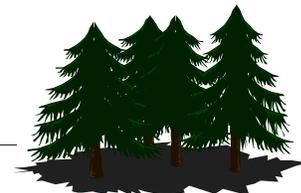


# ITAM



## The Bridge

ISSUE 2

Spring 1997

### Bridging the Gap Between Army Training & Environmental Stewardship

*Under the Guidance of the ITAM Executive Management Council*

#### RFMSS/ITAM - INTEGRATION UPDATE

BY Ms. Leslie Winters, United States Army Training Support Center

The integration between ITAM and Range Facility Management Support System (RFMSS) is a high priority ITAM initiative lead by the U.S. Army Training Support Center (USATSC) and Army Corps of Engineers (ACOE), respectively. USATSC and ACOE serve as the RFMSS program managers; the U.S. Army Missile Command (MICOM) is the RFMSS developer and the U.S. Army Environmental Center provides support, particularly on GIS related issues.

The RFMSS is the range manager's tool for automating many range control functions such as scheduling, firing desk operations, and calculation and analysis of training facility utilization. RFMSS maintains information on training units, training land use, and training requirements and is an essential tool in the Training Requirements Integration (TRI) component of ITAM. ITAM information on land conditions, land capacities, and natural resources is also important to RFMSS users.

Various versions of RFMSS are in use in the range control offices of most ITAM installations. The most recent version of RFMSS is 3.5, which is a Microsoft Windows-based application with a FoxPro Database Management System.

The ITAM requirements currently being integrated into RFMSS include:

- Army Training and Testing Area Carrying Capacity (ATTACC),
- ITAM Workplans, and
- Geographic Information System (GIS) capabilities.

The RFMSS Program management team of USATSC and ACOE anticipate that by FY 98, ITAM installations, using RFMSS version 3.5, will be able to add the ATTACC modules and ITAM workplan to their RFMSS tool set.

The ATTACC modules will allow installations to use *actual* data to calculate maneuver impact miles (MIMs). Initially, the data set will include most Active and Reserve component (RC) units. However, the *complete set* of ATTACC data needed to establish target utilization rates and calculate MIMs for all installations, educational institutes, and testing events associated with unit training will not be available for all installations. (Continued on Page 15)

Materials and opinions appearing in this newsletter, are not necessarily endorsed  
by the Department of the Army.

**6TH ANNUAL ITAM WORKSHOP**

Fort Sam Houston, Texas is sponsoring the 6th Annual Integrated Training Area Management (ITAM) Workshop from 26-28 August 1997 in historic downtown San Antonio, Texas. The conference, which is a forum for installation-level land, natural resource, and range operations managers, will take place at the Hilton Palacio del Rio; the Hilton is approximately 15 minutes from the airport. Any organization, group, or individual, who is directly or indirectly involved with the management of Department of the Army training lands and resources, may attend the meeting. Other DoD and NATO land managers are also invited.

A block of 250 rooms is held for ITAM Workshop participants at the Hilton, 200 South Alamo, phone (210)222-1400. *Registrants are responsible for their hotel reservations.* The special \$91.00 conference rate is in effect from 25 through 28 August 1997, for tax exempt employees. If the Hilton Palacio del Rio is booked, there are additional rooms held at the following locations:

Homewood Suites	Sumner Suites
432 West Market	601 South St. Mary's
(210) 222-1515	(210) 227-6854



Transportation from the airport to the hotel is the responsibility of the registrants and is available from the following:

Taxi Cab Service available:			
Checker Cab	222-2151	Downtown Cab	737-8294
Fiesta Taxi	666-6666	Yellow Cab	226-4242

Primary shuttle service from airport to hotels:	
Star Shuttle & Charter	341-6000
(outside San Antonio, call)	1-800-341-6000

Participants must pre-register by mail or fax. Space is limited, so please try to pre-register. On-site registration is also available Monday and Tuesday at the Hilton. You can pay the \$90.00 registration fee in advance or during registration at the hotel. Please make checks payable to the ITAM WORKSHOP. The ITAM Workshop is exempt from the new *Lodging Success Program*, which went into effect on 1 May 1997. A message exempting the conference will be available to all participants to file with their travel vouchers.

Please contact Ms. Raye Anne Hawkins at COM (210) 221-2902, FAX 0042, DSN 471 to register or ask administrative questions. Please address questions of a technical nature to either Mr. Richard Strimel or Mr. Dusty Bruns at COM (210) 295-7761 or 7824, FAX 7760, DSN 421.

The agenda for the workshop is as follows:

**Day 1 - Mon 25 Aug - Travel Day**

1700 - 1900 Open Registration  
Steering Committee Meeting  
1800 - 2000 Social Mixer

**Day 2 - Tues 26 Aug**

0800 Open Registration  
0800 - 1600 General Session

**Day 3 - Wed 27 Aug**

0800 - 1700 Four Concurrent Sessions

**Day 4 - Thurs 28 Aug**

0800 - 1100 Four Concurrent Sessions  
1200 - 1600 Field Tour Camp Bullis  
1730 - 2200 Texas Barbecue

**Day 5 - Fri 29 Aug- Travel Day**

0800 - 1200 ITAM PMR 97-2

**MESSAGE from the ITAM WORKSHOP HOST**

**by Mr. Ed Miller, MEDCOM ITAM Proponent**

Planning and preparation for the ITAM conference continues. As of 02 MAY 97, we have 54 people registered and 121 persons registered at the Hilton. Remember, we only have 250 rooms held at the hotel so make your reservations ASAP. Also, keep the registration forms coming; Advance registration makes it easier at the start of the conference.

To ensure that you receive the \$91.00 per night rate at the hotel, say the magic word "ITAM". Otherwise, the hotel will charge you the regular rate; the \$91.00 rate applies 25-28 Aug for tax exempt employees. If you have plans to stay through the weekend, expect to pay the regular weekend rate.

Arrangements with the Star Shuttle may be made beforehand so that the shuttle will be on hand at the time of your arrival. Transportation for the field tour and the barbecue will be provided.

The emphasis of the Camp Bullis field tour is the integration of natural resources management, environmental compliance, and training mission requirements at Fort Sam Houston. That's it for now. Will be in touch.

