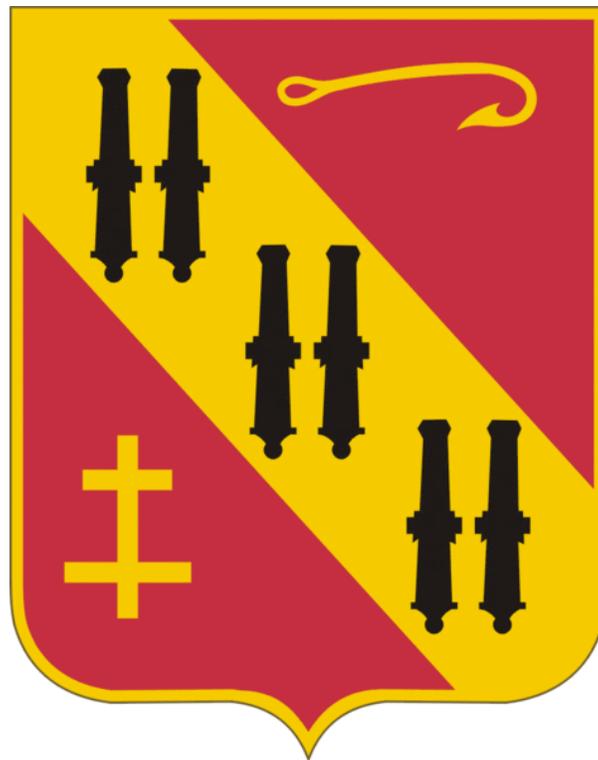


**ENVIRONMENTAL ASSESSMENT FOR THE
CONVERSION OF 5-5 AIR DEFENSE ARTILLERY
BATTALION AT JOINT BASE LEWIS-McCHORD**



AUGUST 2013

Executive Summary

5-5 ADA will convert from an Avenger Battalion to an Indirect Fire Protection Capability (IFPC)/Avenger Composite Battalion at Joint Base Lewis-McChord, (JBLM) Washington, in Fiscal Years (FY) 2013-2014. The unit is already stationed at JBLM and travels twice yearly to Yakima Training Center (YTC) for mandatory weapons firing and collective training. The unit will remain fully stationed at JBLM and will continue traveling twice yearly to YTC for the same purpose. The primary part of the conversion involves changing two of the batteries' missions and associated equipment. Currently, all three of the battalion's ADA batteries have a counter-aircraft mission which is fought using the Avenger system. Two batteries will change their mission to counter-rockets, artillery and mortars (C-RAM). Those two batteries will each turn in their 12 Avengers and receive 12 Land-based Phalanx Weapons Systems (LPWS) and associated equipment and training. The battalion's third battery will keep the counter-aircraft mission, but will exchange its existing 12 Avengers for 12 new, technologically-improved models, called the Slew-to-Cue (STC) Avenger.

The overall size of the unit will increase, primarily because the LPWS is a more complex system than the Avenger and can be deployed in smaller units. For both these reasons, the unit will need more of its own organic maintenance personnel.

The conversion will occur through a total package fielding with most actions taking place on JBLM. New Equipment Fielding (NEF) and New Equipment Training (NET), and associated exercises will take place in and near the battalion's administrative and maintenance areas on JBLM Lewis North beginning in late FY13. In the spring of 2014, the unit will travel to YTC for a Mission Readiness Exercise to ensure all equipment functions properly and the 5-5 ADA soldiers can operate the equipment safely and effectively.

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Acronyms and Abbreviations

5-5 ADA	5 th Battalion, 5 th Air Defense Artillery	NEPA	National Environmental Policy Act
ADA	Air Defense Artillery	NHPA	National Historic Preservation Act
BMP	Best Management Practices	ODC	Ozone Depleting Chemical
CAA	Clean Air Act	PM	Particulate Matter
CDNL	Day-Night Average Sound Level	RAM	Rockets, Artillery and Mortars
CEQ	Council on Environmental Quality	SGPA	Sage Grouse Protection Area
CIA	Central Impact Area	SHPO	State Historic Preservation Office
CIWS	Closed In Weapons System	STC	Slew-to-Cue
C-RAM	Counter- Rockets, Artillery and Mortars	UAS	Unmanned Aerial Systems
CWA	Clean Water Act	USEPA	United States Environmental Protection Agency
DoD	Department of Defense	USFWS	United States Fish and Wildlife Service
EA	Environmental Assessment	WDOE	Washington Department of Ecology
EOD	Explosive Ordnance Disposal	YTC	Yakima Training Center
EPA	Environmental Protection Agency		
ESA	Endangered Species Act		
FONSI	Finding of No Significant Impact		
ft	foot/feet		
HMMWV	high mobility multipurpose wheeled vehicle		
IFPC	Indirect Fire Protection Capabilities		
JBLM	Joint Base Lewis-McChord		
LPWS	Land-based Phalanx Weapons System		
MPTR	Multi Purpose Training Range		

1. Introduction

1.1 Project Background

The Department of the Army is in the process of converting some of its Air Defense Artillery (ADA) weapons systems to meet the changing nature of threats from the air. At present, there are two ADA Battalions within the United States that are equipped with the Avenger, including one which is located at Joint Base Lewis-McChord (JBLM), Washington. Avengers are heavy, high mobility multipurpose wheeled vehicle (HMMWVs) modified with a mounted air defense turret with two Stinger missile launcher pods which provide mobile, short-range air defense protection against cruise missiles, unmanned aerial systems (UAS), low-flying fixed-wing aircraft, and helicopters; but do not protect against incoming artillery, rockets, and mortar rounds.

During the wars in Iraq and Afghanistan, enemy forces frequently attacked U.S. and friendly forces using rockets, artillery and mortars (RAM). U.S. Commanders on the ground identified an urgent need for a weapons system to provide for Counter-RAM (C-RAM) or Indirect Fire Protection Capabilities (IFPC), as RAM attacks comprised a significant portion of all Soldier casualties, second only to Improvised Explosive Devices.

The interim result was the Land-based Phalanx Weapons System (LPWS), which was first put into service in Iraq in 2005. The LPWS is the key component of the C-RAM/IFPC Intercept (destroy or deflect) System, which is a platoon-based structure that uses already developed, tested, and fielded capabilities and integrates them to perform the specific function/mission defined. The LPWS protects friendly forces by detecting incoming fire, providing timely and focused warning of attacks, and, in selected locations, intercepts incoming rockets, artillery and mortars.

Although a little more complicated, the LPWS is basically the Navy's Phalanx Closed-In Weapons System (CIWS) Block 1B mounted on a trailer, to allow movement to key military sites. The Army made slight reconfigurations to the Navy's system to integrate it into the Army's ground defense mission and command control structure, but minimal changes to the CIWS radar/weapon assembly. The LPWS consists of a modified MK-15 Phalanx MOD 29 (Block 1B Baseline 2) CIWS mounted on a modified, commercial 35-ton semitrailer towed by a M916A3 6x6 tractor (35 ft long). Two 60-kilowatt generators mounted on the trailer supply power to the entire system. The trailer also includes a Schreiber Engineering chiller which provides cool water to the environmental control group enclosure. When configured for road travel, the length of the tractor and trailer is 65 feet long (12 ft wide, 14 ft high), and the weight is approximately 60,000 – 70,000 pounds.

The CIWS is a 310 degree, 20-millimeter system with separate search-and-track radars, and a forward-looking infrared camera. It is guided by an integrated *search* radar when no threat has been identified, and by an integrated *tracking* radar when intercepting a threat. The gun is capable of firing 4,500 rounds per minute, with a magazine storage capacity of 1,580 rounds. The LPWS Block 1B barrels are optimized for use with the M940 Multipurpose Tracer-Self Destruct (MPT-SD) ammunition. The M940 ammunition is designed to self destruct beyond 2,000 meters in order to minimize collateral damage. Two redundant onboard 60kW 50/60 Hz diesel generators provide primary power for the entire system.



Figure 1. Example of an Avenger air defense missile system



Figure 2. Example of the Army's Land-based Phalanx Weapons System

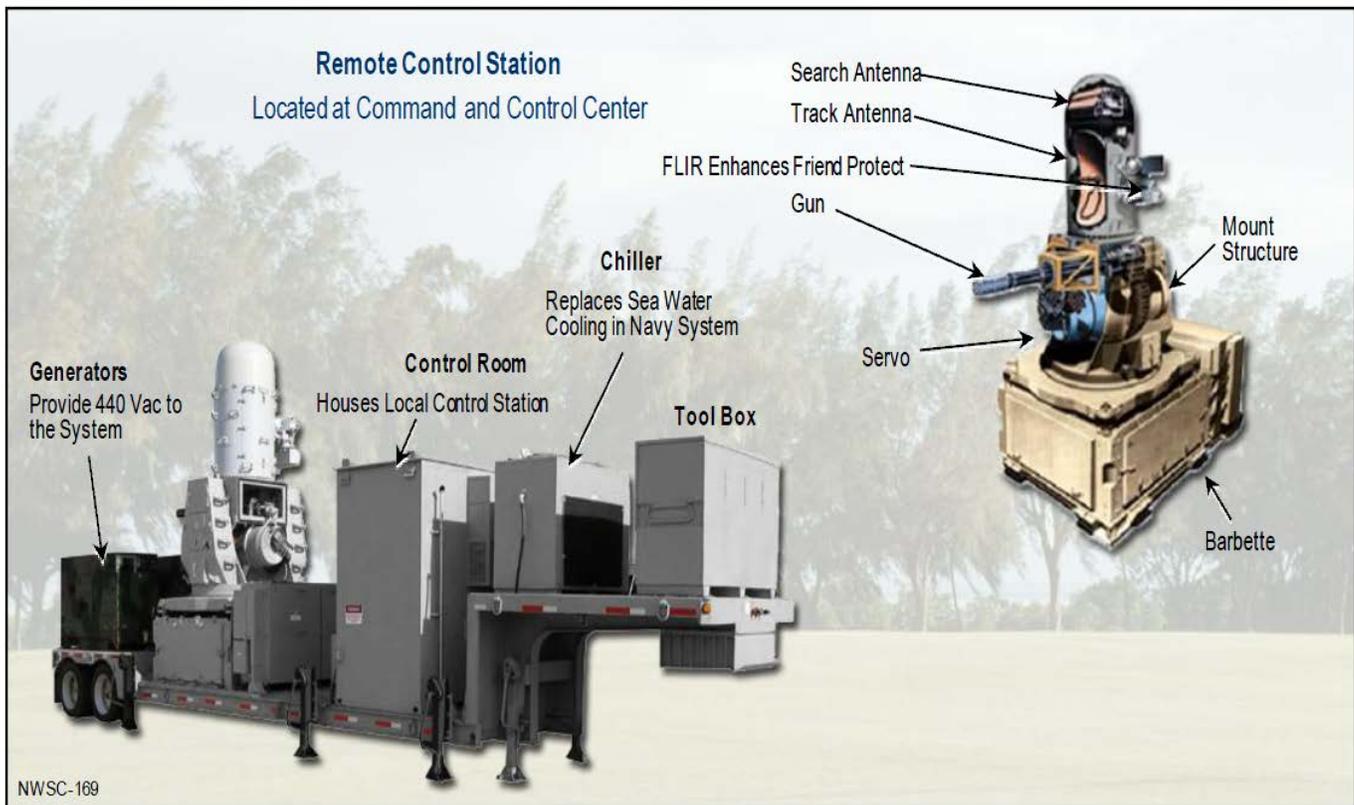


Figure 3. LPWS Components

1.2 Purpose and Need

The mission of 5th Battalion, 5th Air Defense Artillery (5-5 ADA), stationed at JBLM, is to protect fixed and semi-fixed sites and forces from in-flight rockets, artillery, mortars, and low altitude unmanned aircraft system threats. Despite this, the 5-5 ADA is currently an Avenger-only unit and is unable to provide C-RAM/IFPC. The proposed action would convert the existing 5-5 ADA Avengers, into a composite Avenger/LWPS battalion. The purpose of converting existing AVENGER only units to composite IFPC/Avenger units is to maintain a cadre of trained Avenger leaders, operators, and maintainers; while also building the newer IFPC capability into existing ADA units so that current and future C-RAM missions can be sustained by the Army. The addition of the LWPS to the 5-5 ADA is needed because the current and future force requires the capability of integrated counter-RAM capabilities to meet mission requirements and to protect lives.

