



The National Training Center *and* Fort Irwin Land Expansion

In the late-1970s, the Army, during the post-Viet Nam period of a drawdown of forces and austere budgets, pioneered a training concept designed to teach and sharpen the skills of its units, leaders and soldiers. The concept was simple, expanded from proven Navy and Air Force programs, "Top Gun" and "Red Flag" respectively, which honed the combat skills of pilots and aircrews to prepare them for the "first ten missions of the next war." The ambitious Army training concept was to take units, up to brigade size (about 5,000 soldiers), and put them into a training environment with simulated rigorous combat conditions using weapons simulators and actual live fire, against a crafty enemy, with an expert set of trainers to help improve their field performance. The stress of this environment would sharpen the skills of soldiers and leaders under demanding conditions, and show them how tough and expert they must be to win in actual combat.

In 1979, Fort Irwin, California was selected, from among 11 candidates, for its size, high desert terrain, and remote location, to become the "National Training Center (NTC)." At first structured to conduct training to defeat Cold War threats, the first training "rotation" occurred with a battalion-sized force (about 800 soldiers) in 1982, and progressively grew to brigade size by 1986. The proof of principle for the NTC training concept came during the Gulf War in 1991, when an Army trained with NTC rigor and high standards, with its joint partners, took 100 hours to defeat the Iraqi Army in ground combat in Southwest Asia.

Since then, and even before the events of September 11, the world has become a much different place, and the Army has been changing to meet new, challenging threats. The National Training Center, with its continuing mission to train the Army for the next war, also has to change to keep its training relevant to new battles and new tactics. This change requires a modernization of the total environment that puts the training stress on Army units and an expansion of the training area at Fort Irwin. In the remainder of this piece we will discuss NTC's mission, the changing world environment, and how modernization and the land expansion will help the Army and NTC to meet critical national security missions.

NTC Today. Fort Irwin, for its size, is the busiest installation in the Army today. It has a single mission - the training of ten Army brigades per year. All of the energy of the installation, from logistics to operations, is focused on that mission. Every other installation mission is secondary to the "rotation," the brigade training mission that lasts for 28-35 days for each brigade. Any installation resource needed for the rotation is dedicated to the training: the entire training area, 24-hour operations of logistical and support facilities, the labors of 750 observer-controllers (the trainers), the 2,500 soldiers of the 11th Armored Cavalry Regiment (the

Opposing Force or "enemy"), and the 1,300 soldiers of the Support Command (supplies and maintenance). To use Fort Irwin's superb facilities and personnel, over 75,000 soldiers annually, both Active Army and Reserve Component, travel to and train at the NTC.

Fort Irwin, with its brigade training mission, is a unique installation within the US Army. Its size, remoteness, and training infrastructure make it the only place, worldwide, where the Army has the capability to conduct live training, with actual vehicles and tactical systems, for a full brigade and all of its supporting arms and units. Other Army installations, such as Fort Bragg, North Carolina, Fort Hood, Texas or Fort Carson, Colorado, are either too small for such large maneuvers, or have restrictions that limit their training capability.

Each NTC rotation is a capstone training event for an Army brigade, the most rigorous training it will undergo short of war. Rotations are structured to replicate a deployment to an overseas forward operating theater, conduct of operations within that theater, and then redeployment back to a unit home station. Each rotation is a four-month operation for the brigade, with three months of home station training preceding each rotation at Fort Irwin. The basic sequence for the Fort Irwin portion of the rotation is:

Day 1 to Day 9 -- Deployment and Initial Staging. The brigade moves from its home station to Fort Irwin by rail, sea, and air and conducts entry and preparation-for-combat operations.

Day 10 to Day 24 -- Combat Training. The brigade moves to the field and conducts field training with missions that simulate actual combat. A continuous scenario treats the brigade as if it was in a combat area and gives the brigade missions that stress it for 24-hours per day for the entire exercise. The training missions are composed of two types: force-on-force and live fire. Force-on-force training is conducted against the Opposing Force, using eye-safe laser systems to replicate weapons effects. Live fire training uses the actual weapons and munitions that the brigade would employ in combat, concentrating on the application of fires from the small to large unit level. Observer-controllers and a sophisticated instrumentation system monitor all training to provide feedback and enhance the learning of the brigade.