## Army Training And Testing Area Carrying Capacity (ATTACC)

by Mr. Steve Sekscienski, USAEC; Mr. Robert P. Hunt, CALIBRE Systems, Inc., and Ms. Leslie Winters, USATSC

Training Land Carrying Capacity is the amount of training that a given parcel of land can accommodate in a sustainable manner. The Army Training and Testing Area Carrying Capacity (ATTACC) methodology is the US Army's method for quantifying training land carrying capacity. When fully developed, the ATTACC methodology will be able to quantify carrying capacity based on land condition, training load, and measures of effectiveness. ATTACC will quantify carrying capacity for all types of Army units and service schools, Reserve Component (RC) and unique unit requirements, and other mission activities, e.g., artillery, explosives, and testing.

ATTACC estimates land condition as the erosion status and as a function of the training load. Erosion status (ES) is an indicator of land condition; It incorporates most factors affecting land condition, uses the Revised Universal Soil Loss Equation (RUSLE), and is executable using current GIS and LCTA Data.. Land condition is expressed qualitatively on a red-amber-green scale. Red indicates poor conditions and green indicates good conditions.

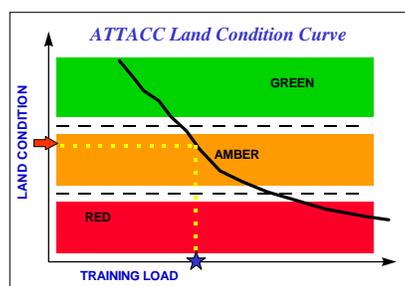
ATTACC quantifies training load in terms of Maneuver Impact Miles (MIM). One MIM is the equivalent impact of an M1A2 tank traveling one mile, while participating in an armor battalion field training exercise. The impacts of all mission activities are converted to MIM, using mileage projections from a) the Battalion Level Training Model (BLTM) of OPTEMPO and Non-OPTEMPO, b) Programs of Instruction (POI), and c) materiel test plans.

ATTACC combines the mileage projections with Training Impact Factors (TIF) to calculate MIM. The training impact factors include the Event Severity Factor (ESF), Vehicle Severity Factor (VSF), Vehicle Conversion Factor (VCF), and Vehicle Off-road Factor (VOF). ATTACC expresses the training land carrying capacity by plotting the land condition and training load, which correspond to a target land condition and the planned land maintenance practices.



The measures of effectiveness reflect the cost and effectiveness of land maintenance practices. Maintenance

practice effectiveness is based on an assessment of their effect on vegetative cover, which is a major variable in the RUSLE. As training load increases, land condition deteriorates. When an installation conducts effective land maintenance practices, the land condition curve will shift. The shift reflects improved land conditions and increased capacity to support different training events.



ATTACC principles have application throughout the installation, MACOM, and HQDA training land management process. Through the RFMSS, ATTACC will provide decision support data to installation training land managers. ATTACC can also assist the installation planner in assessing long range training land requirements,

based on the installation's training population, land condition objectives, and land maintenance practices. At MACOM and DA levels, ATTACC can aid in stationing and resourcing decisions. Finally, ATTACC cost factors are applicable to the DA Training Resource Model (TRM) to predict Army-wide LRAM costs.

If you would like to learn more about ATTACC, the points of contact are as follows:

### ATTACC Environmental Component & Implementation

Mr. Steve Sekscienski  
Army Environmental Center  
(410) 612-7079  
e-mail: sekscien@aec2.apgea.army.mil

### ATTACC Training Component & Systems Applications

Ms. Leslie Winters  
Army Training Support Center  
(757) 878-3090  
e-mail: wintersl@eustis-emh20.army.mil

## ITAM Partnering

by MAJ Aaron Price, NGB-ILE-E

The National Guard Bureau (NGB) has established a partnership between the Operations & Training Directorate (ARO-TS) and the Environmental Division (ILE-E). ARO-TS and ILE-E recently signed a Memorandum of Understanding (MOU) that forges a partnership between the two communities and outlines the duties and responsibilities of each organization.

As the ITAM proponent for the Army National Guard, ARO-TS is responsible for establishing priorities, developing and approving requirements, providing funding, and performing the overall program management.

As the activity agent, ILE-E is responsible for developing and validating requirements, implementing the program according to ARO-TS guidance, providing day-to-day technical support to training sites, and providing support for funding issues.

The partnership is part of the Army National Guard's strategy to take advantage of expertise on both sides, alleviate a one sided program, and accomplish the overall objectives of the ITAM Program. The Guard is committed to working as a team and to training soldiers in a realistic environment. The POCs are CPT Jeff Peterson, NGB-ARO, (703) 607-7360 and MAJ Aaron Price, NGB-ILE-E, (703) 607-7996; DSN 327.

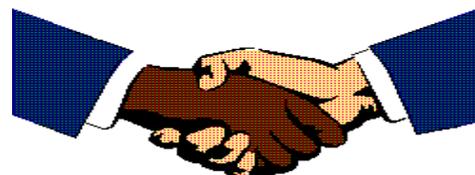
## ITAM Leadership

by MAJ Aaron Price, NGB-ILE-E

The Army National Guard is aggressively implementing the ITAM program at 54 training sites. To eliminate duplication of effort and maximize efficiency during the implementation process the Guard is encouraging a "mentoring" program. The Guard's ITAM mentoring program encourages installations with training sites that have a fully functional ITAM Program to help sites that are just beginning to implement their program.

The mentor from the fully functional site will guide the team at the new site by sharing lessons-learned and relevant experiences. The mentoring program will result in cost savings to the government and a streamlined process for establishing ITAM Programs.

If your installation is interested in guiding another through ITAM implementation, please contact MAJ Aaron Price, NGB-ILE-E at 703-607-7996. Installations outside of the Guard must coordinate with their MACOM before volunteering.



### Army Environmental Training Support Center (ETSC) Facilitates ITAM Program Ms. Lois Adams, USAETSC (Huntsville, AL)

#### What Are You Up To? The Bridge wants to Know

Please submit your comments, concerns, photos, or ITAM related MACOM approved stories for publication to:

COMMANDER  
USAEC  
ATTN SFIM-AEC-ECN MS BRIGHT  
LIETZAN RD BLDG 4435  
APG EA MD 21010  
COM: (410) 671-1563; DSN: 584-1563  
FAX: (410) 671-1680  
E-mail tabright@aec.apgea.army.mil

*The Bridge* is a publication of the Army Environmental Center and is a means to share information about trends, events, and current thoughts related to the Army's ITAM Program. Materials and opinions appearing in this newsletter, are not necessarily endorsed by the Department of the Army. Unless articles appearing in *The Bridge* are copyrighted, we encourage you to reproduce and share them. When reprinting copyrighted materials, please credit the source and author, and send us a copy.

