

# Mineral Industry Surveys

### For information, contact:

Daniel M. Flanagan, Copper Commodity Specialist National Minerals Information Center U.S. Geological Survey 989 National Center Reston, VA 20192

Telephone: (703) 648-7726, Fax: (703) 648-7757

Email: dflanagan@usgs.gov

Samir Hakim (Data) Telephone: (703) 648-7955 Fax: (703) 648-7975 Email: shakim@usgs.gov

Internet: <a href="http://minerals.usgs.gov/minerals/">http://minerals.usgs.gov/minerals/</a>

### **COPPER IN APRIL 2018**

In April 2018, domestic mine production of recoverable copper was 100,000 metric tons (t). The average daily mine production was 3,330 t, an increase of 8% from that in March and a decline of 8% compared with that in April 2017. Year-to-date recoverable mine production through April 2018 was 386,000 t, a decrease of 11% relative to the same period in 2017 (fig. 1, table 2).

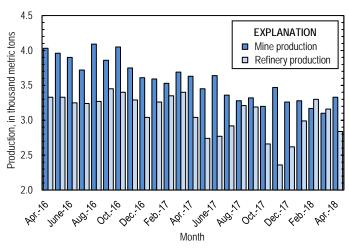


Figure 1. Average daily U.S. copper mine (recoverable) and refinery production from April 2016 through April 2018.

Total refinery production in the United States was 85,200 t in April 2018; data for electrolytic and electrowon output, as well as refined production from scrap, are in table 4. The average daily total refinery production was 2,840 t, a decrease of 10% compared with that in March and 6% less than that in April 2017. Year-to-date refinery production through April 2018 was 368,000 t, a decline of 6% relative to the same period in 2017 (fig. 1, table 4).

Smelter production in April 2018 was 44,800 t. Average daily smelter production was 1,490 t, 11% greater than that in March and an increase of 10% compared with the daily average in April 2017. Year-to-date smelter production through April 2018 was 182,000 t, 4% less than that through April 2017 (table 3).

#### **Prices**

The average April 2018 COMEX spot copper price was \$3.09 per pound, a slight increase from \$3.07 per pound in March and 19% greater than \$2.59 per pound in April 2017 (fig. 2, table 11). The average price of New York dealers' number 2 scrap in April 2018 was \$2.09 per pound, down slightly from \$2.14 per pound in March and 16% higher than \$1.80 per pound in April 2017 (fig. 2, table 12).

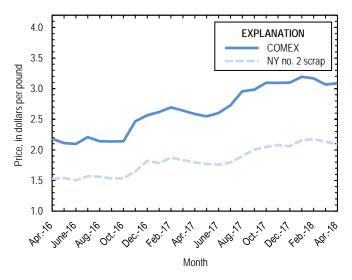


Figure 2. Monthly average COMEX copper price and New York no. 2 copper scrap price from April 2016 through April 2018. Sources: American Metal Market, Platts Metals Week.

#### Stocks

Refined U.S. copper stocks totaled 322,000 t at the end of April 2018, an increase of 7% from those in March and 33% more than those in April 2017. COMEX stocks rose by 6%, stocks at wire-rod mills decreased by 4%, and London Metal Exchange Ltd. stocks in U.S. warehouses were 20% higher compared with those at the end of March (fig. 3, table 10).

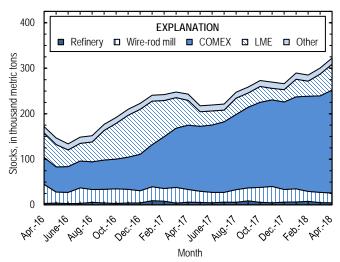


Figure 3. Monthly domestic refined copper stocks, by type, from April 2016 through April 2018. Sources: American Metal Market, London Metal Exchange Ltd., and U.S. Geological Survey.

List services and web feed subscribers are the first to receive notification of USGS minerals information publications and data releases. For information on how to subscribe, go to <a href="http://minerals.usgs.gov/minerals/">http://minerals.usgs.gov/minerals/</a>.