Day 25 to Day 35 -- Recovery and Redeployment. The brigade returns from the field, conducts recovery and maintenance operations, and then redeploys back to its home station by rail, sea, and air.

The Operational Environment. NTC training is designed to prepare Army leaders, soldiers and units for whatever mission they may be called upon to execute. The "operational environment" is the world in which the Army must execute those missions. It is an environment of shifting forces and characters. Since the end of the Cold War and the completion of the Gulf War there are few monolithic threats and many more regional ones, and the level of uncertainty has risen. Figure 1 characterizes the forces in this environment, friendly, enemy and neutral, and the level of uncertainty that the Army must deal with as it protects the Nation's interests. The environment is complex, and demands a force that is lethal, agile, and very adaptable to changing situations.

Army Transformation. Since 1999, the Army has undertaken a sweeping transformation program, designed to change and prepare the Army to better operate against the threats that will continue to emerge in an uncertain world. The Army's basic mission of dominance in land warfare operations has not changed, nor has the range of operations for which the Army must be prepared. As Figure 2 indicates, the Army must be prepared to execute an extremely comprehensive task list, with many types of operations occurring simultaneously.

The World We Live In

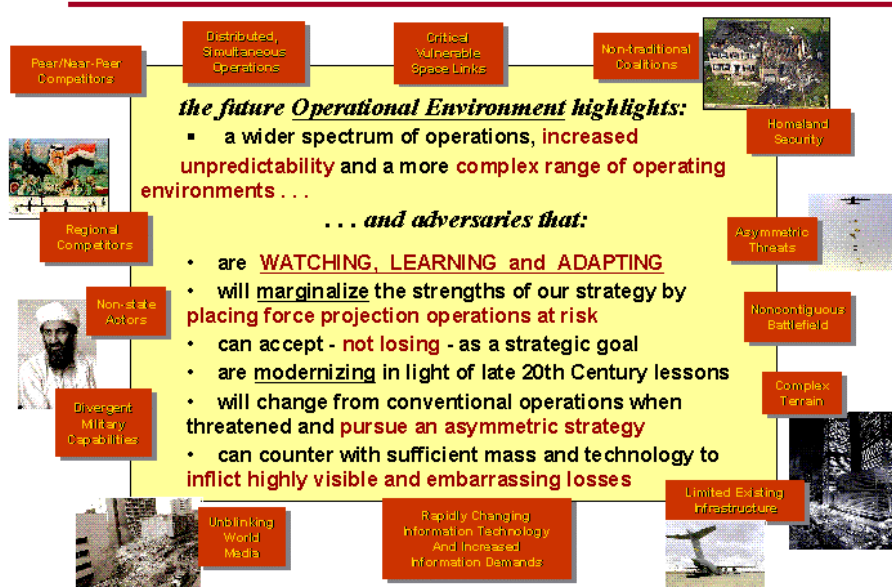


Figure 1. Today's environment affects the way the Army operates.

