

U.S. Nuclear Weapons Policy and Programs



Madelyn Creedon
Principal Deputy Administrator
National Nuclear Security Administration
October 2016



Demonstrated Longtime Commitment to Reducing the Role of Nuclear Weapons



1991

U.S. Stockpile: 19,008



The **collapse of the Soviet Union** led to the START Treaty, Reciprocal Unilateral Measures and Cooperative Threat Reduction. The 1991 START Treaty between the U.S. and USSR resulted in the removal of 80% of all strategic nuclear weapons at the time.

2002

U.S. Stockpile: 10,457

The **Moscow Treaty** between the U.S. and Russia reduced deployed strategic nuclear warheads to 1700-2200.

2009

U.S. Stockpile: 5,113



At the **Prague Speech**, President Obama emphasized “reducing the role and number of nuclear weapons” and, in 2010, the **New START** Treaty with Russia further reduced operationally deployed strategic nuclear warheads to 1550.

2013

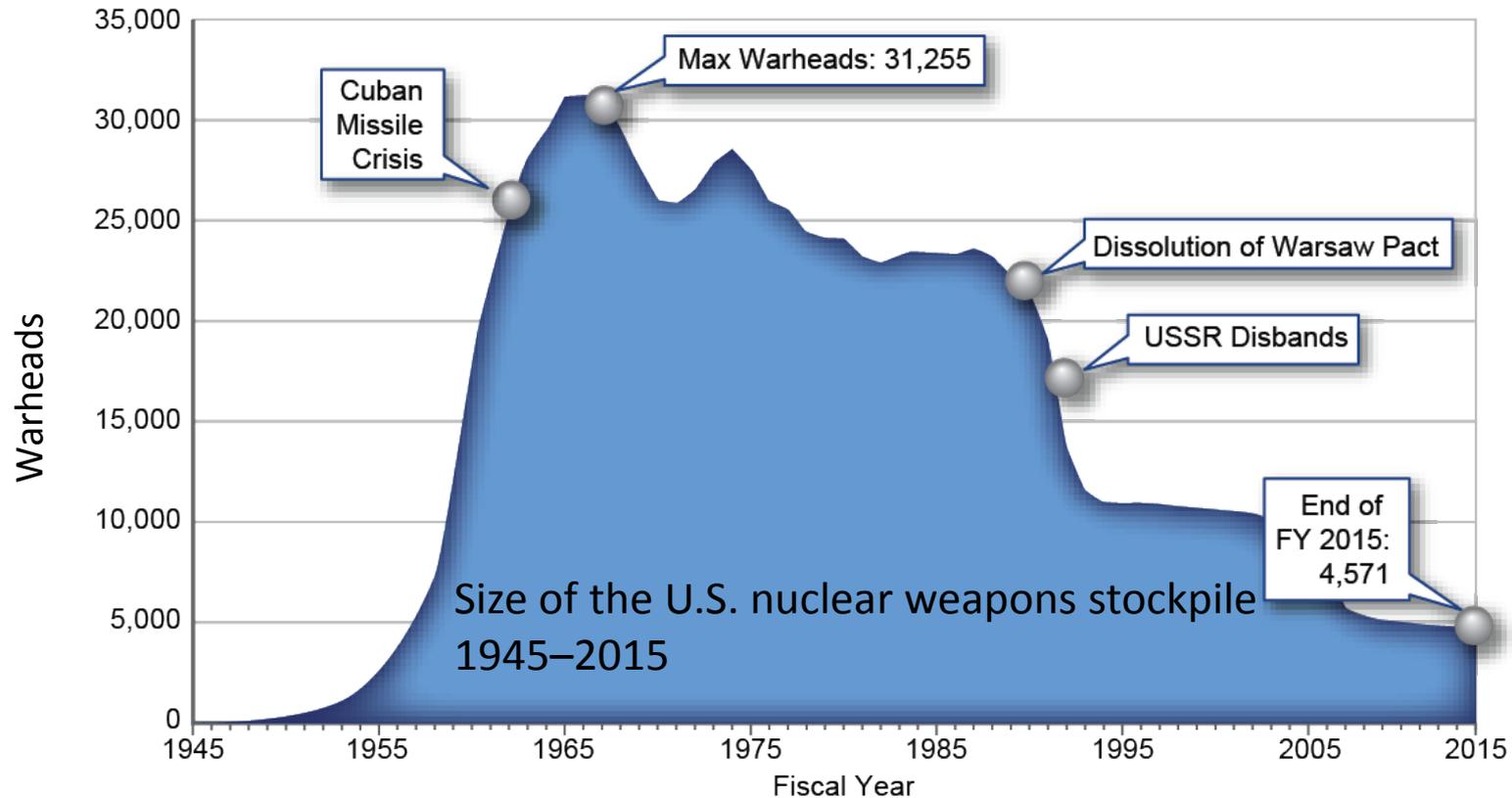
U.S. Stockpile: 4,804

President Obama’s **Berlin speech** invited Russia to join us in additional reductions of up to one third additional operationally deployed strategic weapons.

In 2015, Secretary Kerry announced at the NPT RevCon that we would accelerate dismantlement of warheads retired prior to 2009 – today the U.S. has approximately 2,500 awaiting dismantlement



Evolution of the Stockpile



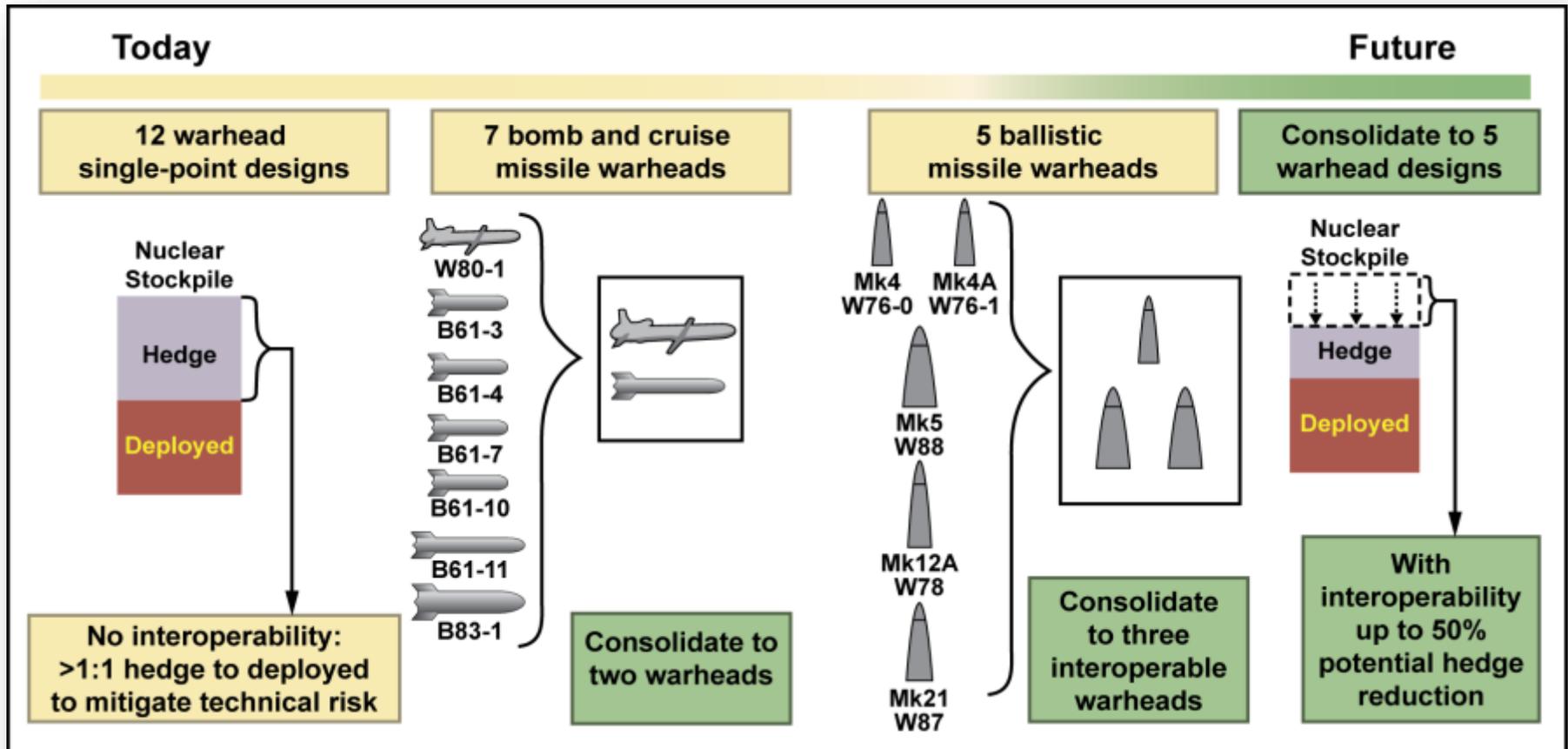
Note: Includes active and inactive warheads. Several thousand additional nuclear warheads are retired and awaiting dismantlement.

