		
3219	Other wood product mfg .....	67	65	38	39	2	2	2	2	2	7		
32191	Millwork .....	75	73	52	49	2	2	9	2	3	3		
321911	Wood window & door mfg .....	73	72	59	59	3	3	2	3	3	2		
321912	Cut stock, resawing lumber, & planing .....	79	77	38	46	4	4	3	2	5	4		
321918	Other millwork (including flooring) ..	77	73	56	37	5	4	3	7	6	4		
32192	Wood container & pallet mfg .....	65	59	45	39	5	6	2	4	5	1		
321920	Wood container & pallet mfg .....	65	59	45	39	5	6	5	4	5	4		
32199	All other wood product mfg .....	58	58	26	30	3	2	5	2	2	3		
321991	Manufactured home (mobile home) mfg .....	55	54	20	25	4	3	4	2	3	2		
321992	Prefabricated wood building mfg .....	69	65	38	37	4	5	4	3	4	4		
321999	All other miscellaneous wood product mfg .....	56	59	32	37	4	3	2	5	4	3		

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2003	2002	2003	2002	Full production			National emergency production		
						Level		2002 to 2003 change	Level		2002 to 2003 change
						2003	2002		2003	2002	
322	Paper mfg .....	81	81	73	71	2	2	3	2	2	3
3221	Pulp, paper, & paperboard mills .....	89	90	86	87	3	2	—	4	3	—
32211	Pulp mills .....	89	87	81	78	4	4	3	7	6	2
322110	Pulp mills .....	89	87	81	78	4	4	4	7	6	7
32212	Paper mills .....	87	89	83	87	4	3	2	6	4	2
322121	Paper (except newsprint) mills .....	86	90	82	87	5	3	3	6	4	3
322122	Newsprint mills .....	95	86	95	85	1	3	3	1	3	3
32213	Paperboard mills .....	94	93	93	87	3	3	4	3	2	3
322130	Paperboard mills .....	94	93	93	87	3	3	2	3	2	3
3222	Converted paper product mfg .....	74	73	63	60	2	2	5	3	3	4
32221	Paperboard container mfg .....	76	74	65	64	3	3	2	4	3	2
322211	Corrugated & solid fiber box mfg .....	83	78	72	68	5	4	3	7	5	3
322212	Folding paperboard box mfg .....	86	79	73	70	4	3	3	4	4	4
322213	Setup paperboard box mfg .....	64	68	43	45	7	6	8	4	4	2
322214	Fiber can, tube, drum, & similar products mfg .....	<sup>a</sup> 35	<sup>a</sup> 44	<sup>a</sup> 28	<sup>a</sup> 32	<sup>a</sup> 4	<sup>a</sup> 5	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 4	<sup>a</sup> 3
322215	Nonfolding sanitary food container mfg .....	70	69	63	62	6	5	2	4	4	2
32222	Paper bag & coated & treated paper mfg .....	69	71	60	58	3	4	4	3	5	5
322221	Coated & laminated packaging paper & plastics film mfg .....	69	65	53	51	3	5	4	5	6	5
322222	Coated & laminated paper mfg .....	67	69	61	56	4	5	2	4	6	5
322223	Plastics, foil, & coated paper bag mfg .....	73	73	50	53	9	7	3	12	10	4
322224	Uncoated paper & multiwall bag mfg .....	72	79	57	63	3	3	2	5	5	3
322225	Laminated aluminum foil mfg for flexible packaging uses .....	72	81	65	71	2	1	1	1	1	1
322226	Surface-coated paperboard mfg .....	78	84	68	69	3	3	3	6	5	3
32223	Stationery product mfg .....	69	65	59	51	3	6	2	3	6	2
322231	Die-cut paper & paperboard office supplies mfg .....	76	79	71	58	2	2	1	4	10	10
322232	Envelope mfg .....	73	75	60	62	4	3	3	3	4	3
322233	Stationery, tablet, & related product mfg .....	58	44	48	35	6	11	11	6	10	11
32229	Other converted paper product mfg .....	77	76	65	59	3	4	3	6	5	4
322291	Sanitary paper product mfg .....	80	79	73	71	3	5	4	6	7	1
322299	All other converted paper product mfg .....	72	73	53	45	6	6	5	10	6	13
323	Printing & related support activities .....	68	69	53	52	2	2	2	2	2	4
3231	Printing & related support activities .....	68	69	53	52	2	2	1	2	2	2
32311	Printing .....	68	69	55	53	3	2	3	2	2	3
323110	Commercial lithographic printing .....	72	72	61	61	3	4	2	2	3	2
323111	Commercial gravure printing .....	88	84	79	73	4	4	5	7	6	4
323112	Commercial flexographic printing .....	75	74	62	61	4	4	3	4	3	3
323113	Commercial screen printing .....	66	<sup>a</sup> 57	44	<sup>a</sup> 36	6	<sup>a</sup> 3	6	7	<sup>a</sup> 4	6
323114	Quick printing .....	67	69	50	32	3	4	2	3	10	10
323115	Digital printing .....	82	<sup>a</sup> 71	71	<sup>a</sup> 56	4	<sup>a</sup> 6	4	6	<sup>a</sup> 7	4
323116	Manifold business form printing .....	52	64	44	53	10	3	10	7	3	7
323117	Book printing .....	59	64	55	58	4	5	3	4	5	2
323118	Blankbook, looseleaf binder, & device mfg .....	51	58	30	31	3	4	3	3	4	2
323119	Other commercial printing .....	68	70	46	46	2	3	2	5	5	2
32312	Support activities for printing .....	72	69	41	42	2	3	9	4	4	9
323121	Tradebinding & related work .....	66	66	28	30	4	4	3	5	5	2
323122	Prepress services .....	75	71	52	51	3	3	2	4	4	4
324	Petroleum & coal products mfg .....	80	80	70	68	2	2	3	2	2	4
3241	Petroleum & coal products mfg .....	80	80	70	68	2	2	1	2	2	2
32411	Petroleum refineries .....	90	91	80	89	2	1	1	2	2	1
324110	Petroleum refineries .....	90	91	90	89	2	1	2	2	2	2
32412	Asphalt paving, roofing, & saturated materials mfg .....	44	43	27	25	3	3	4	3	2	4
324121	Asphalt paving mixture & block mfg .....	33	32	18	17	3	4	4	2	2	2
324122	Asphalt shingle & coating materials mfg .....	67	66	63	50	3	3	3	4	6	6
32419	Other petroleum & coal products mfg .....	56	59	42	43	3	3	3	3	3	3
324191	Petroleum lubricating oil & grease mfg .....	55	59	41	43	3	3	3	3	3	2
324199	All other petroleum & coal products mfg .....	63	60	45	44	8	6	3	8	7	3
325	Chemical mfg .....	63	63	51	46	3	2	4	3	2	5
3251	Basic chemical mfg .....	75	72	69	64	2	2	3	2	2	4
32511	Petrochemical mfg .....	80	75	80	75	6	10	4	6	10	3
325110	Petrochemical mfg .....	80	75	80	75	6	10	6	6	10	6
32512	Industrial gas mfg .....	72	75	71	62	3	3	4	3	8	4
325120	Industrial gas mfg .....	72	75	71	62	3	3	4	3	8	8
32513	Dye & pigment mfg .....	76	81	70	74	2	2	4	2	3	9
325131	Inorganic dye & pigment mfg .....	83	86	81	78	2	2	1	2	4	3
325132	Synthetic organic dye & pigment mfg .....	68	76	60	70	4	4	2	3	3	2
32518	Other basic inorganic chemical mfg .....	65	64	52	50	4	3	3	3	3	3
325181	Alkalies & chlorine mfg .....	75	76	75	76	6	7	1	6	7	1
325182	Carbon black mfg .....	83	<sup>a</sup> 78	76	<sup>a</sup> 72	2	<sup>a</sup> 2	2	2	<sup>a</sup> 1	3
325188	All other basic inorganic chemical mfg .....	63	62	50	47	4	3	3	3	3	3
32519	Other basic organic chemical mfg .....	83	76	81	74	2	3	4	3	3	3
325191	Gum & wood chemical mfg .....	72	80	71	78	1	1	1	1	1	1
325192	Cyclic crude & intermediate mfg .....	73	<sup>a</sup> 83	73	<sup>a</sup> 72	3	<sup>a</sup> 2	2	3	<sup>a</sup> 5	4
325193	Ethyl alcohol mfg .....	97	86	97	62	1	4	4	1	10	10
325199	All other basic organic chemical mfg .....	84	75	82	74	2	3	4	3	3	4