The ETSC is available to assist installations with their Environmental Awareness (EA) programs, by designing and producing EA products that help make people aware of their environmental responsibilities. ETSC's products include customized graphic designs for signs, field cards, stickers, brochures, posters and other graphics.

Collaboration between installation environmental coordinators, ITAM Coordinators and ETSC personnel facilitate the analysis, design, development and reproduction of installation specific training or awareness products. Some products are designed and developed completely by ETSC while others are modified from products created at installations and activities Army wide. All of the products can be used as benchmarks for future development of like products. We can also develop or modify a product and then provide "camera ready" copies for reproduction. Often we can advise on methods to get the best price for your product and assist you in estimating fair and reasonable costs you can expect to pay for your product.

ETSC can assist with video production by providing good examples of video scripts that have been produced for Army installations, raw video footage used in other Army produced videos, and advice on how to proceed with video production with the best quality and lowest cost.

There is no charge at ETSC for standard or tailored designs for EA products; however, installations must bear the cost of any reproduction or contracts that are awarded to reproduce the EA product or produce videos. ***Please be aware that if you plan to use expiring FY dollars for contracting or reproduction, that you should contact ETSC quickly to get your design started.*** The cut off date for accepting current year expiring funds is **01 JUL 97**.

Federal Acquisition Regulations require that current FY dollars be expended for products and services required during that fiscal year. Typically, a customized design requires extensive coordination within the requesting installation and ETSC must have a completed, installation-approved camera ready design before it can contract for reproduction.

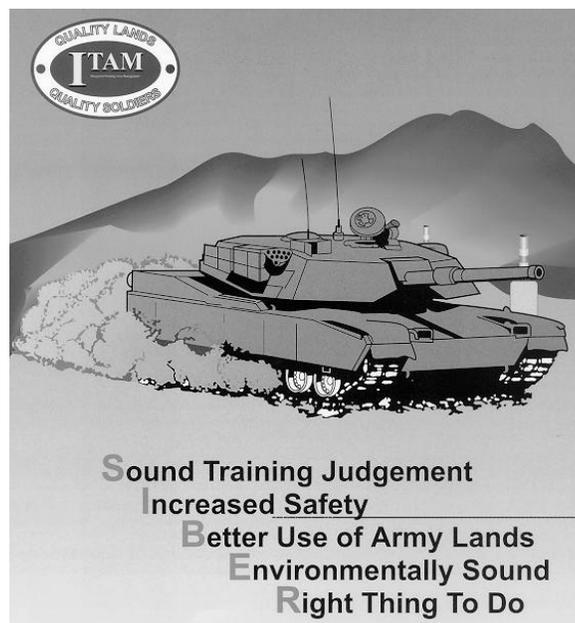
Examples of products produced by Army installations are available along with assistance on how to proceed with customized installation EA programs.

## ETSC Helps Installations with Purchase of SIBER Stakes

The Army Training Support Center (USATSC) is standardizing the design of the Off Limits Markers, which are sometimes referred to as SIBER or Seibert Stakes, and will be publishing interim guidance soon.

In support of the interim guidance, ETSC has a contracting vehicle available to assist installations in purchasing these markers. There is an economy of scale to be realized by buying in volume and we can give you cost estimates for your requirements.

Graphic designs for signage are also available and can be customized and tailored specifically for the installation at their request.



**For more information on ETSC products or services, please contact  
Ms. Lois Adams at (205) 895-7407  
or Dr. Rick Montgomery at (205) 895-7414.**

## SIBER STAKES

### Standard Off-Limits Marker Implementation Plan

by Mr. Gordon Weith, U.S. Army Training Support Center

The Army requires a standard and universal off-limits marker to ensure soldiers and/or leaders recognize and react to this marker from individual through unit/collective training, and at all Army training locations.

The approved name for the standard off-limit markers is **SIBER Stake**. Per guidance issued to the ITAM MACOM proponents at the ATSC 1-3 APR 97 PMR, SIBER Stakes will be tested at all Total Army Installations and ITAM Training Centers. The off-limits marker will serve multiple purposes in training areas that have TES, environmentally sensitive and/or protected areas, physical hazards, fixed boundaries, and pipeline crossings.

Currently, the USATSC is standardizing the design of the SIBER Stakes. The widely accepted and proposed standard is the ETSC/NTC developed model consisting of 16" long., 2" diameter plastic/PVC pipe, 6" white reflective sheet, and 10" red/yellow reflective sheet. A vertical 1" strip of black tape is attached to the side facing the restricted area. Installations can use a larger diameter pipe, if required for greater visibility, as long as the markings remain consistent. Installations frequently place specific signs (TES, wetlands, etc.) adjacent to SIBER Stakes to reinforce the restriction.

The standard metal engineer stake is the SIBER Stake mount. Installations may decide to mount the signs over, onto, or on top of the engineer stake, using clamps or screws, based on terrain and visibility. Installations should contact Mr. Rick Montgomery or Ms. Lois Adams at the U.S. Army Environmental Training Support Center for marker specifications, drawings, material sources and contract support. COM (205) 895-7414 or 7407, DSN 760, e-mail montgomeryr@smtp.hnd.usace.army.mil or adamsl@smtp.hnd.usace.army.mil

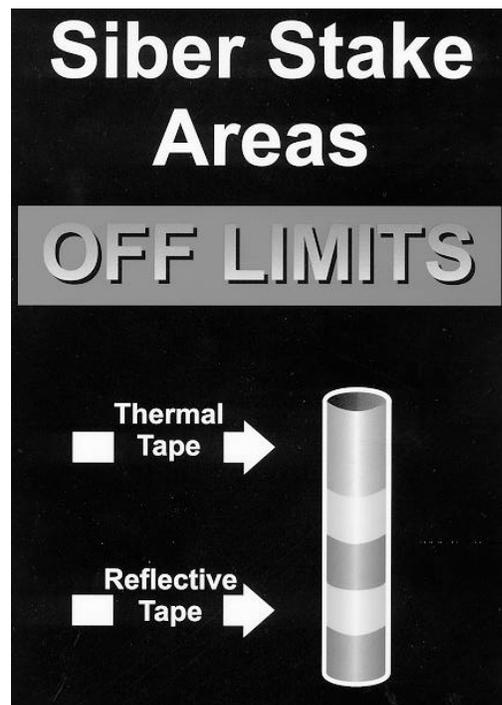
Installations will purchase, build, emplace, and maintain SIBER Stakes according to their own work plans and schedules. Since SIBER Stakes are universal, funding can come from multiple resources such as ITAM and Environmental Programs, depending on their intended use.