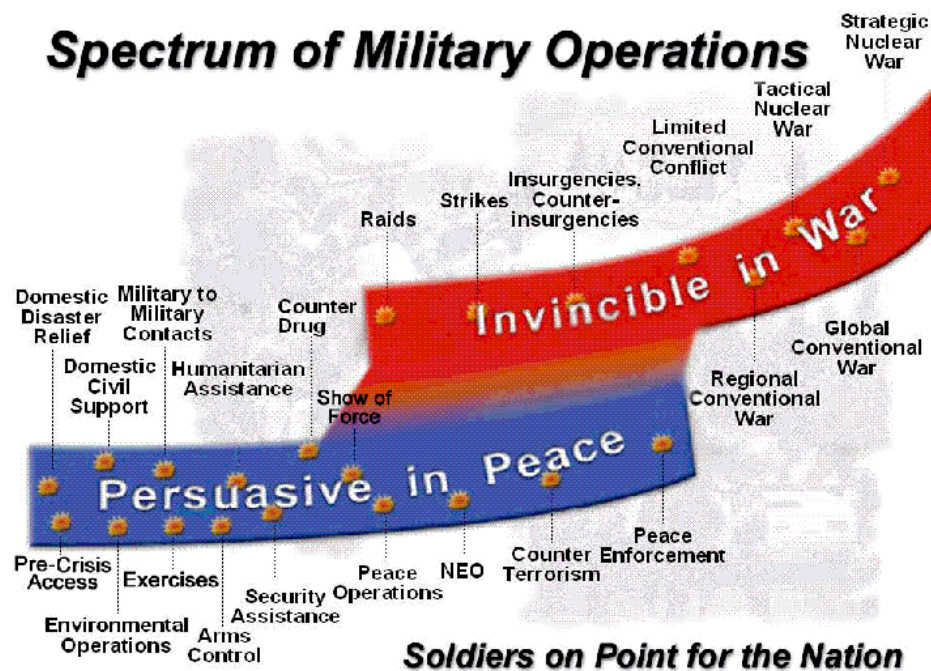


Figure 2. The spectrum of Military Operations for the transformed Army.

This spectrum of operations calls for an Army that is strategically deployable, flexible in its employment, and lethal and effective against a wide variety of possible opponents in different situations.

Army Transformation is designed along three axes, to keep the Army prepared for its current mission while providing near-term improvements and long-range transformation. The legacy, interim, and objective forces are the means to achieve the required changes to Army operations. The Legacy Forces are those we have now, they will be kept prepared and ready to deal with current and near term threats. Interim Forces, such as the medium-weight brigades in organization and training at Fort Lewis, Washington are the transition forces between the present and the future. They are designed to incorporate new technologies and are capable of operating across an increased spectrum of conflict, unlike the units today that are tailored for specific missions such as heavy armor combat in the desert or combat against light infantry in complex terrain. Objective Forces, due after 2012, are fully transformed and are completely redesigned units with precision weapons, intelligence capability, and high deployability. Objective Force units are capable of fighting across the full spectrum of conflict.

Figure 3 discusses the interrelationship between the categories of forces, and shows that, over time, legacy and interim forces will be phased into an Army composed solely by the Objective Force. It also indicates the role that NTC plays in training the transformed Army.