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change	
						Level			2003	2002		
						2003	2002					
325	Chemical mfg—Con.											
3252	Resin, syn rubber, & artificial & syn fibers & filaments mfg . . . . .	78	75	71	71	3	3	2	3	3	2	2
32521	Resin & synthetic rubber mfg . . . . .	77	75	69	71	4	3	8	4	3	5	5
325211	Plastics material & resin mfg . . . . .	80	79	72	75	4	3	2	4	4	2	2
325212	Synthetic rubber mfg . . . . .	60	54	55	52	8	7	3	7	7	2	2
32522	Artificial & synthetic fibers & filaments mfg . . . . .	85	77	81	73	2	2	2	2	2	8	8
325221	Cellulosic organic fiber mfg . . . . .	90	84	81	73	1	1	2	1	1	2	2
325222	Noncellulosic organic fiber mfg . . . . .	84	76	81	73	2	2	2	2	2	2	2
3253	Pesticide, fertilizer, & other agricultural chemical mfg . . . . .	61	60	43	39	3	3	5	5	7	4	4
32531	Fertilizer mfg . . . . .	63	66	54	53	3	4	3	3	4	4	4
325311	Nitrogenous fertilizer mfg . . . . .	83	86	83	85	5	4	4	5	4	4	4
325312	Phosphatic fertilizer mfg . . . . .	85	83	83	81	2	2	1	2	2	1	1
325314	Fertilizer (mixing only) mfg . . . . .	41	45	31	30	3	5	4	2	4	3	3
32532	Pesticide & other agricultural chemical mfg . . . . .	59	57	39	34	4	5	3	6	9	4	4
325320	Pesticide & other agricultural chemical mfg . . . . .	59	57	39	34	4	5	3	6	9	3	3
3254	Pharmaceutical & medicine mfg . . . . .	56	58	44	38	4	4	4	4	3	4	4
32541	Pharmaceutical & medicine mfg . . . . .	56	58	44	38	4	4	4	4	3	2	2
325411	Medicinal & botanical mfg . . . . .	73	80	61	61	7	5	6	10	8	6	6
325412	Pharmaceutical preparation mfg . . . . .	52	54	41	44	5	4	4	5	4	3	3
325413	In-vitro diagnostic substance mfg . . . . .	79	<sup>a</sup> 84	49	<sup>a</sup> 14	3	<sup>a</sup> 1	3	6	<sup>a</sup> 1	6	6
325414	Biological product (except diagnostic) mfg . . . . .	69	72	67	68	4	7	4	4	6	3	3
3255	Paint, coating, & adhesive mfg . . . . .	67	58	52	42	2	3	3	4	3	3	3
32551	Paint & coating mfg . . . . .	69	61	53	42	3	4	2	4	4	3	3
325510	Paint & coating mfg . . . . .	69	61	53	42	3	4	3	4	4	3	3
32552	Adhesive mfg . . . . .	63	53	51	41	4	5	4	5	5	7	7
325520	Adhesive mfg . . . . .	63	53	51	41	4	5	5	5	5	5	5
3256	Soap, cleaning compound, & toilet preparation mfg . . . . .	62	67	53	54	3	3	3	3	3	3	3
32561	Soap & cleaning compound mfg . . . . .	64	66	52	51	2	4	3	3	3	3	3
325611	Soap & other detergent mfg . . . . .	59	68	50	54	3	3	3	3	3	3	3
325612	Polish & other sanitation good mfg . . . . .	70	61	49	43	8	8	9	7	6	5	5
325613	Surface active agent mfg . . . . .	73	76	70	72	5	3	4	4	2	4	4
32562	Toilet preparation mfg . . . . .	60	68	53	57	4	4	2	4	4	3	3
325620	Toilet preparation mfg . . . . .	60	68	53	57	4	4	4	4	4	4	4
3259	Other chemical product mfg . . . . .	68	66	45	44	2	2	2	3	4	2	2
32591	Printing ink mfg . . . . .	76	60	26	25	2	5	3	2	9	4	4
325910	Printing ink mfg . . . . .	76	60	26	25	2	5	4	2	9	8	8
32592	Explosives mfg . . . . .	70	69	36	37	2	2	8	2	2	2	2
325920	Explosives mfg . . . . .	70	69	36	37	2	2	1	2	2	1	1
32599	All other chemical product & preparation mfg . . . . .	67	67	51	49	2	2	3	4	3	3	3
325991	Custom compounding of purchased resin . . . . .	71	69	64	62	3	3	2	4	3	3	3
325992	Photographic film, paper, plate, & chemical mfg . . . . .	72	69	65	64	3	3	3	4	3	3	3
325998	All other miscellaneous chemical product & preparation mfg . . . . .	61	63	39	38	3	4	3	5	4	3	3
326	Plastics & rubber products mfg . . . . .	73	68	63	57	1	2	3	2	2	3	3
3261	Plastics product mfg . . . . .	72	66	64	56	2	3	11	2	3	11	11
32611	Unsupported plastics film, sheet, & bag mfg . . . . .	72	70	68	65	3	3	2	3	3	5	5
326111	Unsupported plastics bag mfg . . . . .	73	65	70	63	3	2	3	2	3	14	14
326112	Unsupported plastics packaging film & sheet mfg . . . . .	67	70	59	61	5	6	3	6	7	3	3
326113	Unsupported plastics film & sheet (except packaging) mfg . . . . .	73	73	70	67	5	4	3	5	5	4	4
32612	Plastics pipe, pipe fitting, & unsupported profile shape mfg . . . . .	72	69	66	66	2	3	3	3	3	4	4
326121	Unsupported plastics profile shape mfg . . . . .	70	69	64	67	2	4	4	3	4	3	3
326122	Plastics pipe & pipe fitting mfg . . . . .	74	69	69	64	4	4	3	5	4	3	3
32613	Laminated plastics plate, sheet, & shape mfg . . . . .	70	62	50	44	6	5	2	6	6	3	3
326130	Laminated plastics plate, sheet, & shape mfg . . . . .	70	62	50	44	6	5	3	6	6	2	2
32614	Polystyrene foam product mfg . . . . .	77	78	64	63	4	3	1	6	6	1	1
326140	Polystyrene foam product mfg . . . . .	77	78	64	63	4	3	2	6	6	3	3
32615	Urethane & other foam product (except polystyrene) mfg . . . . .	69	71	45	50	6	4	3	5	3	3	3
326150	Urethane & other foam product (except polystyrene) mfg . . . . .	69	71	45	50	6	4	3	5	3	3	3
32616	Plastics bottle mfg . . . . .	77	79	73	73	6	5	1	6	5	10	10
326160	Plastics bottle mfg . . . . .	77	79	73	73	6	5	4	6	5	3	3
32619	Other plastics product mfg . . . . .	72	63	64	53	2	4	3	3	3	3	3
326191	Plastics plumbing fixture mfg . . . . .	56	54	43	35	5	4	2	5	9	10	10
326192	Resilient floor covering mfg . . . . .	67	62	61	54	1	2	2	1	2	2	2
326199	All other plastics product mfg . . . . .	73	63	65	54	2	4	4	3	4	3	3
3262	Rubber product mfg . . . . .	77	74	61	60	2	2	5	2	2	4	4
32621	Tire mfg . . . . .	85	85	71	75	2	1	4	2	2	1	1
326211	Tire mfg (except retreading) . . . . .	85	87	78	82	2	2	1	2	2	2	2
326212	Tire retreading . . . . .	89	61	31	34	8	2	8	2	2	3	3
32622	Rubber & plastics hoses & belting mfg . . . . .	66	61	51	47	4	3	5	6	5	13	13
326220	Rubber & plastics hoses & belting mfg . . . . .	66	61	51	47	4	3	2	6	5	3	3
32629	Other rubber product mfg . . . . .	73	70	55	54	3	3	2	3	3	2	2
326291	Rubber product mfg for mechanical use . . . . .	75	74	61	60	3	2	2	3	3	3	3
326299	All other rubber product mfg . . . . .	71	66	50	49	4	4	2	4	4	2	2

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change
						Level			2003	2002	
						2003	2002				
327	Nonmetallic mineral product mfg . . . . .	61	66	43	41	3	2	1	3	2	3
3271	Clay product & refractory mfg . . . . .	69	70	62	61	2	2	4	3	2	4
32711	Pottery, ceramics, & plumbing fixture mfg . . . . .	64	66	57	62	4	4	6	4	4	6
327111	Vitreous china plumbing fixture & bathroom accessories mfg . . . . .	<sup>a</sup> 89	92	<sup>a</sup> 87	91	<sup>a</sup> 1	2	<sup>a</sup> 2	<sup>a</sup> 1	2	<sup>a</sup> 3
327112	Vitreous china, fine earthenware, & other pottery product mfg . . . . .	52	58	46	54	6	6	4	5	6	4
327113	Porcelain electrical supply mfg . . . . .	61	59	53	52	4	5	3	3	5	3
32712	Clay building material & refractories mfg . . . . .	74	74	66	61	3	2	2	3	3	10
327121	Brick & structural clay tile mfg . . . . .	91	88	90	84	2	4	3	2	3	3
327122	Ceramic wall & floor tile mfg . . . . .	72	65	70	57	4	3	4	4	5	5
327123	Other structural clay product mfg . . . . .	72	85	67	72	6	4	6	8	5	10
327124	Clay refractory mfg . . . . .	57	64	39	39	8	4	8	6	5	3
327125	Nonclay refractory mfg . . . . .	65	<sup>a</sup> 67	54	<sup>a</sup> 53	7	<sup>a</sup> 5	3	6	<sup>a</sup> 5	4
3272	Glass & glass product mfg . . . . .	74	73	66	62	3	3	3	4	4	2
32721	Glass & glass product mfg . . . . .	74	73	66	62	3	3	10	4	4	7
327211	Flat glass mfg . . . . .	83	79	75	70	3	4	2	4	5	3
327212	Other pressed & blown glass & glassware mfg . . . . .	67	68	63	59	6	5	3	5	5	4
327213	Glass container mfg . . . . .	94	95	91	93	2	1	1	1	1	1
327215	Glass product mfg made of purchased glass . . . . .	70	68	59	54	4	4	3	5	5	2
3273	Cement & concrete product mfg . . . . .	50	59	31	29	4	2	2	3	2	2
32731	Cement mfg . . . . .	88	84	83	62	2	3	3	3	11	2
327310	Cement mfg . . . . .	88	84	83	62	2	3	3	3	11	11
32732	Ready-mix concrete mfg . . . . .	35	47	19	19	4	3	2	3	2	2
327320	Ready-mix concrete mfg . . . . .	35	47	19	19	4	3	4	3	2	3
32733	Concrete pipe, brick, & block mfg . . . . .	74	77	46	49	3	4	3	3	5	2
327331	Concrete block & brick mfg . . . . .	76	79	43	46	4	5	4	4	6	5
327332	Concrete pipe mfg . . . . .	72	75	52	53	4	7	7	5	9	6
32739	Other concrete product mfg . . . . .	64	63	50	44	4	3	2	4	3	4
327390	Other concrete product mfg . . . . .	64	63	50	44	4	3	4	4	3	5
3274	Lime & gypsum product mfg . . . . .	84	76	82	72	3	4	3	3	4	2
32741	Lime mfg . . . . .	82	75	80	72	2	5	4	2	5	2
327410	Lime mfg . . . . .	82	75	80	72	2	5	5	2	5	5
32742	Gypsum product mfg . . . . .	84	77	83	72	4	4	3	4	5	6
327420	Gypsum product mfg . . . . .	84	77	83	72	4	4	3	4	5	2
3279	Other nonmetallic mineral product mfg . . . . .	74	71	57	56	2	2	4	3	3	8
32791	Abrasive product mfg . . . . .	65	67	48	47	4	4	3	6	5	3
327910	Abrasive product mfg . . . . .	65	67	48	47	4	4	3	6	5	2
32799	All other nonmetallic mineral product mfg . . . . .	78	73	62	60	2	3	6	3	3	6
327991	Cut stone & stone product mfg . . . . .	70	69	46	43	4	3	4	5	5	5
327992	Ground or treated mineral & earth mfg . . . . .	77	70	67	59	7	6	3	5	4	2
327993	Mineral wool mfg . . . . .	85	85	77	81	3	4	2	4	4	3
327999	All other miscellaneous nonmetallic mineral product mfg . . . . .	75	59	52	52	3	5	5	5	5	6
331	Primary metal mfg . . . . .	72	71	60	58	1	1	4	1	1	3
3311	Iron & steel mills & ferroalloy mfg . . . . .	86	88	83	85	3	3	1	3	4	1
33111	Iron & steel mills & ferroalloy mfg . . . . .	86	88	83	85	3	3	2	3	4	2
331111	Iron & steel mills . . . . .	87	89	84	86	3	3	3	3	4	3
331112	Electrometallurgical ferroalloy product mfg . . . . .	70	77	62	70	2	2	1	2	2	1
3312	Steel product mfg from purchased steel . . . . .	67	65	57	56	2	2	1	2	2	1
33121	Iron & steel pipes & tubes mfg from purchased steel . . . . .	64	65	54	53	2	3	2	2	2	3
331210	Iron & steel pipes & tubes mfg from purchased steel . . . . .	64	65	54	53	2	3	2	2	2	2
33122	Rolling & drawing of purchased steel . . . . .	70	66	60	58	2	2	3	2	3	3
331221	Cold-rolled steel shape mfg . . . . .	71	66	67	58	1	4	4	2	5	5
331222	Steel wire drawing . . . . .	69	66	56	57	3	3	2	3	3	2
3313	Alumina & aluminum production & processing . . . . .	76	74	70	65	2	2	4	2	2	10
33131	Alumina & aluminum production & processing . . . . .	76	74	70	65	2	2	2	2	2	4
331311	Alumina refining . . . . .	76	<sup>a</sup> 79	75	<sup>a</sup> 79	1	<sup>a</sup> 1	2	1	<sup>a</sup> 1	2
331312	Primary aluminum production . . . . .	72	<sup>a</sup> 70	68	<sup>a</sup> 67	6	<sup>a</sup> 3	7	6	<sup>a</sup> 3	6
331314	Secondary smelting & alloying of aluminum . . . . .	75	75	70	63	3	2	3	3	3	4
331315	Aluminum sheet, plate, & foil mfg . . . . .	86	<sup>a</sup> 87	81	<sup>a</sup> 80	2	<sup>a</sup> 2	1	2	<sup>a</sup> 2	2
331316	Aluminum extruded product mfg . . . . .	71	66	60	52	2	1	3	3	3	2
331319	Other aluminum rolling & drawing . . . . .	<sup>a</sup> 70	65	<sup>a</sup> 69	61	<sup>a</sup> 2	3	<sup>a</sup> 2	<sup>a</sup> 2	3	<sup>a</sup> 2
3314	Nonferrous metal (except aluminum) production & processing . . . . .	70	67	61	57	1	2	2	2	2	2
33141	Nonferrous metal (except aluminum) smelting & refining . . . . .	66	73	58	59	2	2	4	2	2	4
331411	Primary smelting & refining of copper . . . . .	56	68	56	65	1	1	2	1	1	2
331419	Other nonferrous metal primary smelting & refining . . . . .	78	78	59	55	3	3	2	4	3	2
33142	Copper rolling, drawing, extruding, & alloying . . . . .	75	76	69	68	1	3	2	2	4	2
331421	Copper rolling, drawing, & extruding . . . . .	75	78	71	71	2	4	4	2	5	4
331422	Copper wire (except mechanical) drawing . . . . .	80	80	69	71	3	2	2	2	2	2
331423	Secondary smelting, refining, & alloying of copper . . . . .	68	<sup>a</sup> 60	53	<sup>a</sup> 44	4	<sup>a</sup> 4	6	7	<sup>a</sup> 5	5