2. Description of the Proposed Action and Alternatives

2.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

The Proposed Action would convert the existing Avenger 5-5 ADA stationed at JBLM, into a composite consisting of IFPC/Avenger units. To accomplish this, the IFPC/Avenger Battalion includes two Intercept Batteries (three platoons per battery) and one Avenger battery (two platoons). Each of the three batteries in the Battalion will have their own surveillance radars. The Battery organization is designed to provide Sense, Warn, and Intercept at fixed and semi-fixed sites, and can be employed modularly. The Intercept Platoons are designed with capabilities to provide Sense, Warn, and Intercept capability independently. The IFPC/Avenger Battalion includes a Maintenance Company to provide interceptor maintenance support. The system is designed to deploy as a battery and fight as a platoon.

EQUIPMENT

Under the proposed action, the 5-5 ADA would turn-in all 36 of its Avengers. It would receive **12 Slew-to-Cue (STC) Avengers, 24 LPWS and M916AC 6x6 tractors** (four per platoon x 3 platoons x 2 batteries). It would also receive support equipment associated with the above weapons systems. The LPWS system are mounted on a lowbed tractor trailers that are 35 feet long. When attached to its prime mover, the system is 65 feet long (12' wide, 14' high) and weighs approximately 55,000 pounds without any ammunition (~ 70,000 pounds when fully loaded).

Main components of C-RAM system:

1. Air & Missile Defense Work Station (computer array)
2. C-RAM Command & Control (Armored command post or soft-top shelter)
3. Fire finder (radar system trailer-mounted and pulled by HMMWV)
4. LPWS (with ancillary components on flat bed trailer that include a generator, diesel fuel supply, chiller unit, & control shelter)
5. Lightweight Counter Mortar Radar (highly portable, powered by battery system or external AC source)
6. Sentinel (trailer-mounted, radar-based antenna transceiver group towed by HMMWV)
7. Tactical Automated Security Systems (integrated security and force protection command and control system that can be tailored for a diverse variety of applications)
8. Wireless Audio Visual Emergency System (fielded warning system that includes claxons, lights, and liquid crystal display screens to alert personnel within the perimeter of a FOB or other structure)

9. 20 MM Cartridges (C-RAM is capable of firing 20 mm high-explosive incendiary tracer rounds that self-destruct when they miss their targets)
10. Air Defense Airspace Management (consists of an M-1113/M-1152 series HMMWVs, a SICP-CPP rigid wall shelter, and an M-1097/M-1113/M-1152/M-1151 HMMWV support vehicle)
11. Air and Missile Defense Planning and Control System (mission-essential system [computer array] designed to facilitate quick, accurate conduct of all engagement operations and force operations)
12. Standardized Integrated Command Post Systems-Command Post Platforms (integrated vehicles and shelters that host multiple battle command and support software suites and interface with numerous other digitized vehicles)
13. Command Post Platform Rigid Wall Shelter (shelter house for integrative operations)

5-5 ADA is one of the last units in the Army to receive STC Avengers. The STC feature is purely a technological improvement which allows the weapons system to more quickly detect, acquire, and engage its target. There will be no structural changes to the system or to the type of ammunition it fires. Therefore, we do not anticipate any change to the affected environment from the STC Avenger when compared to the Avenger model currently in possession of 5-5 ADA. For this reason, there is no additional discussion of the STC Avenger transition's impact on the environment in this EA.

STATIONING

There will be both permanent and temporary increases to the workforce at JBLM as a result of the proposed action. The proposed LPWS/Avenger conversion would require a total of 470 soldiers to meet mission requirements. The conversion of the 5-5 would require a permanent increase of **93 military personnel**, in addition to the existing 377 to meet requirements. The increase is necessary primarily due to the complexity of the LPWS, which requires more personnel to maintain than the Avenger. All authorized positions in 5-5 ADA are active duty military soldiers and officers; there are no civilian positions.

The Army will also send a small number of Army civilian employees and contract personnel to JBLM to assist the 5-5 ADA with the conversion process. A temporary increase of 13-15 fielding personnel will occur during the time period that 5-5 ADA is being trained on the new weapon system. This 10-12 month training period is expected to begin in the late spring/early summer of 2013, and end after the unit's Mission Readiness Exercise at YTC in the late spring of 2014. Further, six to nine (6-9) contract logistics support personnel will be onsite providing depot-level maintenance support for three to five (3-5) years while the Army builds this capability internally.

STORAGE & TRAINING AT JBLM

Local JBLM training will include moving out and emplacing the LPWS so it is fully operational, but will not include any firing of ammunition. Training will include: conducting site reconnaissance, setting up local security and site prep, convoying of LPWS, emplace guns, set up lightweight counter-mortar radar and Sentinel radars, set up the radio frequency network and tie in all the assets, establish network connectivity, conduct planning and continuous operations, simulate engagements, tear down and back-

STATIONING AT JBLM

The full conversion of the 5-5 ADA will require a permanent increase of 93 Soldiers to operate and maintain the proposed LPWS.

The environmental impact of Soldiers stationed at JBLM was addressed in the Grow the Army EIS (2010). At this time, JBLM is over the number of soldiers found to have an environmentally significant impact. To mitigate the potential impact of additional troops stationed at JBLM, the increase in troops associated with the 5-5 ADA's conversion will be delayed until either troops stationed at JBLM fall sufficiently below the number of soldiers approved in the Grow the Army EIS, or until additional NEPA documentation has been prepared analyzing a net increase in the number of troops stationed at JBLM.

up of vehicles, and return LPWS to the 5-5 ADA motor pool. Training will occur at JBLM North at the Delta Block Training Area and at the 5-5 Battalion Headquarters.

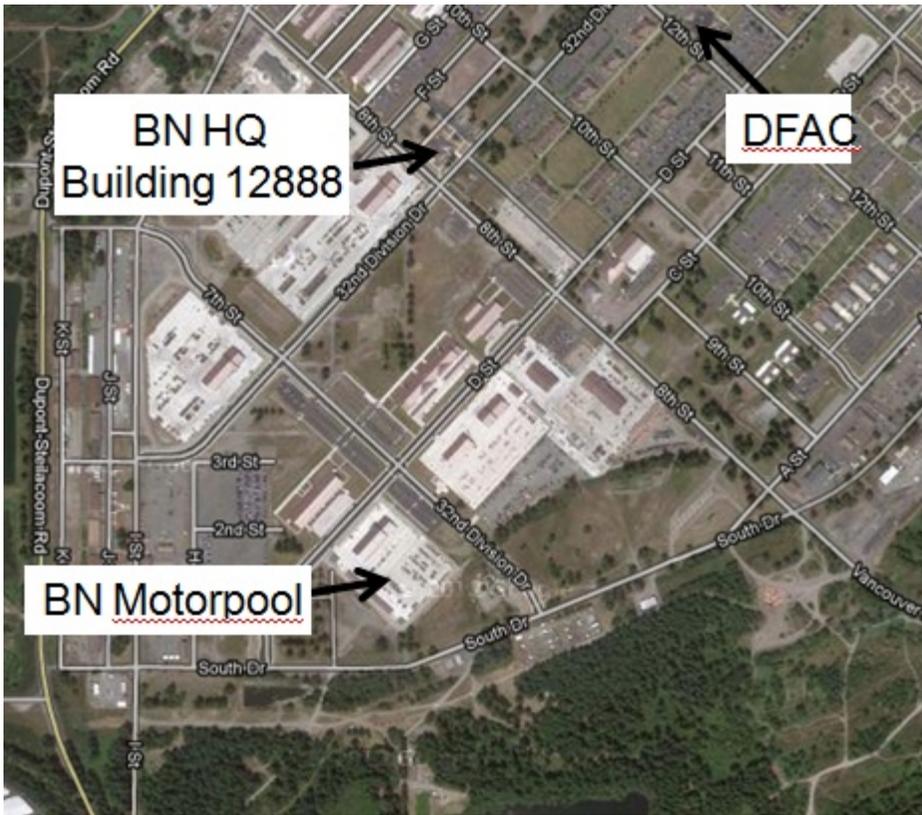


Figure 4. 5-5 ADA Battalion Headquarters and Motorpool at JBLM North



Figure 5. Delta Block Training Site at JBLM North

INTER-BASE TRANSPORTATION

The 5-5 ADA conversion will station Soldiers at JBLM, but will require Soldiers to travel to Yakima Training Center (YTC) to complete live fire qualifications. Soldiers will be required to convoy to YTC twice annually to complete live fire qualifications. The battalion's personnel, the LPWS and Avenger weapons systems, and all equipment will travel between JBLM and YTC over interstate and state highways in military convoys. Convoys are kept as small as possible without hampering the unit's command and control, but will never exceed four LPWS in one group. Convoys will not travel on interstate highways during periods of daily peak travel, to include the "rush hours" of 6:00 – 9:00am and 3:00 – 6:00pm, Monday – Friday to minimize impacts to traffic.

TRANSPORTION

During project scoping, the possibility of permanently housing LPWS weapons at YTC was considered. Under this alternative, only Avengers, personnel, and other equipment would be required to travel between YTC and JBLM.

This alternative was excluded from analysis because it would not allow Soldiers to conduct sufficient non-fire training on the LPWS, including radar, communication with other equipment, mechanics, etc. Infrastructure at YTC does not have sufficient housing or services to permanently station Soldiers. Soldiers would be required to drive back and forth for all live-fire and non-live-fire training. This alternative did not meet the unit's mission requirements and was considered a greater impact to traffic because of the continuous trips that would be required between JBLM and YTC.

LIVE FIRE AT YTC

JBLM does not have the land requirements that would allow the LPWS to be fired on the installation. Therefore, all live-fire will be required to occur at JBLM YTC.

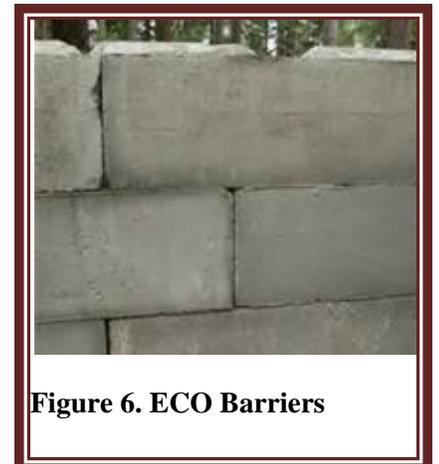
The 5-5 ADA follows the Army's policy to "train as it fights." The IFPC unit is designed to fight as a platoon, which requires four LPWS (4 LPWS in a platoon) to be emplaced during systems qualification training, each separated by 300-400 meters. Qualification training/evaluation of each platoon would occur for a total of five days: 3 days (32 hr) Emplacement training and 2 day Battle Drill/Maintenance Rehearsals.

JBLM YTC Range Operations reviewed the range requirements of the LPWS (Figure 9. LPWS Range Requirements) and looked to identify possible firing points that balanced environmental considerations and fiscal responsibility, without compromising operational readiness. After a review of the requirements, the Multipurpose Training Range (MPTR) (Figure 10) was identified as the preferred location for 5-5 ADA certification training.

Multipurpose Training Range (COA 1) (Army's Preferred Firing Point): would support emplacing all four guns but will only allow for two firing points due to terrain limitations. This means the 5-5 ADA can fire in pairs due to the distance between the gun positions. Some minor improvements would be required for roads and firing points. This range has no significant environmental considerations.