Key: USSR = Union of Soviet Socialist Republics

The United States remains committed to fulfilling our commitments under Article VI of the NPT, and to create the conditions for the peace and security of a world without nuclear weapons.



3+2 Strategy

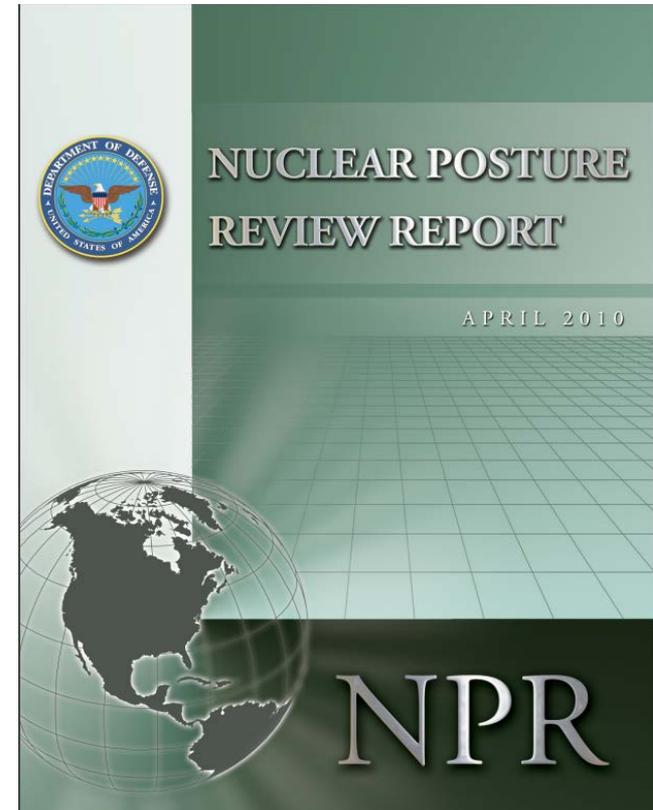




The Five Objectives of the Nuclear Posture Review

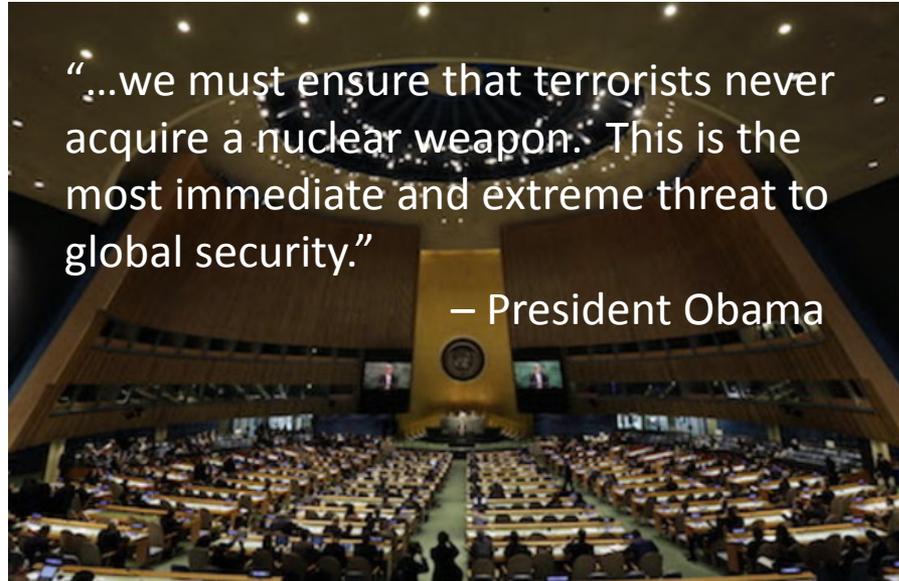


- **Preventing** Nuclear Proliferation and Nuclear Terrorism
- **Reducing** the role of U.S. Nuclear Weapons
- **Maintaining** Strategic Deterrence and Stability at Reduced Nuclear Force Levels
- **Strengthening** Regional Deterrence and Reassuring U.S. Allies and Partners
- **Sustaining** a Safe, Secure, and Effective Nuclear Arsenal





Preventing Nuclear Proliferation and Nuclear Terrorism



- Bolster the nuclear nonproliferation regime by negotiating JCPOA and strengthening IAEA safeguards.
- Establish Nuclear Security Summit Process to draw high level political focus on nuclear and radiological security.
 - Remove and secure vulnerable nuclear material -- enough for 150 nuclear weapons
 - Detect and interdict smuggled nuclear materials
 - Strengthen nuclear forensics efforts
- Cooperation is founded on the capabilities of the NNSA nuclear security enterprise.



Reducing the Role of U.S. Nuclear Weapons



- U.S. intent is to pursue one-third reduction in deployed strategic nuclear weapons from the level established in the New START Treaty so that we can continue to move beyond Cold War nuclear postures.