### TABLE 1 SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES $^{\!1}$

(Metric tons of copper content, unless otherwise specified)

				201	.8	
	Source					January-
	table <sup>2</sup>	2017 <sup>p</sup>	February	March	April	April
Production:	_					
Primary:	<u>-</u>					
Mine, recoverable	(2)	1,260,000	88,600 <sup>r</sup>	96,000 <sup>r</sup>	100,000	386,000
Smelter, total	(3)	470,000	42,200	41,500	44,800	182,000
Refinery:						
Electrolytic, domestic and foreign	(4)	482,000	48,500	50,400	38,700	180,000
Electrowon	(4)	557,000	40,600	44,300	43,200	175,000
Total	(4)	1,040,000	89,000	94,800	81,900	355,000
Secondary recoverable copper: <sup>3</sup>	=					
Refineries	(5)	40,100	3,260	3,220	3,260	12,900
Ingot makers <sup>4</sup>	(5)	57,600	4,800	4,800	4,800	19,200
Brass and wire-rod mills	(5)	645,000	52,900	50,200	54,100	212,000
Foundries, etc. <sup>4</sup>	(5)	46,800	3,900	3,900	3,900	15,600
Consumption:	=					
Apparent	(8)	1,870,000	175,000	154,000	121,000	601,000
Refined (reported)	(7)	1,770,000	141,000	148,000	136,000	570,000
Purchased copper-base scrap (gross weight)	(9)	924,000	76,100	73,300	77,400	304,000
Stocks at end of period:	=					
Total refined	(10)	266,000	285,000	301,000	322,000	322,000
Blister, etc.	(10)	12,600	14,600	9,010	9,880	9,880
Price, U.S. producers cathode (cents per pound) <sup>5</sup>	(11)	285.393	322.495	312.083	314.129	318.337
Imports: <sup>6</sup>	=					
Ore and concentrate	(13)	14,100	8,130	1,500	3	18,500
Refined	(13)	813,000	77,000	72,900	61,800	300,000
Exports: <sup>6</sup>	-					
Ore and concentrate	(14)	237,000	15,400	23,800	15,400	78,200
Refined	(14)	94,200	7,270	12,100	13,700	42,600

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

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

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

<sup>&</sup>lt;sup>3</sup>Copper recovered from copper-base scrap only.
<sup>4</sup>Estimated based on the monthly average of 2016 annual data.

<sup>&</sup>lt;sup>5</sup>Source: Platts Metals Week.

<sup>&</sup>lt;sup>6</sup>Source: U.S. Census Bureau.

# $\label{eq:table 2} \textbf{TABLE 2}$ MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES $^1$

### (Metric tons)

	Red	coverable coppe	r		Contained copper	
Period	Arizona	Others <sup>2</sup>	Total	Electrowon	Concentrates <sup>3</sup>	Total
2017: <sup>p</sup>						
January-April	285,000	148,000	433,000	183,000	260,000	443,000
April	72,500	36,500	109,000	45,600	66,000	112,000
May	75,100	31,900	107,000	48,600	60,900	109,000
June	71,900	37,100	109,000	46,600	64,700	111,000
July	73,500	30,600	104,000	44,900	61,600	107,000
August	71,200	30,500	102,000	46,900	57,000	104,000
September	75,000	24,500	99,500	46,700	55,000	102,000
October	66,900	32,400	99,300	46,600	54,800	101,000
November	72,800	31,200	104,000	46,600	59,700	106,000
December	76,100	24,900	101,000	47,600	55,700	103,000
January-December	868,000	391,000	1,260,000	557,000	730,000	1,290,000
2018:						
January	68,800 <sup>r</sup>	32,900	102,000 <sup>r</sup>	46,800	56,900 <sup>r</sup>	104,000
February	61,000 <sup>r</sup>	27,700 <sup>r</sup>	88,600 <sup>r</sup>	40,600	50,000 <sup>r</sup>	90,500 <sup>r</sup>
March	68,200 <sup>r</sup>	27,800	96,000 <sup>r</sup>	44,300	53,700 <sup>r</sup>	98,000 <sup>r</sup>
April	65,400	34,600	100,000	43,200	58,800	102,000
January-April	263,000	123,000	386,000	175,000	219,000	394,000

<sup>&</sup>lt;sup>p</sup>Preliminary. <sup>r</sup>Revised.