The intent is for installations to use the SIBER Stake, effective immediately, as they mark **new** off-limits areas and replace (lost, damaged) off-limits markers. **Immediate replacement of off-limits markers is not intended.** Building a fireproof SIBER Stake is not practical. Therefore, the USATSC will not pursue a fireproof SIBER Stake. However, the Army will pursue a SIBER Stake with visible thermal imagery.

Chapter 5, AR 210-21, Army Ranges and Training Land Program (DRAFT) may become the vehicle to describe and direct the SIBER Stake Standard. Also the pending ITAM Regulation and Pamphlet, AR/DA PAM 350-XX, may include the standard. (Note: AR 200-3 directs the use of a specific Endangered Species Warning Sign.)

The USATSC will pursue including SIBER Stakes in these regulations. However, USATSC may publish guidance immediately regarding the use of the proven SIBER Stake.

The USATSC POC for the standard off-limits marker is Gordon D. Weith, COM (757) 878-5085/86, DSN 927, e-mail weithg@eustis-emh20.army.mil.



### USATSC RECOMMENDATIONS

- USATSC provides MACOMs with specific guidance and details on the standard SIBER Stake; ETSC supports this effort with "technical" details.
- MACOMs and installations adapt and use the standard SIBER Stake effective 1 August 1997. Use should be restricted to new or replacement markings.
- USATSC, with assistance from FORSCOM, researches and tests a thermal SIBER Stake.
- USATSC identifies appropriate Army publications to explain, describe and direct use of SIBER Stakes.

## FYI... LRAM Equipment Available

by Mr. Bob Anderson, TRADOC ITAM Environmental Representative

Anyone interested in surplus equipment, e.g., scrapers, bucket loaders, etc., useful for LRAM projects can contact **TACOM** representative, Ed Klein, DSN 786-7416 or COM (810) 574-7416. The equipment is available FREE of charge from TACOM.

TACOM currently has road graders (Caterpillar Model 130G) and scoop loaders (JI Case Model MW24C, 2.5 yd bucket). This equipment usually becomes available due to downsizing and/or installation closings. Equipment can be redistributed to other installations, but the receiving installation must have a slot for it on their TDA.

The installation that gives up equipment is usually required to bring equipment up to "TM 1020 Standards", i.e., safe and serviceable condition, before another installation accepts it or pays for its shipping. The free LRAM equipment is not new, but should be serviceable. For more information on how to obtain **TDA slots**, contact your MACOM representative or Karl Wolf at (703) 806-5996.

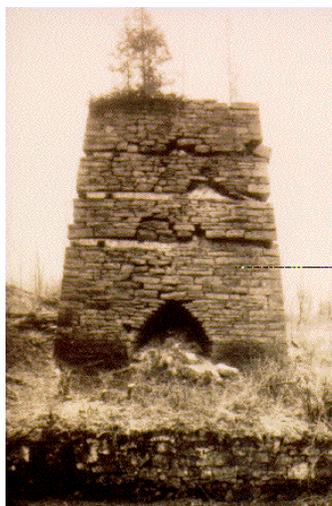


## Cultural Resources AR and PAM

By Dr. Dave Guldenzopf, Cultural Resources Section Chief, USAEC

The Cultural Resources Army Regulation (AR) and Pamphlet (PAM) (200-4) establish new Army-wide policy and guidance for installation Integrated Cultural Resources Management Plans (INCRMPs). One of the more significant developments contained in the Draft DA PAM is a proposed comprehensive planning strategy for INCRMPs that combines a cultural landscape planning approach, with concepts from ecosystem management. This service-wide planning strategy fully integrates cultural resources with natural resources and military operations within an ecosystem framework. Expected date for the AR publication is JUN 97.

For more information, please contact Dr. Dave Guldenzopf, USAEC: COM (410)671-1580, DSN 584-x, e-mail [dbgulden@aec.apgea.army.mil](mailto:dbgulden@aec.apgea.army.mil).



## Development of ITAM Short Course Underway

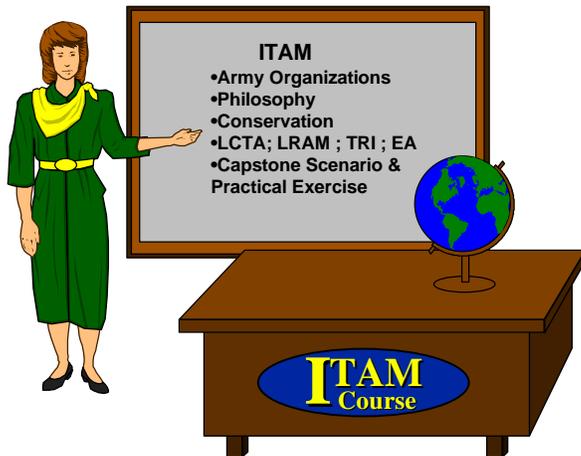
Dave McFerren, USAEC and Dr. William Doe, CEMML (CSU)

The increasing requirements and demands for ITAM implementation at installations throughout the Army will require that government land managers, military trainers and supporting contractor personnel be well versed on all components of the ITAM Program. The professional training and education of all employees involved with the ITAM Program is critical to meeting this challenge.

Under the guidance of the ITAM Executive Management Council (EMC) and with support from the MACOM-level ITAM representatives, a professional short-course on the implementation of the ITAM Program at the installation is being developed. The overall course design and content was presented to attendees at the April ITAM Program Management Review (PMR). Feedback from this meeting and installation representatives will provide the framework for course development during the remainder of FY 97. It is anticipated that the course will be fully developed and ready for instruction early in FY 98. (Short Course Continued on Page 8)

## ITAM Short Course -(Continued from page 7)

The 40-hour, instructor-led course will provide detailed information about the organization, functions and requirements of the ITAM Program to assist military land managers and trainers with implementing a sound ITAM Program at the installation level. The proposed program of instruction will include a ½-day pre-course preparatory study using read-ahead materials, 4 days of in-class instruction and practical exercise, and a ½-day field trip to an installation's training areas. The design concept recommended that the pilot course be taught in the Colorado Springs, Colorado area adjacent to Fort Carson. This would allow attendees to see the implementation of ITAM first-hand at a major operational installation and apply their ITAM knowledge and problem-solving skills to a practical exercise/training scenario designed around actual maneuver training by tactical units.