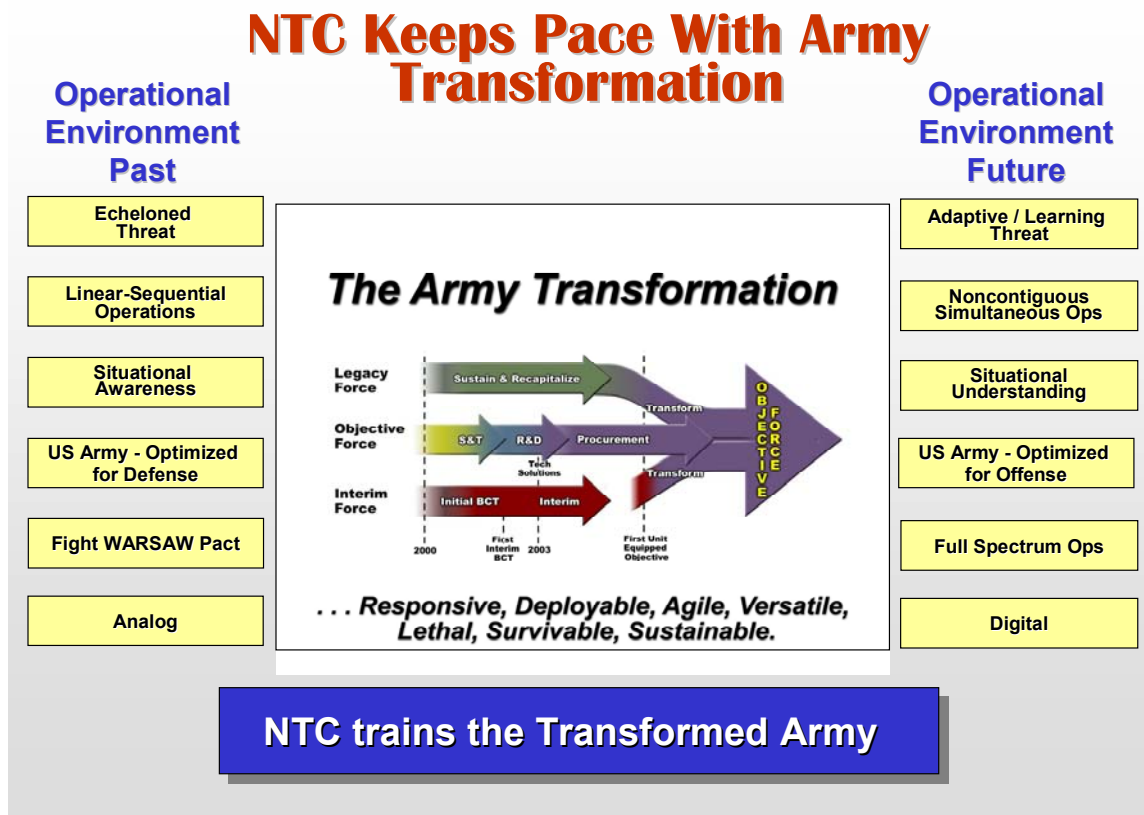


Figure 3. The NTC's role in Army Transformation

NTC's mission of providing the most realistic training short of actual war will not change, but the nature of the training must account for the new environment, and must allow Army units to operate with all of their combat and support systems, over doctrinal distances, and under the conditions of actual combat.

Modernization, Land Expansion and the New NTC. To continue its training mission at the highest possible level, the NTC has continuously undertaken a modernization program aimed at maintaining battlefield relevance and the ability to train Army brigades with current systems under the most stressful conditions. Modernization areas include:

- Equipment, both for the training units and the Opposing Force
- Ranges and logistics infrastructure to support the training unit
- Instrumentation to gather feedback on unit performance
- Training devices that accurately replicate weapons effects
- A rail spur into Fort Irwin to simplify unit deployments
- Cities and built-up areas to replicate future battlefields
- Expanded land for brigade training

Each of these initiatives is designed to maintain the stress of the battlefield and allow the unit to train under the most realistic conditions. In this paper, we will expand only the discussion of the land expansion for training.

Land Expansion. The current maneuver training area at Fort Irwin is composed of three training corridors, each with specific advantages and disadvantages (see Figure 4). The northern (live fire) corridor is filled with 1,600 remote-controlled targets, buried in shallow pits. Live fire brigade operations are normally conducted in the northern corridor. The target pits limit the effectiveness of the area for other maneuver training, especially at night. The central corridor is the primary training corridor used for force-on-force training during rotations. It is up to 50 km in length and varies in width from 8-15 km. The southern corridor is unsuitable for brigade maneuver for half of its length, due to the width of the corridor where land has been set aside for desert tortoise habitat (at the 90N UTM line). The current capability of the maneuver area to support brigade training is shown in Figure 4. There are several limitations to the current brigade maneuver area:

-- The width of the available maneuver corridors effectively limits brigade maneuver to the central corridor and the eastern part of the southern corridor. Other corridors are too narrow to use.

-- The corridors are not wide or long enough to support use of Army equipment at its designed operating ranges. The short corridor length requires that support areas be put near the front lines, an unrealistic condition.

-- Corridors must be used for every rotation, limiting the ability to mitigate or repair maneuver damage.

-- Future training requires dispersed operations, with units operating a distance from a support base. This training situation requires a larger maneuver area that allows separation between units.

