

# Mineral Industry Surveys

## For information, contact:

Daniel M. Flanagan, Copper Commodity Specialist  
National Minerals Information Center  
Telephone: (703) 648-7726  
Email: dflanagan@usgs.gov

Sheema Merchant (Data)

Telephone: (703) 659-9944

Email: smerchant@usgs.gov

**Internet:** <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-surveys>

## COPPER IN MARCH 2023

In March 2023, mine output of recoverable copper in the United States was 97,700 metric tons (t). The average daily mine production was 3,150 t, a decrease of 5% from that in February and 7% lower than that in March 2022 (fig. 1). Year-to-date recoverable mine production was 291,000 t, a decrease of 6% compared with that through March 2022 (table 2).

At Rio Tinto Group's Bingham Canyon Mine in Utah, conveyor belt motors that feed crushed ore to the concentrator failed in early March. Rio Tinto expected the plant to operate at a reduced capacity until the third quarter of 2023 and that the disruption would lower copper production in 2023 by approximately 65,000 t (Rio Tinto Group, 2023a, p. 2, 11).

data reported in table 3 represent primary production only in 2022 and primary and secondary output in 2023. A secondary copper smelter in Shelby, NC, with a monthly production capacity of roughly 4,200 t of anodes began operating in late 2022 (Toto, 2023).

Total U.S. refinery production in March 2023 was 86,600 t; data for electrolytic and electrowon output, as well as refined production from scrap, are reported in table 4. The average daily refinery production was 2,790 t, 4% less than that in February and essentially unchanged from that in March 2022 (fig. 1). Year-to-date refinery output through March 2023 was 256,000 t, an increase of 3% relative to the same time period in 2022. Total domestic refined copper production in the first quarter of 2023 increased by 31,400 t (14%) from that in the fourth quarter of 2022, when the Rio Tinto smelter was affected by unplanned maintenance of the anode furnace (Rio Tinto Group, 2023b, p. 15).

## Prices

In March 2023, the average Commodity Exchange Inc. (COMEX) copper price was \$4.05 per pound, essentially unchanged compared with \$4.09 per pound in February and 14% lower than \$4.68 per pound in March 2022 (fig. 2, table 11). The average U.S. dealers buying price of number 2 copper scrap was \$3.19 per pound in March 2023, essentially unchanged from \$3.22 per pound in February and 7% lower than \$3.42 per pound in March 2022 (fig. 2, table 12).

## Stocks

Refined copper stocks in the United States totaled 70,000 t at the end of March 2023, 13% greater than those in February and a decrease of 47% from those in March 2022. Total domestic stocks at producers and fabricators (brass mills, refineries, wire-rod mills, and other manufacturers) increased by 8,000 t (18%) and total stocks at exchanges (COMEX and London Metal Exchange Ltd.) increased by 97 t (essentially unchanged) compared with those at the end of February (fig. 3, table 10).

## Industry News

**Chile.**—On March 31, Teck Resources Ltd. announced that the first copper concentrate had been produced at an expansion of the Quebrada Blanca Mine. The company expected the

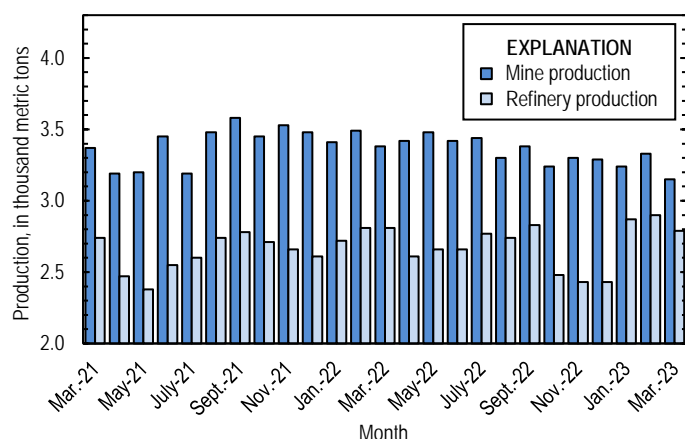


Figure 1. Average daily copper mine (recoverable) and refinery (primary and secondary) production in the United States from March 2021 through March 2023.

Smelter and electrolytic refinery production reported to the U.S. Geological Survey in March 2023 were withheld to avoid disclosing company proprietary data. Smelter and electrolytic refinery output in tables 3 and 4 are estimates based on data in company reports and other public information.

Estimated domestic smelter production was 40,000 t in March 2023. Year-to-date estimated smelter output was 120,000 t, an increase of 14% from that in the same time period in 2022, when the workforce at the Rio Tinto smelter in Utah was significantly impacted by coronavirus disease 2019 (COVID-19) (Rio Tinto Group, 2023a, p. 11). The smelter production

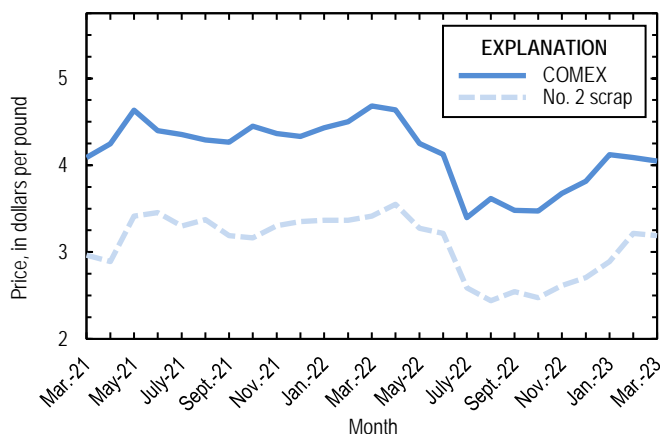


Figure 2. Monthly average Commodity Exchange Inc. (COMEX) copper price and no. 2 copper scrap U.S. dealers buying price from March 2021 through March 2023. Sources: Fastmarkets-AMM and S&P Global Platts Metals Week.

project to ramp up to full capacity by yearend and that future work would increase output at Quebrada Blanca to between 285,000 and 315,000 t of copper per year by 2026 (Teck Resources Ltd., 2023).