 $\begin{tabular}{ll} TABLE 3 \\ COPPER PRODUCED AT SMELTERS IN \\ THE UNITED STATES $^{1,2}$ \\ \end{tabular}$ 

(Metric tons, copper content)

	Anode
Period	production
2017: <sup>p</sup>	
January-April	190,000
April	40,700
May	20,100
June	37,100
July	45,800
August	47,200
September	49,000
October	29,300
November	14,500
December	37,800
January-December	470,000
2018:	
January	53,900
February	42,200
March	41,500
April	44,800
January–April	182,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

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

<sup>&</sup>lt;sup>2</sup>Includes production from Michigan, Missouri, Montana, Nevada, New Mexico, and Utah.

<sup>&</sup>lt;sup>3</sup>Includes copper content of precipitates and other metal concentrates.

<sup>&</sup>lt;sup>1</sup>Includes blister and copper anode from primary or secondary sources.

<sup>&</sup>lt;sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

 ${\it TABLE~4}$  PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY  $^1$ 

### (Metric tons)

	Pri	mary materials			
	Electrolytically				Total
Period	refined <sup>2</sup>	Electrowon	Total	Scrap	refined
2017: <sup>p</sup>					
January-April	195,000	183,000	378,000	13,800	391,000
April	42,300	45,600	87,800	3,230	91,000
May	32,800	48,600	81,400	3,390	84,800
June	33,100	46,600	79,800	3,280	83,000
July	42,400	44,900	87,300	3,220	90,600
August	49,200	46,900	96,100	3,340	99,400
September	45,700	46,700	92,400	3,310	95,700
October	32,500	46,600	79,100	3,280	82,400
November	21,100	46,600	67,700	3,240	70,900
December	30,400	47,600	77,900	3,250	81,200
January-December	482,000	557,000	1,040,000	40,100	1,080,000
2018:					
January	42,800	46,800	89,600	3,220	92,800
February	48,500	40,600	89,000	3,260	92,300
March	50,400	44,300	94,800	3,220	98,000
April	38,700	43,200	81,900	3,260	85,200
January-April	180,000	175,000	355,000	12,900	368,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

 ${\it TABLE~5}$  COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASE SCRAP  $^{\rm I}$ 

(Metric tons, copper content)

	Refin	eries <sup>2</sup>	Ingot n	nakers <sup>3</sup>	Brass and w	ire-rod mills	Foundri	es, etc. <sup>3</sup>	
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	Total <sup>4</sup>
2017: <sup>p</sup>									
January-April	6,710	7,090	3,200	16,000	203,000	12,500	12,200	3,380	264,000
April	1,680	1,550	800	4,000	51,300	3,110	3,060	845	66,300
May	1,680	1,710	800	4,000	52,000	3,140	3,060	845	67,200
June	1,680	1,600	800	4,000	51,300	3,070	3,060	845	66,400
July	1,680	1,540	800	4,000	50,700	3,010	3,060	845	65,700
August	1,680	1,660	800	4,000	52,100	3,360	3,060	845	67,500
September	1,680	1,630	800	4,000	49,200	2,870	3,060	845	64,100
October	1,680	1,600	800	4,000	52,200	3,350	3,060	845	67,600
November	1,680	1,560	800	4,000	49,900	3,110	3,060	845	65,000
December	1,680	1,570	800	4,000	48,000	2,500	3,060	845	62,400
January-December	20,100	20,000	9,600	48,000	608,000	36,900	36,700	10,100	790,000
2018:									
January	1,680	1,540	800	4,000	51,100	3,300	3,060	845	66,300
February	1,680	1,580	800	4,000	50,000	2,940	3,060	845	64,900
March	1,680	1,540	800	4,000	46,800	3,350	3,060	845	62,100
April	1,680	1,580	800	4,000	50,800	3,270	3,060	845	66,100
January-April	6,710	6,240	3,200	16,000	199,000	12,900	12,200	3,380	259,000

Preliminary.