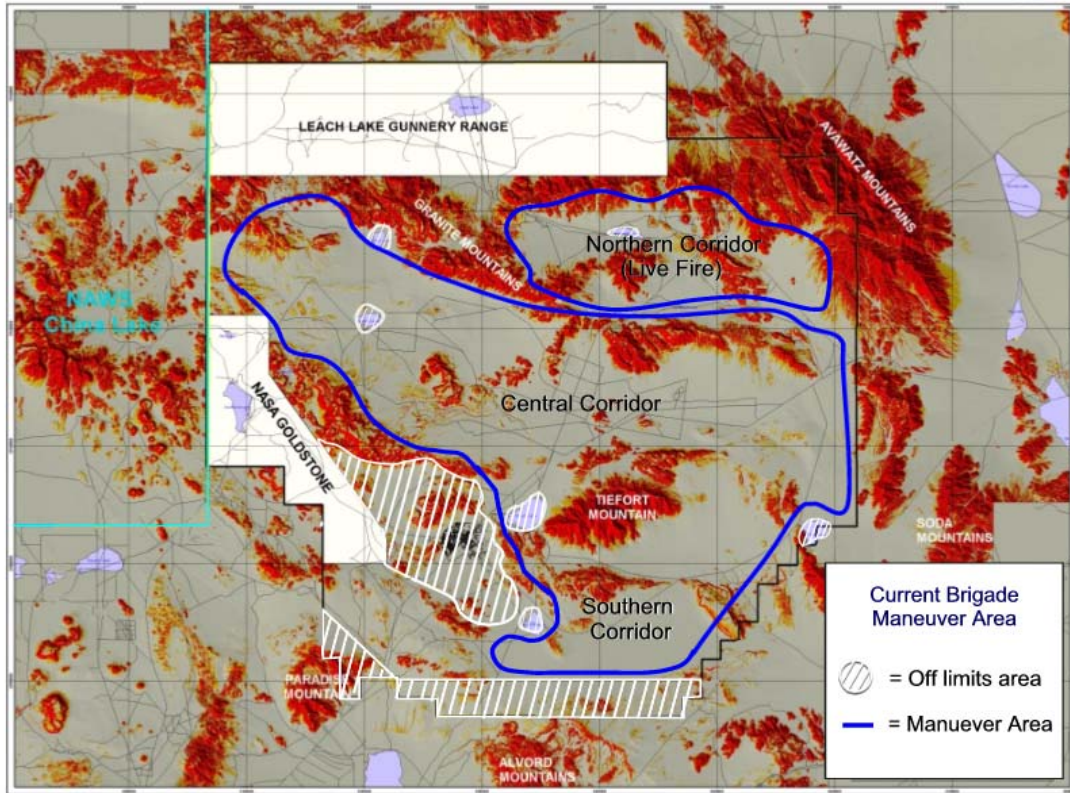


Figure 4. Current Brigade Maneuver Area

The NTC land expansion proposal developed by the Department of the Army and the Department of the Interior, and subsequently addressed in Congressional legislation signed in December 2000, significantly enhances the training land at Fort Irwin available for brigade maneuver training. The expansion adds 112,000 acres to Fort Irwin. An additional 22,500 acres of Fort Irwin, formerly closed to maneuver, brings the total new maneuverable acres to 134,500. As with all current training operations at Fort Irwin, the use of any new training land is dependent on full compliance with the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA) and all other applicable environmental laws.

Figure 5 shows the proportional increase to the brigade maneuver area. The net effect is greater than the 134,500 new acres. The selection of the expansion parcels results in the opening of areas of Fort Irwin that were previously inaccessible for training, or too small for brigade operations. For example, the western end of the southern corridor has seen little use, because of the narrow width and depth of the corridor. With land expansion, the corridor is widened by five kilometers and effectively lengthened by over 30 kilometers. The result is a corridor of almost 80 kilometers in length, allowing full brigade operations at near doctrinal employment distances.

The central corridor is similarly improved. The expansion to the east allows the placement of either logistics elements or a final objective in the new area, depending on the direction of training for the unit. This space adds over 20 kilometers to the effective length of the central corridor.