At present, the short-course curriculum will include instruction of approximately 30 hours of common-task, or core, material, covering all aspects of the ITAM Program, as well as related material on Army systems and conservation management functions. Some 87 courses have been organized into 8 categories. The categories are as follows:

- Army Organizations, Tactical Systems and Training
- ITAM Program Philosophy, Development and Resourcing
- Conservation Organization, Planning and Functions
- Land Condition Trend Analysis (LCTA) Core Capabilities
- Land Rehabilitation and Maintenance (LRAM) Core Capabilities
- Environmental Awareness (EA) Core Capabilities
- Training Requirements Integration (TRI) Core Capabilities
- Capst

one Integrated Scenario and Practical Exercise

Attendees will participate in the common-core curriculum as a group. An additional 6 hours of instruction will involve break-out sessions designed for functional positions such as ITAM Coordinators, LCTA Coordinators, GIS Technicians and LRAM Coordinators. During the capstone exercise, participants will work within small, integrated teams to address installation-specific problems and issues associated with training and ITAM implementation. Several future packaging and presentation options for the course, to include distance learning and MACOM-tailored versions, may be explored once the course is underway. Questions or comments concerning course development can be addressed to the MACOM ITAM representatives or Steve Sekscienski at USAEC, COM (410)671-1562, DSN 584-x, or e-mail our ITAM team at ITAM\_master@aec.apgea.army.mil.

### ITAM at USMA - West Point "Pep Talk"

by Ms. Catherine Coleman, USMA ITAM Program Manager

Every installation works a bit differently when it comes to running their ITAM Program. Here at USMA, we have had an active ITAM Program since 1994. We have yearly LCTA data from 1991, but there has been no warm body to manage that data until 1994. In the short period of time since 1994, however, ITAM at West Point has grown from a dusty and unused database, with computer attached, to a thriving, actively growing and fully functioning program.

The ITAM Program at USMA operates from within the Natural Resources Branch office. When first initiated at West Point, ITAM was considered an environmental program. Upon its recent transition to a training program, it was decided at West Point "by the powers that be" to leave ITAM in the NR office, at least until such a time that it proved necessary to move it fully into the DPTM. This orientation works well at West Point because ITAM and all of its components, LCTA, EA, LRAM and TRI, are managed by a single person, the ITAM Program Manager.

(Continued on Page 13)

---

## **USMA Thanks ITAM Community for Their Support**

**by LTC Daniel D. O'Brien, USMA, Dept. of Geography and Environmental Engineering**

The USMA would like to thank you for your interest in the Advanced Individual Academic Development (AIAD) Program. This summer, three cadets are headed to Fort Hood and Fort Campbell. Angela Lombardi of Fort Lewis expressed an interest for sponsoring cadets next summer.

We are also working with several installations to use ITAM in the Environmental Geography Class we teach during spring semester to senior cadets, who are getting ready to graduate. The senior cadets are responsible for planning an environmentally sound training exercise using their education received over their last three and a half years. The cadets combine their knowledge in areas such as environmental science, GIS, ITAM products and military training.

It is a great learning experience as we discuss the science behind ITAM and integrate the science with tactical and field craft training. The results are future leaders with a better understanding of the tools and skills needed to support our environmental stewardship mission. Special thanks to Mike Mazuk and Chris Collins of Fort Campbell, Dan Keese of Fort Hood, Dave Anderson of Fort Carson, Archibald Caldwell and Patrick Chavet of Fort Benning, and Jim Pearson of Fort Stewart for their support.

At USMA, we are dedicated to providing leaders of character and help to the Army. Thanks to your support, we are getting great results! If you are interested in participating in the partnership please contact LTC Daniel D. O'Brien, USMA, Dept. of Geography and Environmental Engineering, Bldg. 745a Washington Hall, West Point NY 10996; DSN 688-x, COM 914-938-5126, e-mail [bd1234@exmail.usma.army.mil](mailto:bd1234@exmail.usma.army.mil).

## **Photogrammetric Technical Center of Expertise**

**by Mr. Danny McMurphy, TCX, St. Louis District, U.S. Army Corps of Engineers**

The Technical Center of Expertise (TCX) for Photogrammetric Mapping is located within the St. Louis District, U.S. Army Corps of Engineers (CE). Since 1984, the St. Louis District has been contracting for photogrammetric services and products for internal mapping and surveying projects as well as for other government agencies and CE offices throughout the continental United States.

Today, the TCX maintains an in-house technical capability and proficiency and sufficient contracts with photogrammetric mapping and surveying firms to support Army needs. TCX provides rapid response and full service support for planning, cost estimation, and acquisition of aerial photography, remote sensing, photogrammetric map compilation, and related spatial/digital mapping products used for input in GIS, CADD, LIS, and AM/FM databases.

Currently, the TCX is assisting the ITAM Program at Fort Leonard Wood, Missouri by procuring orthophoto mapping with natural color aerial photography. Airborne global positioning system (ABGPS) will be used in conjunction with minimal ground survey control to perform aerotriangulation (AT) and to develop digital elevation models (DEM) from the natural color aerial photography for digital orthophoto production. All projects and products procured by the TCX are required to meet standards as specified in Engineering Manual (EM) 1110-1-1000. The TCX will be updating and revising EM 1110-1-1000 during the next fiscal year.

For more information on the TCX or EM, contact: Dennis Morgan, (314) 331-8373 or e-mail; [morgan@smtp.lms.usace.army.mil](mailto:morgan@smtp.lms.usace.army.mil); Danny McMurphy, (314) 331-8389 or e-mail; [mcmurphy@smtp.lms.usace.army.mil](mailto:mcmurphy@smtp.lms.usace.army.mil). Be sure to Visit our home page at: [lms61.lms.usace.army.mil/tcx.html](http://lms61.lms.usace.army.mil/tcx.html).

## **Bullet Traps On Outdoor Small Arms Ranges**

**by Mr. Gene Fabian, Environmental Technology Division, USAEC**

Training with small arms, i.e., weapons smaller than 0.50 caliber, takes place at 67% of U.S. Army firing ranges and results in more than 272 million rounds fired during training exercises. Since the rounds contain lead, the Installation Commander must ensure that the lead in the ranges does not migrate through the soil into the groundwater or from the range to off-range surface water.

