How will they fix the giant sinkhole in Guatemala City?

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How To Fix a Giant Sinkhole

The cement method vs. the graded-filter technique.

A sinkhole in Guatamala

A sinkhole, 65 feet across and 100 feet deep, swallowed up a small factory and some telephone poles in Guatemala City last weekend. Police have been stationed around the hole to prevent bystanders from falling in, and those who live nearby are staying elsewhere for the time being. How do you fill a massive sinkhole in the middle of a major urban area?

With cement or rocks. Sinkholes develop when water flows through pores in bedrock and gradually enlarges them. When these subterranean cavities get big enough, the ground above collapses and fills them in. Guatemala City's last major crater, which opened in 2007, dropped three houses 330 feet below the city's streets. The government spent $2.7 million redirecting sewer pipes around the area and filling the hole with cement. This week's sinkhole will probably be filled the same way.

It's not clear whether cement is the best option, however. A 6,500-cubic-foot wad of concrete may serve to concentrate water runoff in other areas, leading to more sinkholes. Many engineers prefer the graded-filter technique, in which the hole is filled with a layer of boulders, then a layer of smaller rocks, and, finally, a layer of gravel. This fills the hole, more or less, while permitting water to drain through the area.