The proposed action will include the construction of two permanent fighting positions, which will be developed within the boundaries of the MPTR near the boundary of the Central Impact Area (CIA). The first firing point will be located at an existing grubbed site, which was formerly a mock training compound (grid 714400 5182820). This site will be rolled for compaction, but has adequate gravel and does not require additional lifts. The second firing point will be located at a new 200' x 200' grubbed site (grid 714120 5182840). Firing point 2 will be graded, compacted, and lifted with gravel. The fighting positions will be constructed using ECO block barriers to protect the system from incoming rounds (approximately 30 per firing point). The Barrier would be set up on a level site in a 'U' shape, approximately 9 feet tall, 85 feet long, and 70 feet wide.

The range areas would need to be maneuverable for tractors and LPWS (combined length of 65 feet) and free of any major dips or pot holes (trailer has 17 inches ground clearance). Excavation and roadway improvements would be required to level and harden areas to emplace the LPWS, including an unimproved road between the first and the second firing point (approximately 1265 feet). Gravel will be placed to improve the roadway. One concrete bunker will also be set up on-site for storage of ammunition.



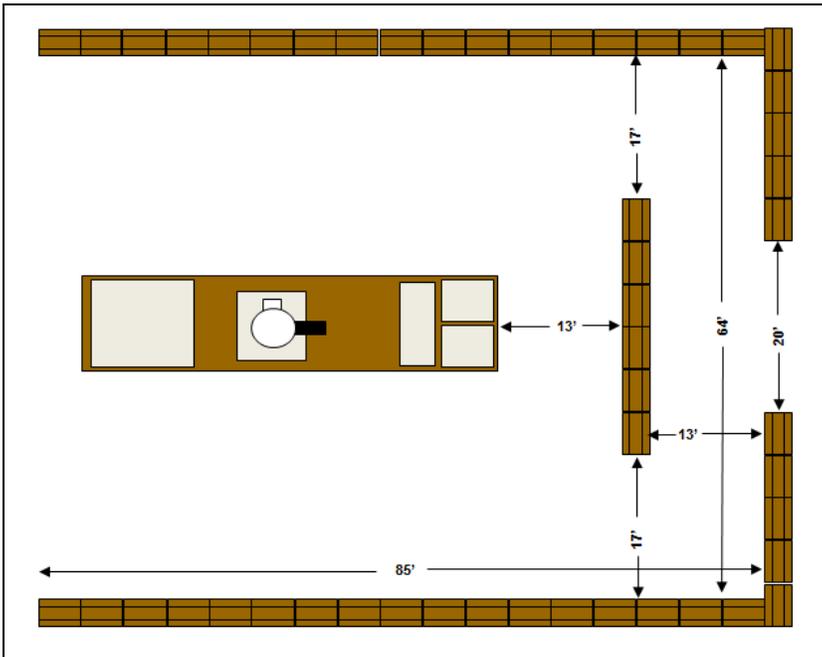


Figure 7. Sample of LPWS site with HESCO Barriers. Short ends of barriers would not be set until LPWS is in place.

Each of the six IFPC platoons would occupy the range for approximately one week, two times a year (12 weeks total time for the entire 5-5 ADA). The overall footprint of this impact would include the LPWS, the Platoon CP, antennas, radars, and vehicles (see Figure 12. 5-5 ADA Architecture). Although four guns would be emplaced, only two guns would be queued to fire at any target. C-RAM sensors and weaponry will be set up in previously disturbed areas, or firing points, and directed into the Central Impact Area. All training with, or testing of the systems will be conducted on existing gun positions, roads, trails and/or disturbed areas.

Rockets, artillery, and mortars directed at the LPWS will be fired from the firebreaks on the opposite side of the CIA from the LPWS sites in the MPTR. Two firing points will be located on the south-side firebreak of the CIA and one will be on the west-side firebreak adjacent to, and south of, Range 16. There will be no impacts outside of the CIA. Use of the firebreaks for training is subject to all pertinent installation regulations and limitations. Sage Grouse Protection Area (SGPA) training limitations and soil moisture training restrictions will be strictly enforced.

LIVE-FIRE AND SAGE GROUSE CONCERNS

During project scoping, Range 26 at YTC was identified as 5-5 ADA's 'preferred' firing point. Initial review of this range identified **significant environmental concerns regarding sage grouse habitat**. Because of the potential impacts operation of the LPWS could have on the species and sage grouse recovery, Range 26 was excluded as a viable alternative for firing at YTC. Any firing at Range 26 with the LPWS would require additional NEPA analysis, likely an Environmental Impact Statement, to be completed prior to perusing this alternative.



During analysis of the ranges at YTC, OP3 was also identified as a possible firing point for the LPWS. This alternative was also excluded as a viable alternative because the existing roadways at OP3 would not support the weight of the LPWS. The proposed 5-5 Conversion does not include funding for range -land improvements, so OP3 was excluded as an alternative at this time. The Army may pursue funding for OP3 upgrades at a later date, and if funded and/or planned, will be required to complete additional NEPA analysis on proposed upgrades.

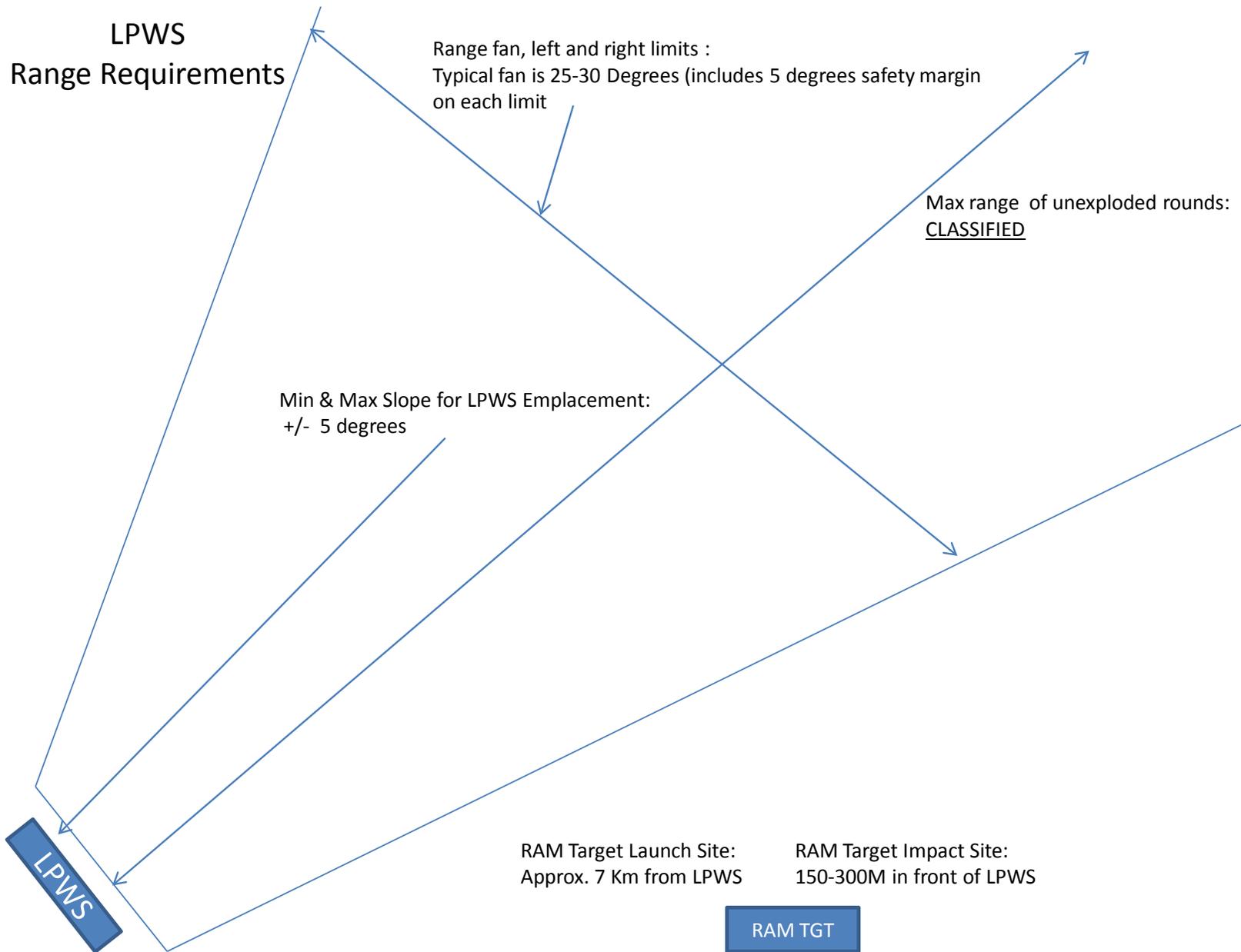
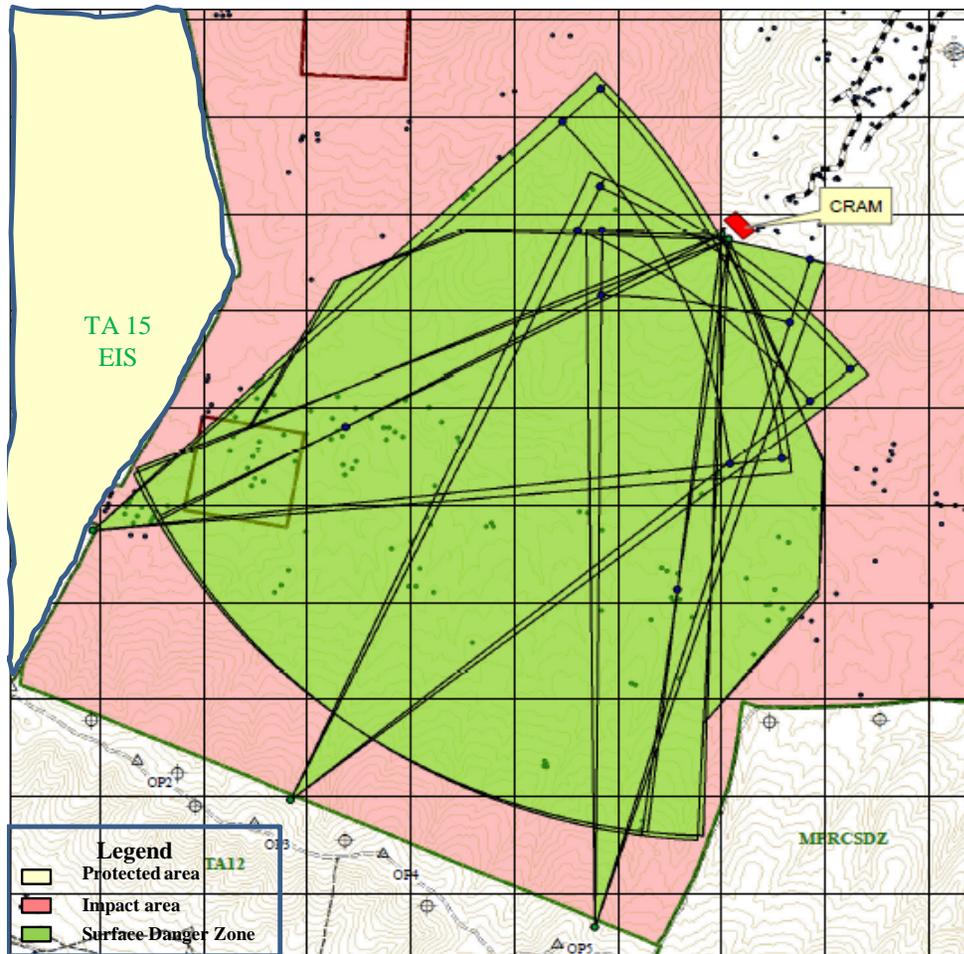


Figure 8. LPWS Range Requirements

JBLM Yakima Training Center Multipurpose Training Range (MPTR) COA 1



Advantages

- Roads and range area would require minimal improvements
- support equipment emplacement areas
- range fans will support target firing from different azimuths
- Existing terrain supports radar emplacement
- No environmental considerations on LPWS range

Disadvantages

- Range has limited are to emplace LPWS (only 2 online)
- Would require significant gravel and terrain reinforcement to get LPWS w/in +/-5
- Mortar/rocket positions within the protected area (no range occupation from 1159-0900 Feb-JUN)

Additional Considerations

- Occupation of TA 15 is a protected area, requires a NEPA Environmental Assessment required (if during the protected time period of 1159-0900 Feb-JUN o significant impact)
- SDZs are for planning purpose only

Figure 9. Multipurpose Training Range (COA 1)

2.2 No Action Alternative

Under the No Action Alternative the 5-5 ADA will not convert from an Avenger Battalion to an IFPC/Avenger Battalion. The existing Avengers will still be upgraded to the STC Avengers, but no LPWS are received. The permanent size of the battalion would not increase, and none of the LPWS fielding or operations would take place. Although this alternative does not meet the purpose and need of the proposed action, it serves as a baseline against which other alternatives may be considered.