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

<sup>&</sup>lt;sup>2</sup>From domestic and foreign source materials.

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

<sup>&</sup>lt;sup>2</sup>Electrolytically refined and fire refined from scrap based on source of material at smelter or refinery level.

<sup>&</sup>lt;sup>3</sup>Monthly data estimated based on the monthly average of 2016 annual data.

<sup>&</sup>lt;sup>4</sup>Does not include an estimate, based on reported 2016 annual data, of 3,120 tons per month from new scrap and 2,490 tons per month from old scrap of copper recovered from scrap other than copper-base.

 ${\it TABLE~6}$  PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD SEMIFABRICATES  $^1$ 

(Metric tons, gross weight)

	Pro	duction	Shi	pments	Stocks, e	ocks, end of period	
Period	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	Brass mills	Wire-rod mills	
2017: <sup>p</sup>							
January-April	293,000	448,000	293,000	440,000	28,000	33,000	
April	72,200	112,000	72,800	104,000	28,000	33,000	
May	74,700	112,000	74,500	117,000	28,300	28,500	
June	73,300	115,000	73,000	117,000	28,600	26,400	
July	73,000	97,200	73,200	97,400	28,400	26,700	
August	75,000	111,000	74,200	112,000	29,300	25,800	
September	74,000	108,000	73,600	103,000	29,700	30,300	
October	74,100	107,000	74,100	109,000	29,700	28,500	
November	72,500	100,000	72,800	100,000	29,300	28,300	
December	72,100	93,400	72,000	91,100	29,500	30,600	
January-December	882,000	1,290,000	881,000	1,290,000	29,500	30,600	
2018:							
January	73,600	105,000	73,500	105,000	29,500	30,800	
February	72,700	101,000	73,400	103,000	28,800	28,500	
March	74,300	108,000	74,000	107,000	29,200	28,800	
April	73,600	95,500	73,600	103,000	29,200	21,200	
January-April	294,000	409,000	295,000	418,000	29,200	21,200	

<sup>&</sup>lt;sup>p</sup>Preliminary.

 ${\bf TABLE~7} \\ {\bf CONSUMPTION~OF~REFINED~COPPER}^1$ 

(Metric tons)

	Brass	Wire-rod	Other	
Period	mills	mills	plants <sup>2</sup>	Total
2017: <sup>p</sup>				
January-April	139,000	455,000	22,500	617,000
April	34,200	112,000	5,620	152,000
May	35,300	113,000	5,620	154,000
June	34,700	114,000	5,620	155,000
July	35,000	96,300	5,620	137,000
August	35,300	98,600	5,620	140,000
September	35,200	108,000	5,620	148,000
October	35,400	107,000	5,620	148,000
November	34,700	99,900	5,620	140,000
December	34,900	92,700	5,620	133,000
January-December	420,000	1,280,000	67,400	1,770,000
2018:				
January	34,600	105,000	5,620	145,000
February	35,100	100,000	5,620	141,000
March	34,900	107,000	5,620	148,000
April	35,100	95,300	5,620	136,000
January–April	140,000	408,000	22,500	570,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

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

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

<sup>&</sup>lt;sup>2</sup>Monthly consumption data by ingot makers, chemical plants, foundries, and miscellaneous manufacturers are estimated based on the monthly average of 2016 annual data.

