

# Next Generation Squad Weapons (NGSW) Weapons and Ammunition (W&A)



*Next Generation Squad Weapon Rifle XM7 (NGSW-R) (top) and  
Automatic Rifle XM250 (NGSW-AR) (bottom)*

In FY23, the Army conducted developmental and Live Fire Limited Lethality Assessment (LLA) on Next Generation Squad Weapons (NGSW). The Army plans to conduct a Limited User Test (LUT) at Fort Campbell, Kentucky in 1QFY24. DOT&E intends to write a report after completion of the LLA and LUT.

## SYSTEM DESCRIPTION

The NGSW system includes the Rifle (NGSW-R) XM7, Automatic Rifle (NGSW-AR) XM250, 6.8mm ammunition common to both weapons, and Fire Control (NGSW-FC) XM157 to be mounted on each weapon. The NGSW-R XM7 and the NGSW-AR 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 (SFAB). The NGSW-R is fielded with seven 20-round magazines and will have selectable safe, semi-automatic, and automatic firing modes. The NGSW-AR is fielded with a 50- or 100-round fabric ammo pouch and will have selectable safe, semi-automatic, and automatic firing modes. The NGSW-FC XM157 is a magnified direct view optic with laser range finder, environmental sensors, ballistic solver, wireless communication, and display overlay. The NGSW-FC XM157 will replace the current optics used by the CCF and SFAB when issued NGSW systems.

The 6.8mm ammunition includes General Purpose (GP), Special Purpose (SP), Blank,

Reduced Range, Tracers, marking, and Drill Dummy Inert ammunition.

## MISSION

Units will employ NGSW against threat dismounted personnel and small unit formations equipped with and without protective body armor; in urban, rural,

- Defense
- Reconnaissance Patrol
- Enter and Clear a Trench
- Enter a Building and Clear a Room
- Hasty Defense

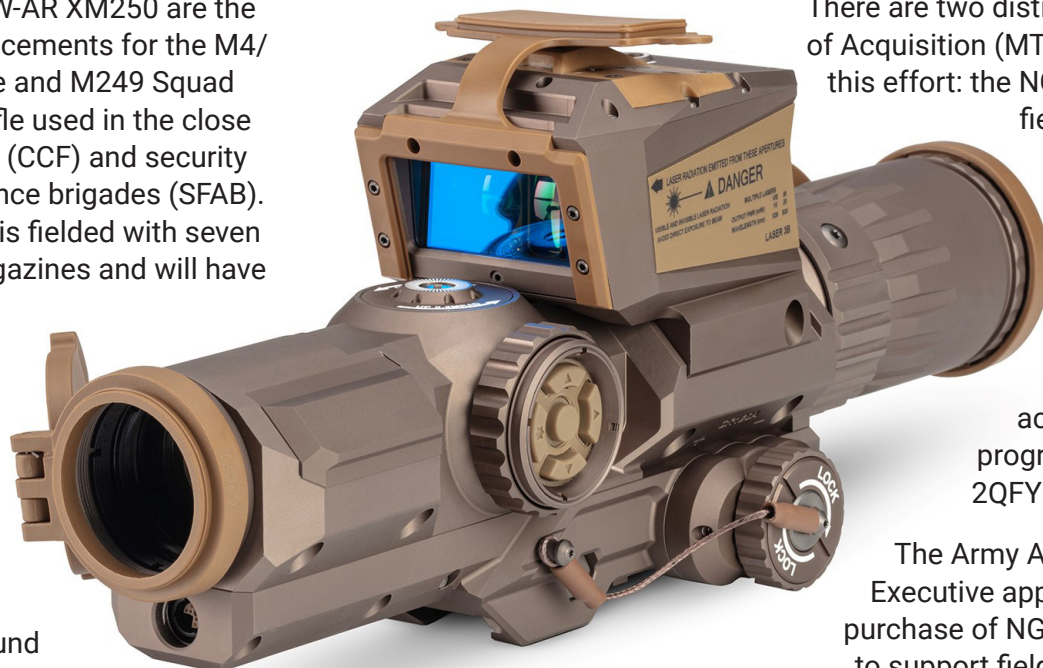
## PROGRAM

There are two distinct Middle Tier of Acquisition (MTA) programs in this effort: the NGSW W&A rapid fielding and the NGSW-FC rapid fielding. The programs may transition to multiple major capability acquisition programs (MCAs) by 2QFY27.