3. Affected Environment and Environmental Consequences (Direct & Indirect effect)

In accordance with CEQ Regulations, the Army focused its review on resources areas that had the potential to be impacted by the proposed action. Resource areas that would not be impacted by the proposed action, or had impacts that were so minimal that they were discountable, were excluded from further analysis (see Table 1). Rationale behind there exclusion is outlined below.

Table 1. Resources Areas Not Reviewed in the Environmental Assessment

RESOURCE AREA	Reason for Exclusion
Land Use	No impacts to land use are expected to occur as a result of the proposed action. The proposed action would be stored at existing motor pool areas at JBLM. Training activities would occur within existing ranges and would result in no changes to noise contours or range boundaries.
Cultural Resources	No impacts to cultural resources are expected to occur as a result of the proposed action. Storage and systems training on the LPWS at JBLM will occur within the cantonment area of JBLM North. Live fire training at YTC will occur in the range areas, on existing roadways (the LPWS cannot be taken off training area roadways). Any roadway upgrades/repairs will occur on existing roadways and will not include any digging or soil disturbance outside of the existing roadway. All areas where ground disturbing activities will occur have been previously surveyed for cultural resources.
Water Resources	No impacts to water resources (surface water, drinking water, stormwater, and/or wetlands) are expected to occur as a result of the proposed action. The LPWS will be stored and utilized in existing motor pool and training area sites. Only minimal roadway resurfacing/repair (pot holes, gravel re-surfacing) may be required at YTC, which is not expected to have any impacts on the water resources within the project vicinity.

IDENTIFICATION OF POTENTIAL AREAS OF CONCERN

During the project scoping, several questions came up regarding the new LPWS. These questions were explored during the environmental review.

1. Does firing of the LPWS have any impact to air quality? Is the LPWS impacts similar to the Avenger?
2. Noise impacts? What are the noise contours of the new LPWS? Any changes? Are there impacts to the surrounding community?
3. What impacts will noise and live-fire activities have on biological species?
4. What about impacts to wildfire from live-fire activities?
5. Does the weight of the LPWS have any impacts to roads or infrastructure?
6. How will the LPWS get to YTC? What are the impacts from convoy activities?
7. What is the LPWS ammunition made of? Are there any hazardous materials that would harm human health and/or the environment?

3.1 Air Quality

Air quality impacts focused on training and live-fire activities at YTC. Review of activities at JBLM main (classroom training, communication and LPWS set-up, etc) would not have any measurable impacts to air quality within the Pierce County and were considered discountable.

Yakima Regional Clean Air Agency is responsible for oversight of air quality in Yakima County. Air quality at YTC is considered good, although it can degrade quickly when particulate matter (PM) pollutants are generated by rangeland fires and fugitive dust associated with maneuver training activities.

3.1.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

In 2006, the Yuma Test Center conducted testing on toxic fumes levels measured in the Local Control Station of the Land Based Phalanx Weapon System. No gas measured exceeded the Occupational Safety and Health Administration, National Institute for Occupational Safety and Health or American Conference of Governmental Industrial Hygienists criteria for any of the locations tested. Impacts associated with traffic and transportation are considered to be less than significant, due to the minimal number of trips per year and the avoidance of non-peak travel times for convoys. There is a potential for Ozone Depleting Chemical (ODC) releases during manufacture, maintenance and testing activities. In accordance with Army directives, the least harmful ODCs will be used and ODC replacements are being actively sought. Training on the handling of ODC equipment would be performed to minimize any releases. The energetic and combustible materials present in the 20 mm cartridge would have a negligible effect on air quality. In a toxic fumes test detailed in Report No. USACSTA-6953 dated March 1990, it was shown that the M940 produced less carbon monoxide than the associated training round which had been in use for many years. All other components were below the analyzer detection limits for all trials. Once released into the air, the components quickly dissipate to non-hazardous levels.

The risk of fire associated with live-fire training is not expected to increase under this alternative. The LPWS will use Multipurpose Tracer-Self Destruct M940 (20 mm) ammunition, which was produced by General Dynamics primarily for anti-aircraft activities. According to Robert Hannah, the C-RAM Program Officer, the self-destruct feature engages at approx. 8,200 ft and destroys the round, preventing it from falling back to earth and inflicting damage to the surrounding territory. The M940 are designed to self designate after the tracer burns through. The dud rate is estimated at 1 in 10,000. Of those rounds that detonate as designed, there is a 0% chance of lighting fires as their will not be any remaining energetics (similar to tank or Bradley rounds with tracer that frequently light fires) and the shrapnel will be immediately subject to air cooling as it falls from the sky. Of the 1 in 10,000 rounds that do not detonate, they will either point detonate if they land on their fuse, or they might tumble and not detonate at all because the tracer should be burned out by the time the impacted the ground (Hannah, 2013). The impacts to air quality as a result of fire are considered less than significant. There is minimal probability that the M940 would reach fail to detonate (1 in 10,000). In addition, YTC's Fire Management Programs would continue to be in place to minimize the risk of fire. The Army would continue to conduct prescribed burns to minimize the risks associated with training-induced fires, to remove fuel while minimizing the impacts to air quality by controlling the extent and intensity of the burn. Prescribed burning activities would be coordinated with local and regional air agencies to ensure that air quality is not adversely affected.

3.1.2 No Action Alternative

Under the proposed action, there would be no changes to air quality. The 5-5 ADA would continue to utilize the Avengers for all training and mission-related activities.

3.2 Noise Impacts

Impacts to noise focused on effects associated to live-fire training of the LPWS at YTC.

The Army conducted a noise study in 2008 to provide noise contours that forecast impulsive weapon noise contours for the YTC Installation Operational Noise Management Plan and the YTC Master Plan to address noise impacts from training at YTC. YTC supports a diverse training needs to include conventional and tactical weapons delivery, armored maneuver and live-fire, artillery (and other large caliber weapons) fire, small arms capabilities, and rotary-winged and fighter aircraft maneuver.

The YTC land use guidelines base their noise zones on the average day-night average sound level (CDNL). For large caliber weapons, Noise Zone I is <62 CDNL, Noise Zone II is 62-70 CDNL, and Noise Zone III is >70 CDNL.

YTC is approximately 327,200 acres. Minimal noise impacts extend beyond the installation boundary. Occasionally, weapons firing and explosive ordnance disposal activities are audible at nearby residential areas, but the impacts are not significant. Most of the land adjacent to YTC is zoned as undeveloped, agricultural, rural residential, and recreation land. Noise Zone III does not extend into the YTC cantonment area or beyond the YTC installation boundary.

3.2.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

Under the proposed action impacts to noise are considered to be less than significant. The two proposed sites (OP9 and MPTR) are located near the impact area in the existing Noise Zone III (>70 CDNL). Although the additional activity might cause a negligible change to the Noise Zones in close proximity to the firing points, there would not be a significant impact to the noise environment either on or off post. Additionally, the sites are located a minimum of 12,000 meters from the closest boundary (majority of the boundaries are at least 14,500 meters away), so Peak levels from training would not result in a complaint risk off post

3.2.2 No Action Alternative

No changes to noise contours/noise impacts would occur under the No Action Alternative. Noise impacts associated with firing of the Avengers at YTC would continue within the established noise contours at YTC training areas.

3.3 Traffic and Transportation

The approved convoy route between JBLM and YTC is Interstate 5 (I-5) to Interstate 405 (I-405) to Interstate 90 (I-90) to Interstate 82 (I-82). The convoys are timed to avoid the primary rush hours of 0600 to 0900 and 1500 to 1700 on I-5 and I-405.

Traffic and transportation concerns focus on concerns regarding impacts to commuter traffic and high-volume roadways (baseline conditions for traffic at I-5 and I-405 are already at significant levels/significant impacts); concerns with traffic effects associated

to roadway construction (i.e. roadway construction along the I-90 corridor); and potential impacts to local roadways and intersection operations.

3.3.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

Impacts to traffic and transportation associated with the increases of personnel (93 permanent Soldiers and temporary contract staff) are not directly addressed in this environmental assessment. Any stationing increases associated with the 5-5 ADA were addressed in the GTA EIS and ROD. The increase in stationing levels for the 5-5 ADA will be offset by other stationing actions that will reduce the overall population at the installation. Therefore, there should be no additional cumulative impact from general troop populations levels as a result of this action. .

Platoons will conduct their own convoy to and from YTC. No ammunition will be transported during convoys. When prepared for transport, the LPWS will meet dimensional and weight limits for U.S. highway transport with permits and unrestricted U.S. highway transport. The LPWS vehicles can be driven at maximum speeds of 55 mph on primary roads, 35 mph on secondary roads, and 15 mph on off-road terrain.

The 5-5 ADA conversion will require the units to convoy LPWS to and from JBLM North to YTC. Under the proposed action, the 5-5 ADA will ensure that convoys avoid peak traffic periods on I-5 and I-405, including during the periods of 0600 to 0900, and 1500 to **1800**, Monday thru Friday (one hour beyond typical mitigation times). The LPWS convoys will drive slower than typical traffic (55 mph rather than 60-65 mph), but should have minimal impacts on traffic because non-peak traffic volumes would allow vehicles to quickly pass or go around the convoys. A total of **12** roundtrips convoys per year would be required to meet the entire Battalion’s training requirements.

Impacts associated with traffic and transportation are considered to be less than significant, due to the minimal number of trips per year and the avoidance of non-peak travel times for convoys.

3.3.2 No Action Alternative

Under the No Action Alternative, no changes to traffic and/or transportation will occur. The 5-5 ADA will continue to convoy Avengers to YTC to meet training requirements 12 times per year, during non-peak travel times.

3.4 Infrastructure & Utilities

The C-RAM Intercept system will use existing military facilities and training locations. The institutional training activities will use current classrooms and facilities (twelve classrooms will be required for training activities). Classroom training will occur within the existing Delta Block WWII buildings, located at JBLM North. No modifications to classrooms are required to meet training requirements.

Ninety (90) percent of LPWS maintenance can occur outside. Activities that need to be conducted inside will utilize the 5-5 ADA existing facilities for processing equipment and maintenance activities. Two of the four motor pool bays will be required for LPWS Operator training. In addition, two outdoor emplacement training locations will be required for systems integration (an area ~75x75 yards for equipment set up).

Twelve (12) convoys per year based on the twice annual training of two (2) batteries with three (3) platoons each.

2 annual x 2 batteries x 3 platoons per battery = 12 total LPWS convoys for entire Battalion

3.4.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

Under the proposed action, the LPWS will be stored and maintained within the 5-5 ADA existing motor pool, located at JBLM North. 5-5 ADA motor pool bays meet the requirements for the LPWS. The weapon system can be lowered to travel configuration, which reduces the height sufficiently to enter/exit motor pool bays. Electrical upgrades (440 V power) and/or exhaust adapters may be required to be installed for LPWS generators and power may be required to be connected to the motor pool. Infrastructure and utilities upgrades to the 5-5 motor pool are considered minor and will not result in any adverse impacts to the infrastructure and utility capabilities at JBLM.

There is sufficient space available to support the receipt, storage and issuance of the new LPWS. After examining weight and surface requirements, no roadway modifications will be required to support the size and weight of the vehicle at JBLM or any outside roadways.