### $\label{eq:table 8} \text{U.S. APPARENT CONSUMPTION OF COPPER}^1$

### (Metric tons)

-	Refined copper	Copper in	Refined general	Refined	Stock change	Apparent
Period	production <sup>2</sup>	old scrap <sup>3</sup>	imports <sup>4</sup>	exports <sup>4</sup>	during period	consumption
2017: <sup>p</sup>						
January–April	378,000	48,900	251,000	43,400	19,900	614,000
April	87,800	12,000	51,400	12,200	-5,100	144,000
May	81,400	12,200	63,200	9,230	-25,200	173,000
June	79,800	12,000	79,500	6,140	1,300	164,000
July	87,300	11,900	91,800	7,140	2,900	181,000
August	96,100	12,400	54,300	6,680	25,600	130,000
September	92,400	11,800	85,400	7,190	11,400	171,000
October	79,100	12,300	69,600	5,210	14,200	142,000
November	67,700	12,000	66,500	4,400	-3,740	146,000
December	77,900	11,400	58,900	4,810	-3,450	147,000
January-December	1,040,000	145,000	820,000	94,200	42,900	1,870,000
2018:						
January	89,600	12,200	81,100	9,550	23,300	150,000
February	89,000	11,900	77,500	7,270	-4,130	175,000
March	94,800	12,200	75,200	12,100	15,600	154,000
April	81,900	12,200	62,400	13,700	21,400	121,000
January–April	355,000	48,400	296,000	42,600	56,200	601,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

 ${\it TABLE~9} \\ {\it CONSUMPTION~OF~PURCHASED~COPPER-BASE~SCRAP}^1$ 

### (Metric tons, gross weight)

	Sme	lters			Brass	s and			
	and ref	ineries	Ingot n	nakers <sup>2</sup>	wire-ro	d mills <sup>3</sup>	Foundri	es, etc. <sup>2</sup>	Total scrap
Period	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	used
2017: <sup>p</sup>									
January-April	6,920	6,340	8,250	20,500	235,000	13,000	14,600	3,820	308,000
April	1,730	1,590	2,060	5,130	59,300	3,190	3,660	956	77,600
May	1,730	1,590	2,060	5,130	60,100	3,250	3,660	956	78,400
June	1,730	1,650	2,060	5,130	59,300	3,180	3,660	956	77,700
July	1,730	1,590	2,060	5,130	58,700	3,070	3,660	956	76,900
August	1,730	1,590	2,060	5,130	60,100	3,450	3,660	956	78,700
September	1,730	1,690	2,060	5,130	57,100	2,920	3,660	956	75,200
October	1,730	1,650	2,060	5,130	60,200	3,460	3,660	956	78,900
November	1,730	1,610	2,060	5,130	57,900	3,180	3,660	956	76,200
December	1,730	1,620	2,060	5,130	55,900	2,560	3,660	956	73,600
January-December	20,800	19,300	24,700	61,600	704,000	38,000	43,900	11,500	924,000
2018:									
January	1,730	1,590	2,060	5,130	59,000	3,380	3,660	956	77,500
February	1,730	1,630	2,060	5,130	57,900	3,010	3,660	956	76,100
March	1,730	1,590	2,060	5,130	54,700	3,450	3,660	956	73,300
April	1,730	1,630	2,060	5,130	58,800	3,380	3,660	956	77,400
January–April	6,920	6,430	8,250	20,500	231,000	13,200	14,600	3,820	304,000

Preliminary

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

<sup>&</sup>lt;sup>2</sup>Includes electrowon production and electrolytically-refined copper from primary materials. All refined copper produced from scrap is included in "Copper in old scrap."

<sup>&</sup>lt;sup>3</sup>Includes reported monthly production of copper from old scrap of copper-base, an estimate for annual reporters, and a monthly average of copper from non-copper-base materials based on 2016 annual data.

<sup>&</sup>lt;sup>4</sup>Source: U.S. Census Bureau.

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

<sup>&</sup>lt;sup>2</sup>Monthly data estimated based on the monthly average of 2016 annual data.

