"Overall, an all-out U.S. attack on the Soviet Union, China and satellite countries in 1962 would have killed 335 million people within the first seventy-two hours."

It is no exaggeration to say that for those who grew up during the Cold War, all-out nuclear war was “the ultimate nightmare.” The prospect of an ordinary day interrupted by air-raid sirens, klaxons and the searing heat of a thermonuclear explosion was a very real, albeit remote, possibility. Television shows such as The Day After and Threads realistically portrayed both a nuclear attack and the gradual disintegration of society in the aftermath. In an all-out nuclear attack, most of the industrialized world would have been bombed back to the Stone Age, with hundreds of millions killed outright and perhaps as many as a billion or more dying of radiation, disease and famine in the postwar period.
During much of the Cold War, the United States' nuclear warfighting plan was known as the SIOP, or the Single Integrated Operating Plan. The first SIOP, introduced in 1962, was known as SIOP-62, and its effects on the Soviet Union, Warsaw Pact and China were documented in a briefing paper created for the Joint Chiefs of Staff and brought to light in 2011 by the National Security Archive. The paper presupposed a new Berlin crisis, similar to the one that took place in 1961, but escalating to full-scale war in western Europe.

Although the war scenario was fictional, the post-attack estimates were very real. According to the paper, the outlook for Communist bloc countries subjected to the full weight of American atomic firepower was grim. The paper divided attack scenarios into two categories: one in which the U.S. nuclear Alert Force, a percentage of overall nuclear forces kept on constant alert, struck the Soviet Union and its allies; and a second scenario where the full weight of the nuclear force, known as the Full Force, was used.

Under SIOP, “about 1,000” installations that were related to “nuclear delivery capability” would be struck. The scenario, which assumed advance warning of a Soviet attack and an American preemptive strike, would see the Alert Force attacking 75 percent of these targets. The attack would be a largely “counterforce” strike, in which U.S. nuclear forces attacked Soviet, Warsaw Pact and Chinese command-and-control and nuclear forces. The report states that 83 to 88 percent of all targets would be destroyed with 70 percent assurance.

In an Alert Force attack, 199 Soviet cities with populations of fifty thousand or greater would be struck. This would turn 56 percent of the urban population and 37 percent of the total population into casualties, most of whom would eventually die due to a post-attack breakdown of society. In China, forty-nine cities would be struck, turning 41 percent of the urban population into casualties and 10 percent of the overall population. In eastern Europe, only purely military targets would be struck, with a projected 1,378,000 killed by American nuclear attacks.

An all-out Full Force attack would be much worse. A Full Force attack would devastate 295 cities, leaving only five cities with populations of fifty thousand or more unscathed. 72 percent of the urban population and 54 percent of the overall population would become casualties—as the National Security Archive points out, that amounts to 108 million likely killed out of a total population of 217 million. In China, seventy-eight cities would be struck, affecting 53 percent of the urban population and 16 percent of the overall population. Casualties in eastern Europe would more than double, to 4,004,000.

Overall, an all-out U.S. attack on the Soviet Union, China and satellite countries in 1962 would have killed 335 million people within the first seventy-two hours.

The SIOP-62 report does not attempt to estimate U.S. casualties in a nuclear war. However, a 1978 report prepared for the Pentagon’s Office of Technology Assessment (OTA), “The Effects of Nuclear War,” spelled out in grim detail what would happen if the Soviet Union
unleashed its arsenal on the United States.

The OTA report states that, in the event of a Soviet attack against U.S. nuclear forces, other military targets, economic targets and population targets, an attack could be estimated to kill between sixty and eighty-eight million Americans. With enough warning, major cities and industrial areas could be evacuated, but that would only lower the number of dead to between fifty-one and forty-seven million. Attacks on U.S. allies, including the NATO nations, Japan and South Korea, would undoubtedly occur but are not modelled in the study.

Another report, “Casualties Due to the Blast, Heat, and Radioactive Fallout from Various Hypothetical Nuclear Attacks on the United States,” postulated a Soviet attack against “1,215 U.S. strategic-nuclear targets. The attack involves almost 3,000 warheads with a total yield of about 1,340 megatons.” Because the attacks are carried out against hardened facilities, particularly MX and Minuteman III intercontinental ballistic-missile silos, the attacks are envisioned using SS-18 “Satan” ICBMs, each carrying ten 550-to-750-kiloton warheads. Attacks against U.S. bomber and refueling forces are carried out by ICBMs and submarine-launched ballistic missiles fired from off the coastline.

The result of even this modest attack, which largely spares U.S. cities to attack nuclear forces in the Midwest, is thirteen to thirty-four million deaths and twenty-five to sixty-four million total casualties. Still, bombarded by 1,215 nukes, the United States would lose far fewer people than Strategic Air Command estimated the Soviet Union would lose in 1962.

The discrepancy is probably because of the larger yields of U.S. nuclear weapons in the 1960s versus Soviet nukes in the 1980s, but also because at the time of the SAC report, Soviet nuclear forces were primarily bomber-based. The Soviet Union had between 300 and 320 nuclear weapons in 1962, all but forty of which were bomber-based. Bomber bases may have been closer to major population areas. A major draw of U.S. nuclear weapons to Soviet cities would have also been the presence of local airports, which would have functioned as dispersal airfields for nuclear-armed bombers. On the other hand, the Soviet attack would largely hit ICBM fields and bomber bases in low-population-density regions of the Midwest, plus a handful of submarine bases on both coasts.

As devastating as these projections are, all readily admit they don't tell the entire story. While these three studies model the immediate effects of a nuclear attack, long-term problems might kill more people than the attack itself. The destruction of cities would deny the millions of injured, even those who might otherwise easily survive, even basic health care. What remains of government—in any country—would be hard pressed to maintain order in the face of dwindling food and energy supplies, a contaminated landscape, the spread of disease and masses of refugees. Over a twelve-month period, depending on the severity of the attack, total deaths attributable to the attacks could double.
While the threat of nuclear war between the United States and Soviet Union has ended, the United States now faces the prospect of a similar war with Russia or China. The effects of a nuclear war in the twenty-first century would be no less severe. The steps to avoiding nuclear war, however, are the same as they were during the Cold War: arms control, confidence-building measures undertaken by both sides and a de-escalation of tensions.

Kyle Mizokami is a defense and national-security writer based in San Francisco who has appeared in the Diplomat, Foreign Policy, War is Boring and the Daily Beast. In 2009 he cofounded the defense and security blog Japan Security Watch. You can follow him on Twitter: @KyleMizokami.