Road improvement (pot holes, etc) will be required at the Yakima training field site (Figure 13). Work will consist of grading and adding 2 inches of rock to the existing 220 meters of existing service road. A 200' by 200' firing position (VIC existing Target #27) will also be graded and compacted with a 4 ¾ inch sub base and a 2 5/8 inch wear course. The firing line has deteriorated down to top soil and needs rock and grading to prevent damage to the terrain. Repair to the range roadways is considered a maintenance activity (CATEX g(2)) and would not result in a significant impact to any resource area.

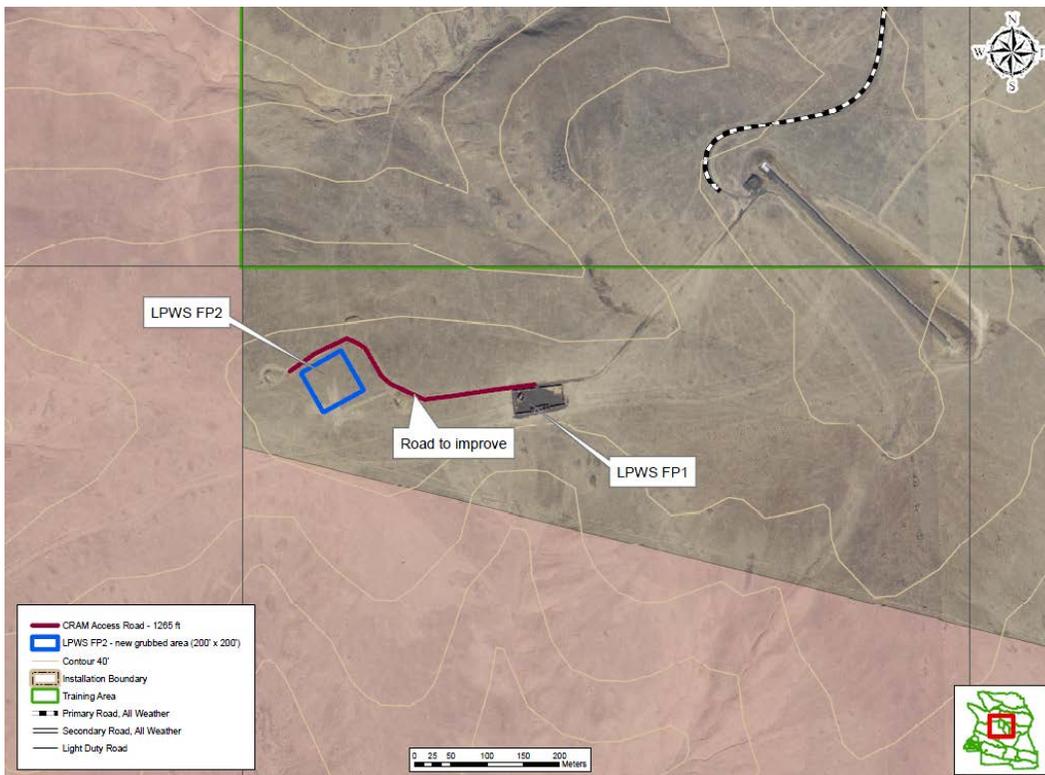


Figure 11. Proposed Roadway Improvements

3.4.2 No Action Alternative

Under the No Action Alternative, no changes to infrastructure and/or utilities would occur.

3.5 Biological Resources

Training and storage of the LPWS at JBLM North will occur in the cantonment and 5-5 ADA motor pool area which is highly disturbed. No biological resources would be affected by activities at JBLM North.

Live-weapons training and firing of the LPWS at YTC will include use of the shrub steppe range areas that provide habitat to several species.

Upland vegetation communities on the Installation consist of a mosaic of native and non-native grasslands and a variety of shrubland communities often composed of several species of Sagebrush (*Artemisia*). The intricate mosaic of these plant communities is the result of complex soil patterns, topography, precipitation, and past and current land uses. Historic and present day causes of disturbance to vegetation on JBLM YTC include grazing, fire, construction, road building, the deliberate and inadvertent introduction of non-native species, and maneuver training exercises. Disturbance reduces native plant species cover and diversity, changes species composition and structure, and increases the likelihood of invasion by non-native species. Native bunchgrasses and native forbs are particularly vulnerable to disturbances and have decreased dramatically in most portions of the shrub-steppe in Washington (U.S. 27 Army, 2011).

The greater sage-grouse is a ground-dwelling bird, measuring up to 30 inches high and two feet in length that lives in shrub-steppe and meadow steppe habitats at YTC. The greater sage-grouse lives in these sage-brush habitats and depends almost entirely on sagebrush vegetation for food, cover, and nesting materials. JBLM YTC is a critical component of the sage-grouse habitat, as all aspects of their life history (e.g., breeding, brood-rearing, wintering, etc.) are fulfilled within YTC shrub steppe habitats. Threats to these birds at YTC are primarily loss of habitat, primarily through training-generated fires, but also the development of ranges, ground training, and live-fire training. YTC has implemented a sage grouse management plan as part of its Integrated Natural Resources Management Plan. The plan includes maintaining high quality habitat, monitoring lek sites and population trends, translocating birds to increase gene pool diversity, and reducing threats from fire and predation. Efforts taken by YTC have improved the numbers and the genetic diversity of the Columbia Basin Distinct Population Segment of greater sage-grouse, a candidate species that is warranted for listing. Nevertheless the species remains in peril due to existing baseline habitat, population trends, and continued loss of habitat throughout the region.

3.5.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

During initial reconnaissance of the firing of the LPWS at YTC, the 5-5 ADA initially identified Range 26 as their preferred training area for the LPWS. Range 26 would provide realistic training scenarios and would allow all four LPWS to engage at the same time (other range alternatives only can support two of the four LPWS at one time, and do not fully meet the Army's "Train as you Fight" policy). Despite this, initial scoping of the potential issues at YTC determined that utilizing Range 26 for LPWS live-fire had the potential for significant impacts to the greater sage-grouse due to concerns of habitat loss from the construction of the ECO barriers, expanded roads/firing points and impacts from live-fire activities. Creating vertical structure in grouse habitat also provides more perches for raptors that prey on the grouse causing the grouse to vacate the area. Such impacts could have significant environmental impacts and would require an EIS analysis. Range 26 has been excluded as a viable alternative for these reasons. (Mitigation measure - Avoidance).

Proposed live-fire activities would occur at MPTR, which are active Ranges at YTC. Vegetation at these sites consist of a mosaic of native and non-native grasslands and a variety of shrubland communities often composed of several species of Sagebrush (*Artemisia*). The proposed firing areas are heavily degraded from past military training and there is no viable grouse habitat in the vicinity. Existing live-fire activities, off-road maneuvering, digging, and other Soldier training activities has resulted in extensive vegetation disturbances and alterations to the landscape. In addition, repeated wildfires (from both natural and anthropogenic causes) have substantially contributed to alterations of vegetation composition and cover. One of the proposed firing points is located within the Sage Grouse Protection Area. All existing protection measures will apply to the use of that area (i.e. temporal and spatial protection measures).

At these ranges, impacts to biological resources from the 5-5 Conversion and training at YTC are considered to be less than significant. The proposed action avoids impacts to biological resources by conducting live-fire training in areas that have been previously disturbed. Utilizing these ranges minimizes the impacts that military training has on biological resources at YTC. In addition, travel and training with the LPWS will remain on the roadways within the training area (the LPWS is too large to travel off-roads or on otherwise unstable ground). Furthermore, as discussed previously, the risk of wildfire occurring as a result of the live-fire activities is discountable due to the self-destruct and safety features that are built into the ammunition.

3.5.2 No Action Alternative

Under the No Action Alternative, there would be no changes to affects to biological resources. Shrub Steppe species would continue to be affected by Avenger training activities at YTC. (See above).

3.6 Hazardous Materials

Potential impacts associated with hazardous waste focused on the M940 Multipurpose Tracer-Self Destruct (MPT-SD) ammunition and the two redundant onboard 60kW 50/60 Hz diesel generators that provide primary power for the LPWS.

3.6.1 Proposed Action – Conversion of 5-5 ADA to LPWS/Avenger Battalion

The U.S. Army Armament Research, Development and Engineering Center establishes the Interim Hazard Classification for the C-RAM program (No. 801-6061, 02 Mar 05). The M940, 20mm is classified as a DoD Hazard Class 1.2E Explosives, UN 0321. The M940 has not been used at JBLM or YTC prior to this proposed fielding, but M939 has been used at both installations. The M940 and the M939 have similar characteristics as listed in the ammunition Yellow Book and the Department of Defense Identification Code. Based on the munitions composition report for the M940 and the DoD Toxic Release Inventory Data Delivery System, there is no hazardous waste concerns or issues with fielding the LPWS at JBLM or YTC (Leiding, 2013). Ammunition use and quantities fired, in association with LPWS training will be documented by the 5-5 ADA and reported to YTC Range Control through the normal procedures. This information is used for the annual Toxic Release Inventory (Form R) that is required for operational ranges, that is submitted to the U.S. Environmental Protection Agency (EPA) each calendar year.

Fuel support for generators used in training and refueling operations for the M916A3 6x6 tractor will occur through a Petroleum Supply Specialist with a HEMMITT tanker. A Petroleum Supply Specialist has specialized training in fueling in order to minimize the Joint Base Lewis McChord

risk of accidents during fueling activities. All refueling activities include proper spill response and fuel containment supplies within the HEMMITT tanker. A 55 gallon drum is also stored on the LPWS trailer for proper disposal of ethylene glycol mixture, which will be disposed in accordance with installation regulations and applicable state and federal hazardous waste disposal regulations.

The M940 ammunition and fuel support for the LPWS tanker and generators will not result in significant impacts to hazardous wastes and hazardous materials.

3.6.2 No Action Alternative

Under the No Action Alternative, no change to hazardous wastes and hazardous materials is expected. The 5-5 ADA Avengers will continue to be used and fueling activities will utilize a Petroleum Supply Specialist, who has specialized training in fueling and containment in order to minimize the risk of accidents during fueling activities.

4. Weapon System End of Life

There are no adverse environmental effects associated with the LPWS when used and disposed of in accordance with existing U.S. Army policies and procedures. The C-RAM Intercept system shall be rendered useless for its intended purpose prior to sale, recycling, or disposal to prevent offensive and defensive equipment from being released in operable condition to the public. Demilitarization and/or disposal shall be conducted in accordance with DOD 4160.21-M-1. The system shall apply existing explosive ordnance disposal procedures for safe response to C-RAM ordnance and energetic containing systems during system development, system testing, system operation, system anomalies, system disposal, and system demilitarization. Existing procedures shall be reviewed prior to system's first use or at a minimum, annually. Explosive ordnance disposal procedures shall adhere to ATTP 4-32.16, EOD Multiservice Procedures for Explosive Ordnance Disposal in a Joint Environment, and shall be coordinated with test ranges and the ordnance developer.

5. Cumulative Impacts

Cumulative effects address the incremental environment impacts of the proposed action, together with the impacts of past, present, and reasonably foreseeable future actions. The cumulative effects addresses the impacts from projects that may be individually minor, but result in collectively significant impacts when taking into account actions occurring over a period of time.

The proposed action is not expected to have any significant cumulative impacts.

6. Mitigation

JBLM is currently over the stationing cap that was established in the Grow the Army EIS and ROD (2010). The proposed increase in stationing associated with the conversion of the 5-5 ADA, would increase the number of soldiers stationed at JBLM beyond the level determined to have a significant environmental impact unless offset by a decrease of soldiers from other units. The Army 2020 Force Structure Realignment EA and FNSI (2013) has set forth a draft plan to reduce the current population at JBLM by 4,500 Soldiers over the next several years (<http://aec.army.mil/usaec/nepa/Army2020FNSI.pdf>).