**Indonesia.**—Freeport-McMoRan Inc. suspended operations at the Grasberg Mine on February 11 because of landslides and heavy rain. Mining resumed by the end of February and production rates returned to normal by the end of March. Copper production at Grasberg was approximately 149,000 t through March 2023, a decrease of 14% from 173,000 t in the first quarter of 2022. The mine produced 711,000 t of copper in concentrates in all of 2022, equivalent to 3% of global copper mine output (Freeport-McMoRan Inc., 2023a, p. 8, I; b, p. II).

**Panama.**—On February 23, First Quantum Minerals Ltd. halted ore processing at the Cobre Panama Mine in response to a decision by the Government of Panama to prohibit copper concentrate loading at the port of Punta Rincon. The company reached a tentative agreement with the Government on a new operating contract on March 8, and mill throughput returned to full capacity on March 10. First Quantum anticipated that Cobre Panama would produce between 350,000 and 380,000 t of copper in 2023, unchanged from the projection prior to the shutdown (First Quantum Minerals Ltd., 2023).

## References Cited

- First Quantum Minerals Ltd., 2023, First Quantum Minerals reports first quarter 2023 results: Toronto, Ontario, Canada, First Quantum Minerals Ltd. news release, April 25, 12 p. (Accessed April 28, 2023, at [https://s24.q4cdn.com/821689673/files/doc\\_news/2023/NR-23-16-Q1-2023-Financial-Operating-Results-FINAL.pdf](https://s24.q4cdn.com/821689673/files/doc_news/2023/NR-23-16-Q1-2023-Financial-Operating-Results-FINAL.pdf).)
- Freeport-McMoRan Inc., 2023a, Freeport-McMoRan reports first-quarter 2023 results: Phoenix, AZ, Freeport-McMoRan Inc. news release, April 21, [28] p. (Accessed April 28, 2023, at [https://s22.q4cdn.com/529358580/files/doc\\_news/2023/FCX\\_230421\\_1Q\\_2023\\_Earnings\\_Release.pdf](https://s22.q4cdn.com/529358580/files/doc_news/2023/FCX_230421_1Q_2023_Earnings_Release.pdf).)

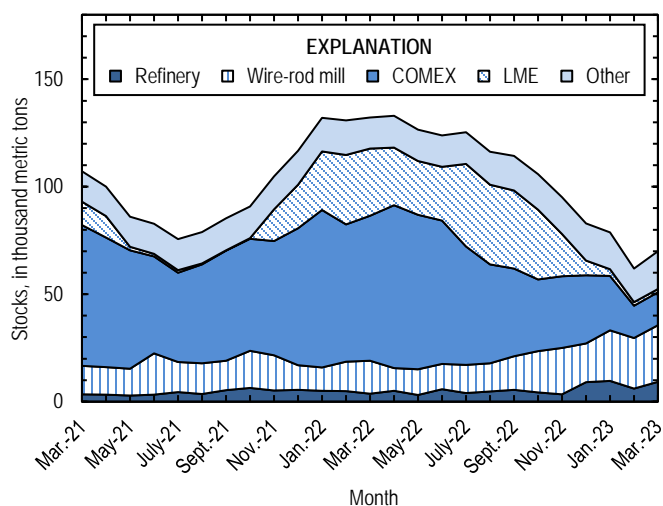


Figure 3. Domestic refined copper stocks at end of month, by type, from March 2021 through March 2023. Sources: London Metal Exchange Ltd., S&P Global Platts Metals Week, and U.S. Geological Survey.

- Freeport-McMoRan Inc., 2023b, Freeport-McMoRan reports fourth-quarter and year ended 2022 results: Phoenix, AZ, Freeport-McMoRan Inc. news release, January 25, [41] p. (Accessed January 27, 2023, at [https://s22.q4cdn.com/529358580/files/doc\\_news/2023/FCX\\_230125\\_4Q\\_2022\\_Earnings\\_Release.pdf](https://s22.q4cdn.com/529358580/files/doc_news/2023/FCX_230125_4Q_2022_Earnings_Release.pdf).)
- Rio Tinto Group, 2023a, Rio Tinto releases first quarter production results: London, United Kingdom, Rio Tinto Group media release, April 20, 27 p. (Accessed April 21, 2023, at <https://cdn-rio.dataweavers.io/-/media/content/documents/invest/financial-news-and-performance/production/2023/rt-first-quarter-operations-review-2023-pdf.pdf?rev=6607c371671041a1865a99e106e9671c>.)
- Rio Tinto Group, 2023b, Rio Tinto releases fourth quarter production results: London, United Kingdom, Rio Tinto Group media release, January 17, 31 p. (Accessed January 17, 2023, at <https://cdn-rio.dataweavers.io/-/media/content/documents/invest/financial-news-and-performance/production/2022/rt-fourth-quarter-operations-review-2022-pdf.pdf?rev=9b582cee49c8494bbd063804c603f095>.)
- Teck Resources Ltd., 2023, Teck announces first copper at QB2 project in northern Chile: Vancouver, British Columbia, Canada, Teck Resources Ltd. news release, March 31, 3 p. (Accessed March 31, 2023, at <https://www.teck.com/media/23-22-TR.pdf>.)
- Toto, Deanne, 2023, ISRI2023—Critical copper: Recycling Today, April 22. (Accessed April 23, 2023, at <https://www.recyclingtoday.com/news/isri-2023-spotlight-on-copper-critical-metal/>.)

