

# Next Generation Squad Weapons (NGSW) Weapons and Ammunition (W&A) and NGSW Fire Control (NGSW-FC)



Top: Next Generation Squad Weapon (NGSW) XM7 Rifle  
Bottom: NGSW XM250 Automatic Rifle

The Army completed limited lethality testing for the 6.8mm General Purpose (GP) ammunition in August 2023, and an operational demonstration (Ops Demo) on the Next Generation Squad Weapons (NGSW) system in October 2023. DOT&E published a classified combined Ops Demo and limited lethality assessment (LLA) report in May 2024. The Army plans to conduct limited lethality testing for the 6.8mm Special Purpose (SP) ammunition and an operational assessment (OA) in 1QFY25. DOT&E will publish a combined OA and LLA report in 4QFY25.

## SYSTEM DESCRIPTION

The NGSW system includes the XM7 Rifle, XM250 Automatic Rifle, 6.8mm ammunition common to both weapons, and XM157 Fire Control mounted on each weapon. The XM7 and the XM250 are the planned replacements for the M4/M4A1 carbine and M249 Squad Automatic Rifle used in the close combat force (CCF) and security force assistance brigades.

The XM7 is fielded with seven 20-round magazines and will have selectable safe, semiautomatic, and automatic firing modes. The XM250 is fielded with two 50-round fabric ammunition pouches and three 100-round fabric ammo pouches, and will have selectable safe, semi-automatic, and automatic firing modes. The XM157 is a variable magnification direct view optic with laser range finder, aiming lasers, environmental sensors, ballistic solver, compass, wireless communication, and display overlay. The XM157 will replace the current optics used by the CCF and security force assistance brigades when issued NGSW systems.

The 6.8mm ammunition includes GP, SP, Blank, Reduced Range, Tracers, Marking, and Drill Dummy Inert ammunition.



Next Generation Squad Weapon Fire Control (NGSW-FC)

## MISSION

CCFs employ NGSW against threat dismounted personnel and small unit formations equipped with and without protective body armor; in urban, rural, open, and positions under cover; and in all environmental conditions. Operational environments may range from a known traditional or conventional regional environment to an unknown complex environment, such as an international megacity encompassing complex urban terrain. Units equipped with the

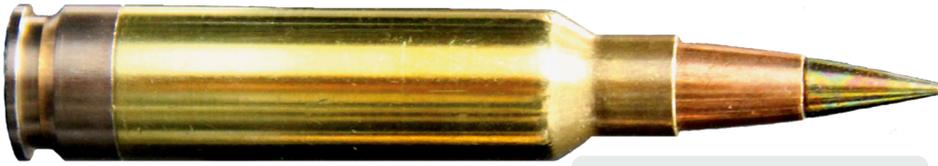
NGSW supports the following unit combat operations:

- Movement to Contact
- Attack
- Defense
- Reconnaissance Patrol
- Enter and Clear a Trench

- Enter a Building and Clear a Room
- Hasty Defense

## PROGRAM

The NGSW system consists of two distinct Middle Tier of Acquisition (MTA) programs: the NGSW Weapons and Ammunition (W&A) rapid fielding program and the NGSW-FC rapid fielding program. The NGSW W&A program consists of the following components: XM7, XM250, and a common family of 6.8mm ammunition. NGSW W&A was approved as an MTA rapid fielding program in March 2022. The Army approved an urgent materiel release for the weapons in March 2024 and for the ammunition in April 2024. The Army intends to transition NGSW W&A from the MTA rapid fielding pathway to separate major capability acquisition (MCA)



6.8mm GP Ammunition

programs for each component in 3QFY26.

The NGSW-FC rapid fielding consists of the XM157 fire control and was approved as an MTA rapid fielding program in July 2021. The Army approved an urgent materiel release for the fire control in March 2024. The Army intends to transition the NGSW-FC from the MTA rapid fielding pathway to the MCA pathway in 3QFY26.

DOT&E approved the TEMP for both programs in August 2023. The Army issued the NGSW system to the test unit in March 2024 to support the OA in 1QFY25.

The Army plans to conduct an OA of the NGSW system in 1QFY25 to support the planned transition from MTA rapid fielding programs to MCA programs in 3QFY26. DOT&E approved the operational test plan in August 2024.

## » MAJOR CONTRACTORS

- SIG SAUER, Inc. – Newington, New Hampshire
- Sheltered Wings, Inc., doing business as Vortex Optics – Barneveld, Wisconsin

## TEST ADEQUACY

The Army completed limited lethality testing for the 6.8mm GP ammunition against priority targets in August 2023, and an Ops Demo and cooperative vulnerability and penetration assessment on the NGSW system in October 2023, in accordance with DOT&E-approved test plans. DOT&E personnel observed the testing. DOT&E published a classified combined Ops Demo and LLA report in May 2024.

The Army completed NGSW cold weather natural environment testing in February 2024 and airborne testing in August 2024. The test plans did not require DOT&E approval, but DOT&E observed the tests. DOT&E will include its observations in the combined OA and LLA report.

Natural environment testing for tropical and hot weather environments is scheduled for FY25. The Army plans to evaluate the capability to stow weapons and the effect on crew members' ability for ingress/egress on select wheeled and tracked vehicles as part of the hot weather testing.

The Army plans to conduct limited lethality testing for the 6.8mm SP ammunition against a subset

of targets and an OA in 1QFY25. The Army plans to conduct live fire testing for the 6.8mm GP ammunition against the full set of targets in 1Q – 2QFY25. DOT&E plans to publish a combined OA and LLA report in 4QFY25.

## PERFORMANCE

### » EFFECTIVENESS, LETHALITY, SUITABILITY, AND SURVIVABILITY

DOT&E published a classified combined Ops Demo and LLA report in May 2024, providing preliminary assessments of the effectiveness, lethality, suitability, and survivability of the NGSW system. Preliminary assessments from the report include:

- The 6.8mm GP ammunition provides increased lethality over the M855A1 (i.e., the GP ammunition for the legacy M4A1 weapon) against the tested targets,
- Soldiers assessed the usability of the XM157 as below average/failing, and
- The XM7 with mounted XM157 demonstrated a low probability of completing one 72-hour wartime mission without incurring a critical failure.

DOT&E identified several recommendations in the combined Ops Demo and LLA report. Since the Ops Demo in October 2023, the program management office has made several technical

improvements to the NGSW system to address identified deficiencies from the Ops Demo and the recommendations from DOT&E's report. These changes will be verified at the OA in 1QFY25.

## **RECOMMENDATIONS**

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The Army should:

1. Continue to redesign the suppressor to reduce heat signature and burn risk.
2. Continue to reduce noxious off-gassing of the XM250 and XM7.
3. Continue to improve the operational reliability of the XM157, XM250, and XM7.
4. Continue to address the complete list of recommendations found in DOT&E's classified combined Ops Demo and LLA report published in May 2024.