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change	
						Level			2003	2002		
						2003	2002					
331	Primary metal mfg—Con.											
3314	Nonferrous metal (except aluminum) production & processing—Con.											
33149	Other nonferrous metal rolling, drawing, extruding, & alloying .....	69	60	58	50	2	2	3	3	2	2	
331491	Other nonferrous metal rolling, drawing, & extruding .....	64	61	56	53	2	2	2	3	2	3	
331492	Other nonferrous metal secondary smelting, refining, & alloying .....	83	<sup>a</sup> 56	63	<sup>a</sup> 45	4	<sup>a</sup> 4	3	3	<sup>a</sup> 2	3	
3315	Foundries .....	63	63	46	44	2	2	1	2	2	1	
33151	Ferrous metal foundries .....	63	62	45	43	4	2	2	3	3	2	
331511	Iron foundries .....	63	65	44	43	5	3	5	4	4	2	
331512	Steel investment foundries .....	65	54	48	43	4	2	3	3	2	2	
331513	Steel foundries (except investment) .....	64	58	48	46	3	2	1	3	3	3	
33152	Nonferrous metal foundries .....	63	65	48	45	1	2	4	2	2	4	
331521	Aluminum die-casting foundries .....	66	67	52	50	3	3	3	5	4	2	
331522	Nonferrous (except aluminum) die-casting foundries .....	64	61	45	42	2	3	2	3	4	2	
331524	Aluminum foundries (except die-casting) .....	60	64	50	45	2	3	2	2	4	4	
331525	Copper foundries (except die-casting) .....	56	58	33	34	2	2	2	3	3	2	
331528	Other nonferrous foundries (except die-casting) .....	76	75	65	59	2	2	2	4	3	3	
332	Fabricated metal product mfg .....	61	59	36	36	1	1	7	3	2	5	
3321	Forging & stamping .....	58	56	46	42	2	2	6	2	2	6	
33211	Forging & stamping .....	58	56	46	42	2	2	3	2	2	3	
332111	Iron & steel forging .....	56	57	43	43	2	2	2	3	3	1	
332112	Nonferrous forging .....	67	60	57	44	2	4	5	3	3	3	
332114	Custom roll forming .....	60	53	46	41	2	2	2	2	2	2	
332115	Crown & closure mfg .....	62	53	50	42	2	2	1	2	2	1	
332116	Metal stamping .....	56	55	45	40	3	3	2	3	3	2	
332117	Powder metallurgy part mfg .....	73	68	58	54	2	2	2	2	3	2	
3322	Cutlery & handtool mfg .....	61	62	45	44	2	2	3	2	2	6	
33221	Cutlery & handtool mfg .....	61	62	45	44	2	2	4	2	2	3	
332211	Cutlery & flatware (except precious) mfg .....	54	65	45	44	4	5	2	4	4	3	
332212	Hand & edge tool mfg .....	61	58	42	41	2	3	2	2	2	2	
332213	Saw blade & handsaw mfg .....	73	72	58	54	3	3	1	4	3	1	
332214	Kitchen utensil, pot, & pan mfg .....	<sup>a</sup> 71	67	<sup>a</sup> 57	58	<sup>a</sup> 1	2	<sup>a</sup> 1	<sup>a</sup> 1	2	<sup>a</sup> 1	
3323	Architectural & structural metals mfg ....	58	57	22	29	1	2	5	5	4	5	
33231	Plate work & fabricated structural product mfg .....	59	58	37	34	1	3	4	2	2	3	
332311	Prefabricated metal building & component mfg .....	59	60	44	43	2	2	2	2	2	2	
332312	Fabricated structural metal mfg .....	60	58	36	33	1	5	5	2	2	2	
332313	Plate work mfg .....	56	53	34	30	2	3	3	3	3	3	
33232	Ornamental & architectural metal products mfg .....	58	56	17	27	2	2	3	5	6	3	
332321	Metal window & door mfg .....	61	60	37	35	3	3	2	5	4	1	
332322	Sheet metal work mfg .....	54	53	12	22	2	2	2	5	7	6	
332323	Ornamental & architectural metal work mfg .....	66	59	37	38	2	2	2	2	2	2	
3324	Boiler, tank, & shipping container mfg ...	67	64	45	50	2	2	4	3	2	4	
33241	Power boiler & heat exchanger mfg ...	62	54	46	40	4	2	3	4	2	3	
332410	Power boiler & heat exchanger mfg ...	62	54	46	40	4	2	4	4	2	5	
33242	Metal tank (heavy gauge) mfg .....	56	58	37	42	2	3	9	3	3	5	
332420	Metal tank (heavy gauge) mfg .....	56	58	37	42	2	3	2	3	3	3	
33243	Metal can, box, & other metal container (light gauge) mfg .....	76	75	51	62	2	2	4	6	2	4	
332431	Metal can mfg .....	79	77	53	70	2	3	2	8	3	9	
332439	Other metal container mfg .....	68	66	45	43	2	2	2	2	2	2	
3325	Hardware mfg .....	62	67	46	48	3	3	1	4	4	1	
33251	Hardware mfg .....	62	67	46	48	3	3	4	4	4	8	
332510	Hardware mfg .....	62	67	46	48	3	3	2	4	4	2	
3326	Spring & wire product mfg .....	64	65	50	45	2	2	3	2	3	3	
33261	Spring & wire product mfg .....	64	65	50	45	2	2	2	2	3	3	
332611	Spring (heavy gauge) mfg .....	64	71	50	57	2	2	1	4	3	3	
332612	Spring (light gauge) mfg .....	65	64	52	49	3	3	2	3	4	3	
332618	Other fabricated wire product mfg ...	64	65	50	42	3	2	1	3	4	4	
3327	Machine shops, turned product, & screw, nut, & bolt mfg .....	58	53	37	28	2	2	3	2	3	3	
33271	Machine shops .....	57	50	37	25	2	2	3	2	4	3	
332710	Machine shops .....	57	50	37	25	2	2	2	2	4	4	
33272	Turned product & screw, nut, & bolt mfg .....	61	59	38	35	2	2	3	3	2	14	
332721	Precision turned product mfg .....	58	54	34	30	3	3	2	3	3	2	
332722	Bolt, nut, screw, rivet, & washer mfg.	65	65	44	42	2	2	2	3	3	2	
3328	Coating, engraving, heat treating, & allied activities .....	63	61	48	47	2	2	4	3	3	3	
33281	Coating, engraving, heat treating, & allied activities .....	63	61	48	47	2	2	3	3	3	4	
332811	Metal heat treating .....	71	65	56	54	5	5	2	5	4	4	
332812	Metal coating/engraving (exc jewelry/silverware)/allied services .....	70	71	58	59	2	4	3	3	4	3	
332813	Electroplating, plating, polishing, anodizing, & coloring .....	55	52	39	37	3	3	2	3	3	2	

See footnotes at end of table.



