



# SME FOUNDATION FOR PUBLIC INFORMATION AND EDUCATION, INC.

Affiliated with the Society for Mining, Metallurgy and Exploration, Inc.

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## "IN ONE DAY"

According to the US Bureau of Mines, *during your lifetime, you will use more than 2 million pounds of minerals and metals* including 1.2 million pounds of sand and gravel, 360,000 pounds of coal, 91,000 pounds of iron and steel, 27,000 pounds of clay, 26,000 pounds of salt, 500,000 pounds of coal, 800 pounds of lead, 28,000 pounds of phosphate and potash, 3,200 pounds of aluminum, 1,500 pounds of copper and 840 pounds of zinc.

The following mineral related facts are excerpts from *In One Day* by Tom Parker and *Mined It!* by Peter Harben and Jeanette Harris. They are presented to provide perspective about the relationship of minerals - and mining - to things and events in our lives that are often taken for granted. Minerals and mining play essential roles in modern society.

### To maintain our standard of living, every day ...

- \* 18 million tons of raw material must be mined, cut or harvested to meet the demands of US citizens for "things and stuff"; about 150 pounds for every man, woman and child in the United States.
- \* 625 acres of land is disturbed by mining; 337 acres are reclaimed and replanted.
- \* 1,500 tons of lead (a 16 foot cube), 3,400 tons of copper (a 23 foot cube), 7,560 pounds of silver (a 27 inch cube) and 272 pounds of gold (a 7.5 inch cube) are mined and refined.
- \* 3,000 new homes and 650 mobile homes are completed. (concrete and asphalt foundations and driveways; iron and zinc nails; copper and aluminum wiring; window glass; steel beams and window frames; asphalt roofing; clay, feldspar, talc and silica in porcelain sinks, bathtubs and toilets; iron, brass, steel, aluminum in plumbing fixtures; carpeting; iron, zinc, brass light fixtures and bulbs; clays in brick fireplaces and tiles; counter tops of marble and granite; putty to stick them together of limestone and gypsum; wallboard made from gypsum)
- \* 640 acres - one square mile - of carpeting is woven. (barite, calcium carbonate)
- \* 9.7 million square feet of plate and window glass - about 223 acres - are used; enough to cover 200 football fields. (silica sand, trona)
- \* 2,750 acres of pavement are laid, four times as much surface area as is mined, and enough concrete and asphalt to make a bicycle path 7 feet wide from coast to coast. (sand, gravel, stone chips, limestone)
- \* 150,000 lead-acid car batteries are replaced. (lead)
- \* 4,000,000 eraser tipped pencils are purchased. That's enough erasers to correct all the mistakes from 1,500 miles of notebook paper - about 129 acres of goofs. (graphite, kaolin, pumice)
- \* 426 bushels of paper clips - 35,000,000 are purchased. Seven million are actually used; 8-9 million are lost and almost 5 million are twisted up by nervous fingers during telephone conversations. (iron, clay, limestone, trona, steel)
- \* 650,000 x-rays are snapped. Each requires lead shielding for technicians and patients. (silver, iodine, lead)
- \* 164 square miles of newsprint is used to print 62.5 million newspapers; enough to line a bird cage 12 miles wide and 13 miles long. (trona, kaolin)

- \* 3 million gallons of paint are used - enough to spruce up 200,000 homes. (titanium, iron, silica, wulfenite, mica)
- \* 400 acres of asphalt roofing are nailed down. (silica, borate, limestone, trona, feldspar, talc, silica sand)
- \* 187,000 tons of cement are mixed, enough to construct a four foot wide sidewalk from coast to coast. (limestone, sand, gravel, stone chips)
- \* 150,000 miles of copper wiring is added to telephone networks to carry the 80 million calls we make.
- \* 3.6 million light bulbs are purchased. (tungsten, trona, silica sand, copper, aluminum)
- \* 120 million glass bottles and jars are used. (trona, silica sands)
- \* 250,000 tons of steel are used, enough to forge a spike the size of the Washington Monument. (iron, clay, limestone, trona)
- \* 10 tons of colored gravel for aquariums is purchased.
- \* 40 acres of leather is used, most of it to cover feet and hold up pants. (chromite)
- \* 80 pounds of gold are used to fill 500,000 dental cavities.
- \* 550,000 pounds of toothpaste - 2.5 million tubes - are used; enough to fill a small jet airliner. (calcium carbonate, zeolites, trona, clays, silica)
- \* 21 million photographs are snapped, more than 29 acres of wallet-sized photos. (silver, iodine)

Supplies of mineral products are driven by consumer demand. Before processing, raw, non-fuel minerals contribute more than \$30 billion per year to the US economy. Another \$300 billion is added when the minerals are processed to produce steel, aluminum, copper, brick and glass. And finally, by the time finished products like automobiles, toasters, glassware and china, cans, bottles, vacuum cleaners, airplanes, TV sets and computers reach the hands of consumers, more than \$5 trillion will be added to the economy because we are able to mine and process mineral resources.

### REMEMBER:

*"If it can't be grown, it has to be mined"*