



Updated May 22, 2025

Russia's Nuclear Weapons

Russia presents an "acute threat" to the United States and its allies, according to the 2022 National Defense Strategy. The 2022 Nuclear Posture Review, a Biden Administration review of U.S. nuclear policy, states,

Russia remains the U.S. rival with the most capable and diverse nuclear forces. Today it is unique in the combination of strategic and non-strategic nuclear forces it fields that enables nuclear employment ranging from large-scale attacks on the [U.S.] homeland to limited strikes in support of a regional military campaign [in the Euro-Atlantic region].

Since Russia's February 2022 invasion of Ukraine, Russian President Vladimir Putin has issued nuclear weapons threats, stated that Russia has deployed nonstrategic nuclear weapons to its ally Belarus, and declared the suspension of certain Russian obligations under the 2010 New START Treaty that limits U.S. and Russian strategic nuclear forces. Congress may choose to examine U.S. deterrence and risk reduction policy toward Russia.

Force Structure

According to one 2025 nongovernmental estimate, Russia has around 1,718 deployed nuclear warheads based on a triad of strategic delivery vehicles roughly consisting of 330 intercontinental ballistic missiles (ICBMs), 12 ballistic-missile submarines (SSBNs) with 192 submarine-launched ballistic missiles (SLBMs), and 58 strategic bombers. Russia has not exchanged official data with the United States about the structure of its strategic nuclear forces since 2023. Russian officials have stated, however, that Russia continues to abide by New START limits, thus maintaining rough parity with U.S. strategic nuclear forces. According to one 2025 nongovernmental estimate, the United States has around 1,770 deployed nuclear warheads.

Russia is concluding a modernization of its strategic nuclear forces that focuses in particular on the development of the SS-X-29 (Sarmat) heavy ICBM, the SS-27 Mod 2 (Yars) ICBM, and the Dolgorukiy (Borei) class SSBN, according to a 2024 Defense Intelligence Agency (DIA) statement to Congress. Russia deploys the majority of its strategic nuclear warheads on ICBMs. A separate Russian military service, the Strategic Rocket Forces, commands these silobased and mobile ICBMs. Russia can field most of its ICBMs and all of its SLBMs with multiple warheads on each missile.

Russia also has a variety of dual-capable systems (which are able to use conventional or nuclear warheads), including precision strike missiles, of various ranges and modes of launch, that are not limited by any arms control agreements. The Russian military could deploy these systems with nuclear warheads, enabling their use as nonstrategic nuclear weapons. Russia has rejected U.S. efforts to negotiate limits

on Russian nonstrategic nuclear weapons, describing these weapons as an offset to U.S. and NATO conventional superiority. The State Department stated in 2025 that the Russian military has between 1,000 to 2,000 nuclear warheads for nonstrategic weapons; nongovernmental organizations attribute 1,477 warheads to these systems.

Russian officials have expressed concerns about the survivability of Russian strategic nuclear forces, given advances in U.S. long-range conventional strike and missile defenses. In 2018, President Putin announced that Russia was developing new delivery vehicles, including an ICBM-mounted hypersonic glide vehicle, a nuclear-powered cruise missile, and a nuclear-capable autonomous underwater system. According to 2025 testimony of NORTHCOM Commander General Gregory Guillot, "if fielded," these novel Russian capabilities "will severely challenge [the U.S.] ability to detect and characterize an inbound attack and determine an appropriate response during a conflict."

In 2024, U.S. officials posited concerns about Russia's plans to launch a nuclear-armed satellite into space. A 2025 DIA statement indicated that Russia believes that a "satellite capable of carrying a nuclear device," among other counterspace capabilities, "will deter Western adversaries reliant on space and enable [Russia] to disrupt or destroy Western satellite should deterrence fail."

Doctrine and Employment Plans

According to a November 2024 revision of Russia's nuclear declaratory policy document, Russian nuclear deterrence policy seeks to maintain nuclear forces at a "sufficient" level, "guarantees protection of national sovereignty and territorial integrity," deters aggression, and enables escalation management, as well as the "termination" of adversary "military actions" on conditions "acceptable" to Russia. The document adds that the Russian President could authorize nuclear weapons employment in the following scenarios: (1) "the receipt of reliable data" about a ballistic missile attack against Russian or allied territory, (2) the use by an adversary of "nuclear and other weapons of mass destruction" against Russia or an ally, (3) "adversary actions" on "government or military" targets that could affect Russia's ability to retaliate with nuclear weapons, (4) a conventional "aggression against" Russia and (or) Belarus that "poses a critical threat to their sovereignty and (or) territorial integrity," and (5) "the receipt of reliable data" about a "mass start of aerospace attack means" and "their crossing of [Russia's] state border." The document also states that Russia considers "an aggression" by "any nonnuclear state, but with participation or with support from a nuclear state," a "joint attack" against Russia. While this declaratory policy revision broadens the range of Russia's potential nuclear employment scenarios, it is

unknown how the Russian military will translate it into changes in Russia's nuclear employment planning.