**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change	
						Level			2003	2002		
						2003	2002					
332	Fabricated metal product mfg—Con.											
3329	Other fabricated metal product mfg . . . . .	65	64	47	45	1	1	2	2	1	3	
33291	Metal valve mfg . . . . .	65	64	48	45	2	2	3	2	2	3	
332911	Industrial valve mfg . . . . .	63	63	46	42	3	3	1	2	2	2	
332912	Fluid power valve & hose fitting mfg . . . . .	67	64	49	46	3	2	2	3	3	2	
332913	Plumbing fixture fitting & trim mfg . . . . .	67	66	53	52	2	2	2	2	2	1	
332919	Other metal valve & pipe fitting mfg . . . . .	65	62	52	49	2	4	4	2	3	3	
33299	All other fabricated metal product mfg . . . . .	66	64	46	44	2	2	3	2	2	2	
332991	Ball & roller bearing mfg . . . . .	71	68	55	51	3	5	3	5	5	4	
332992	Small arms ammunition mfg . . . . .	63	69	47	55	1	1	1	1	1	1	
332993	Ammunition (except small arms) mfg . . . . .	52	52	40	28	3	4	1	2	4	4	
332994	Small arms mfg . . . . .	71	72	52	52	5	4	2	7	6	3	
332995	Other ordnance & accessories mfg . . . . .	63	67	59	58	1	3	3	1	3	3	
332996	Fabricated pipe & pipe fitting mfg . . . . .	62	63	38	39	3	2	3	5	2	5	
332997	Industrial pattern mfg . . . . .	55	69	37	43	4	7	11	3	6	7	
332998	Enameled iron & metal sanitary ware mfg . . . . .	72	68	43	37	3	3	3	3	2	2	
332999	All other miscellaneous fabricated metal product mfg . . . . .	66	62	46	43	3	3	2	4	4	2	
333	Machinery mfg . . . . .	59	57	39	37	1	1	3	1	1	2	
3331	Agriculture, construction, & mining machinery mfg . . . . .	60	55	38	36	2	2	4	2	2	3	
33311	Agricultural implement mfg . . . . .	57	52	34	33	3	2	4	2	2	3	
333111	Farm machinery & equipment mfg . . . . .	55	53	36	33	3	3	3	2	2	2	
333112	Lawn & garden tractor & home lawn & garden equipment mfg . . . . .	63	50	29	34	3	4	3	3	4	2	
33312	Construction machinery mfg . . . . .	65	57	43	39	3	3	2	5	4	10	
333120	Construction machinery mfg . . . . .	65	57	43	39	3	3	2	5	4	2	
33313	Mining & oil & gas field machinery mfg . . . . .	57	54	40	40	2	2	2	2	2	2	
333131	Mining machinery & equipment mfg . . . . .	57	53	43	41	3	3	2	3	3	2	
333132	Oil & gas field machinery & equipment mfg . . . . .	57	54	40	39	2	2	2	3	2	3	
3332	Industrial machinery mfg . . . . .	52	51	35	29	2	2	2	2	2	3	
33321	Sawmill & woodworking machinery mfg . . . . .	56	49	35	28	3	3	1	3	3	2	
333210	Sawmill & woodworking machinery mfg . . . . .	56	49	35	28	3	3	2	3	3	3	
33322	Plastics & rubber industry machinery mfg . . . . .	57	56	38	32	3	3	8	4	4	3	
333220	Plastics & rubber industry machinery mfg . . . . .	57	56	38	32	3	3	3	4	4	3	
33329	Other industrial machinery mfg . . . . .	52	50	35	29	2	2	2	2	3	3	
333291	Paper industry machinery mfg . . . . .	68	62	37	34	4	5	5	6	4	4	
333292	Textile machinery mfg . . . . .	<sup>a</sup> 57	<sup>a</sup> 57	<sup>a</sup> 32	<sup>a</sup> 31	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	
333293	Printing machinery & equipment mfg . . . . .	65	58	32	29	3	3	3	3	3	4	
333294	Food product machinery mfg . . . . .	55	52	33	35	5	4	3	2	3	3	
333295	Semiconductor machinery mfg . . . . .	43	44	40	34	3	3	3	2	3	3	
333298	All other industrial machinery mfg . . . . .	56	54	30	23	3	3	2	5	5	6	
3333	Commercial & service industry machinery mfg . . . . .	58	55	37	33	2	2	2	2	2	3	
33331	Commercial & service industry machinery mfg . . . . .	58	55	37	33	2	2	2	2	2	2	
333311	Automatic vending machine mfg . . . . .	44	41	32	30	1	1	1	1	1	1	
333312	Commercial laundry, drycleaning, & pressing machine mfg . . . . .	33	<sup>a</sup> 28	28	<sup>a</sup> 25	5	<sup>a</sup> 4	2	4	<sup>a</sup> 3	1	
333313	Office machinery mfg . . . . .	<sup>a</sup> 43	<sup>a</sup> 56	<sup>a</sup> 33	<sup>a</sup> 30	<sup>a</sup> 3	<sup>a</sup> 4	<sup>a</sup> 3	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	
333314	Optical instrument & lens mfg . . . . .	71	66	43	34	3	3	2	4	3	3	
333315	Photographic & photocopying equipment mfg . . . . .	70	59	57	46	1	1	1	1	1	1	
333319	Other commercial & service industry machinery mfg . . . . .	60	55	32	32	3	3	3	3	3	3	
3334	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	60	47	42	2	3	3	2	3	3	
33341	Ventilation, heating, AC, & commercial refrigeration equip mfg . . . . .	62	60	47	42	2	3	4	2	3	4	
333411	Air purification equipment mfg . . . . .	62	59	41	37	2	3	2	2	2	1	
333412	Industrial & commercial fan & blower mfg . . . . .	64	55	46	38	4	3	3	4	2	4	
333414	Heating equipment (except warm air furnaces) mfg . . . . .	59	59	43	46	2	2	1	2	2	2	
333415	AC & warm air heating & commercial/industrial refrig equip mfg . . . . .	62	60	48	42	3	4	3	2	4	3	
3335	Metalworking machinery mfg . . . . .	58	57	32	35	1	1	4	2	2	5	
33351	Metalworking machinery mfg . . . . .	58	57	32	35	1	1	3	2	2	3	
333511	Industrial mold mfg . . . . .	58	64	29	39	2	3	2	3	4	4	
333512	Machine tool (metal cutting types) mfg . . . . .	49	47	32	34	3	3	2	2	2	1	
333513	Machine tool (metal forming types) mfg . . . . .	49	46	31	28	3	2	1	4	4	1	
333514	Special die & tool, die set, jig, & fixture mfg . . . . .	60	57	33	35	2	2	2	2	2	2	
333515	Cutting tool & machine tool accessory mfg . . . . .	67	60	36	41	2	3	2	5	5	2	
333516	Rolling mill machinery & equipment mfg . . . . .	56	58	29	28	10	12	3	12	11	2	
333518	Other metalworking machinery mfg . . . . .	57	58	29	31	3	3	2	2	2	2	

