

Gold

Current estimated underground gold reserves are around **57,000 to 60,000 metric tons**, with a total of approximately 187,000 to 216,000 metric tons of gold having been mined and above-ground reserves. These figures, based on the World Gold Council and U.S. Geological Survey (USGS), account for economically viable deposits and known historical extraction, though estimates can vary. [1, 2, 3, 4]

Key Figures

- **Mined Gold:** Roughly 187,000 to 216,000 metric tons of gold have been mined and are above ground.
- **Underground Reserves:** Approximately 57,000 to 60,000 metric tons of gold are estimated to remain in the earth as economically viable reserves. [2, 3, 4]

What These Figures Mean

- **Total Available Gold:** The total amount of gold found to date, including what has been mined and what remains in the ground as reserves, is estimated to be around 244,000 metric tons.
- **Economic Factors:** Reserve estimates are influenced by economic viability, meaning the cost and technology required to extract the gold from a deposit.
- **Varying Estimates:** While these are current estimates from authoritative sources, gold reserves are a dynamic number that can change with new exploration, technological advancements, and economic factors. [1, 4, 5]

The concentration of gold in the oceans is extremely low, estimated to be around **1 to 13 parts per trillion**. This means there is about 1 gram of gold for every 100 million metric tons of seawater, making extraction currently impossible due to the immense cost and energy required to process such vast quantities of water for a minuscule amount of metal. [1, 2, 3, 4]

Concentration and Quantity:

- **Parts per Trillion (ppt):** Gold is present in incredibly dilute concentrations, measured in parts per trillion.
- **One Gram per 100 Million Tons:** A common approximation is that there is approximately one gram of gold for every 100 million metric tons of seawater.
- **Total Amount:** Despite the low concentration, the total estimated amount of gold in the oceans is vast, with some estimates suggesting around 20 million tons. [1, 2, 3, 4, 5]

AI responses may include mistakes.

[1] <https://marcos-jewellery.co.uk/blogs/gold/how-much-gold-exists-in-the-world>

[2] <https://www.livescience.com/planet-earth/geology/how-much-gold-is-there-in-the-world>

[3] <https://www.gold.org/goldhub/data/how-much-gold>

[4] <https://www.usgs.gov/faqs/how-much-gold-has-been-found-world>

[5] <https://tavexbullion.co.uk/how-much-gold-is-left-in-the-world/>

To hold 100 million tons of water, 40,000 Olympic-sized swimming pools would be required. [1, 2]

Calculation

1. **Determine the volume of 100 million tons of water.**
 - The density of water is approximately 1,000 kilograms per cubic meter (kg/m^3).
 - One metric ton is equal to 1,000 kilograms.
 - Therefore, 100 million metric tons is equal to 100 billion kilograms ().
 - The total volume of the water is its mass divided by its density:
2. **Determine the volume of an Olympic-sized swimming pool.**
 - Based on minimum standard dimensions (50 meters long, 25 meters wide, and 2 meters deep), an Olympic-sized pool holds 2,500 cubic meters ().
3. **Divide the total volume by the volume of one pool.**
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[1] https://en.wikipedia.org/wiki/Olympic-size_swimming_pool

[2] https://www.engineeringtoolbox.com/water-density-specific-weight-d_595.html