<sup>&</sup>lt;sup>3</sup>Consumption at brass and wire-rod mills assumed equal to receipts.

# ${\bf TABLE~10} \\ {\bf COPPER~STOCKS~AT~END~OF~PERIOD}^1 \\$

### (Metric tons)

				]	Refined copper			
	Crude		Wire-rod					Total
Period	copper <sup>2</sup>	Refineries <sup>3</sup>	$mills^3$	Brass mills <sup>3</sup>	Other <sup>4</sup>	Comex	LME <sup>5</sup>	refined
2017: <sup>p</sup>	•							
April	26,100	5,980	27,900	8,030	5,470	141,000	54,700	243,000
May	11,000	5,280	24,400	7,410	5,470	143,000	31,900	218,000
June	11,000	4,670	22,700	7,430	5,470	148,000	31,000	219,000
July	11,000	5,810	21,500	7,920	5,470	155,000	25,800	222,000
August	7,350	5,610	27,800	7,740	5,470	165,000	35,900	247,000
September	12,100	8,740	28,600	7,440	5,470	177,000	31,300	259,000
October	13,600	5,620	32,600	7,650	5,470	187,000	34,800	273,000
November	16,700	4,700	35,700	8,190	5,470	190,000	25,600	269,000
December	12,600	5,840	28,000	7,870	5,470	192,000	27,100	266,000
2018:								
January	15,000	6,190	29,000	8,040	5,470	202,000	38,800	289,000
February	14,600	7,690	21,800	7,880	5,470	209,000	33,200	285,000
March	9,010	4,790	22,600	8,000	5,470	212,000	47,600	301,000
April	9,880	4,500	21,600	7,870	5,470	226,000	57,000	322,000

<sup>&</sup>lt;sup>p</sup>Preliminary.

TABLE 11 AVERAGE PRICE OF COPPER IN THE UNITED STATES AND ON THE LONDON METAL EXCHANGE

### (Cents per pound)

		Comex	LME
	U.S. producers	first	cash price
Period	cathode1	position <sup>2</sup>	Grade A
2017:			
April	263.626	258.626	258.428
May	259.902	254.902	253.608
June	265.143	260.193	258.506
July	277.821	272.883	271.162
August	300.928	295.878	293.822
September	303.468	298.405	298.585
October	314.747	309.559	308.299
November	314.717	309.417	309.581
December	314.825	309.825	308.471
Year	285.393	280.425	279.518
2018:			
January	324.640	319.390	321.137
February	322.495	316.745	317.574
March	312.083	306.683	308.227
April	314.129	308.754	310.169
January–April	318.337	312.893	314.277

<sup>&</sup>lt;sup>1</sup>Sum of "Comex high grade first position" and "NY dealer premium cathode."

Source: Platts Metals Week.

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

<sup>&</sup>lt;sup>2</sup>Copper content of blister and anode.

<sup>&</sup>lt;sup>3</sup>Stocks of refined copper as reported; no estimates are made for nonrespondents.

<sup>&</sup>lt;sup>4</sup>Monthly estimates based on 2016 annual data, comprising stocks at ingot makers, chemical plants, foundries, and miscellaneous manufacturers.

<sup>&</sup>lt;sup>5</sup>London Metal Exchange Ltd., U.S. warehouses.

<sup>&</sup>lt;sup>2</sup>Listed as "Comex high grade first position."

# $\label{eq:table 12} \textbf{AVERAGE BUYING PRICES FOR COPPER SCRAP}$

### (Cents per pound)

			Dealers	(New York)
				Red brass
	Brass mills	Refiners	No. 2	turnings and
Period	No. 1 scrap	No. 2 scrap	scrap	borings
2017:				
April	251.10	225.95	179.50	145.00
May	249.41	225.32	177.23	144.36
June	255.59	232.27	175.95	144.00
July	267.82	243.18	179.50	146.00
August	285.74	260.67	190.07	151.17
September	286.25	261.35	200.30	154.45
October	297.34	270.18	204.95	156.18
November	295.42	267.25	208.00	157.50
December	298.58	271.05	206.00	157.00
Year	271.69	245.68	189.25	149.55
2018:				
January	308.14	279.00	215.79	160.81
February	304.63	275.68	217.50	161.00
March	295.18	268.32	213.50	160.00
April	299.33	274.36	209.02	158.00
January–April	301.82	274.34	213.95	159.95

Source: American Metal Market.