Because cleanup of lead on active ranges is often impractical and expensive, the US Army Environmental Center (USAEC) is seeking pollution prevention strategies to reduce lead buildup and potential migration. As part of the overall P2 approach for small arms ranges, the USAEC is evaluating the use of bullet traps.

Bullet traps, which are designed to capture bullets fired into limited cross-sectional areas, are currently being developed and marketed by independent commercial vendors and may represent a feasible solution for some types of firing ranges. In theory, bullet traps should provide a means to capture and contain small arms rounds, recycle lead, and prevent its buildup in the soil on the range. The bullet traps should also mitigate the excessive soil erosion caused by the impact of the rounds on the outdoor ranges. Erosion control and soil stabilization on the ranges helps to prevent the migration of existing heavy metals off range, which would alleviate the recurring costs of range rehabilitation. Finally, bullet traps should reduce or eliminate safety problems caused by ricochets off natural or other materials on current ranges.

To evaluate the effectiveness of the bullet traps, the USAEC identified commercially available bullet traps and assessed their applicability on different types of small arms ranges. The Bullet Trap Feasibility Assessment Report and User's Guide describes the evaluation and results.

As a result of the assessment, the Army is planning demonstrations to further assess the performance and operational effectiveness of using selected commercial traps on the ranges.

For more information on bullet traps call the U.S. Army Environmental Hotline 1-800-USA-3845 or e-mail: [t2hotline@aec.apgea.army.mil](mailto:t2hotline@aec.apgea.army.mil). The Technical Point of Contact is: US Army Environmental Center, ATTN.: SFIM-AEC-ETD (Mr. Gene L. Fabian), Aberdeen Proving Ground-EA, MD 21010-5401, COM (410)612-6847, DSN 584.

## **CSU Master's Degree Programs in Military Lands Management**

**by Dr. William Doe, CEMML, Colorado State University**

The Army's commitment to integrating training readiness with long-term environmental stewardship of its lands requires that professional military land managers, both civilian and military, be knowledgeable in a wide range of natural resources disciplines. The breadth and complexity of military land management requires that these individuals be knowledgeable of the rapidly evolving practices, technologies, and analytical tools that support this mission.

Colorado State University (CSU) has recently instituted a unique graduate-level degree Program in Military Lands Management. The overall program combines the military lands management mission with traditional natural resources studies, such as forest sciences, earth resources, fishery and wildlife biology, natural resource recreation, and rangeland ecosystem science. Program options are designed for students with a variety of natural resources-related undergraduate degrees, as well as for students who have just begun their career in military lands management.

Applied research opportunities related to the Military Lands Management Program will be available through the Center for Ecological Management of Military Lands (CEMML), which is also located on the CSU campus.

For more information and a down-loadable copy of the Military Lands Management Program brochure, visit the CEMML's web site at [www.cemml.colostate.edu](http://www.cemml.colostate.edu). Information regarding graduate school application and CSU is available at [www.colostate.edu](http://www.colostate.edu). Contact Dr. William Doe, CEMML, CSU at (970) 491-2719 for specific questions.

## Tularosa Basin Ecosystems: Past and Present

by Ms. Shelley J. Smith, BLM Liaison, USAEC

The Tularosa Basin of south-central New Mexico is the focus of a pilot study to provide natural resource specialists with data from archaeological, historic, and paleoenvironmental sources that are relevant to current management issues and decisions. The project is a cooperative effort between the U.S. Army White Sands Missile Range and the Bureau of Land Management; Human Systems Research, Inc. is the contractor conducting the work. The USAEC initiated the project to support the Army's mission of troop readiness by having training lands available and in realistic, natural conditions.

As land managers increasingly apply the principles of ecosystem management, the need for reliable data about natural long-term cycles, landscape changes, and the roles humans have played in shaping ecosystems becomes apparent. Archaeological and historic data can often provide just the kinds of information scientists need as they undertake a variety of ecosystem management projects, including data about vegetative cycles, fire histories, animal population distributions over time, climatic regimes, and riparian system histories. Further, humans have been manipulating ecosystems for many millennia; identifying human-caused changes is essential to understanding the configuration of today's landscapes.



A result of the pilot study is a demonstration CD-ROM that contains a user friendly database with ancillary summaries. The database includes annotations about each data source, including a brief abstract, type of data available in the report/record (e.g. pollen, faunal), geographic origin of data, the location where the data or report is available, and a list of species by Latin and common names. A query search directs users to data sources that could assist them in designing, implementing, or choosing a management option. The database is the heart of the project.

Other tools that will help users with the database are summaries of current management issues, data types, and a listing of available natural resource data. Since the purpose of the project is to enable managers to make more informed decisions, the current management issues summary is a crucial link to the database. Here a user will find which kinds of archaeological, historic, and paleoenvironmental data are relevant to a particular management question.



Another summary provides an overview of data types written for the non-cultural specialist. For each type of data included in the data base there is a description of its originating context, how it was collected and analyzed, and the primary uses and limitation of such data. Using fossil pollen as an example, there is an explanation of how it becomes incorporated into sediments through natural pollen rain and human activities; conditions required for its in-place preservation; how it is gathered, processed, and identified in the laboratory; and conventions of data display. Limitations, such as the species differential for distance traveled from source to deposition, is included so that a user will know that grass pollen in a sample usually means an immediately local occurrence of grass, but pine pollen can be transported hundreds of miles before deposition.

The final summary is a listing of the major bodies of natural resource data, such as soil and vegetation inventories, available from land-managing agencies within the Tularosa Basin and the media in which the data are available (e.g. paper copy, maps, GIS, database). The eventual goal is to have all such data available on a GIS, so that a user could construct queries that include natural resource information. (Continued on Page 12)

### Tularosa Basin Ecosystems: Past and Present (Continued from Page 11)

The Tularosa Basin Ecosystem project was developed with the participation of natural resources specialists and managers, and the design of the database and ancillary summaries reflects their needs and concerns. A follow-up phase, one year after specialists have had a chance to use the database, will focus on a) identifying the actual and practical use of the project and b) gathering suggestions for revision of the prototype format. A summary of the Basin's climatic and vegetative history may also be produced.

The anticipated outcome of the project is improved ecosystem management and decisions, because:

- decision makers will have a better understanding of the factors that shaped the present ecosystem and its potential under various management options;
- ecosystem changes from human activity or natural long-term cycles may be possible to discern and then management practices can be adjusted accordingly; and
- future studies and inventories will be well focused, because the pilot project will show where there are either already enough data or crucial data gaps.