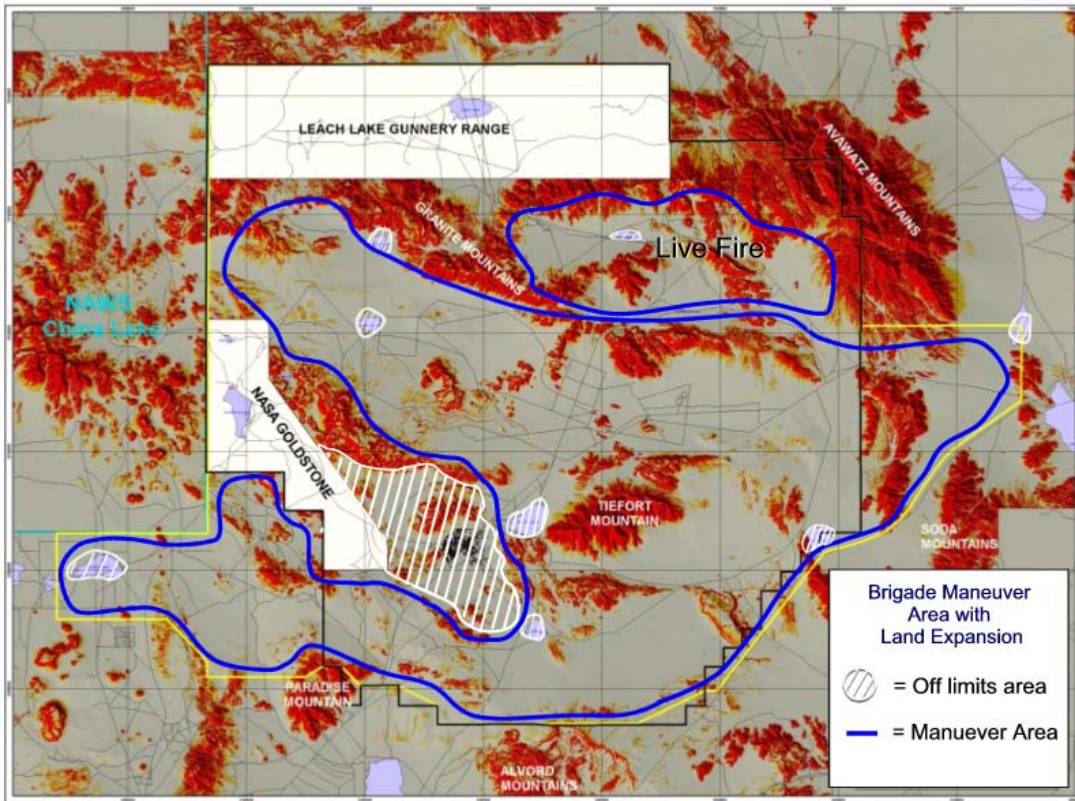


Figure 5. Expanded brigade maneuver area

Figures 6, 7, and 8 illustrate the changes to brigade training operations that are now possible. Figure 6 shows the current brigade maneuver training footprint. It is predominantly located in a single corridor, due to the types of units training and the limits on brigade-size training space. Figure 7 shows future training with the land expansion for modernized and more capable Army brigades. Modernized Army brigades have increased intelligence and combat systems, and can operate over larger areas and longer distances. The expansion to the NTC maneuver area allows a brigade to operate in multiple maneuver corridors simultaneously, as called for in emerging Army doctrine. Finally, Objective Force units, with their unmatched capability to see and fight, will operate over the entire length and width of Fort Irwin, fighting battles and conducting operations simultaneously in un-connected areas of responsibility. The size of the expanded National Training Center allows units to train and practice in a realistic area that approximates their zone of action for future combat.