The Army Acquisition Executive approved the purchase of NGSW systems to support fielding to the CCF starting in 2QFY24. DOT&E plans to write a report following the LUT and LLA in support of this fielding. The NGSW-R and -AR will initially be fielded and tested with GP and Blank ammunition. Testing of the SP ammunition is scheduled to begin in FY24.

## » MAJOR CONTRACTORS

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



*Next Generation Squad Weapon Fire Control (NGSW-FC)*

open and defilade settings; 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

## TEST ADEQUACY

---

DOT&E approved the TEMP for the MTA phase in August 2023, with caveats to include testing the capability to stow the weapons, and the effect on crew members' ability for ingress/egress on major weapons platforms. In support of the continued campaign of learning, DOT&E expects testing not currently covered during the MTA phase to be addressed by the Army in the next TEMP update.

During the MTA phase, the Army is planning to conduct a LUT in 1QFY24, which is equivalent to an operational demonstration per DoD Instruction 5000.89, followed by an operational assessment in 1Q – 2QFY25. If the program transitions to MCAs, a DOT&E-approved TEMP will outline the additional testing requirements.

DOT&E plans to write a report after completion of the LLA and LUT to support the Army's fielding decision. The LUT is not intended for DOT&E to make a complete assessment of operational effectiveness, lethality, suitability, and cyber survivability. The data and testing obtained during the MTA phase will enable an expedited operational assessment (OA). A report will follow the OA currently planned for 1QFY25, assessing the operational effectiveness, lethality, suitability, and survivability.

In FY23, the Army conducted developmental and live fire lethality testing on NGSW components. The testing included:

- A Soldier Touchpoint in 1QFY23 to confirm technical test results, assess the maturity of NGSW, and obtain soldier feedback.
- A First Article Test completed in 3QFY23 to verify that the NGSW-FC XM157 conformed to all contract requirements.
- An LLA in 4QFY23 to assess the lethality of the GP 6.8mm round against a subset of operationally relevant targets. The full range of operationally relevant targets will be assessed for the 6.8mm GP and SP rounds in the LFT&E scheduled for 3QFY24 – 1QFY25.
- A Production Qualification Test from 3Q – 4QFY23 to measure the current design compliance to system performance requirements.

The GP 6.8mm munition exceeds current training range capacities for the use of NGSW for urban and close quarters combat testing. The Army's real-time casualty assessment system is being upgraded to support force-on-force testing. The Army intends to address both limitations to enable an adequate OA in FY25.

A cooperative vulnerability and penetration assessment (CVPA) is planned in 4QFY23 to characterize the cyberattack surface and cyber resiliency of the NGSW. This CVPA will enable the adversarial assessment planned to be conducted during the OA in FY25.

## PERFORMANCE

---

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

---

Sufficient data do not exist yet to assess NGSW operational effectiveness, lethality, suitability, and cyber survivability. DOT&E will write a report after completion of LUT and LLA to support the fielding of the CCF in 2QFY24 but will not make a full assessment of operational effectiveness, lethality, suitability, and cyber survivability at that time. A report that will assess the operational effectiveness, lethality, suitability, and survivability will be published following completion of the OA in FY25.

## RECOMMENDATIONS

---

The Army should:

1. Submit an operational test plan for DOT&E approval for the FY25 OA to assess operational effectiveness, lethality, suitability, and cyber survivability of the system.
2. Provide for DOT&E's approval a test strategy to evaluate the capability to stow the weapons, and the effect on crew members ability for ingress/egress on major weapons platforms.