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production			
						Level			2003	2002	2002 to 2003 change	
						2003	2002					
333	Machinery mfg—Con.											
3336	Engine, turbine, & power transmission equipment mfg . . . . .	67	61	51	45	2	2	8	2	2	3	
33361	Engine, turbine, & power transmission equipment mfg . . . . .	67	61	51	45	2	2	6	2	2	10	
333611	Turbine & turbine generator set unit mfg . . . . .	<sup>a</sup> 78	<sup>a</sup> 88	<sup>a</sup> 62	<sup>a</sup> 70	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 2	
333612	Speed changer, industrial high-speed drive, & gear mfg . . . . .	53	53	41	29	1	2	1	2	1	1	
333613	Mechanical power transmission equipment mfg . . . . .	51	50	39	38	4	4	3	4	3	2	
333618	Other engine equipment mfg . . . . .	67	53	49	41	2	2	2	2	3	2	
3339	Other general-purpose machinery mfg . . . . .	59	58	38	38	1	1	1	1	1	1	
33391	Pump & compressor mfg . . . . .	59	63	43	44	2	2	3	3	3	4	
333911	Pump & pumping equipment mfg . . . . .	64	67	46	50	2	2	2	4	4	2	
333912	Air & gas compressor mfg . . . . .	52	56	40	39	3	3	1	5	4	2	
333913	Measuring & dispensing pump mfg . . . . .	<sup>a</sup> 74	<sup>a</sup> 70	<sup>a</sup> 40	<sup>a</sup> 37	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	
33392	Material handling equipment mfg . . . . .	59	55	34	33	1	2	2	2	2	3	
333921	Elevator & moving stairway mfg . . . . .	66	70	47	50	2	3	2	2	2	2	
333922	Conveyor & conveying equipment mfg . . . . .	58	55	28	28	2	3	2	3	3	1	
333923	Overhead traveling crane, hoist, & monorail system mfg . . . . .	59	49	38	34	2	4	4	2	2	2	
333924	Industrial truck, tractor, trailer, & stacker machinery mfg . . . . .	58	52	41	38	2	3	2	2	3	2	
33399	All other general-purpose machinery mfg . . . . .	59	58	39	38	2	2	3	2	2	4	
333991	Power-driven handtool mfg . . . . .	75	75	56	59	3	2	2	7	4	8	
333992	Welding & soldering equipment mfg . . . . .	41	50	27	36	5	6	4	5	7	3	
333993	Packaging machinery mfg . . . . .	60	62	36	39	2	3	3	2	2	2	
333994	Industrial process furnace & oven mfg . . . . .	54	49	35	30	2	2	3	2	2	2	
333995	Fluid power cylinder & actuator mfg . . . . .	66	62	41	39	2	2	2	3	3	2	
333996	Fluid power pump & motor mfg . . . . .	64	62	42	41	3	3	2	3	3	1	
333997	Scale & balance (except laboratory) mfg . . . . .	58	50	44	20	1	3	3	1	9	9	
333999	All other miscellaneous general-purpose machinery mfg . . . . .	61	55	41	37	2	3	3	2	3	2	
334	Computer & electronic product mfg . . . . .	53	52	38	38	3	2	2	2	1	2	
3341	Computer & peripheral equipment mfg . . . . .	65	62	45	43	2	2	4	3	2	3	
33411	Computer & peripheral equipment mfg . . . . .	65	62	45	43	2	2	3	3	2	11	
334111	Electronic computer mfg . . . . .	67	65	49	44	1	1	1	3	3	3	
334112	Computer storage device mfg . . . . .	55	<sup>a</sup> 51	34	<sup>a</sup> 36	6	<sup>a</sup> 3	4	5	<sup>a</sup> 3	3	
334113	Computer terminal mfg . . . . .	<sup>a</sup> 94	51	<sup>a</sup> 31	50	<sup>a</sup> 1	1	<sup>a</sup> 1	<sup>a</sup> 1	1	<sup>a</sup> 1	
334119	Other computer peripheral equipment mfg . . . . .	71	<sup>a</sup> 66	56	<sup>a</sup> 51	4	<sup>a</sup> 4	3	3	<sup>a</sup> 4	2	
3342	Communications equipment mfg . . . . .	<sup>a</sup> 32	<sup>a</sup> 35	<sup>a</sup> 24	<sup>a</sup> 26	<sup>a</sup> 4	<sup>a</sup> 3	<sup>a</sup> 5	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 5	
33421	Telephone apparatus mfg . . . . .	<sup>a</sup> 24	<sup>a</sup> 27	<sup>a</sup> 19	<sup>a</sup> 21	<sup>a</sup> 4	<sup>a</sup> 3	<sup>a</sup> 4	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 5	
334210	Telephone apparatus mfg . . . . .	<sup>a</sup> 24	<sup>a</sup> 27	<sup>a</sup> 19	<sup>a</sup> 21	<sup>a</sup> 4	<sup>a</sup> 3	<sup>a</sup> 1	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 1	
33422	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	52	<sup>a</sup> 56	34	<sup>a</sup> 38	2	<sup>a</sup> 2	7	2	<sup>a</sup> 2	6	
334220	Radio & TV broadcasting & wireless communications equipment mfg . . . . .	52	<sup>a</sup> 56	34	<sup>a</sup> 38	2	<sup>a</sup> 2	1	2	<sup>a</sup> 2	1	
33429	Other communications equipment mfg . . . . .	63	66	41	39	2	2	4	3	2	5	
334290	Other communications equipment mfg . . . . .	63	66	41	39	2	2	2	3	2	2	
3343	Audio & video equipment mfg . . . . .	57	54	41	40	4	5	3	3	4	2	
33431	Audio & video equipment mfg . . . . .	57	54	41	40	4	5	3	3	4	2	
334310	Audio & video equipment mfg . . . . .	57	54	41	40	4	5	5	3	4	3	
3344	Semiconductor & other electronic component mfg . . . . .	70	58	56	46	2	2	3	2	2	2	
33441	Semiconductor & other electronic component mfg . . . . .	70	58	56	46	2	2	4	2	2	5	
334411	Electron tube mfg . . . . .	74	73	48	55	1	1	2	6	5	2	
334412	Bare printed circuit board mfg . . . . .	60	51	48	38	3	3	3	3	3	3	
334413	Semiconductor & related device mfg . . . . .	79	65	74	56	3	3	3	4	3	3	
334414	Electronic capacitor mfg . . . . .	57	51	45	36	4	4	2	4	4	3	
334415	Electronic resistor mfg . . . . .	50	47	29	29	3	3	2	3	3	1	
334416	Electronic coil, transformer, & other inductor mfg . . . . .	50	45	32	29	2	2	2	2	2	1	
334417	Electronic connector mfg . . . . .	65	53	46	40	7	3	5	8	3	6	
334418	Printed circuit assembly (electronic assembly) mfg . . . . .	<sup>a</sup> 63	47	<sup>a</sup> 47	39	<sup>a</sup> 2	2	<sup>a</sup> 3	<sup>a</sup> 1	2	<sup>a</sup> 2	
334419	Other electronic component mfg . . . . .	49	48	27	26	3	3	2	3	2	2	
3345	Navigational, measuring, medical, & control instruments mfg . . . . .	63	60	39	40	2	2	5	1	2	6	
33451	Navigational, measuring, medical, & control instruments mfg . . . . .	63	60	39	40	2	2	2	1	2	3	
334510	Electromedical & electrotherapeutic apparatus mfg . . . . .	75	79	55	57	2	2	2	3	5	4	
334511	Search, detection, navigation, & guidance instrument mfg . . . . .	<sup>a</sup> 67	59	<sup>a</sup> 44	43	<sup>a</sup> 2	3	<sup>a</sup> 3	<sup>a</sup> 3	4	<sup>a</sup> 3	
334512	Automatic environmental control mfg . . . . .	62	49	40	37	3	2	2	3	1	2	
334513	Industrial process control instrument mfg . . . . .	55	58	34	29	3	2	3	2	3	3	
334514	Totalizing fluid meter & counting device mfg . . . . .	70	60	52	47	2	7	7	2	5	4	
334515	Electricity measuring & testing instrument mfg . . . . .	52	51	31	36	3	3	2	2	2	1	
334516	Analytical laboratory instrument mfg . . . . .	59	62	28	32	8	8	2	4	4	2	
334517	Irradiation apparatus mfg . . . . .	77	79	42	49	2	2	2	4	4	2	
334518	Watch, clock, & part mfg . . . . .	46	51	34	27	2	2	1	1	1	1	

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>					
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change
						Level			2003	2002	
						2003	2002				
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 .....	53	59	34	32	3	2	3	2	2	1
3346	Mfg & reproducing magnetic & optical media .....	67	73	56	55	5	4	1	4	4	1
33461	Mfg & reproducing magnetic & optical media .....	67	73	56	55	5	4	3	4	4	3
334611	Software reproducing .....	78	81	63	69	4	6	8	8	2	9
334612	Prerecorded CD (except software), tape, & record reproducing .....	63	72	51	50	6	4	3	5	5	4
334613	Magnetic & optical recording media mfg .....	81	77	79	75	3	7	6	4	7	5
335	Electrical equipment, appliance, & component mfg .....	64	60	46	44	1	1	2	1	1	3
3351	Electric lighting equipment mfg .....	60	58	41	37	2	3	2	2	2	2
33511	Electric lamp bulb & part mfg .....	61	67	52	53	1	1	4	1	3	5
335110	Electric lamp bulb & part mfg .....	61	67	52	53	1	1	1	1	3	3
33512	Lighting fixture mfg .....	60	56	39	35	2	3	2	2	2	2
335121	Residential electric lighting fixture mfg .....	<sup>a</sup> 62	<sup>a</sup> 52	<sup>a</sup> 41	<sup>a</sup> 24	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 3
335122	Commercial/industrial/institutional electric lighting fixture mfg .....	55	54	35	35	3	5	4	3	4	3
335129	Other lighting equipment mfg .....	67	62	43	44	2	3	3	3	3	3
3352	Household appliance mfg .....	78	72	59	52	2	2	1	2	2	2
33521	Small electrical appliance mfg .....	84	68	58	43	4	3	7	4	3	6
335211	Electric housewares & household fan mfg .....	88	65	64	45	1	6	6	2	4	5
335212	Household vacuum cleaner mfg .....	80	71	53	41	6	3	4	7	3	4
33522	Major appliance mfg .....	76	74	60	56	2	3	3	2	2	4
335221	Household cooking appliance mfg .....	57	56	43	43	3	2	2	3	2	2
335222	Household refrigerator & home freezer mfg .....	84	81	61	58	2	1	1	3	3	1
335224	Household laundry equipment mfg ..	85	87	71	71	1	1	1	1	1	1
335228	Other major household appliance mfg .....	81	74	65	52	2	8	8	4	4	3
3353	Electrical equipment mfg .....	59	59	38	43	2	2	2	2	2	2
33531	Electrical equipment mfg .....	59	59	38	43	2	2	1	2	2	2
335311	Power, distribution, & specialty transformer mfg .....	61	63	46	46	2	2	1	2	2	1
335312	Motor & generator mfg .....	62	60	37	46	2	2	2	5	2	5
335313	Switchgear & switchboard apparatus mfg .....	63	64	45	45	4	2	4	3	2	3
335314	Relay & industrial control mfg .....	53	54	33	38	3	3	2	2	3	2
3359	Other electrical equipment & component mfg .....	64	58	50	44	1	1	6	1	1	5
33591	Battery mfg .....	65	57	55	49	2	2	2	2	2	2
335911	Storage battery mfg .....	63	<sup>a</sup> 52	55	<sup>a</sup> 45	3	<sup>a</sup> 3	2	2	<sup>a</sup> 2	1
335912	Primary battery mfg .....	68	64	56	54	1	1	1	1	1	2
33592	Communication & energy wire & cable mfg .....	64	53	54	41	2	2	2	3	2	2
335921	Fiber optic cable mfg .....	<sup>a</sup> 52	<sup>a</sup> 45	<sup>a</sup> 50	<sup>a</sup> 34	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1	<sup>a</sup> 1
335929	Other communication & energy wire mfg .....	72	58	57	47	3	3	2	4	3	2
33593	Wiring device mfg .....	64	66	50	51	3	2	4	3	2	4
335931	Current-carrying wiring device mfg ..	65	67	49	50	4	3	4	4	3	3
335932	Noncurrent-carrying wiring device mfg .....	64	64	50	51	3	3	3	2	3	2
33599	All other electrical equipment & component mfg .....	63	57	41	37	1	1	2	1	2	2
335991	Carbon & graphite product mfg .....	66	53	56	43	2	3	3	3	4	3
335999	All other miscellaneous electrical equipment & component mfg .....	<sup>a</sup> 62	57	<sup>a</sup> 39	36	<sup>a</sup> 2	1	<sup>a</sup> 1	<sup>a</sup> 1	2	<sup>a</sup> 2
336	Transportation equipment mfg .....	66	64	47	45	1	1	2	1	1	1
3361	Motor vehicle mfg .....	82	83	52	52	1	2	3	1	1	2
33611	Automobile & light duty motor vehicle mfg .....	83	85	52	53	1	2	3	1	1	3
336111	Automobile mfg .....	80	82	47	48	1	3	3	1	1	1
336112	Light truck & utility vehicle mfg .....	87	89	60	59	1	1	1	1	2	1
33612	Heavy duty truck mfg .....	61	52	44	35	2	2	5	2	2	2
336120	Heavy duty truck mfg .....	61	52	44	35	2	2	2	2	2	1
3362	Motor vehicle body & trailer mfg .....	61	61	36	36	2	2	3	2	1	2
33621	Motor vehicle body & trailer mfg .....	61	61	36	36	2	2	1	2	1	3
336211	Motor vehicle body mfg .....	64	65	41	35	4	2	5	3	2	3
336212	Truck trailer mfg .....	54	54	38	36	3	2	2	2	2	1
336213	Motor home mfg .....	61	55	37	33	2	1	1	1	1	1
336214	Travel trailer & camper mfg .....	63	64	29	38	4	3	4	4	2	4
3363	Motor vehicle parts mfg .....	73	72	56	54	1	2	2	2	2	2
33631	Motor vehicle gasoline engine & engine parts mfg .....	74	73	56	56	1	2	2	1	2	2
336311	Carburetor, piston, piston ring, & valve mfg .....	82	80	70	68	3	4	2	5	5	2
336312	Gasoline engine & engine parts mfg ..	72	71	54	54	2	2	1	1	2	1
33632	Motor vehicle electrical & electronic equipment mfg .....	64	60	48	43	4	6	2	5	5	4
336321	Vehicle lighting equipment mfg .....	79	71	64	59	3	3	2	3	3	1
336322	Other motor vehicle electrical & electronic equipment mfg .....	62	59	46	41	4	7	7	5	6	6