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TABLE 1  
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES<sup>1</sup>

(Metric tons, copper content, unless otherwise specified)

	Source table <sup>2</sup>	2022 <sup>p</sup>	2023			
			January	February	March	January– March
Production:						
Primary (from ore):						
Mine, recoverable <sup>3</sup>	(2)	1,230,000	100,000	93,100	97,700	291,000
Smelter <sup>e, 4</sup>	(3)	375,000	40,000 <sup>r</sup>	40,000 <sup>r</sup>	40,000	120,000
Refinery:						
Electrolytic <sup>e</sup>	(4)	375,000	40,000 <sup>r</sup>	40,000 <sup>r</sup>	40,000	120,000
Electrowon	(4)	556,000	45,600	37,800	43,300	127,000
Total	(4)	931,000	85,600 <sup>r</sup>	77,800 <sup>r</sup>	83,300	247,000
Secondary (from copper-base scrap): <sup>5</sup>						
Refineries <sup>6</sup>	(5)	40,000	3,220	3,230	3,220	9,670
Ingot makers <sup>e, 7</sup>	(5)	39,500	3,290	3,290	3,290	9,860
Brass and wire-rod mills	(5)	650,000	58,000	55,700	56,300	170,000
Foundries, etc. <sup>e, 7</sup>	(5)	40,000	3,330	3,330	3,330	9,990
Consumption:						
Reported, refined copper	(7)	1,720,000	128,000	131,000 <sup>r</sup>	139,000	398,000
Apparent, primary refined copper and copper from old scrap <sup>8</sup>	(8)	1,820,000	141,000 <sup>r</sup>	154,000 <sup>r</sup>	212,000	506,000
Reported, purchased copper-base scrap (gross weight)	(9)	890,000	77,800	75,500	76,100	229,000
Stocks at end of period:						
Blister and anodes	(10)	13,300	13,600	13,000	14,300	14,300
Refined <sup>9</sup>	(10)	82,800	78,700	61,900 <sup>r</sup>	70,000	70,000
Price, U.S. producers cathode (cents per pound) <sup>10</sup>	(11)	410.775	423.233	418.824	414.915	418.991
Imports for consumption: <sup>11</sup>						
Ore and concentrates	(13)	11,700	--	1,740	1,500	3,240
Refined	(13)	733,000	39,000	48,700	126,000	214,000
Exports: <sup>11</sup>						
Ore and concentrates	(14)	352,000	31,500	32,600	37,600	102,000
Refined	(14)	27,800	1,190	2,000	1,290	4,470

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

<sup>2</sup>Numbers in parentheses refer to the tables where these data are located.

<sup>3</sup>Includes the recoverable copper content of concentrates (of copper and other metals), copper produced by solvent extraction and electrowinning, and copper recovered as precipitates.

<sup>4</sup>Contains small quantities of copper from scrap.

<sup>5</sup>Copper recovered from copper-base scrap and converted to refined metal, alloys, and other forms. Does not include copper recovered from scrap other than copper-base.

<sup>6</sup>Electrolytically refined and fire-refined copper.

<sup>7</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>8</sup>Primary refined copper production plus copper recovered from old scrap (of copper-base and non-copper-base) plus refined imports for consumption minus refined exports, including adjustments for refined stock changes. Old scrap consists of copper items used by consumers.

<sup>9</sup>Stocks of refined copper at brass mills, exchanges, refineries, wire-rod mills, and other manufacturers.

<sup>10</sup>Source: S&P Global Platts Metals Week. Sum of the monthly average Commodity Exchange Inc. (COMEX) price and monthly average New York dealers cathode premium; reflects the delivered spot price of copper cathode to U.S. consumers by U.S. producers.

<sup>11</sup>Source: U.S. Census Bureau. See tables 13 and 14 for the relevant Harmonized Tariff Schedule (imports) and Schedule B (exports) codes.

TABLE 2  
MINE PRODUCTION OF COPPER IN THE UNITED STATES<sup>1</sup>

(Metric tons)

Period	Recoverable copper <sup>2</sup>			Contained copper		
	Arizona	Others <sup>3</sup>	Total	Electrowon	Concentrates <sup>4</sup>	Total
2022: <sup>P</sup>						
January–March	211,000	97,300	308,000	134,000	181,000	315,000
March	73,100	31,700	105,000	48,500	58,400	107,000
April	72,200	30,400	103,000	44,900	59,900	105,000
May	77,900	29,800	108,000	49,100	60,900	110,000
June	73,900	28,600	103,000	46,500	58,200	105,000
July	73,300	33,500	107,000	47,600	61,400	109,000
August	69,600	32,600	102,000	46,800	57,500	104,000
September	69,700	31,500	101,000	46,800	56,500	103,000
October	69,200	31,200	100,000	48,600	53,800	102,000
November	66,800	32,300	99,100	44,600	56,500	101,000
December	71,400	30,700	102,000	47,000	57,100	104,000
January–December	855,000	378,000	1,230,000	556,000	702,000	1,260,000
2023:						
January	69,400	31,000	100,000	45,600	56,800	102,000
February	63,900	29,200	93,100	37,800	57,400	95,300
March	67,400	30,300	97,700	43,300	56,500	99,800
January–March	201,000	90,500	291,000	127,000	171,000	298,000

<sup>P</sup>Preliminary.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes the recoverable copper content of concentrates (of copper and other metals), copper produced by solvent extraction and electrowinning, and copper recovered as precipitates.