Improved ecosystem management contributes to agencies' missions in two significant ways. First, by enabling wiser decisions on how natural resources on training lands are managed, a savings is realized in time and money. The project could well pay for itself by preventing even one revegetation project, based on inaccurate baseline data, from occurring. Further, management projects to comply with other laws, such as protecting endangered species habitat, can now be more productively and efficiently conducted. Secondly, the archaeological, historic, and paleoenvironmental data that has been collected for years will be providing a good return on the investment.

The demonstration CD will be produced and available for distribution this summer. The CD will come with a description of the lessons learned while building the he database. For information on the project, or to request a demonstration CD, please contact: Mike Mallouf, White Sands Missile Range, (505) 678-8651 or Shelley Smith, U.S. Army Environmental Center, (410) 671-1577.

## We Need Your Support and Input for the Bridge! 25 July Deadline for Summer 1997 Bridge Articles

The USAEC generates the ITAM Quarterly newsletter using articles and photos submitted by ITAM installations and land management professionals. Without your timely input, *The Bridge* will either be published late or not at all. Most of the articles in this issue were provided well after the 25 April 1997 deadline, which caused a delay in the publication. In fact, by 25 April AEC had only received two articles!

We'd like to thank those of you who took the time to submit articles; your contributions are appreciated! We'd also like to encourage everyone to participate by submitting stories, articles, and photos so that we can continue to provide you with a quarterly ITAM newsletter that keeps you abreast of advancements, accomplishments, and the great work that goes on in support of the ITAM Program.

We hope that you value *The Bridge* and that you will spend a few moments to help us make it a more valuable product. Remember, without your contributions and participation, *The Bridge* cannot be produced.

For information on how to submit articles or other items, please refer to page 4.

#### The schedule for the Summer 1997 edition of *The Bridge* is as follows:

- **25 July** MACOM approved articles, stories, and photos due to AEC.
- **26 August** Distribution of Summer 1997 issue of *The Bridge*.

### USMA Pep Talk (Continued from Page 8)

Being physically located in the NR office, gives direct access to the natural resources data and assets that are necessary for LCTA and other components of ITAM. This does tend to separate me from the daily activities of the training side of ITAM, but I think it helps me remember my environmental/ecological roots, which are very important and integral parts of ITAM.

So. What have I done to make ITAM work so splendidly at USMA? I huffed, and I puffed, and I.-----Well, sometimes it just has to be done that way!

Take LRAM, for instance. I think the small rehabilitation projects are even harder from start to finish than the big projects. Why? Because, they are definitely more time consuming. It takes a lot more personal attention to see each project through step by step. How does that contracting business work anyway? I still don't think I have the hang of it.

Troop labor: It works great! And it's cheap! If you can get it. When you can't, do it yourself? You're kidding, right? O.K. then, find someone (anyone!) to do it for you. The NRCS is my savior! It takes a lot of work on my own end, in writing scopes and checking schedules, but it's worth the effort!



Environmental Awareness: How do you tell a bunch of soldiers crawling around in the brush during their training mission not to hurt the snake they just woke from its afternoon nap? You tell me! I haven't found the appropriate method yet. That's the part I remember most about the EA briefings. Everyone seems to wake up when I mention "Rattlesnakes". Wait until they see the new "Caution, Rattlesnake Crossing" road signs!

So, where does LCTA fit in? Oh, remember that dusty database? Well, it has produced some very useful information. The front-end program is not necessarily user-friendly, but it's not too difficult either, once you learn your way around it. How about data collection. Those Sherman live traps used for our small mammal survey are very popular with the troops. We thought we had a problem with the raccoons dragging them off, but we've found recently that if the trap lines aren't well hidden, they become a good target for orienteering practice. We've lost a few of them to big feet. "CRUNCH!"

TRI: That's the "tri" in "... tri, tri again", right???

O.K. There are always a few problem areas and some kinks to work out in every program. So what really makes our ITAM Program successful here at the USMA:

1) **Communication:** I have established a very easy and open communication between myself, as the ITAM Program Manager and the DPTM. I also keep an open line with the folks in the environmental office (DHPW). This communication is the most important factor in creating and keeping a successful ITAM Program. It is of great value to me to know what the trainers are doing and planning, and it probably also helps that the trainers (meaning the DPTM) know that ITAM is actively involved in supporting them.

(Continued on Page 14)

- 2) **Liaison:** In keeping these lines of communication, I act as a liaison between the DPTM and the environmental office in many instances. When necessary, I contact the appropriate environmental personnel to inform them of training activities or changes in activities that may require any environmental or cultural resources review. This helps streamline the planning of many projects both for ITAM and the DPTM. I am also able to bring in outside experts when appropriate. Contacting NRCS and FWS for LRAM is one example of my duties as a liaison.
- 3) **Education:** ITAM helps to educate the trainers and troops in environmental awareness and land stewardship through EA presentations and materials. I have given EA presentations to several groups at various levels. This is a very good way to let the trainers know about ITAM. By actively participating in the environmental awareness presentations, the trainers are able to see me face to face. This makes more of an impression than just a field card or handbook, although I give these out as well.
- 4) **Technical Support:** I have provided technical support and expertise in the form of GIS coverages, GPS data, and other kinds of data, including LCTA. I use some of the GIS created maps of the training area as well as other information in my briefings to the trainers and to the DPTM. In this way I am able to introduce them to some of the technical capabilities of ITAM. Initially some of these coverages included maps of fire effected areas, training areas, and acreage estimates. The GIS and GPS systems have become an integral part of ITAM. They are some of the ITAM technical resources most heavily used by the DPTM.
- 5) **Information Support:** ITAM can supply information necessary for mission planning activities. I have provided the DPTM with information about land quality, suitability, sensitivity data and other important data for a number of their planning projects, such as new or redesigned ranges. Because in many cases I am more familiar with the land and natural resources than the trainers, I am able to help them locate areas that are suitable for their specific training needs. In doing so, I am able to save them a lot of time and effort. I have provided them with specific maps of prospective new ranges, landing zones, and other information needed for training and planning.
- 6) **Land Rehabilitation:** ITAM plays a very important and active role in informing the trainers of eroded and damaged areas and in helping establish LRAM priorities for these areas. Troop labor, both active and reserve, have been used in executing some of the smaller LRAM projects, with great success. The state and regional NRCS offices have been recruited (via an Interagency Agreement) in the planning and execution of several LRAM projects for this and future FY's. The NRCS has the expertise and resources to resolve many of the larger and more complex erosion issues.