To mitigate the cumulative impact of the proposed action, the 5-5 ADA's proposed stationing increase will not occur until JBLM is sufficiently below the stationing limit outlined in the Grow the Army EIS and ROD, or alternatively, until the Army has prepared additional NEPA documentation analyzing an increase in troops stationed at JBLM beyond the current levels. Potential significant impact from the additional troops and support personnel stationed at JBLM as part of the conversion will thus be mitigated below the level of significance. The proposed action will not increase the number of troops stationed at JBLM beyond the baseline approved in the 2010 Grow the Army EIS and ROD.

7. Summary of Environmental Consequences

This Environmental Assessment examined the potential impacts associated with the proposed Conversion of the 5-5 ADA to enable them to provide counter-RAM and indirect fire protection capabilities. If broken down to its most basic components, the primary undertaking that is currently proposed would exchange 24 of the 5-5 ADA's Avengers for 24 LPWS systems. No major construction or infrastructure upgrades are proposed. The construction of the ECO or HESCO barriers, the upgrades to existing buildings and motor pool areas, and the repair/maintenance of range roads are the only construction-like activities that will occur as part of the proposed action. These upgrades will occur in previously disturbed areas and should not contribute to further environmental degradation. Stationing activities will only be able to occur within the framework of existing NEPA documents that address and mitigate their impacts (GTA EIS). Live-fire activities utilize similar ammunition and are comparable to other large artillery activity at the YTC training ranges.

The direct, indirect, and cumulative effects of the proposed action on each resources area are summarized below (Table 2).

RESOURCE AREA	PROPOSED ACTION - CONVERSION OF THE 5-5 ADA	NO ACTION ALTERNATIVE
Air Quality	Training with the LPWS is not expected to result in significant impacts to air quality. Testing on toxic fumes levels measured for the LPWS found that no gas measured exceeded the OSHA, NIOSH or ACGIH standards. In addition, the risk of wildfire (and resulting air quality inputs) associated with live-fire training is not expected to increase under this alternative. If required, temporary impacts from dust due to construction activities will be managed through a Dust Management Plan, approved by WDOE.	No change. Current impacts to air quality are less than significant for 5-5 ADA activities and training with the Avenger.
Noise	Under the proposed action impacts to noise are considered to be less than significant. The two proposed sites (OP9 and MPTR) are located near the impact area in the existing Noise Zone III (>70 CDNL). Additional activity might cause a negligible change to the Noise Zones in close proximity to the firing points, but there would not be a significant impact to the noise environment either on or off post. Additionally, the sites are located a minimum of 12,000 meters from the closest boundary (majority of the boundaries are at least 14,500 meters away), so Peak levels from training would not result in a complaint risk off post.	No change. Current noise impacts remain at significant for JBLM and less than significant for YTC. Firing of the Avengers are within the noise contours outlined in the Noise Management Plan and do not extend beyond JBLM and YTC boundaries.
Traffic & Transportation	Impacts associated with traffic and transportation are considered to be less than significant, due to the minimal number of trips per year and the avoidance of non-peak travel times for convoys.	No change. Current impacts to traffic and transportation remain at significant for JBLM and less than significant for YTC. Convoys of the Avengers occur during non-peak travel periods

		and do not result in significant travel concerns.
Infrastructure & Utilities	No significant impacts to infrastructure and utilities are expected from the introduction of the LPWS. The LPWS will be stored and maintained within existing motor pool areas. Minimal power, bay doors, and exhaust upgrades will be required. Minimal improvements to the YTC Range roadways and firing points will be required (grading and surfacing). The minimal motor pool and roadway improvements that are required for the LPWS will result in less than significant impacts to infrastructure and utilities.	No change.
Biological Resources	No significant impacts are expected to biological resources from the 5-5 Conversion is expected. The proposed action will occur in areas that have been previously disturbed. Travel and training with the LPWS will remain on the roadways within the training area, so no ground disturbance will occur. Furthermore, the risk of wildfire occurring as a result of the live-fire activities is discountable due to the self-destruct and safety features that are built into the ammunition. One of the firing areas is within the SGPA. All existing protection measures would apply to any use of that area.	No change. Impacts to biological resources remain as significant for JBLM and YTC. The Avengers contribute to the cumulative impact for these resource areas.
Hazardous Materials	No significant impacts are expected due to hazardous waste associated with the M940 ammunition and/or the diesel generators that provide power for the LPWS. Based on the munitions composition report for the M940 and the DoD Toxic Release Inventory Data Delivery System (TRI-DDS), there is no hazardous waste concerns or issues with the M940. Fuel support for generators and tanks will occur through a Petroleum Supply Specialist, with specialized training in fueling operations and containment. A 55 gallon drum is also stored on the LPWS trailer for proper disposal of ethylene glycol mixture that is a byproduct of the diesel generator. All hazardous waste materials will be disposed in accordance with applicable environmental regulations. Because of the safety measurements that have been put in place and the minimal risk for accidents, the M940 ammunition and fuel support for the LPWS will not result in significant impacts to hazardous wastes and hazardous materials.	No change. Refueling operations for the Avengers occur by a Petroleum Supply Specialist who has special training in refueling operations and containment in order to minimize the risk of accidents. All hazardous waste materials will be disposed in accordance with the installation regulations. Impacts to hazardous materials is considered less than significant.

8. Document Prepared By

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9. Distribution List

Federal Agencies

Federal Highway Administration
Western Federal Lands Highway Division
Defense Access Road Program
610 East Fifth Street
Vancouver, WA 98661

National Marine Fisheries Service
ATTN: Federal Projects Division
510 Desmond Drive SE, Suite 103
Lacey, WA 98503

U.S. Fish and Wildlife Service
ATTN: Federal Project Division
510 Desmond Drive SE, Suite 102
Lacey, WA 98503-1263

State Agencies

Puget Sound Clean Air Agency
1904 Third Avenue, Suite 105
Seattle, Washington 98101

Washington Department of Ecology
Environmental Review
PO Box 47703
Olympia, WA 98504

Washington State Department of Transportation
NEPA/SEPA Compliance
P.O. Box 47331
Olympia Washington 98504-7300

Washington Department of Fish and Wildlife
ATTN: Mr. Jeff Tayer, Regional Director
1701 South 24th Ave.
Yakima, Washington 98902-5720

Yakima Regional Clean Air Agency
329 North 1st Street
Yakima, Washington 98901-2303

Counties and Regional Agencies

Pierce County Planning and Land Services
2401 S. 35th Street
Tacoma, WA 98504

Pierce County Public Works & Utilities
2401 S. 35th Street
Tacoma, WA 98504

Cities and Towns

Town of Steilacoom
Planning Department
1030 Roe Street
Steilacoom, WA, 98388

City of DuPont
Planning Department
1700 Civic Drive
Dupont, WA 98327

City of Lakewood
Planning Department
6000 Main Street SW
Lakewood, WA 98499

Yakima County
Planning Division
128 North Second Street
Yakima, Washington 98901

Tribal Governments

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Beverly, WA 98321

The Honorable Herman Dillon, Sr.
Chair, Puyallup Tribal Council
3009 East Portland Avenue
Tacoma, WA 98404

The Honorable Cynthia Iyall
Chair, Nisqually Indian Tribe
4820 She-Nah-Num Drive SE
Olympia, WA 98513

The Honorable Joan K. Ortez
Chair, Steilacoom Indian Tribe
PO Box 88419
Steilacoom, WA 98388

The Honorable James Peters
Chair, Squaxin Island Tribe
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Shelton, WA 98584

The Honorable Harry Smiskin
Chair, Confederated Tribes and Bands of the
Yakama Indian Nation
P.O. Box 151
Toppenish, WA 98948

Libraries

Graham Library
9202 224th Street E
Graham, Washington 98338

Lacey Timberland Library
500 College Street SE
Lacey, Washington 98503

Pierce County Library, DuPont
1540 Wilmington Drive
DuPont, Washington 98327

Pierce County Library, Tillicum
14916 Washington Avenue SW
Lakewood, Washington 98497

Pierce County Library, Parkland
13718 Pacific Avenue S
Tacoma, Washington 98444

10. References

- Army, 2010 Department of Army. 2010. Final Environmental Impact Statement for the Fort Lewis Army Growth and Force Structure Realignment (GTA EIS) and Record of Decision. http://www.lewis-mcchord.army.mil/publicworks/sites/envir/eia_gta.aspx
- CEQ 1978 Council on Environmental Quality (CEQ). 1978. Policy for Federal agency actions for the National Environmental Policy Act (NEPA). 40 Code of Federal Regulations (CFR) 1500.2.
- Leiding, 2013 Leiding, Lana. LPWS HAZMAT List. Email to Mary Huff. April 08, 2013

Appendix A: YTC Record of Environmental Consideration

DEPARTMENT OF THE ARMY
JOINT BASE LEWIS-McCHORD - YAKIMA TRAINING CENTER
RECORD OF ENVIRONMENTAL CONSIDERATION
REFERENCE REIA 13 - 010

Date: 11 Jul 13

1. Project Title:

C-RAM Firing Positions

2. Background:

There is a need to develop hardened firing positions to support soldiers training with Counter-Rocket, Artillery, and Mortar (C-RAM) weaponry, which entails specifically the use of the Land-based Phalanx Weapon System (LPWS) at JBLM YTC. These weapon systems have a large surface danger zone (SDZ), which limits the locations from which firing may occur. A suitable location on the Multi Purpose Training Range (MPTR), adjacent to the Central Impact Area (CIA) boundary, was identified as the preferred location for the establishment of two firing positions to support C-RAM training.

3. Description of Proposed Action:

Two firing positions will be developed within the boundaries of the MPTR near the CIA boundary to support C-RAM and LPWS training at JBLM YTC. An existing grubbed site, formerly a mock training compound, located at grid 714400 5182820, will be rolled for compaction, and will be LPWS Firing Point 1. This site already has adequate gravel in place and does not require additional lifts. A new 200' x 200' site, located at grid 714120 5182840, will be grubbed and will serve as LPWS Firing Point 2. This site will be bladed and will receive a 4" lift of 3-in minus rock, compacted, and a 2" lift of 5/8" minus wearing course compacted. A 2" lift of wearing course will be applied to the existing unimproved road between FPs 1 and 2 (approximately 1265'). 30 ecoblock barriers will be emplaced at each firing position in a "U" shape, stacked 3 high (9').

Rockets, artillery and mortars directed at the LPWS weaponry will be fired from the firebreaks on the opposite side of the CIA from the LPWS sites in the MPTR. Two firing points will be located on the south-side firebreak of the CIA and one will be on the west-side firebreak adjacent to, and south of, Range 16. They will be fired from points from which there is no possibility that impact would be outside of the CIA. Use of the firebreaks for training is subject to all pertinent installation regulations and limitations. Sage Grouse Protection Area (SGPA) training limitations and soil moisture training restrictions will be strictly enforced.

4. Results of screening criteria for Categorical Exclusion (CX), and discussion of Impact Analysis:

This proposal qualifies as a CX because it satisfies all three Screening Criteria (i.e., the action is not segmented, no extraordinary circumstances exist, and one or more CXs encompass the proposal). The proponent is required to comply with any terms, conditions, mitigation, permits, etc., set forth in this REC. The proponent is also required to review the attached Request for Environmental Impact Analysis (REIA) document and advise the NEPA specialist prior to project mobilization if the project has been changed or modified; or if any information provided is no longer accurate.

5. Additional terms, conditions and/or mitigation required as determined by YTC Resource Specialists:

1.) One of the proposed firing points of rockets, artillery or mortars is located within SGPA. All existing protection measures would apply to any use of that area (i.e., temporal and spatial protection measures). 2.) Prior to conducting C-RAM training it is recommended that a fire-risk assessment of the firing points and containment areas be completed and any subsequent precautionary measures identified be imposed during the wildland fire season. 3.) While sediment loading of storm/run-off water emanating from these hardened sites will be significantly reduced as a result of the hardening, the water will be concentrated and could potentially result in impacts to soils in the surrounding area. Therefore there is a need to add minor berming for water retention purposes around the outer edge of the hardened areas to slow and capture runoff and enhance percolation into the soil profile. Similarly, there is a need to ensure that proper borrow ditching and water turn-outs are installed along the connector road to provide for similar capture and infiltration of storm/runoff water coming from the roadway.