<sup>3</sup>Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>4</sup>Also includes copper recovered as precipitates.

TABLE 3  
COPPER PRODUCED AT SMELTERS IN  
THE UNITED STATES<sup>1, 2</sup>

(Metric tons, copper content)

Period	Anode production <sup>e, 3</sup>
2022: <sup>p</sup>	
January–March	105,000
March	35,000
April	30,000
May	30,000
June	30,000
July	35,000
August	35,000
September	35,000
October	25,000
November	25,000
December	25,000
January–December	375,000
2023:	
January	40,000 <sup>r</sup>
February	40,000 <sup>r</sup>
March	40,000
January–March	120,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Data reflect primary production in 2022 and primary and secondary production in 2023.

<sup>3</sup>To avoid disclosing company proprietary data, anode production data are estimated based on public information and do not reflect output reported to the U.S. Geological Survey.

TABLE 4  
U.S. PRODUCTION OF REFINED COPPER<sup>1</sup>

(Metric tons)

Period	From primary materials			From scrap <sup>3</sup>	Total refined
	Electrolytic <sup>e, 2</sup>	Electrowon	Total primary		
2022: <sup>p</sup>					
January–March	105,000	134,000	239,000	10,800	250,000
March	35,000	48,500	83,500	3,490	87,000
April	30,000	44,900	74,900	3,250	78,200
May	30,000	49,100	79,100	3,220	82,300
June	30,000	46,500	76,500	3,370	79,900
July	35,000	47,600	82,600	3,250	85,800
August	35,000	46,800	81,800	3,260	85,000
September	35,000	46,800	81,800	3,220	85,000
October	25,000	48,600	73,600	3,220	76,800
November	25,000	44,600	69,600	3,280	72,900
December	25,000	47,000	72,000	3,240	75,300
January–December	375,000	556,000	931,000	40,000	971,000
2023:					
January	40,000 <sup>r</sup>	45,600	85,600 <sup>r</sup>	3,220	88,800 <sup>r</sup>
February	40,000 <sup>r</sup>	37,800	77,800 <sup>r</sup>	3,230	81,100 <sup>r</sup>
March	40,000	43,300	83,300	3,220	86,600
January–March	120,000	127,000	247,000	9,670	256,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>To avoid disclosing company proprietary data, electrolytic production data are estimated based on public information and do not reflect output reported to the U.S. Geological Survey.

<sup>3</sup>Electrolytically refined and fire-refined copper.

TABLE 5  
COPPER RECOVERED AS REFINED COPPER AND IN ALLOYS AND OTHER FORMS FROM PURCHASED  
COPPER-BASE SCRAP IN THE UNITED STATES<sup>1, 2</sup>

(Metric tons)

Period	Refineries <sup>3</sup>		Ingot makers <sup>e, 4</sup>		Brass and wire-rod mills		Foundries, etc. <sup>e, 4</sup>		Total <sup>5</sup>
	New scrap <sup>e</sup>	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2022: <sup>p</sup>									
January–March	5,030	5,720	1,050	8,810	151,000	12,000	2,220	7,770	193,000
March	1,680	1,810	350	2,940	50,900	3,950	740	2,590	64,900
April	1,680	1,570	350	2,940	49,900	3,750	740	2,590	63,500
May	1,680	1,540	350	2,940	49,800	3,640	740	2,590	63,200
June	1,680	1,690	350	2,940	49,800	3,710	740	2,590	63,500
July	1,680	1,570	350	2,940	50,700	3,110	740	2,590	63,700
August	1,680	1,580	350	2,940	51,400	3,330	740	2,590	64,600
September	1,680	1,540	350	2,940	50,800	3,340	740	2,590	64,000
October	1,680	1,540	350	2,940	51,100	3,230	740	2,590	64,200
November	1,680	1,600	350	2,940	51,800	3,270	740	2,590	65,000
December	1,680	1,560	350	2,940	51,800	2,600	740	2,590	64,200
January–December	20,100	19,900	4,200	35,300	608,000	41,900	8,880	31,100	769,000
2023:									
January	1,680	1,540	350	2,940	53,600	4,360	740	2,590	67,800
February	1,680	1,550	350	2,940	52,300	3,360	740	2,590	65,500
March	1,680	1,540	350	2,940	52,700	3,620	740	2,590	66,200
January–March	5,030	4,640	1,050	8,810	159,000	11,300	2,220	7,770	200,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>New scrap refers to material generated during the manufacturing process. Old scrap consists of copper items used by consumers.