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>						
		2003	2002	2003	2002	Full production		2002 to 2003 change	National emergency production		2002 to 2003 change	
						Level			2003	2002		
						2003	2002					
336	Transportation equipment mfg—Con.											
3363	Motor vehicle parts mfg—Con.											
33633	Motor vehicle steering & suspension component (except spring) mfg .....	70	72	54	59	2	4	2	2	4	2	2
336330	Motor vehicle steering & suspension component (except spring) mfg .....	70	72	54	59	2	4	4	2	4	3	3
33634	Motor vehicle brake system mfg .....	78	75	59	60	2	3	2	3	5	3	3
336340	Motor vehicle brake system mfg .....	78	75	59	60	2	3	3	3	5	4	4
33635	Motor vehicle transmission & power train parts mfg .....	77	81	64	66	2	4	2	1	4	1	1
336350	Motor vehicle transmission & power train parts mfg .....	77	81	64	66	2	4	4	1	4	4	4
33636	Motor vehicle seating & interior trim mfg .....	84	83	60	48	3	3	5	3	5	3	3
336360	Motor vehicle seating & interior trim mfg .....	84	83	60	48	3	3	3	3	5	5	5
33637	Motor vehicle metal stamping .....	76	75	59	57	3	3	2	3	3	2	2
336370	Motor vehicle metal stamping .....	76	75	59	57	3	3	2	3	3	2	2
33639	Other motor vehicle parts mfg .....	72	71	54	53	2	2	1	3	3	1	1
336391	Motor vehicle air-conditioning mfg .....	73	76	63	62	1	2	2	1	3	3	3
336399	All other motor vehicle parts mfg .....	72	70	53	52	2	2	1	4	3	2	2
3364	Aerospace product & parts mfg .....	55	52	41	38	1	1	2	1	1	3	3
33641	Aerospace product & parts mfg .....	55	52	41	38	1	1	2	1	1	2	2
336411	Aircraft mfg .....	47	50	34	35	1	1	1	1	1	1	1
336412	Aircraft engine & engine parts mfg ..	<sup>a</sup> 63	61	<sup>a</sup> 50	42	<sup>a</sup> 1	2	<sup>a</sup> 1	<sup>a</sup> 2	3	<sup>a</sup> 2	<sup>a</sup> 2
336413	Other aircraft part & auxiliary equipment mfg .....	57	58	41	44	2	2	1	2	2	1	1
336414	Guided missile & space vehicle mfg .	87	<sup>a</sup> 45	85	<sup>a</sup> 38	1	<sup>a</sup> 1	1	1	<sup>a</sup> 1	1	1
336415	Guided missile & space vehicle propulsion unit & parts mfg .....	43	45	25	27	2	3	1	2	2	1	1
336419	Other guided missile & space vehicle parts & auxiliary equip mfg .....	44	46	39	37	1	2	1	1	2	2	2
3365	Railroad rolling stock mfg .....	50	45	41	37	2	2	1	2	2	1	1
33651	Railroad rolling stock mfg .....	50	45	41	37	2	2	2	2	2	2	2
336510	Railroad rolling stock mfg .....	50	45	41	37	2	2	1	2	2	2	2
3366	Ship & boat building .....	52	53	38	37	1	1	2	1	1	2	2
33661	Ship & boat building .....	52	53	38	37	1	1	1	1	1	1	1
336611	Ship building & repairing .....	<sup>a</sup> 48	51	<sup>a</sup> 38	40	<sup>a</sup> 1	2	<sup>a</sup> 1	<sup>a</sup> 1	2	<sup>a</sup> 2	<sup>a</sup> 2
336612	Boat building .....	61	59	39	34	2	3	2	2	2	2	2
3369	Other transportation equipment mfg .....	58	61	27	29	1	1	3	2	3	3	3
33699	Other transportation equipment mfg .....	58	61	27	29	1	1	5	2	3	2	2
336991	Motorcycle, bicycle, & parts mfg .....	<sup>a</sup> 57	<sup>a</sup> 59	<sup>a</sup> 17	<sup>a</sup> 18	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 1	<sup>a</sup> 1
336992	Military armored vehicle, tank, & tank component mfg .....	44	42	39	37	2	1	1	1	1	1	1
336999	All other transportation equipment mfg .....	65	74	42	47	2	1	2	2	2	1	1
337	Furniture & related product mfg .....	62	61	36	36	1	2	2	2	2	3	3
3371	Household & institutional furniture & kitchen cabinet mfg .....	64	66	36	34	2	2	4	3	3	5	5
33711	Wood kitchen cabinet & counter top mfg .....	72	73	46	43	3	4	2	4	5	6	6
337110	Wood kitchen cabinet & counter top mfg .....	72	73	46	43	3	4	3	4	5	2	2
33712	Household & institutional furniture mfg .	61	63	32	31	2	2	2	4	3	2	2
337121	Upholstered household furniture mfg .....	71	74	44	39	4	5	3	5	8	5	5
337122	Nonupholstered wood household furniture mfg .....	63	65	28	28	4	4	4	6	5	2	2
337124	Metal household furniture mfg .....	<sup>a</sup> 44	<sup>a</sup> 47	<sup>a</sup> 22	<sup>a</sup> 24	<sup>a</sup> 2	<sup>a</sup> 3	<sup>a</sup> 3	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2	<sup>a</sup> 2
337125	Household furniture (except wood & metal) mfg .....	44	42	36	32	9	9	3	7	6	3	3
337127	Institutional furniture mfg .....	61	59	36	32	4	4	3	3	5	5	5
337129	Wood television, radio, & sewing machine cabinet mfg .....	<sup>a</sup> 39	67	<sup>a</sup> 30	44	<sup>a</sup> 1	2	<sup>a</sup> 2	<sup>a</sup> 1	5	<sup>a</sup> 5	<sup>a</sup> 5
3372	Office furniture (including fixtures) mfg ...	59	53	35	39	2	2	2	4	2	9	9
33721	Office furniture (including fixtures) mfg .	59	53	35	39	2	2	2	4	2	3	3
337211	Wood office furniture mfg .....	<sup>a</sup> 57	42	<sup>a</sup> 31	31	<sup>a</sup> 2	4	<sup>a</sup> 5	<sup>a</sup> 2	3	<sup>a</sup> 3	<sup>a</sup> 3
337212	Custom architectural woodwork & millwork mfg .....	73	66	47	40	4	3	5	4	6	6	6
337214	Office furniture (except wood) mfg ..	54	52	30	39	2	3	2	6	2	6	6
337215	Showcase, partition, shelving, & locker mfg .....	60	60	43	42	3	3	2	3	4	2	2
3379	Other furniture related product mfg .....	64	63	44	40	4	3	1	3	3	3	3
33791	Mattress mfg .....	63	63	42	40	5	4	2	3	3	2	2
337910	Mattress mfg .....	63	63	42	40	5	4	2	3	3	3	3
33792	Blind & shade mfg .....	65	63	48	40	4	4	2	3	7	2	2
337920	Blind & shade mfg .....	65	63	48	40	4	4	3	3	7	7	7
339	Miscellaneous mfg .....	66	64	43	40	2	2	2	2	2	1	1
3391	Medical equipment & supplies mfg .....	68	63	48	44	2	3	2	3	3	4	4
33911	Medical equipment & supplies mfg .....	68	63	48	44	2	3	1	3	3	4	4
339111	Laboratory apparatus & furniture mfg .....	68	68	33	38	4	4	2	3	2	2	2
339112	Surgical & medical instrument mfg ..	66	58	46	40	2	5	5	4	5	4	4
339113	Surgical appliance & supplies mfg ..	68	66	52	48	5	3	3	4	3	3	3
339114	Dental equipment & supplies mfg ...	76	74	50	48	5	5	2	5	5	2	2
339115	Ophthalmic goods mfg .....	63	52	50	43	3	4	5	2	5	4	4
339116	Dental laboratories .....	84	88	56	66	3	2	1	4	3	3	3

See footnotes at end of table.