- These reductions are possible in part because the 2013 employment guidance aligns U.S. nuclear plans to focus on only those objectives and missions necessary for deterrence in the 21st century security environment.
- The guidance takes further steps toward reducing the role of nuclear weapons in U.S. national security strategy, moving further away from nuclear postures that are not suited to contemporary and emerging threats.



Maintaining Strategic Deterrence and Stability at Reduced Nuclear Force Levels



Nuclear Posture Review:

- “Large disparities in nuclear capabilities...may not be conducive to maintaining a stable, long-term strategic relationship, especially as nuclear forces are significantly reduced. Therefore, we will place importance on Russia joining us as we move to lower levels.”

Employment Guidance:

- U.S. will maintain a nuclear Triad (ICBMs, SLBMs nuclear-capable heavy bombers).
- Retaining all three Triad legs will best maintain strategic stability at a reasonable cost, while hedging against political technical problems or vulnerabilities.
- These forces should maintain strategic stability with Russia and China, deter potential regional adversaries, and assure U.S. allies and partners.



Maintaining Strategic Deterrence and Stability at Reduced Nuclear Force Levels (cont'd)



- NNSA is in the process of updating and right-sizing its facilities to create a truly responsive nuclear infrastructure
- Life Extension Programs (LEP) enable further reduction:
 - W76-1 LEP will, when completed in 2019, allow significant stockpile reductions.
 - Delivery of the B61-12 First Production Unit will lead to the retirement of the last megaton weapon, the B83 gravity bomb.