<sup>3</sup>Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

<sup>4</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>5</sup>Does not include an estimate, based on 2021 annual data, of 2,970 tons per month from new scrap and 1,700 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6  
U.S. PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES<sup>1</sup>

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills
2022: <sup>p</sup>						
January–March	227,000	339,000	227,000	337,000	29,300	21,500
March	76,900	118,000	77,000	116,000	29,300	21,500
April	76,300	117,000	76,100	112,000	29,500	26,200
May	74,200	112,000	74,300	116,000	29,400	21,900
June	74,800	111,000	74,900	115,000	29,300	17,200
July	74,600	117,000	74,800	114,000	29,100	21,000
August	75,300	112,000	75,200	115,000	29,200	17,900
September	79,900	116,000	79,400	119,000	29,800	15,600
October	75,400	115,000	75,100	114,000	30,000	16,600
November	74,900	94,800	74,800	94,700	30,200	16,600
December	74,800	90,300	74,300	88,400	30,700	18,600
January–December	908,000	1,330,000	906,000	1,330,000	30,700	18,600
2023:						
January	76,400	99,100 <sup>r</sup>	75,400	102,000 <sup>r</sup>	31,700	15,600
February	75,300	100,000 <sup>r</sup>	74,500 <sup>r</sup>	104,000 <sup>r</sup>	32,500 <sup>r</sup>	12,300
March	77,000	105,000	75,000	107,000	34,500	10,500
January–March	229,000	305,000	225,000	313,000	34,500	10,500

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.



TABLE 7  
U.S. CONSUMPTION OF REFINED COPPER<sup>1</sup>

(Metric tons)

Period	Brass mills	Wire-rod mills	Other plants <sup>e, 2</sup>	Total
2022: <sup>p</sup>				
January–March	106,000	325,000	10,800	443,000
March	36,600	114,000	3,590	154,000
April	34,600	113,000	3,590	152,000
May	34,900	109,000	3,590	147,000
June	34,800	107,000	3,590	146,000
July	34,900	112,000	3,590	151,000
August	35,000	106,000	3,590	145,000
September	34,900	101,000	3,590	140,000
October	35,000	105,000	3,590	144,000
November	35,000	83,700	3,590	122,000
December	35,200	88,700	3,590	127,000
January–December	420,000	1,250,000	43,000	1,720,000
2023:				
January	34,700	89,600	3,590	128,000
February	36,200 <sup>r</sup>	91,100	3,590	131,000 <sup>r</sup>
March	34,100	101,000	3,590	139,000
January–March	105,000	282,000	10,800	398,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Chemical plants, foundries, ingot makers, and miscellaneous manufacturers. These plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

TABLE 8  
U.S. APPARENT CONSUMPTION OF COPPER<sup>1</sup>

(Metric tons)

Period	Primary refined copper production	Copper in old scrap <sup>2</sup>	Refined imports for consumption <sup>3</sup>	Refined exports <sup>3</sup>	Refined stock change during period	Apparent consumption <sup>4</sup>
2022: <sup>p</sup>						
January–March	239,000	39,400	223,000	8,230	15,500	478,000
March	83,500	13,000	48,700	2,590	1,350	141,000
April	74,900	12,500	64,800	2,820	794	149,000
May	79,100	12,400	74,300	2,890	-6,470	169,000
June	76,500	12,600	75,900	1,720	-2,560	166,000
July	82,600	11,900	80,900	1,900	1,560	172,000
August	81,800	12,100	36,400	3,060	-9,190	136,000
September	81,800	12,100	50,700	2,470	-1,970	144,000
October	73,600	12,000	49,700	1,190	-8,330	142,000
November	69,600	12,100	37,900	1,430	-10,800	129,000
December	72,000	11,400	38,800	2,100	-12,300	132,000
January–December	931,000	149,000	733,000	27,800	-33,800	1,820,000
2023:						
January	85,600 <sup>r</sup>	13,100	39,000	1,190	-4,040	141,000 <sup>r</sup>
February	77,800 <sup>r</sup>	12,100	48,700	2,000	-16,800 <sup>r</sup>	154,000 <sup>r</sup>
March	83,300	12,400	126,000	1,290	8,090	212,000
January–March	247,000	37,700	214,000	4,470	-12,800	506,000

<sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Copper recovered from old scrap (of copper-base and non-copper-base) and converted to refined metal, alloys, and other forms. Includes reported monthly production and estimates for annual reporters based on the monthly average of 2021 annual data. Old scrap consists of copper items used by consumers.

<sup>3</sup>Source: U.S. Census Bureau. Includes Harmonized Tariff Schedule (imports) and Schedule B (exports) codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>4</sup>Primary refined copper production plus copper in old scrap plus refined imports for consumption minus refined exports minus refined stock change during period.

TABLE 9  
U.S. CONSUMPTION OF PURCHASED COPPER-BASE SCRAP<sup>1, 2</sup>

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers <sup>e, 3</sup>		Brass and wire-rod mills <sup>4</sup>		Foundries, etc. <sup>e, 3</sup>		Total
	New scrap <sup>e</sup>	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
2022: <sup>P</sup>									
January–March	5,190	5,900	2,800	10,400	175,000	12,600	2,610	9,120	224,000
March	1,730	1,870	933	3,450	59,200	4,250	871	3,040	75,300
April	1,730	1,620	933	3,450	58,100	3,980	871	3,040	73,700
May	1,730	1,590	933	3,450	57,800	3,810	871	3,040	73,200
June	1,730	1,740	933	3,450	57,900	3,880	871	3,040	73,500
July	1,730	1,620	933	3,450	58,800	3,220	871	3,040	73,600
August	1,730	1,630	933	3,450	59,500	3,490	871	3,040	74,700
September	1,730	1,590	933	3,450	58,900	3,510	871	3,040	74,000
October	1,730	1,590	933	3,450	59,100	3,340	871	3,040	74,100
November	1,730	1,650	933	3,450	59,800	3,420	871	3,040	74,900
December	1,730	1,610	933	3,450	59,900	2,710	871	3,040	74,200
January–December	20,700	20,500	11,200	41,400	705,000	43,900	10,500	36,500	890,000
2023:									
January	1,730	1,590	933	3,450	61,700	4,500	871	3,040	77,800
February	1,730	1,600	933	3,450	60,400	3,500	871	3,040	75,500
March	1,730	1,590	933	3,450	60,800	3,740	871	3,040	76,100
January–March	5,190	4,790	2,800	10,400	183,000	11,700	2,610	9,120	229,000