TABLE 13 U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			Blister and anodes			Refined		
•	2018				2018			2018			2018	
Country or		January-	-	January-			January-				January-	
locality	2017	April	April	2017	April	April	2017	April	April	2017	April	April
Belgium				69		33				(4)		8,100
Bolivia										1,560		312
Brazil										3,580		297
Canada	25			284	108	231				209,000	15,500	66,000
Chile										486,000	35,600	191,000
China		3	4	33						48	6	23
Congo (Kinshasa)										9,190	218	2,990
Finland							359	16	102	4		
Germany				7			(4)		(4)	2,310	132	418
India										224	(4)	(4)
Japan				76			2	(4)	(4)	4,630	329	1,290
Malaysia							126		54			
Mexico	14,000		18,500	588	97	294				75,200	4,930	20,100
Netherlands				166	14	66	3	(4)	(4)	3	(4)	(4)
Peru										18,000		3,010
South Africa										1,510	963	963
Other	9			700	18	36	14	(4)	2	1,230	4,150	5,850
Total	14,100	3	18,500	1,920	236	658	504	17	159	813,000	61,800	300,000

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

<sup>2</sup>Copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

<sup>3</sup>Copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.

TABLE 14 U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS<sup>1</sup>

(Metric tons, copper content)

	Ore and concentrates <sup>2</sup>			Matte, ash, and precipitates <sup>3</sup>			Blister and anodes			Refined		
	2018 January–				2018 January–			2018 January–			2018	
Country or												January-
locality	2017	April	April	2017	April	April	2017	April	April	2017	April	April
Belgium				4,860	180	868	447	18	69	(4)		
Canada	23,500	1,870	6,850	17,200	2,010	8,450	3,290	138	1,530	18,300	5,050	10,100
China	70,800	4,420	20,000	392	169	396	249	20	85	10,100	478	483
Germany				576	54	87	215	20	51	14		2
Hong Kong							1,110		139	1	(4)	(4)
India	1			(4)	8	25	730	54	208	15	1	6
Italy				73		7	325	41	81	14		17
Japan	1,540		28	189			80		15	16	5	6
Korea, Republic of	99		2,150	397	36	236	1,780	76	464	2,460	4	415
Mexico	141,000	9,140	49,200	99	4	4	102	49	54	62,600	8,050	31,400
Singapore							40		11	5	(4)	(4)
Spain				124		208	121	20	40	1		(4)
Switzerland							31	1	7	5		2
Taiwan				146			122	20	20	19		12
Vietnam										503		1
Other	137	8	28	1,090	129	404	1,040	82	240	142	60	120
Total	237,000	15,400	78,200	25,100	2,590	10,700	9,690	540	3,010	94,200	13,700	42,600

<sup>--</sup> Zero.

Data are rounded to no more than three significant digits; may not add to totals shown.

Copper ore and concentrates only; excludes copper contained in ore and concentrates of other metals.

Copper matte, ash, and precipitates only; excludes the copper content of mattes and ashes of other metals.

<sup>&</sup>lt;sup>4</sup>Less than ½ unit.