Strengthening Regional Deterrence and Reassurance of U.S. Allies and Partners



- The United States is committed to working with allies and partners to strengthen regional deterrence.
 - Continue to enhance conventional capabilities, field regional missile defenses, and improve counter-WMD capabilities.
 - Provide assurance to allies and partners of our commitment to their security.
 - Retain a nuclear component in key regional security architectures as long as nuclear threats to U.S. forces and allies remain.
 - Continue close consultations with allies and partners to ensure the credibility and effectiveness of the U.S. extended deterrent.



Sustaining a Safe, Secure, and Effective Stockpile



U.S. stockpile management principles:

- No nuclear-explosive testing – maintain the stockpile with a science-based Stockpile Stewardship Program (SSP).
- Sustain the Stockpile
 - No new nuclear warheads. LEPs will only use nuclear components based on previously tested designs and will not support new military missions or provide for new military capabilities.
- Annual assessment process assures a credible deterrent.



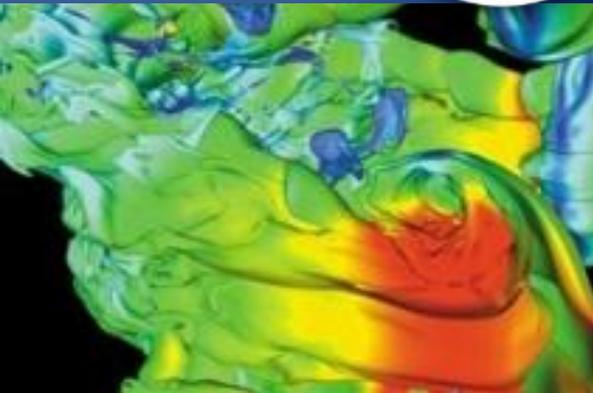
Science Based Stockpile Stewardship



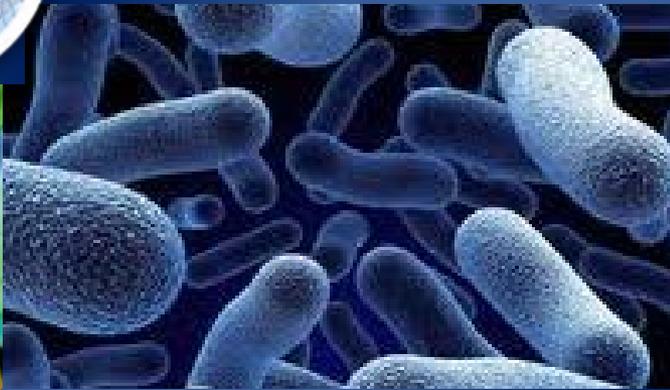
Computing & Information Sciences



Engineering Science

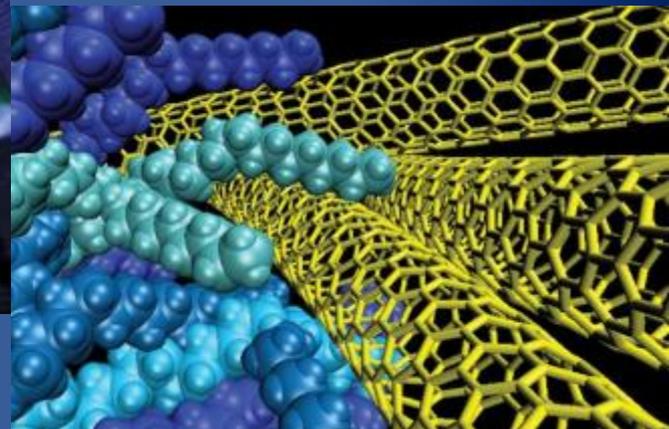


High Energy Density Science



Bioscience

Materials Sciences



Geoscience

