

ECWCS Gen III

Generation III of the Extended Cold-Weather Clothing System, or Gen III ECWCS, is a major upgrade and redesign of the earlier generations of ECWCS. While some elements of ECWCS I and ECWCS II have been retained, the most significant items have been replaced. The result is a small and light ensemble of clothing that will meet the Soldier's needs for warmth, comfort and water protection across a wide range of temperatures and conditions.



Soldier wearing Urban Gray ECWCS Gen III Level VII parka and trousers.

ECWCS parkas, trousers and other elements are widely available as surplus/militaria or as commercial equivalents or substitutes. When buying, pay careful attention to the specifications to make sure what you purchase is either military issue or meets the same government specifications.

Generation III of the Extended Cold Weather Clothing System (ECWCS)



ECWCS Gen III Fleece Jacket.

By the mid-2000s, the U.S. military decided on a new generation of cold weather clothing, a full replacement for Gen II ECWCS and, at the same time, legacy items such as the M65 Field Jacket. The new cold weather uniform, developed by United States Army Natick Soldier Center in Natick, MA, starting in December 2003, became known as generation III of the Extended Cold-Weather Clothing System or Gen III ECWCS (pronounced Ek-wax). PEO Soldier drove the development and distribution of Gen III ECWCS through a Rapid Fielding Initiative (RFI v8.3). The Army began testing Gen III in 2004, with 10th Mountain Division and the 82nd Airborne Division. The 49th Missile Defense Battalion in Alaska and a few other units received it ahead of schedule, based on

their mission. The 10th Mountain Division field-tested 18,000 Gen III ECWCS units in Afghanistan in the fall of 2006 and winter of 2007. In August 2007, the 73rd Cavalry Regiment, 82nd Airborne Division in Afghanistan received Gen III ECWCS. General issue of Gen III ECWCS started in July 2008, first to 2nd Infantry Division, then with priority given to soldiers in or deploying to Afghanistan, Alaska, South Korea, Bosnia, and Kosovo.

The ECWCS Gen II was criticized for bulkiness and lack of breathability. Soldiers stationed in Iraq and Afghanistan complained of overheating when active and feeling uncomfortably cold when standing still. ECWCS was also too bulky, constricting movement when worn and taking up too much space when packed. A superior response to NIR (Near Infrared) was needed to make the garments less vulnerable to night vision equipment. And there were design problems such as the tendency of the hood to funnel rain down the wearer's back.

To deal with all these issues, Gen III ECWCS is a radical redesign that requires 33 percent less space and weighs 25 percent less than previous generations. Each piece in the Generation III ECWCS fits and functions either alone or together as a system to provide the most options for the Soldier, enabling seamless integration with load bearing equipment and Interceptor Body Armor. The Gen III ECWCS design lets moisture escape into the air, rather than being trapped inside the clothing, while blocking outside moisture from entering.

On 3 Jan 2007, ADS, Inc. received a U.S. Army contract to manage and procure ECWCS Gen III components. ADS, an award winning vendor to the DoD, is the lead integrator to fulfill the Army's requirements.

The Generation II ECWCS parka and trousers continued in use after introduction of Generation III, serving as an additional layer to the Generation III system. Generation I components in Woodland and Desert camouflage were issued until stocks were exhausted. During the changeover period, mixtures of Gen I - Gen II - Gen III components were used. In the U.S. Marine Corps, the APECS solution was adopted in place of Generation III ECWCS.

In practical use, the Gen III ECWCS Layer system performs due to the interaction of:

- Insulation: Resist the transmission of heat, traps air, wicks moisture away from the body
- Layers: Increases air space, allows easy adjustment to activity level, wind/water proof
- Ventilation: Vents unneeded heat, allows moisture to escape

By mixing and matching ECWCS Gen III components, military users can protect themselves from weather in the range +40° F to as frigid as -60° F.

Generation III ECWCS Components



Components of Generation III of the Extended Cold Weather Clothing System (ECWCS).

ECWCS GEN III features a 12-piece set of component items that enable Soldiers to wear up to seven different layers, depending upon how cold it is. The seven layers and twelve components are:

Level	Item	NSN/Notes
Level I	Lightweight Cold Weather Undershirts (Polartec® Power Dry®)	NSN 8415-01-538-7780 to 8415-01-547-7008, non-consecutive 15 sizes, Sand Color. Silk weight polyester, worn next to the skin. Crewneck with long sleeves.
Level I	Lightweight Cold Weather Drawers (Polartec® Power Dry®)	NSN 8415-01-538-8468 to 8415-01-547-8755, non-consecutive 15 sizes, Sand Color. Silk weight polyester, worn next to the skin. Elastic waistband and standard front fly opening.
Level II	Midweight Cold Weather	NSN 8415-01-538-8598 to 8415-01-546-0376. non-