Russian political and military leaders have articulated a "strategic deterrence" concept that combines nonmilitary means, nonnuclear capabilities, and nuclear weapons into a spectrum of continuous actions aimed at deterrence, escalation management, and warfighting. The U.S. intelligence community's 2024 Annual Threat Assessment (ATA) said that "Russia is expanding and modernizing" its dual-capable systems "because Moscow believes [they] offer options to deter adversaries, control the escalation of potential hostilities, and counter U.S. and Allied conventional forces." Western studies of authoritative Russian military writings depict several different variants of "ladders" involving steps with dual-capable systems the Russian military could take to deter or manage escalation.

The Russian military plans for the use of military force through a system of "strategic operations." According to nongovernmental sources, some of these operations may foresee large-scale as well as limited use of nuclear weapons. Other strategic operations may provide Russia with flexible coercive options below the nuclear threshold. According to General Guillot's 2024 testimony, Russia could employ nonnuclear precision missiles and cyber capabilities "to strike Western economic and military infrastructure in an attempt to degrade our political will and compel negotiations to terminate an escalating conflict."

Russian Coercive Signaling Since 2022

Since February 2022, President Putin has invoked Russia's nuclear weapons in an apparent attempt to deter Western military intervention against Russia in Ukraine. Russian nuclear signaling has included announcements of increased nuclear readiness, exercises, missile tests, capability demonstrations, and changes in nuclear declaratory policy. (See CRS Insight IN12464, Russia's Nuclear and Coercive Signaling During the War in Ukraine.) In February 2023, President Putin also noted the possibility of nuclear tests, if the United States engaged in such testing, and Russia withdrew its ratification of the Comprehensive Test Ban Treaty (CTBT) in November 2023. Russia maintains a nuclear testing capability at a test site in the Arctic.

Belarusian President Alexander Lukashenko posited in April 2024 that Russia deployed "several dozen" nuclear weapons to Belarus. The DIA stated in 2025 that Russia is "expanding its nuclear posture to Belarus by establishing missile and nuclear-capable aircraft capabilities, renovating a nuclear weapons storage site, and training Belarusian crews to handle tactical nuclear weapons."

Some experts in Russia have called for limited nuclear strikes and changes to declaratory policy, arguing that Russian threats have not deterred Western military aid to Ukraine. Western analysts have debated the credibility of Putin's nuclear threats and signaling. According to a 2025 DIA statement, "Russia almost certainly seeks to avoid direct conflict with NATO because it assesses it cannot win a conventional military confrontation with the alliance."

Throughout the war in Ukraine, U.S. officials have voiced concerns that Russia may use a nuclear weapon. More recently, a DIA 2025 statement posits that "Russia is very unlikely to use nuclear weapons in the conflict unless Russian leadership judged it faced an existential threat to the regime."

Arms Control and Risk Reduction

Since the 1962 Cuban Missile Crisis, the United States and Russia have periodically engaged in efforts to reduce the risks of nuclear war and negotiated agreements to limit and reduce their nuclear weapons. (See CRS In Focus IF12964, U.S.-Russian Nuclear Arms Control: Overview and Potential Considerations for Congress.)

As a result of Russia's war in Ukraine, the United States and Russia have not met in a Strategic Stability Dialogue aimed at discussing future arms control since January 2022. Biden Administration officials have said since 2023 that the United States is willing to return to talks with Russia "without preconditions." However, President Putin has stated that Russia would not discuss arms control while the United States seeks to inflict "strategic defeat" on Russia by providing military aid to Ukraine. An August 2022 National Intelligence Council assessment stated that Russia "probably still sees value in strategic nuclear arms control as a means to constrain the United States."

In February 2023, President Putin announced that Russia would suspend its participation in the New START Treaty, an agreement that limits U.S. and Russian strategic nuclear delivery vehicles to 800 and warheads actively deployed on these delivery vehicles to 1,550 each. Russian officials have said Russia would maintain treaty limits but discontinue onsite inspections and data exchanges.

In a January 2025 report to Congress, the State Department stated that "Russia may have exceeded the [treaty's] deployed warhead limit by a small number," but "assesses with high confidence" that Russia did not carry out "any large-scale activity above the Treaty limits in 2024." The report further stated that while the United States "cannot certify" that Russia is compliant with New START, the department "does not determine" at present that "Russia's noncompliance" threatens U.S. "national security interests." A 2025 DIA assessment stated that Russia has "a stockpile of about 1,550 deployed strategic warheads." It is unknown if President Putin may choose to build up Russian strategic nuclear forces after New START expires in February 2026.

The Congressional Commission on the U.S. Strategic Posture proposed in its 2023 report that the United States prepare for the emerging "two-nuclear-peer" threat from Russia and China. (See CRS In Focus IF12621, Congressional Commission on the U.S. Strategic Posture.) Congress may consider some of the commission's recommendations for U.S. conventional and nuclear deterrence capabilities, cooperation with allies, and risk reduction with adversaries.

Anya L. Fink, Analyst in U.S. Defense Policy

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.