**Table 2. Capacity Utilization Rates by Industry: Fourth Quarters 2003 and 2002—Con.**

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

NAICS code	Industry	Full production		National emergency production		Standard errors <sup>1</sup>							
		2003	2002	2003	2002	Full production			National emergency production				
						Level		2002 to 2003 change	Level		2002 to 2003 change		
						2003	2002		2003	2002			
339	Miscellaneous mfg—Con.												
3399	Other miscellaneous mfg .....	63	65	37	36	3	2	2	2	2	2	2	2
33991	Jewelry & silverware mfg .....	64	59	33	33	3	4	2	2	3	2	2	2
339911	Jewelry (except costume) mfg .....	64	58	34	35	5	5	4	3	4	3	3	3
339912	Silverware & plated ware mfg.....	63	55	28	27	6	4	2	5	4	2	2	2
339913	Jewelers' material & lapidary work mfg .....	77	68	57	50	3	3	3	6	4	3	3	3
339914	Costume jewelry & novelty mfg .....	60	64	28	28	4	5	4	4	6	5	5	5
33992	Sporting & athletic goods mfg .....	70	65	34	30	4	4	2	6	5	2	2	2
339920	Sporting & athletic goods mfg .....	70	65	34	30	4	4	3	6	5	3	3	3
33993	Doll, toy, & game mfg .....	51	60	38	45	3	4	2	3	5	4	4	4
339931	Doll & stuffed toy mfg .....	<sup>a16</sup>	<sup>a27</sup>	<sup>a14</sup>	<sup>a24</sup>	<sup>a1</sup>	<sup>a2</sup>	<sup>a2</sup>	<sup>a1</sup>	<sup>a2</sup>	<sup>a2</sup>	<sup>a2</sup>	<sup>a2</sup>
339932	Game, toy, & children's vehicle mfg .	66	69	46	50	4	5	4	4	7	5	5	5
33994	Office supplies (except paper) mfg ....	64	63	49	43	2	2	3	3	3	3	3	3
339941	Pen & mechanical pencil mfg.....	63	63	42	41	2	1	2	5	4	3	3	3
339942	Lead pencil & art good mfg.....	71	69	63	64	3	4	4	4	5	5	5	5
339943	Marking device mfg .....	55	<sup>a56</sup>	44	<sup>a31</sup>	2	<sup>a4</sup>	4	3	<sup>a2</sup>	3	3	3
339944	Carbon paper & inked ribbon mfg ...	63	63	58	40	4	5	3	3	13	13	13	13
33995	Sign mfg.....	66	71	45	41	3	4	2	4	4	2	2	2
339950	Sign mfg.....	66	71	45	41	3	4	3	4	4	4	4	4
33999	All other miscellaneous mfg .....	60	65	36	36	6	2	1	3	2	2	2	2
339991	Gasket, packing, & sealing device mfg .....	69	70	45	45	2	3	2	5	6	5	5	5
339992	Musical instrument mfg .....	67	59	17	14	3	3	3	1	1	1	1	1
339993	Fastener, button, needle, & pin mfg .	54	60	31	39	5	5	5	9	11	4	4	4
339994	Broom, brush, & mop mfg .....	68	66	36	35	5	5	2	7	7	2	2	2
339995	Burial casket mfg .....	74	63	46	45	4	5	3	4	3	2	2	2
339999	All other miscellaneous mfg .....	50	<sup>a65</sup>	40	<sup>a45</sup>	10	<sup>a3</sup>	11	8	<sup>a1</sup>	7	7	7
5111	Newspaper, periodical, book, and database publishers.....	<sup>a81</sup>	81	<sup>a76</sup>	69	<sup>a3</sup>	6	<sup>a5</sup>	<sup>a2</sup>	13	<sup>a13</sup>	<sup>a13</sup>	<sup>a13</sup>

<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**  
(3-3-2004)

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

**SURVEY OF PLANT CAPACITY UTILIZATION  
FOURTH QUARTER 2003 (October–December)**

**NOTICE – 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 retained in your files are immune from legal process.

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

**IMPORTANT**

PLEASE READ INSTRUCTIONS AND DEFINITIONS BEFORE COMPLETING FORM

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

**NOTE** — If you need a copy of the instructions, please visit [www.census.gov/cir/www/mqc1pag2.html](http://www.census.gov/cir/www/mqc1pag2.html)

**Item 1 OPERATIONAL STATUS**

Mark (X) ONE box which best describes this establishment at the end of 2003. See instructions for reporting.

- 12  In operation – Complete items 2 through 6.
- 13  Temporarily idle – See instruction sheet – Complete items 2–6.

- 14  Sold or leased to another company  
See instruction sheet . . . . .
- 15  Permanently ceased operations –  
See instruction sheet. . . . .

} Give date sold or closed	Month	Year

**Item 2 VALUE OF PRODUCTION**

**ACTUAL PRODUCTION**

	4th QTR. 2003		4th QTR. 2002	
	\$ Mil.	Thou.	Mil.	Thou.
a. Report market value of <b>actual production</b> for the 4th quarter of 2003 . . . . .	23			

**FULL PRODUCTION CAPABILITY**

	4th QTR. 2003		4th QTR. 2002	
	\$ Mil.	Thou.	Mil.	Thou.
b. Estimate the market value of production of this plant as if it had been operating at <b>full production capability</b> in the 4th quarter of 2003. . . . . Assume:	34			

- 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 in the fourth quarter.

c. Divide your **actual production estimate** by your **full production estimate**. Multiply this ratio by 100 to get a percentage. Enter this percentage in the box.

**Capacity Utilization:**

Is this a reasonable estimate of your sustainable capacity use in the 4th quarter?

- Yes
- No – Please review your full production estimate

d. If your estimate of 2003 fourth quarter **full production capability** has changed compared to 2002, mark (X) the primary reasons.

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

**Item 3 WORK PATTERNS OF FOURTH QUARTER OPERATIONS 2003**

Column (1-3) – Report work patterns for **each shift of actual operations** in the 4th quarter of 2003.  
 If the plant did not operate a second or third shift, do not complete the corresponding columns.  
 Column (4) – Report work patterns as if the plant operated at **full production capability** as defined in item 2b.

	Actual Operations									Full Production Capability			
	Shift one			Shift two			Shift three			Number of shifts per day			
	(1)	(2)	(3)	(4)									
<b>90</b>													
<b>a.</b> Days per week in operation . . . . .	<b>91</b>												
<b>b.</b> Plant hours per week in operation . . . . .	<b>92</b>												
<b>c.</b> Weeks in operation in the quarter . . . . .	<b>93</b>												
<b>d.</b> Total number of production workers . . . . .	<b>94</b>												
<b>e.</b> Temporary production workers included in line d (not on the payroll and hired through temporary agencies or as their own agent; see instructions) . . . . .	<b>95</b>												
		Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.	Mil.	Thou.	Hrs.
<b>f.</b> Total hours worked by production workers . . . . .	<b>96</b>												
<b>g.</b> Hours worked by temporary production workers (included in line f) . . . . .	<b>97</b>												
<b>h.</b> Overtime hours worked by production workers (included in line f) . . . . .	<b>98</b>												

**Item 4 FOURTH QUARTER ACTUAL OPERATIONS VS FULL PRODUCTION CAPABILITY FOR 2003**

- a. 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="text"/>                                |
- b. If **actual** operations in the 4th quarter were **less** than **full production capability**, how quickly could you increase to that level, if necessary? Assume sufficient demand for your product. Mark (X) the shortest amount of time you would require.
- 71  Less than 3 months    72  3 to 6 months    73  7 to 12 months    74  More than one year

**Item 5 NATIONAL EMERGENCY PRODUCTION**

	NATIONAL EMERGENCY PRODUCTION				
	4th QTR. 2003		4th QTR. 2002		
\$	Mil.	Thou.	Mil.	Thou.	
<b>a.</b> Estimate the value of production for this plant as if it had been operating under <b>national emergency</b> conditions in the 4th quarter of 2003. . . . .	99				

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

**See the instruction sheet for additional guidance.**

- b. If **actual** operations in the 4th quarter were **less** than **national emergency production**, how quickly could you increase to the national emergency production level if given emergency priority by the government? Mark (X) the shortest amount of time you 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 (3-3-2004)



## **INSTRUCTIONS FOR THE SURVEY OF PLANT CAPACITY UTILIZATION DURING THE FOURTH QUARTER 2003**

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**AUTHORITY AND CONFIDENTIALITY** – The law that authorizes this survey (Title 13, United States Code) requires that we keep your report in full confidence. Only persons sworn to uphold confidentiality of Title 13 will see your information, and it will be used only for statistical purposes. 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 the Associate Director for Administration/Comptroller, Attn: Paperwork Reduction Project 0607-0175, Room 3104, FB-3, Bureau of the Census, Washington, DC 20233.

## WHO SHOULD REPORT?

This report covers the manufacturing plant 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.

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 in the fourth quarter of 2003:

- (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 in the fourth quarter; and
- (3)** the value of products that could have been produced if required in a national emergency.

If 2002 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

## 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 2003 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 fourth quarter** report actual operations as zero where appropriate.
- b.** If this plant was temporarily idle during **only part of the fourth 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 2003.

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

- a. If you still maintain records for this plant, complete items 2 through 6.
- b. If you do not have 4th quarter information about this plant, complete item 6 only and return the form.

**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 fourth quarter of 2003, complete items 2 through 6. Report full production and emergency production capabilities, as if the plant operated the **entire** quarter.

SPECIAL NOTE:

### Seasonal Operations

- a. If this plant is usually temporarily idle during the fourth quarter *due to seasonal factors*, report as instructed for idle plants.
- b. If this plant was not temporarily idle during the fourth 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 4a if actual operations are less than full production capability.

## Item 2 – VALUE OF PRODUCTION

### Item 2a – MARKET VALUE OF PRODUCTION

Report the value of production based on estimated sales price(s) of what was produced during the fourth quarter, not fourth 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 fourth 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 fourth quarter.
- (2) Use book figures of actual production costs plus an estimate of markup to cover overhead and profit.

- (3) Use fourth 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 fourth 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 in the fourth quarter of 2003.

**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 in the fourth 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 fourth quarter. If your plant is subject to short-run variation assume the product mix of the current period.

**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 fourth 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 2c) by your current **rate of capacity** utilization (in decimal form). For example, if your value of actual operations for the fourth 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 fourth 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 percentage of your sustainable capacity use in the 4th quarter of 2003?** Mark (X) yes or no. If no, please review your full production capability estimate. If yes, continue with the next item.

**Item 2d – Comparing full production capability between fourth quarters of 2002 and 2003**

If the value of full production for the fourth quarter of 2003 differs from 2002, mark (X) the primary reasons for the change.

**Item 3 – WORK PATTERNS OF FOURTH QUARTER OPERATIONS**

**Actual Operations – In columns 1 through 3,** report work patterns for the following characteristics covering each *production shift* of actual operations in the 4th quarter of 2003. Report based on the average number of shifts per day in the fourth 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.