<sup>e</sup>Estimated. <sup>P</sup>Preliminary.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>New scrap refers to material generated during the manufacturing process. Old scrap consists of copper items used by consumers.

<sup>3</sup>Plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on the monthly average of 2021 annual data.

<sup>4</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10  
COPPER STOCKS IN THE UNITED STATES AT END OF PERIOD<sup>1</sup>

(Metric tons, copper content)

Period	Blister and anodes	Refined copper						Total refined
		Refineries	Wire-rod mills	Brass mills	Other <sup>e, 2</sup>	COMEX <sup>3</sup>	LME <sup>4</sup>	
2022: <sup>p</sup>								
March	12,200	3,690	15,400	8,160	6,200	67,400	31,300	132,000
April	16,100	4,990	10,600	8,620	6,200	75,800	26,800	133,000
May	11,500	3,090	12,000	8,330	6,200	71,800	25,100	126,000
June	13,100	5,800	11,700	8,330	6,200	66,700	25,100	124,000
July	12,900	3,980	13,100	8,640	6,200	55,100	38,400	125,000
August	14,200	4,790	13,100	9,010	6,200	46,000	37,100	116,000
September	14,900	5,570	15,500	9,840	6,200	40,800	36,400	114,000
October	18,500	4,300	19,200	10,400	6,200	33,400	32,400	106,000
November	14,600	3,470	21,500	10,800	6,200	33,400	19,700	95,100
December	13,300	9,100	18,000	11,000	6,200	31,700	6,850	82,800
2023:								
January	13,600	9,640	23,500	10,900	6,200	25,400	3,050	78,700
February	13,000	6,040	23,600	9,380 <sup>r</sup>	6,200	15,000	1,680	61,900 <sup>r</sup>
March	14,300	9,160	26,400	11,400	6,200	15,400	1,400	70,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Chemical plants, foundries, ingot makers, and miscellaneous manufacturers. These plants are surveyed by the U.S. Geological Survey on an annual basis; data after 2021 not yet available. Monthly data are estimated based on yearend 2021 stocks.

<sup>3</sup>Commodity Exchange Inc.

<sup>4</sup>London Metal Exchange Ltd., U.S. warehouses.

TABLE 11  
AVERAGE PRICES FOR REFINED COPPER IN THE UNITED STATES  
AND ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	COMEX		
	first position <sup>1</sup>	U.S. producers cathode <sup>2</sup>	LME grade A cash <sup>3</sup>
2022:			
March	468.228	477.228	464.329
April	463.763	473.388	461.863
May	424.929	434.929	424.657
June	412.540	422.540	409.684
July	339.610	350.610	341.513
August	361.500	372.500	361.070
September	348.021	359.021	350.800
October	347.386	358.386	345.649
November	367.683	378.483	364.184
December	381.645	391.895	379.511
Year	400.719	410.775	399.791
2023:			
January	412.233	423.233	408.200
February	408.824	418.824	406.165
March	404.915	414.915	400.734
January–March	408.657	418.991	405.033

<sup>1</sup>Listed as “COMEX high grade first position.” COMEX refers to the Commodity Exchange Inc.

<sup>2</sup>Sum of “COMEX high grade first position” and “NY dealer premium cathode.” Reflects the delivered spot price of copper cathode to U.S. consumers by U.S. producers.

<sup>3</sup>LME refers to the London Metal Exchange Ltd.

Source: S&P Global Platts Metals Week.

TABLE 12  
AVERAGE BUYING PRICES FOR COPPER SCRAP IN THE UNITED STATES

(Cents per pound)

Period	Brass mills no. 1 scrap	Refiners no. 2 scrap	Dealers	
			No. 2 scrap	Red brass turnings and borings
2022:				
March	459.30	423.17	341.50	217.00
April	454.35	418.85	355.00	211.50
May	414.90	379.40	327.50	196.50
June	401.81	366.31	321.50	185.00
July	329.10	295.60	259.00	172.50
August	350.65	322.65	244.00	153.00
September	335.52	307.81	254.50	148.00
October	333.62	308.71	247.50	148.00
November	356.15	332.15	261.50	150.50
December	371.67	348.57	270.50	155.50
Year	390.04	358.05	296.29	183.13
2023:				
January	401.30	379.30	289.00	159.00
February	397.03	374.29	321.50	159.00
March	392.67	369.41	319.00	156.50
January–March	397.00	341.00	309.83	158.17

Source: Fastmarkets-AMM.