6. Required permits:

1.) Dig Permit -- Range Area dig permit required prior to initiating construction activities. 2.) Dust Control Plan -- Contractor must contact the WA State Dept. of Ecology with a project description for possible submittal of a dust control plan. If required, the contractor must submit a copy of the plan to Public Works-Environmental Compliance for review. 3.) NPDES Construction Permit -- R10 EPA requires NPDES for all land disturbances greater than 1 acre, unless filing for a waiver for sites less than 5 acres in size. Submit NOI to YTC Public Works-ED for review prior to filing with R10 EPA. 4.) Stormwater Pollution Prevention Plan -- Required if land disturbance is greater than 1 acre, unless submitting waiver for sites less than 5 acres. Submit to YTC Public Works-ED for review prior to NOI notification to R10 EPA.

7. Proposed Date(s) of Action: 01 Jul 13 through 30 Sep 13

8. Reason for using a REC: In accordance with 32 CFR Part 651, this action is adequately covered by CX c-1 stating: Construction of an addition to an existing structure or new construction on a previously undisturbed site if the area to be disturbed has no more than 5.0 cumulative acre of new surface disturbance. This does not include construction of facilities for the transportation, distribution, use, storage, treatment, and disposal of solid waste, medical waste, and hazardous waste.

U.S. ARMY
JOINT BASE LEWIS-McCHORD - YAKIMA TRAINING CENTER
RECORD OF ENVIRONMENTAL CONSIDERATION
REFERENCE REIA 13 - 010

9. Project Proponent

X MALLO.LARRY.R.1386411278
Date: 12 Jul 13
Name: Larry Mallo, P.E.
Title: Staff Engineer, JBLM YTC DPW

Caveat with this NEPA document:
Any change in the magnitude, location, duration, or timing of this project will require re-evaluation and possible revised documentation by the Proponent with Public Works, Environmental Division NEPA Coordinator (509.577.3789).

10. Preparer:

Jay Becker
NEPA Coordinator, JBLM YTC DPW-ED
Date: 11 Jul 13

11. Compliance Screening:

A. Environmental Baseline Survey

X N/A
Date: _____
Name: _____
Title: _____

B. Wildlife/Vegetation

X LEINGANG.COLIN.R.1244568439
Date: 19 Jul 13
Colin Leingang
Wildlife Program Mgr., JBLM YTC DPW-ED

C. Cultural Resources

X KORGEL.RANDY.MICHAEL.1265424046
Date: 18 Jul 13
Randy Korgel
Cultural Resources Mgr., JBLM YTC DPW-ED

D. Infrastructure

X MALLO.LARRY.R.1386411278
Date: 12 Jul 13
Larry Mallo, P.E.
Staff Engineer, JBLM YTC DPW

E. Range Control/DPTMS

X HOLMAN.GEORGE.DOUGLAS.JR.1122951851
Date: 19 Jul 13
George Holman
Range Officer, JBLM YTC DPTMS-RD

F. Environmental Compliance

X TAAFFE.MARGARET.A.1231559228
Date: 23 Jul 13
Russell Eastenes
Env. Compliance Mgr., JBLM YTC DPW-ED

G. Natural Resources

X NISSEN.PETER.E.1231604886
Date: 17 Jul 13
Peter E. Nissen
Natural Resources Mgr., JBLM YTC DPW-ED

12. Approval

X TAAFFE.MARGARET.A.1231559228
Date: 23 Jul 13
Margaret Taaffe
Chief, JBLM YTC DPW-ED

YAKIMA TRAINING CENTER REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

INSTRUCTIONS: To request an environmental review for a project, complete Sections 1 - 3 below and return to: jay.w.becker.ctr@us.army.mil. If you have any questions about this form, contact the JBLM YTC NEPA Specialist at: (509) 577-3789.

REQUEST NUMBER:	13	-	010
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(DPW NEPA use only)

DATE:	12 June 2013
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(DPW NEPA use only)

1. PROPONENT INFORMATION

Proponents located outside of JBLM YTC must complete both Section 1 and Section 1.1. If the Proponent is not located at JBLM YTC, a Local Representative must be designated who is familiar with the proposed action and will be available to answer questions. Local Proponents need only complete Section 1.1.

NAME:		TITLE:	
PHONE:		FAX:	
EMAIL:			

1.1. LOCAL PROPONENT/REPRESENTATIVE

NAME:	George Holman	TITLE:	Range Officer
PHONE:	509-225-8101		
Has this project been reviewed in the context of land use requirements contained within the training unit SOP?			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

2. PROPOSED ACTION

Describe the proposed action. Include any maps, plans, or diagrams that describe the action and/or area. If the action will involve the demolition of a structure, include photographs of the structure.

PROJECT TITLE:	C-RAM Firing Positions
PURPOSE AND NEED:	There is a need to develop hardened firing positions to support soldiers training with Counter-Rocket, Artillery, and Mortar (C-RAM) weaponry, which entails specifically the use of the Land-based Phalanx Weapon System (LPWS) at JBLM YTC. These weapon systems have a large surface danger zone (SDZ), which limits the locations from which firing may occur. A suitable location on the MPTR, adjacent to the Central Impact Area boundary, was identified as the preferred location for the establishment of two firing positions to support C-RAM training.
DESCRIPTION OF ACTION: <i>(who, what, when, where, how)</i>	<p>Two firing positions will be developed within the boundaries of the MPTR near the Central Impact Area boundary to support Counter-Rocket, Artillery, and Mortar (C-RAM) and Landbase Phalanx Weapon System (LPWS) training at JBLM YTC.</p> <p>An existing grubbed site, formerly a mock training compound, located at grid 714400 5182820, will be rolled for compaction, and will be LPWS FP1. This site already has adequate gravel in place and does not require additional lifts.</p> <p>A new 200' x 200' site, located at grid 714120 5182840, will be grubbed and will serve as LPWS FP2. This site will be bladed, and will receive a 4" lift of 3-in minus rock, compacted, and a 2" lift of 5/8" minus wearing course compacted.</p> <p>A 2" lift of wearing course will be applied to the existing unimproved road between FPs 1 and 2 (approximately 1265').</p> <p>30 ecoblock barriers will be emplaced at each firing position in a "U" shape, stacked 3 high (9').</p> <p>Rockets, artillery and mortars directed at the LPWS weaponry will be fired from the firebreaks on the opposite side of the Central Impact Area from the LPWS sites in the MPTR. Two firing points will be located on the south side firebreak of the CIA and one will be on the west side firebreak adjacent to, and south of, R16 (map of firing points is located here: Yakima DPW drive:\Common\NEPA\Environmental Documentation\RECs\FY2013\13-010 C-RAM Firing Positions\Alternative sites maps YTC\C-RAM Selected Option). They will be fired from points from which there is no possibility that impact would be outside of the CIA. Use of the firebreaks for training is subject to all pertinent installation regulations and limitations. SGPA training limitations and</p>

	soil moisture training restrictions will be strictly enforced.		
GENERAL LOCATION:	<input type="checkbox"/> Cantonment Area <input checked="" type="checkbox"/> Down Range <input type="checkbox"/> Both		
SPECIFIC LOCATION:	UTM Coordinates (<i>center mass</i>):	714255 Easting	5182820 Northing
SIMILAR OR CONNECTED ACTIONS: <i>Note: These include other activities that must occur for completion of proposed activity (e.g., road building, use of lights, pesticide use).</i>			
SIZE/FOOTPRINT: <i>Note: Report entire area that will be disturbed by digging, scraping, excavating, etc., including access roads and laydown areas.</i>	3 Acres	LPWS FP1: 240' x 120' = 0.66 ac LPWS FP2: 200' x 200' = 0.92 ac 1265' road, 14' wide = 0.41 ac	
TIMING/SEQUENCING:	From (mo, yr):	June 2013	Through (mo, yr): September 2013
WORK PERFORMER:	<input type="checkbox"/> In-House <input checked="" type="checkbox"/> Contractor <input type="checkbox"/> Both		
REVIEW PHASE:	<input type="checkbox"/> Preliminary (<i>Attach a complete Statement of Work/Project Description.</i>) <input type="checkbox"/> Draft Final (<i>Attach a draft Statement of Work/draft Contract.</i>)		

3. PRELIMINARY ENVIRONMENTAL SURVEY

Use the following section to identify issues that will be considered further in the resulting environmental compliance review. If applicable, discuss both temporary activities associated with implementation of the action (i.e., construction of a facility) as well as any longer-term or ongoing activities (i.e., maintenance and operation of the facility). If uncertain, indicate a “Yes” response and explain further.

3.1 Land Use

Will there be any changes to current land use as a result of the action?

No Yes Two firing positions will be added at the MPTR to support C-RAM training.

Who owns the property on which the action will take place? JBLM YTC

Do you anticipate any impacts to neighboring land uses, either on or off post, with implementation of this proposed action?

No Yes _____

Will the action involve a real estate transaction?

No Yes _____

Will the action involve the use of pyrotechnics or increase the potential for fire?

No Yes The C-RAM firing positions will be located on an active range, adjacent to the Central Impact Area, where fire hazard due to training is already high.

3.2 Air Quality

Will the action result in a change in the release or production of airborne pollutants, including vehicle emissions, smoke, smog, odors, greenhouse gases, and/or dust?

No Yes Temporary increased dust during construction.

Will the action involve rock, concrete, or asphalt crushing or grinding?

No Yes _____

Will the construction activity involve the use of temporary or non-road air emitting sources (e.g., generators)?
 No Yes _____

Will the action result in the establishment of a facility that uses fossil-fuel burning equipment (e.g., boilers, generators, heaters/furnaces)?
 No Yes _____

3.3 Hazardous Materials/Waste

Will the action involve production, storage, treatment, or disposal of hazardous wastes or materials, including regulated pesticide, herbicide, fungicide, fuel, etc.?
 No Yes _____

Will the action involve the remodeling or demolition of a structure or structures?
 No Yes _____

Will the action result in the generation of solid waste and, if so, how would the waste be disposed of?
 No Yes _____

3.4 Biological Resources

Will the action introduce fish, wildlife, or vegetative species into an area?
 No Yes _____

Will the action result in adverse effects to existing fish or wildlife populations or habitat?
 No Yes _____

3.5 Cultural Resources

Will the action involve any ground disturbing activities outside of the cantonment area?
 No Yes A new 200' x 200' area will be grubbed on the MPTR.

3.6 Geology/Soils/ Hydrologic Resources

Will the action result in long-term disturbance, displacement, or compaction of soils?
 No Yes One 0.66 acre site will be compacted (no additional gravel is necessary as adequate aggregate is already in place), and one 0.92 acre site will be grubbed and improved with a 6" lift of gravel.

Will the action result in new impervious surfaces (i.e., parking areas, improved roads, permanent structures)?
 No Yes Compacted aggregate only on road surface and firing positions - no paving or hardball.

3.7 Water

Will the action change the course, direction, quality, or quantity of any water body, including groundwater and/or wetlands?
 No Yes _____

Will the action involve dredging or placement of fill in any body of water or drainage?
 No Yes _____

Will any aspect of the action take place within a river, creek, pond, wetland, or floodplain?
 No Yes _____

Will the action result in any liquid discharges?
 No Yes _____

Will the action result in the establishment of a facility that engages in industrial activities (e.g., vehicle/equipment maintenance, vehicle/equipment washing, hazardous waste handling, vehicle/equipment fueling)?

No Yes _____

3.8 Socioeconomics

Will the action alter the location, distribution, density, or growth rate of the human population of an area?

No Yes _____

Will the action result in any economic impact to the surrounding communities (i.e., within 15 miles of the installation boundary)?

No Yes Temporary construction employment. _____

3.9 Infrastructure

Will the action result in an increase in permanent personnel on-post?

No Yes _____

Will the action result in a change in amount or distribution of vehicular traffic on- and/or off-post?