 $\label{eq:table 15} \textbf{U.S. IMPORTS FOR CONSUMPTION OF COPPER SCRAP}^1$ 

(Metric tons, gross weight)

		Unalloyed	Alloyed				
		201	8		2018		
Country or	<del>-</del>		January-	<del>-</del>		January-	
territory	2017	April	April	2017	April	April	
Canada	18,900	1,340	5,950	81,900	5,630	25,400	
Chile	57	19	61	301	21	57	
Colombia	598	79	139	1,360	150	382	
Costa Rica	636	44	214	1,060	47	253	
Guatemala	36	20	42	446	35	118	
Honduras	61			352	11	110	
Mexico	10,400	964	3,610	35,300	3,050	11,800	
Nicaragua	38			321	20	165	
Pakistan	694	76	340				
Panama	1,440	122	556	790	41	263	
Venezuela	958	70	1,240	1,870	10	344	
Other	1,700	114	657	6,120	431	2,060	
Total	35,500	2,850	12,800	130,000	9,450	40,900	

<sup>--</sup> Zero.

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

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

(Metric tons, gross weight)

-				Unalloyed								
•			201	8			201	2018				
	No. 1		No. 2		Other			Segreg	gated	Unsegr	egated	
•		January-		January-		January-			January-		January-	
2017	April	April	April	April	April	April	2017	April	April	April	April	
7,870	301	1,100	277	760	133	678	8,560		117	1,110	2,480	
43,700					4,330	17,300	49,200			2,890	11,200	
351,000	12,000	45,400	11,300	41,500	10,200	38,300	335,000	6,740	23,600	7,710	30,100	
19,700	1,750	5,530	623	1,620	183	394	10,900	255	1,270	1,010	3,280	
6,950	454	1,130	49	233	633	2,200	31,800	313	3,300	1,340	6,250	
4,710	330	1,320	67	498	138	417	20,000	789	3,650	404	1,150	
11,800	167	606	1,160	3,930	438	1,470	9,300	78	242	895	6,250	
17,000	1,690	5,440	340	808	472	1,520	14,400	581	1,930	414	2,380	
3,500	314	1,360		3		2	507		23	13	260	
7,260	384	1,530	39	120	321	1,570	1,120	39	100	250	651	
2,340	28	82	60	131			5,780	18	126	664	2,040	
1,220	27	170		107		59	6,280	295	783	559	2,300	
5,600	469	1,950	83	260	320	1,040	2,900	159	352	772	2,360	
204	259	662		243	311	689	472	77	376	1,150	4,760	
9,580	1,500	3,750	538	1,730	1,600	5,540	13,600	992	2,980	2,570	10,000	
492,000	19,600	70,100	14,500	52,000	19,100	71,100	510,000	10,300	38,800	21,700	85,500	
	7,870 43,700 351,000 19,700 6,950 4,710 11,800 17,000 3,500 7,260 2,340 1,220 5,600 204 9,580	2017 April 7,870 301 43,700 351,000 12,000 19,700 1,750 6,950 454 4,710 330 11,800 167 17,000 1,690 3,500 314 7,260 384 2,340 28 1,220 27 5,600 469 204 259 9,580 1,500	Zo17         April         January-April           7,870         301         1,100           43,700             351,000         12,000         45,400           19,700         1,750         5,530           6,950         454         1,130           4,710         330         1,320           11,800         167         606           17,000         1,690         5,440           3,500         314         1,360           7,260         384         1,530           2,340         28         82           1,220         27         170           5,600         469         1,950           204         259         662           9,580         1,500         3,750	Zo17         April         277         43,700         2	2017         April         April	2017         April         April	2017         April         April	2017         April         2017           7,870         301         1,100         277         760         133         678         8,560           43,700             4,330         17,300         49,200           351,000         12,000         45,400         11,300         41,500         10,200         38,300         335,000           19,700         1,750         5,530         623         1,620         183         394         10,900           6,950         454         1,130         49         233         633         2,200         31,800           4,710         330         1,320         67         498         138         417         20,000           11,800         167         606         1,160         3,930         438         1,470         9,300           17,000         1,690         5,440         340         808         472         1,520         14,400           3,500         314         1,360	2017         April         January- April         January- April         January- April         January- April         January- April         April         Apri	2017         April         April	2017         April         April	

<sup>--</sup> Zero.

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