TABLE 13  
U.S. IMPORTS FOR CONSUMPTION OF UNMANUFACTURED COPPER<sup>1</sup>

(Metric tons, copper content)

Country or locality	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			Blister and anodes <sup>4</sup>			Refined <sup>5</sup>		
	2023			2023			2023			2023		
	2022	March	January– March	2022	March	January– March	2022	March	January– March	2022	March	January– March
Austria	--	--	--	--	--	--	--	--	--	54	--	--
Belgium	--	--	--	384	--	--	--	--	--	2	--	--
Canada	11,700	1,500	3,240	581	29	77	(6)	--	(6)	118,000	9,090	31,200
Chile	--	--	--	--	--	--	--	--	--	473,000	97,600	154,000
China	--	--	--	--	--	--	(6)	--	(6)	897	22	124
Congo (Kinshasa)	--	--	--	--	--	--	--	--	--	8,910	4,730	5,370
Finland	--	--	--	--	--	--	281	46	78	39	--	--
France	--	--	--	--	--	--	15	--	--	53	6	19
Germany	(6)	--	--	94	--	--	(6)	--	(6)	3,410	250	703
Hungary	9	--	--	--	--	--	--	--	--	--	--	--
India	11	--	--	--	(6)	(6)	--	--	(6)	57	--	--
Japan	(6)	--	--	--	--	--	(6)	--	--	1,350	287	565
Korea, Republic of	--	--	--	--	--	--	1	(6)	(6)	10	7	13
Mexico	--	--	--	25	2	4	(6)	--	--	75,500	3,680	6,730
Peru	--	--	--	--	--	--	--	--	--	50,100	10,100	15,000
Qatar	--	--	--	43	--	--	--	--	--	--	--	--
Slovakia	--	--	--	14	--	--	--	--	--	--	--	--
Spain	--	--	--	51	--	151	(6)	--	--	--	--	--
United Kingdom	(6)	--	--	(6)	--	--	5	(6)	1	138	--	--
Zambia	--	--	--	--	--	--	--	--	--	1,230	--	--
Other	(6)	--	--	1	--	--	4	(6)	(6)	11	1	5
Total	11,700	1,500	3,240	1,190	31	233	306	47	79	733,000	126,000	214,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Harmonized Tariff Schedule of the United States (HTS) code 2603.00.0010. Includes copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

<sup>3</sup>HTS codes 2620.30.0010 and 7401.00.0000. Includes copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

<sup>4</sup>HTS code 7402.00.0000.

<sup>5</sup>HTS codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>6</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 14  
U.S. EXPORTS OF UNMANUFACTURED COPPER<sup>1</sup>

(Metric tons, copper content)

Country or locality	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			Blister and anodes <sup>4</sup>			Refined <sup>5</sup>		
	2023			2023			2023			2023		
	2022	March	January– March	2022	March	January– March	2022	March	January– March	2022	March	January– March
Belgium	70	--	--	5,950	453	1,430	211	11	61	--	--	6
Bulgaria	1,540	--	--	--	--	--	--	--	--	--	--	--
Canada	39,800	2,410	10,400	13,300	332	1,140	6,740	1,580	6,140	14,200	175	1,440
China	56,900	4,360	14,300	378	147	236	60	20	41	2,350	38	91
Costa Rica	--	--	--	345	--	4	--	--	--	(6)	--	3
Germany	1,500	--	--	235	24	45	244	20	20	1	--	20
India	--	--	9	16	--	19	1,560	59	76	34	--	37
Israel	--	--	--	--	--	--	115	10	10	98	2	9
Italy	--	--	--	--	--	--	155	12	32	10	--	--
Japan	11,000	4,260	4,260	361	(6)	20	20	13	30	23	--	--
Korea, Republic of	59	--	--	189	9	9	1,570	210	337	133	--	7
Madagascar	1,220	--	--	--	--	--	--	--	--	--	--	--
Malaysia	186	6	24	147	--	27	168	120	221	51	52	222
Mexico	232,000	23,100	69,200	30	62	882	260	1	87	7,680	616	2,050
Netherlands	--	--	--	59	--	--	4	--	--	1,070	--	--
Philippines	7,770	--	--	(6)	--	--	67	--	3	35	--	--
Poland	--	--	--	270	191	345	--	--	--	--	--	--
Singapore	--	--	--	414	16	35	40	--	1	22	2	2
Slovakia	--	--	--	1,210	63	123	--	--	--	--	--	--
Spain	--	--	--	1,510	153	605	42	--	--	376	60	159
Taiwan	--	--	--	86	--	--	137	--	--	25	2	2
Thailand	1	--	--	158	13	13	94	--	--	--	--	--
Turkey	--	--	--	233	--	20	20	20	20	20	--	--
United Kingdom	--	--	--	4	--	--	40	2	6	1,630	--	1
Other	718	3,460	3,480	194	12	81	378	3	32	57	339	426
Total	352,000	37,600	102,000	25,100	1,480	5,030	11,900	2,080	7,120	27,800	1,290	4,470

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Schedule B of the United States code 2603.00.0010. Includes copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

<sup>3</sup>Schedule B codes 2620.30.0000, 7401.00.0010, and 7401.00.0050. Includes copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

<sup>4</sup>Schedule B code 7402.00.0000.

<sup>5</sup>Schedule B codes 7403.11.0000, 7403.12.0000, 7403.13.0000, and 7403.19.0000.

<sup>6</sup>Less than ½ unit.

Source: U.S. Census Bureau.