No Yes _____

Will the action involve the addition of new utility systems or substantial alterations to existing systems (e.g., electrical power, telephone or data connectivity, drinking or irrigation water conveyance, wastewater collection and treatment)?

No Yes _____

Will the action result in discharges to the wastewater treatment system or a stand-alone septic system?

No Yes _____

Will the action result in new temporary or permanent facilities/structures? For temporary structures, identify duration and responsible party for removal or demolition/disposal.

No Yes _____

3.10 Noise

Will the action result in increases in actual or perceived noise levels?

No Yes _____

3.11 Sustainability

Will the action result in the permanent connection of utilities (gas, water, electricity) to a facility?

No Yes _____

Will the action result in the acquisition of goods and/or services above the micropurchase threshold (\$3500)?

No Yes _____

----- STOP -----

THE REMAINING QUESTIONS WILL BE ADDRESSED BY THE YTC RESOURCE SPECIALISTS
BASED UPON THE INFORMATION YOU HAVE PROVIDED.

4. YTC RESOURCE SPECIALIST REVIEW

Using the information provided by the proponent and your professional judgment complete the following section. When applicable, discuss any past, present, or reasonably foreseeable future actions which may contribute to cumulative effects of the proposed action.

4.1 Land Use

Will there be any changes to current land use as a result of the action?

No Yes Two firing positions will be added at the MPTR to support C-RAM training however the same type of historical training activities will continue in the MPTR and adjacent impact area.

4.2 Air Quality

Will the action take place within a non-attainment or maintenance area?

No Yes _____

4.3 Hazardous Materials/Waste

Will the action involve production, storage, treatment, or disposal of hazardous wastes or materials, including regulated pesticide, herbicide, fungicide, etc.?

No Yes _____

Will the action result in the generation of solid waste and, if so, how will the waste be disposed of?

No Yes _____

MILCON/NAF Environmental Survey Cat. Code (for construction actions per AR 420-1, App. E, §E-2 d (3))?

- Category I: There is no reason to suspect contamination will be encountered during construction.
 Category II: There is no known contamination; there remains some potential that contamination may be encountered during construction.
 Category III: The site is known to be contaminated or there is a strong suspicion contamination will be encountered during construction.
 N/A: Not a MILCON/NAF construction action.

4.4 Biological Resources

Has the site been surveyed for rare and sensitive plant species? If so, please elaborate on any vegetative communities that may be affected by the action.

No Yes That portion of the proposed action that is considered new construction (one of the MPTR firing points) was surveyed FY13. No rare/sensitive plants were found within the proposed project footprint. All other firing points are located on existing disturbed or developed ground (i.e., firebreaks and/or firing points).

Will the action affect any plant species covered under YTC's *Sensitive Plant Management Plan*, and/or unique vegetation communities?

No Yes No rare/sensitive plant species and/or unique vegetation community is expected to be impacted by the proposed action.

Will the action affect riparian, spring, or wetland habitat?

No Yes No riparian, spring, or wetland habitat exists within or is expected to be impacted by the proposed action.

Is the site within the Sage Grouse Protection Area?

No Yes One of the proposed firing points is located within SGPA. All existing protection measures would apply to any use of that area (i.e., temporal and spatial protection measures).

Does the action have the potential to affect species of management emphasis on YTC?

No Yes Risk of wildland fire exists with any military training through the use of munitions and the concentration of troops. The concern for wildland fire exists throughout the insallation but is of particular concern in the SGPA and areas outside established fire containment areas. Implementation of existing wildland fire policies and procedures reduces the risk however prior to conducting CRAM training it is recommended that a fire-risk assessment of the firing points and containment areas be completed and any subsequent precautionary measures identified be imposed during the wildland fire season.

Does the action have the potential to affect Essential Fish Habitat?

No Yes The project will not affect EFH.

Does the action require a Section 7 Consultation?

No Yes The proposed action will not impact any federally listed species thus no section 7 ESA consultation is required.

Is this action considered a military readiness activity as defined by the Final Rule regarding Take of Migratory Birds by DoD?

No Yes The construction of ranges/firing points is not considered a military readiness activity however there are no population level effects anticipated from either the construction and/or subsequent use/training.

If a permit is required (Section 5), is the appropriate Threatened/Endangered Species, Essential Fish Habitat, and/or Priority Habitat and Species documented and completed?

No Yes No other wildlife related permits are required at this time.

4.5 Cultural Resources

Has the site been surveyed for cultural resources?

No Yes

Will the action affect any resources of significance to the Yakama Nation and/or Wanapum Band?

No Yes

4.6 Geology/Soils/Hydrologic Resources

Will the action result in changes to runoff, erosion, and/or increased sediment loading of water bodies?

No Yes The action will result in the hardening of approximately 2 acres through placement of aggregate/crushed rock. While sediment loading of storm/run-off water emanating from these hardened sites will be significantly reduced as a result of the hardening, the water will be concentrated and could potentially result in impacts to soils in the surrounding area. Therefore, there is a need to add, to the extent practical, minor berming for water retention purposes, around the outer edge of the hardened areas to capture runoff water and allow it to be absorbed into the soil profile and not be lost as runoff water. Similarly, there is a need to ensure that proper borrow ditching and water turnouts are installed along the connector road to provide for similar capture and infiltration of storm/runoff water coming from the roadway.

Are there highly erodible soils within the proposed project area?

No Yes The soil type at the site is Argabak-Vantage complex, 3 to 15 percent slopes. These are very thin soils that encounter basalt at six (Argabak) to 17 inches (Vantage). Sites where the soils occur are lithosols and shallow range sites; sites of very limited productivity. Permeability of these soils is moderately low to low, and available water holding capacity is very low. Due to the thin nature of these soils their erodability is relatively low to very low.

4.7 Water

Will the project be located below Ordinary High Watermark?

No Yes The proposed project is located away from the nearest drainage (type 1 ephemeral) by approximately 950 feet.

Will the action impact wetlands in any manner?

No Yes There are no wetlands within the surrounding area

4.8 Socioeconomics

Will the action disproportionately affect children, minority, or low-income populations?

No Yes _____

Will the action alter the location, distribution, density, or growth rate of the human population of an area?

No Yes _____

Will the action result in an economic impact to the surrounding communities (i.e., within 15 miles of the installation boundary)?

No Yes _____

4.9 Infrastructure

Will the action result in a substantial change in amount or distribution of vehicular traffic on- and/or off-post?

No Yes Enhanced training facilities means an increase of traffic related to suppliers, trainers, and trainees.

Does the action involve the addition of new utility systems or substantial alterations to existing systems?

No Yes _____

Will the action result in discharges to the wastewater treatment system or a standalone septic system?

No Yes _____

4.10 Noise

Will the action result in increases in actual or perceived noise levels?

No Yes During construction there will be temporary increased noise due to construction activities. Once construction is complete, noise levels, types, intensity, and frequency consistent with current conditions will continue.

4.11 Sustainability

Will the action impact the ability to achieve installation sustainability goals?

No Yes _____

Will the action affect any of the installation significant environmental aspects?

No Yes _____

4.12 Cumulative Effects

When all the cumulative effects on the resources identified above are combined, do they have a reasonable likelihood of posing a significant environmental effect?

No Yes _____

Will the action threaten a violation of federal, state, or local law or requirements imposed to protect the environment?

No Yes _____

5. REQUIRED PERMITS AND PLANS

Based on the information provided in Section 2 and Section 3 of this form, check those permits and plans that the described action may require. Use space provided for further discussion if needed.

- Air - New Source Review _____
- Air - Rock Crushing Permit _____
- Air - Emitting Equipment Inventory _____
- Burn Permit _____
- Demolition Permit _____
- Dig Permit Range Area dig permit required prior to initiating construction activities. _____
- Dust Control Plan (Project) Contractor must contact the WA State Dept. Ecology with a project description for possible submittal of a dust control plan. If required, the contractor must submit a copy of the plan to Public Works-Environmental Compliance for review. _____
- Hydraulics Permits (JARPA) _____
- NPDES Construction Permit R10 EPA requires NPDES for all land disturbances greater than 1 acre, unless filing for a waiver for sites less than 5 acres in size. Submit NOI to YTC Public Works-ED for review prior to filing with R10 EPA. _____
- Stormwater Pollution Prevention Plan Required if land disturbance is greater than 1 acre, unless submitting waiver for sites less than 5 acres. Submit to YTC Public Works-ED for review prior to NOI notification to R10 EPA. _____
- Multi-sector General Permit for Industrial Activities _____
- Environmental Baseline Survey _____
- Other (specify) _____

RESOURCE SPECIALIST REVIEW ROUTING

- ITAM Coordinator (Section 4.1)
- Air Quality Specialist (Section 4.2)
- HM/HW & Solid Waste Specialist (Section 4.3)
- Wildlife Program Manager (Section 4.4)
- Cultural Resources Program Manager (Section 4.5)
- Natural Resource Management Specialist (Section 4.6)
- Construction Stormwater Specialist (Section 4.6)
- Industrial Stormwater Specialist (Section 4.6)
- Groundwater Specialist (Section 4.6)
- Natural Resources Program Manager (Section 4.7)
- NEPA Specialist (Section 4.8, Section 4.12)
- Engineering Supervisor (Section 4.9)
- Environmental Compliance Manager (Section 4.10)
- EMS/Sustainability Coordinator (Section 4.11)

6. DETERMINATION OF IMPACTS

Based on the information provided in Sections 2 through 4 of this form, work through the following questions to determine the level of analysis warranted by the proposed action.

6.1 Will the action have a significant impact on the human environment?

- No. Go to 6.2.
- Yes or uncertain. Go to 6.5.

6.2 Is the action covered under a Categorical Exclusion (CX)?

- No. Go to 6.5
- Yes. Go to 6.3.

6.3 Do any exceptional circumstances exist? See 32 CFR 651.29 paragraphs (b) (1) through (14).

- No. Go to 6.4.
- Yes. Go to 6.7.

6.4 Is the action segmented?

- No. If required, prepare a Record of Environmental Consideration (REC).
- Yes. Go to 6.7.

6.5 Has the action been adequately analyzed and, if applicable, mitigated for in a previous Environmental Assessment (EA) or Environmental Impact Statement (EIS)?

- No. Go to 6.6.
- Yes. Go to 6.3.

6.6 Does the action have any significant impacts in which mitigation measures cannot be applied to minimize impacts to an acceptable (non-significant) level?

- No. Go to 6.7.
- Yes. Prepare an EIS.

6.7 Is the action controversial in nature?

- No. Prepare an EA.
- Yes. Prepare an EIS.

Appendix B: Public Comments

NOTICE OF AVAILABILITY



ENVIRONMENTAL ASSESSMENT FOR THE CONVERSION OF THE 5-5 AIR DEFENSE ARTILLERY BATTALION AT JBLM

The Department of the Army is in the process of converting some of its Air Defense Artillery (ADA) weapons systems to meet the changing nature of enemy threats from the air, including rockets, artillery, and mortars (RAM). The proposed action will implement a counter-RAM mission for the 5-5 ADA, including the arrival of the Land-based Phalanx Weapons System (LPWS) to Joint Base Lewis-McChord. Under the proposed action, the 5-5 ADA will exchange 24 of their Avengers for 24 of the LPWS. A permanent increase of approximately 93 soldiers would be included to meet the maintenance requirements of the LPWS. All live-fire activities with the LPWS would occur at Yakima Training Center.

An Environmental Assessment and Draft Finding of No Significant Impact have been prepared for this action and are now available for public review.

These documents and related information can be found at

<http://www.lewis-mcchord.army.mil/publicworks/sites/envir/eia.aspx>

For further information, or to submit comments, send an email to usarmy.jblm.imcom.list.dpw-eis@mail.mil or write to:

DEPARTMENT OF THE ARMY
DIRECTORATE OF PUBLIC WORKS
ATTN ENVIRONMENTAL DIVISION (NEPA)
2012 LIGGETT AVE, BOX 339500 MS 17
JOINT BASE LEWIS-MCCHORD, WA 98433-9500



*Comments must be received by **September 6, 2013** to be considered.*