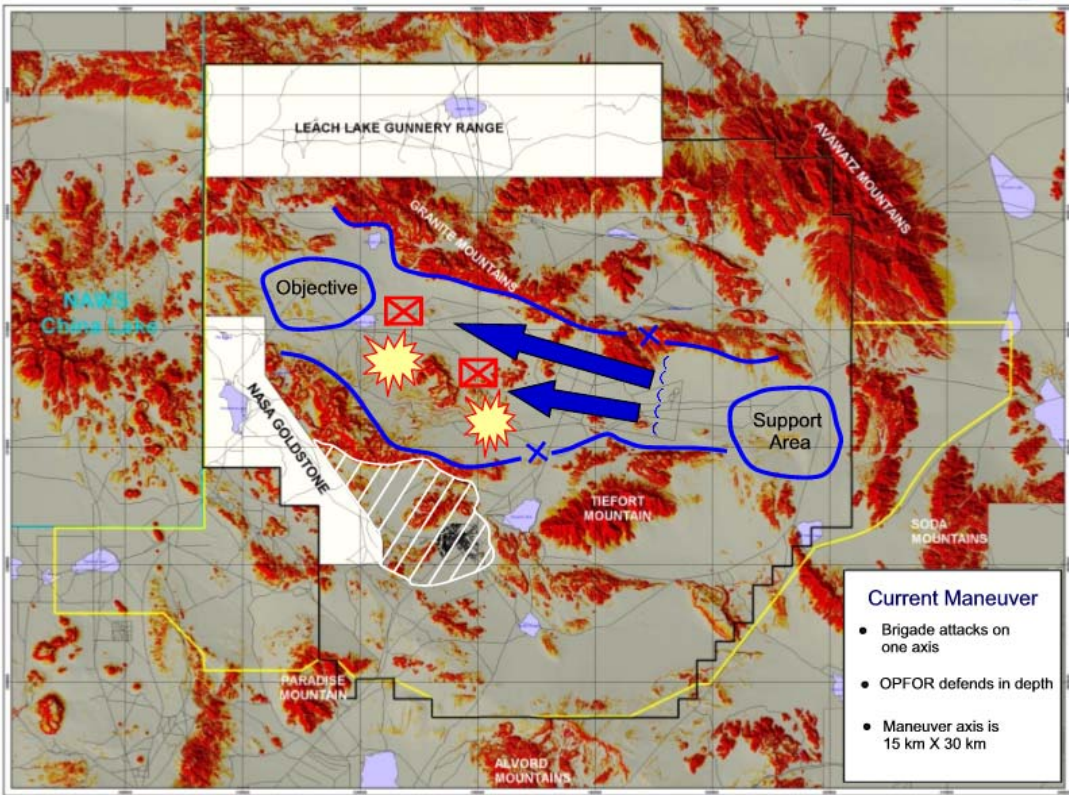


Figure 6. Current Brigade Operations at Fort Irwin

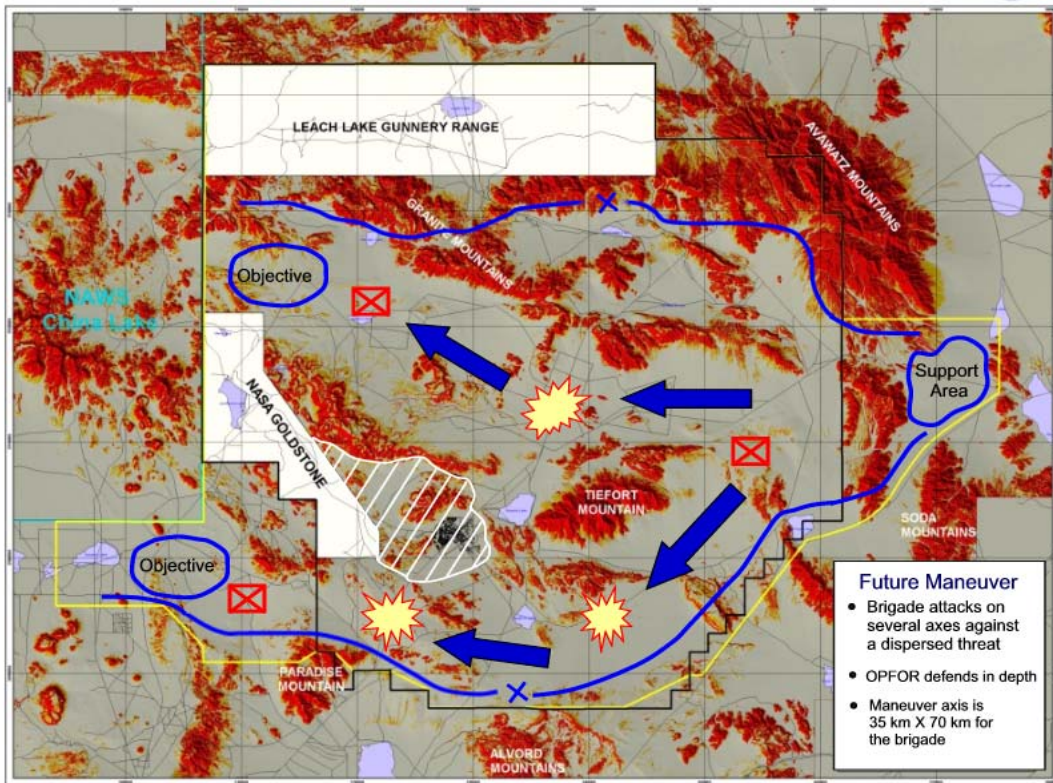


Figure 7. Future Training Operations at Fort Irwin

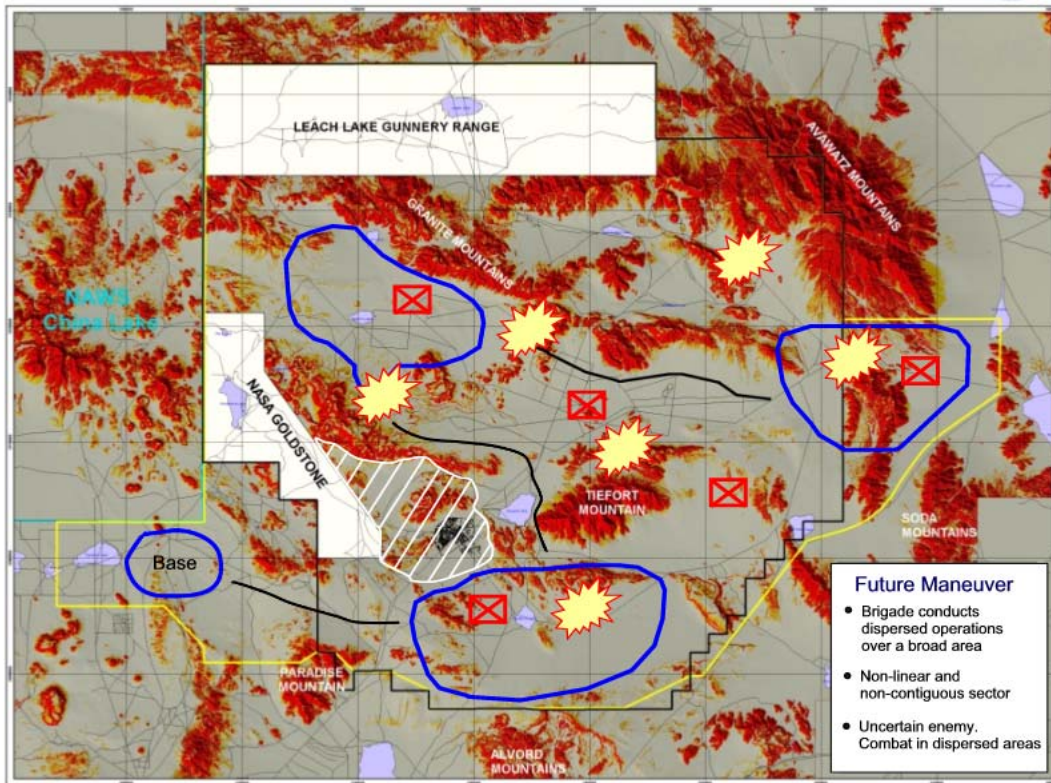


Figure 8. Future Training Operations at Fort Irwin

While primarily designed to enhance brigade training, the land expansion also has complementary effects that improve other areas of Fort Irwin operations. Army National Guard and Army Reserve units train at Fort Irwin on weekends and for two-week periods in the summer. Additional training land expands the numbers of these units that can train simultaneously with each rotation. Remediation and repair of the training area, while never completely restoring the training area, can now be done in off-rotation areas. Remediation and revegetation are currently difficult to do because of required unit operations in the training area.

Summary. For almost twenty years the National Training Center and Fort Irwin has successfully trained Army brigades. Over 1,200,000 soldiers have trained at Fort Irwin and gone on to employ the lessons learned from hard training in their Army units. The world and the Army are changing. The NTC must modernize to continue its mission of providing the most rigorous, stressful training to Army brigades, to prepare them for the modern battlefield. The expansion of training land at Fort Irwin is one of the keys to that transformation and the successful training of Army forces.