TABLE 15  
U.S. IMPORTS FOR CONSUMPTION OF COPPER SCRAP<sup>1</sup>

(Metric tons, gross weight)

Country or locality	Unalloyed <sup>2</sup>			Alloyed <sup>3</sup>		
	2023			2023		
	2022	March	January– March	2022	March	January– March
Antigua and Barbuda	--	--	--	188	--	25
Bahamas, The	--	--	--	612	56	164
Barbados	--	--	--	326	21	31
Bermuda	12	13	13	90	--	9
Bolivia	39	--	--	94	--	--
Brazil	14	--	--	69	--	97
Canada	17,600	1,270	4,030	41,800	3,150	8,540
Cayman Islands	--	--	--	243	14	42
Colombia	196	20	40	106	4	4
Costa Rica	712	55	124	1,350	135	293
Dominican Republic	1,350	138	436	2,090	93	307
Ecuador	24	--	--	57	--	--
El Salvador	--	--	--	1,090	80	208
Germany	260	44	123	50	--	--
Grenada	--	--	--	72	14	28
Guatemala	--	--	--	309	19	58
Haiti	--	--	--	104	30	45
Honduras	24	2	5	787	53	235
Jamaica	7	--	--	461	63	108
Mexico	12,200	1,230	3,540	42,900	3,910	10,800
Nicaragua	--	--	--	194	--	18
Panama	1,190	64	226	405	21	88
Peru	--	--	--	225	--	--
Saudi Arabia	--	--	--	134	--	--
Sint Maarten	1	--	--	54	5	35
Saint Lucia	25	--	--	269	29	64
Saint Vincent and the Grenadines	--	--	--	91	24	34
Suriname	360	--	50	69	--	15
Uruguay	80	--	--	32	--	--
Vietnam	62	--	--	50	--	--
Other	75	4	43	401	38	56
Total	34,200	2,840	8,630	94,700	7,760	21,300

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Harmonized Tariff Schedule of the United States (HTS) codes 7404.00.3020 and 7404.00.6020.

<sup>3</sup>HTS codes 7404.00.3045, 7404.00.3055, 7404.00.3065, 7404.00.3090, 7404.00.6045, 7404.00.6055, 7404.00.6065, and 7404.00.6090.

Source: U.S. Census Bureau.

TABLE 16  
U.S. EXPORTS OF COPPER SCRAP<sup>1</sup>

(Metric tons, gross weight)

Country or locality	Unalloyed <sup>2</sup>							Alloyed <sup>3</sup>				
	2023							2023				
	No. 1		No. 2		Other			Segregated		Unsegregated		
	2022	January– March	January– March	March	January– March	March	January– March	2022	March	January– March	March	January– March
Austria	1,300	18	53	--	77	--	--	1,210	--	278	--	162
Belgium	33,100	1,030	2,710	1,020	2,740	494	1,590	8,990	58	171	501	1,680
Canada	60,900	--	--	--	--	5,950	17,600	45,800	--	--	3,050	8,320
China	261,000	7,010	19,400	5,250	14,800	9,570	28,700	32,100	1,650	5,020	1,170	3,480
Germany	15,300	789	3,340	98	213	541	1,070	15,700	20	133	1,070	2,780
Greece	8,910	293	798	--	--	87	298	2,170	--	21	399	778
Hong Kong	16,700	50	90	592	1,510	241	924	3,900	21	80	155	662
India	19,800	829	1,920	124	306	762	1,810	66,200	1,040	3,710	2,690	8,630
Japan	25,400	334	1,080	972	3,070	93	360	6,910	13	239	457	1,910
Korea, Republic of	42,000	1,150	2,990	614	1,850	1,100	2,820	11,300	255	932	231	953
Malaysia	25,000	1,290	3,330	319	922	807	2,260	41,700	654	1,890	2,390	7,080
Mexico	3,120	208	629	--	1	--	43	8,380	69	106	415	884
Netherlands	7,620	99	208	--	41	--	545	1,540	--	--	40	97
Pakistan	1,490	--	40	--	5	--	--	26,300	--	80	1,430	4,100
Philippines	1,780	9	189	--	--	11	76	817	37	37	98	238
Poland	15,700	337	857	--	20	612	3,280	1,030	--	20	230	249
Singapore	1,210	--	539	--	20	--	--	264	--	--	--	64
Slovakia	1,540	87	279	--	--	--	--	2,500	173	212	74	93
Spain	3,900	14	177	--	--	134	504	7,380	121	362	439	1,230
Sweden	581	--	--	--	--	--	--	1,940	--	--	43	142
Taiwan	13,100	120	242	238	905	320	987	4,470	19	19	291	1,050
Thailand	23,900	709	1,690	32	59	1,320	4,290	39,500	443	1,050	2,530	7,550
Turkey	1,040	--	300	--	--	--	--	2,320	--	--	--	--
United Arab Emirates	766	9	67	--	--	--	--	5,810	--	--	516	2,320
Vietnam	159	157	157	62	62	--	--	929	--	--	79	99
Other	2,200	23	191	20	58	61	198	2,710	20	20	180	710
Total	588,000	14,600	41,300	9,340	26,700	22,100	67,300	342,000	4,600	14,400	18,500	55,300

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Schedule B of the United States codes 7404.00.0010 and 7404.00.0015 (no. 1), 7404.00.0025 (no. 2), and 7404.00.0030 (other).

<sup>3</sup>Schedule B codes for segregated alloyed copper scrap are 7404.00.0041, 7404.00.0046, 7404.00.0051, 7404.00.0056, 7404.00.0061, 7404.00.0066, and 7404.00.0075. Schedule B codes for unsegregated alloyed copper scrap are 7404.00.0085 and 7404.00.0095.

Source: U.S. Census Bureau.