**a. Days per week in operation –** For each shift, report the typical number of days per week in operation for the fourth 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 –** For each shift, report the typical number of **hours the plant was in production** 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 fourth quarter. NOTE: The fourth quarter of the year covers 13 weeks.

**d. Total number of production workers –** For each shift, report the total number of production workers at this establishment, including both permanent (payroll) and temporary employees who were paid during the pay period which included November 12. Include all persons on paid sick leave, paid holidays, paid vacation during this pay period.

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.

### Item 3 – WORK PATTERNS OF FOURTH QUARTER OPERATIONS – Continued

**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 pay period including November 12. 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 fourth quarters (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).

**Full production capability – In column 4,** report work patterns for each characteristic as if the plant operated at full production capability in the 4th quarter of 2003. Use the criteria defined for Full Production Capability in item 2b.

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.**

### Item 4 – FOURTH QUARTER ACTUAL OPERATIONS VS. FULL PRODUCTION CAPABILITY

Compare the actual value of production in the fourth quarter of 2003 to the estimated value of full production.

**Item 4a** – Mark (X) reasons why your actual operations were less than the estimated value of full production capability, if appropriate.

**Item 4b** – Select a time period that would have been reasonable to increase output to full production level.

### 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 fourth quarter of 2003. 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.

**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 fourth 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 required.

**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.**

**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) → 1		
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) → 2		
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) → 3		
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 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.

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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 (pps). Independent samples were chosen for each NAICS industry, except for the newly-added publishing industry group (5111), 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 estimates 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 estimates 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 estimates 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 2003 estimates presented in this report are derived from a probability sample of about 17,000 manufacturing establishments and about 250 publishing establishments. The 2003 panel is a continuation of a primary panel first selected in 1999. In each of the years subsequent to 1999 (except for 2003), this primary panel was updated with a representative sample of manufacturing births for those years. The births for a given year were selected from plants that had come into existence in the year following the most recent survey. As with the primary panel, selected births in a given year that remained active continued into subsequent panels. We were not able to update the sample with births in 2003 because we were in the process of transition between frame sources. The frame source we had used in previous years to identify births (the Standard Statistical Establishment List, or SSEL) was not updated and the new frame source (the Business Register) was not ready in time to supplement the previous panel. Therefore, the 2002 sample was simply carried forward for the 2003 survey, minus any plants from the previous panel that were no longer in business. For the 2002 survey, the manufacturing panel was supplemented with a panel of establishments selected from NAICS 5111, Newspaper, Periodical, Book, and Database Publishers. The printing activity of publishers had been omitted from the survey since the conversion to NAICS in 1999 because under NAICS, publishing became a nonmanufacturing industry group. However, the Federal Reserve Board (FRB), one of the funding agencies for the Survey of Plant Capacity, requested that the collection of publishing data be reinstated to enable them to maintain the continuity of production and capacity measures that are featured in its statistical release, G.17 Industrial Production and Capacity Utilization, a principal federal economic indicator.

The primary panel drawn in 1999 was a newly-selected panel and was the first to be wholly selected using the North American Industry Classification System (NAICS).<sup>1</sup> Previous panels were designed to provide estimates by

<sup>1</sup>In 1997 dental labs (SIC 8072) were sampled, and this panel was canvassed in both the 1997 and 1998 survey years. At the time, dental labs were the only new manufacturing activity under NAICS that could be completely identified by a unique SIC industry code. In 1998 the remaining 20 new manufacturing industries (under NAICS) were sampled and mailed as part of the 1998 survey. Data were collected for these respective industries in anticipation of the 1999 publication, which was the first to present NAICS-based estimates.

Standard Industrial Classifications (SIC). The sampling frame for the 1999 panel was created from the Manufacturing sector of the 1997 Economic Census and from a universe of new businesses that were identified subsequent to the census. The economic census manufacturing sector, which was also on a NAICS basis for the first time, contained almost 400,000 establishments. However, only about 230,000 establishments were mailed a census form; the remainder were imputed based on administrative data obtained from Internal Revenue Service and/or Social Security Administrative records. These small administrative record cases were not part of the sampling frame for the Survey of Plant Capacity Utilization. Thus, including new businesses starting after 1997, the final frame for the 1999 survey consisted of nearly 232,000 establishments. The birth frames for survey years 2000, 2001, and 2002 were approximately 7,100, 5,900, and 5,000 establishments, respectively. For all three frames, most of these establishments were “true” births, meaning they came into existence subsequent to the most recent survey. A small number from each frame, however, were existing plants that in earlier frame creation operations could not be coded to a NAICS-6 manufacturing code. These uncoded plants were not included in the original sampling frame. Approximately 1,600 births were sampled for the 2000 survey, about 600 for the 2001 survey, and about 1,000 for the 2002 survey. For the publishing supplement, about 250 establishments were selected from a universe frame of approximately 12,000 establishments.

The conversion to NAICS in 1999 resulted in two major differences from previous survey frames. Some activities were newly classified as manufacturing under NAICS and were in the scope of the survey for the first time. Similarly, some SIC manufacturing activities became nonmanufacturing under NAICS and were no longer in scope. The logging industry fell into the latter category. However, because of a special request to collect logging statistics for the 1999 survey, the panel cases from the previous survey panel were included with the 1999 mailing. In the years subsequent to 1999, however, logging statistics have not been collected.

For the 1999 sample operation, probabilities of selection were assigned to each sampling unit proportionate to its total value of shipments. For new businesses that started after 1997, total value of shipments (either reported or imputed) was obtained from the 1998 Annual Survey of Manufactures (ASM) and was used to assign probabilities

of selection. Selected units were assigned sampling weights equal to the inverse of their probability of selection.

Sampling was conducted independently for each NAICS industry, so actual probabilities of selection were dependent on the final sample size determined for each industry. This determination was based upon a priority assigned to a given industry and the constraint that the total sample size was limited to about 17,000 establishments. Industry priority was based upon the grouping of SIC industries provided by the Department of Defense (DOD) prior to the sampling operation for the 1994 survey.

The DOD identified 188 SIC industries as primary industries and the remainder as nonpriority. The Census Bureau further split each of these groups into five priority categories and allocated the sample accordingly. For the 1996 sampling operation these same categorical breaks were maintained, but the sampling allocation was modified based on the survey results observed for the 1994 panel. For 1999, the DOD partition and the categorical breaks within were again maintained to the extent possible by mapping the SIC-4 codes to NAICS-6 codes. However, this was not a one-to-one mapping, so the final allocation of the sample was modified to remain within the total sample size constraint. For the incoming (new) manufacturing industries (see footnote 1), the allocation parameters used in 1997 and 1998, respectively, were maintained.

The 1999 panel selection was accomplished using a probability proportionate to size (pps) sampling methodology that insured that the sample size desired for each industry was realized. In previous panel selections, sampling was conducted independently by unit, which meant that over repeated applications, the resultant sample size would vary about the expected size. This property results in larger variances for the survey estimates. The fixed sample size methodology was used in 1998 to select the incoming NAICS manufacturing industries but was not used for the overall sample selection that year. Prior to sampling, an adjustment was made to all assigned probabilities that fell below a certain minimum value. This adjustment, which reset the original probabilities to this minimum value, guarded against exceedingly large sample weights (the inverse of the probability of selection) being assigned for selected establishments. If sample establishments with large sample weights reported data in excess of what was anticipated based on the unit of measure of size, the survey estimates could be adversely affected. For the priority industries, the minimum probability value was set to 0.02 (maximum weight 50); for the nonpriority industries, the minimum probability was set to 0.01 (maximum weight 100). These minimum probability rules resulted in a slight increase in the originally-allocated industry sample sizes.

The birth frames in 2000, 2001, and 2002 and the publishing frame in 2002 were sampled in similar fashion.

Probabilities of selection for the 2000 and 2001 birth frames were assigned based on total value of shipments obtained from the ASM. It was decided to use payroll in place of shipments for 2002 births because in the earlier years a significant proportion of the frame units did not have shipments available at the time of sampling. Payroll was also used to determine probabilities of selection for publishing. For year 2000, the birth universe was partitioned into three strata. The first stratum consisted of the births in the 48 highest priority industries. The second stratum consisted of jobbers, while the third contained the remainder of the birth cases. In both 2001 and 2002, each birth universe was treated as a unique stratum. For all three years, the total number of births selected was a function of the total number of manufacturing plants identified in the previous panel as no longer in operation, and the desire to maintain the overall manufacturing panel size at approximately 17,000 establishments. The 2002 publishing universe was partitioned into two strata based on whether or not plants had performed printing-related activities in the past. This determination was made using product information reported for these plants in the 1997 Census. Approximately 900 of the 12,000 frame units had printing activity, and they defined the first stratum. The remaining frame units either had no printing activity in 1997 or did not match to the 1997 Census file. These units defined the second stratum. Sampling for both strata was controlled at the industry group level and was designed so that most of the sample cases were drawn from the first stratum. The total selected sample of about 250 publishing establishments resulted in an overall sample size of about 17,300 units for the survey.

#### ESTIMATING PROCEDURE

The estimated full production rates shown in this report for the six-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 the  $j$ th six-digit NAICS industry,  $WT_{ij}$  is the sampling weight for establishment  $i$  in six-digit industry  $j$ ;  $VPA_{ij}$  is the actual value of production for establishment  $i$  in six-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 the Kth industry group,  $VA_j$  is the value added for the jth six-digit industry as published in the most recent ASM or economic census and  $VA_j/R_j$  represents the value added for the jth six-digit industry adjusted to full production or national emergency production levels of operation.

Value added is defined as the difference between sales values and the cost of merchandise sold without further manufacture, processing, or assembly.

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 six-digit industry estimates described above for manufacturing, except that the summations range over all establishments within the industry group.

The estimated variances for the 2002 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 six-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  $A_j = \sum_i WT_{ij} VPA_{ij}$

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

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

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

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

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 six-digit industries comprising the higher level industry group K. When census year value added data are utilized, then 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 2001 to 2002 are also presented in Table 2. For more information regarding these estimates, contact the Special Studies Branch at 301-763-7657.

## IMPUTATION

A new imputation methodology was implemented beginning with the 2003 survey. The new 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.

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