	Shirt (Polartec® Power Dry®)	consecutive 36 sizes, Sand Color. Polyester grid fleece, worn next to skin or over Level I undershirt.
Level II	Midweight Cold Weather Drawers (Polartec® Power Dry®)	NSN 8415-01-538-8727 to 8415-01-546-0531, non-consecutive 36 sizes, Sand Color. Polyester grid fleece, worn next to skin or over Level I drawers.
Level III	Fleece, Cold Weather, Jacket (Polartec® Thermal Pro®)	NSN 8415-01-538-6747 to 8415-01-546-7663, non-consecutive 35 sizes, Foliage Green. Primary insulation layer, mimicks animal fur. May be worn as outer garment if unit regulations permit.
Level IV	Wind, Cold Weather, Jacket (Nylon/Spandex)	NSN 8415-01-538-6057 to 8415-01-538-6089, non-consecutive 6 sizes, Camouflage. Windproof, water repellent. Shell with no hood. Can be worn over body armor and/or Army Combat Uniform (ACU).
Level V	Soft Shell, Cold Weather, Jacket (Nylon/Lycra)	NSN 8415-01-538-6808 to 8415-01-538-6831, non-consecutive 6 sizes, Camouflage. Windproof, water repellent. Shell with stowable hood, extended tail, many pockets, adjustable wrist cuffs.
Level V	Soft Shell, Cold Weather, Trousers (Nylon/Lycra)	NSN 8415-01-538-6764 to 8415-01-538-7008, non-consecutive 6 sizes, Camouflage. Windproof, water repellent. Suspenders, hand pockets, cargo pockets, drop seat, adjustable ankle cuffs, side zippers to ease boots on/off.
Level VI	Extreme Cold Weather Cold/Wet Weather Jacket (PrimaLoft® Sport)	NSN 8415-01-538-7001 to 8415-01-538-7769, non-consecutive 6 sizes, Camouflage. Waterproof, stowable hood, pass-trough pockets, rank tab.
Level VI	Extreme Cold Weather Cold/Wet Weather Trousers (PrimaLoft® Sport)	NSN 8415-01-538-6672 to 8415-01-538-6683, non-consecutive 6 sizes, Camouflage. Waterproof, side zippers to ease boots on/off.
Level VII	Extreme Cold Weather Parka (Nylon w/ breathable waterproof laminate)	NSN 8415-01-538-6278 to 8415-01-545-9618, non-consecutive 36 sizes, Urban Gray. Windproof, water repellent, stowable hood, deep inside pockets. Fits over body armor. Worn in very cold environment when movement is limited.
Level VII	Extreme Cold Weather Trousers (Nylon w/ breathable waterproof laminate)	NSN 8415-01-538-6687 to 8415-01-546-0121, non-consecutive 34 sizes, Urban Gray. Windproof, water repellent. Full leg zippers for easy on/off.

Generation III ECWCS Accessories

ECWCS Gen III is defined by the seven levels of protective clothing defined above. Accessories worn with Gen III ECWCS are primarily selected from existing military stock numbers for items such as boots, gloves, face protection and more. The list of items that could be worn as ECWCS Gen III accessories is quite long and the content of the list will change as items are replaced by newly developed items. Commercial substitutes are authorized for many of these items.

Examples include:

- Headwear:
 - Balaclava Hoods (Cotton/Rayon/Spandex)
 - Cap, Synthetic, Microfleece (Polartec) Foliage Green
 - Gaiter, Neck Polypropylene and Lycra (jersey knit fabric, brown)
 - Goggles, Ski
 - Goggles, Sun-Wind-Dust
 - Ruff, synthetic fur (Gen I ECWCS)
- Handwear:
 - Gloves, Cold weather (black Gore-Tex)
 - Gloves, Flyer's , Summer (Flameproof)

- Gloves, Flyer's, Intermediate Cold Weather
- Gloves, Insert, Cold Weather
- Gloves, Intermediate Cold-Wet
- Gloves, Men's and Women's, Light Duty
- Inserts, Glove, Cold weather
- Inserts, Mittens, Cold Weather (Trigger Finger)
- Liners, Glove, Polypropylene
- Mittens, Arctic
- Mitten Set, Extreme Cold Weather
- Mitten Shells, Cold Weather (Trigger Finger)
- Mitten Shells, Snow Camouflage, Cotton, White, Two Finger
- Footwear:
 - Boots, Cold Weather (Type I-Black) Mickey Mouse boots
 - Boots, Extreme Cold Weather (Type II-White) Bunny boots
 - Boots, Intermediate Cold-Wet (with booties)
 - Socks, Men's, Nylon, Cushion Sole, Stretch Type, OG-106
 - Socks, Polypropylene
 - Socks, Wool (black or olive drab)
- Other:
 - Parka and Trousers, Snow Camouflage, White
 - Suspenders, Trousers