Successful integration of Army training with sound land and natural resources management requires open and continuous communication, coordination, persistence, and diplomacy.

As part of the Army's ITAM Program, I am in a position that affords me the opportunity to influence many others through my responsibility to educate the Army community on the importance of our natural resources, and the need to be good land stewards.

(Continued on page 15)

---

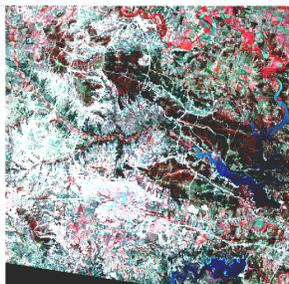
**USMA Pep Talk (Continued from Page 14)**

As part of the DPTM at my installation, I have the ear of those who most directly effect the land and natural resources on my installation. It is through this direct contact that I can influence the decisions that are made concerning training activities and their effect on training land sustainment and training realism.

How do I go about influencing the Army trainers? I offer my support and expertise through ITAM's LCTA and GIS, LRAM, and EA components. I let the trainers know what ITAM is, and that ITAM is here to support them and their training mission. I can use the ITAM Program to benefit both Army training and the environment. It may not be possible to completely eliminate all training effects on the environment, but a working ITAM Program can provide the trainers with information that will allow them to make informed and environmentally friendly decisions while still accomplishing the Army's training mission.

ITAM educates and informs the trainers, and all users of the training areas, in how they can effectively execute their training activities with minimal impact to the land and natural resources on which they train.

---

**The USAEC Wants to Know**
**REMOTE SENSING  
USERS' GUIDE**


Version 1.0  
February 1997

**What do you think of the Remote Sensing User's Guide?**

- Is it useful?
- Easy to follow?
- What additional material would you like to see in Version 2.0?

Please email your comments to USAEC at  
ITAM\_master@aec.apgea.army.mil

You may also contact Ms. Terri Bright at DSN: 584-1563,  
COM: 410-671-1563; or FAX: 410-671-1680 .

The Remote Sensing User's Guide is available on the ITAM  
Homepage at [www.army-itam.com](http://www.army-itam.com)

**We value your input!**

---

**RFMSS/ITAM Integration (Continued from Page 1)**

This target utilization rate is the account opening balance, and the currency is the Maneuver Impact Mile (MIM). The RFMSS database will be populated with the target values, and RFMSS will maintain a running balance of actual training area utilization (measured in MIMs), as events are scheduled and executed.

To give the land manager a qualitative view of current utilization patterns, RFMSS will represent projected year-end land conditions for each training area on a red-amber-green scale. As with target utilization levels, ITAM managers will determine the appropriate MIM thresholds between each color based on local land condition standards and the ATTACC methodology. (Continued on Page 16)



### RFMSS/ITAM Inegration (Continued from Page 15)

It is important to recognize that the target utilization levels and the red-amber-green thresholds are a decision support mechanism, rather than hard and fast values. Each installation will need to tailor the values to their particular circumstances and determine whether and how ATTACC projections will influence training land use and training land maintenance decisions.

The second ITAM function planned for integration into RFMSS by FY 98 is the capability to maintain ITAM project information and create ITAM workplans. This provides flexibility in reporting, editing, and querying and allows for retention of historical project information.

In addition to the standard ITAM workplan data fields, the RFMSS implementation will include an association of training areas to projects. This will facilitate tracking of LRAM projects by training area and will provide a spatial link for recalling project data from a GIS. RFMSS will also support the ITAM work area and work category breakdown for project classification. Finally, RFMSS workplan reports will be compatible with the existing spreadsheet format to facilitate transfer of data.



The third major ITAM function identified for integration into RFMSS is a GIS capability. While GIS is a mainstay of the ITAM program, RFMSS does not currently include any GIS capabilities beyond the display of a *flat map* of the training area, which illustrates Surface Danger Zones (SDZs). The proof of concept for the regional Geographic Information System (GIS) support center and the GIS related functions under way at Ft A.P. Hill will continue through FY 98. The extension of the regional GIS concept to other regions or installations and the addition of GIS technologies may also be included during the FY 98 extension.

The most important ITAM GIS-related requirement for RFMSS is to provide a simple to use, training-oriented interface to a GIS. For example, users of RFMSS may want to use a GIS to display spatial characteristics of a training area such as the location of wetlands and endangered species habitats, how steep the slopes of a hillside may be, whether an area is wooded or grassy, and location of targets, firing points, and range facilities. The RFMSS user must be able to display any or all of this information quickly and easily without being a GIS expert.

Another very important ITAM GIS-related requirement is to provide access to RFMSS facility and utilization databases for use in GIS analysis. GIS operators who perform utilization analyses and develop data layers are interested in capturing data from RFMSS to enable these functions. For example, training utilization data from the ATTACC process is needed to develop the red-amber-green ATTACC map layer. The GIS user should have simple, near real-time access to RFMSS databases to ensure that GIS products are accurate. Ideally, RFMSS will incorporate the required GIS capabilities directly and seamlessly so that neither the RFMSS user nor the GIS operator will need to operate multiple systems.

Seamless inclusion of GIS capabilities is a significant change to the current RFMSS system; the inclusion raises concerns regarding the compatibility of installations' current hardware configurations with GIS requirements. Therefore, GIS will not be directly incorporated into RFMSS in the first phase of the development effort. Rather, an Army training-oriented interface to a commercial GIS system running external to RFMSS is being developed as a proof of concept. The GIS will be interfaced with RFMSS databases so that data tables can be exported for use in development of data layers.

The proof of concept for the regional Geographic Information System (GIS) support center and the GIS related functions is Ft A.P. Hill. The extension of the regional GIS concept to other regions or installations and the addition of GIS technologies may also be included during the FY 98 extension.

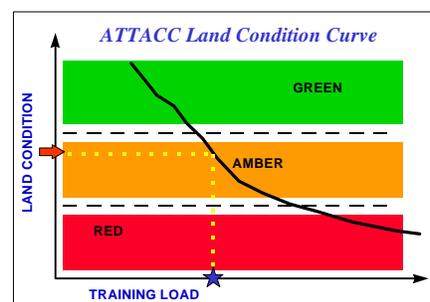
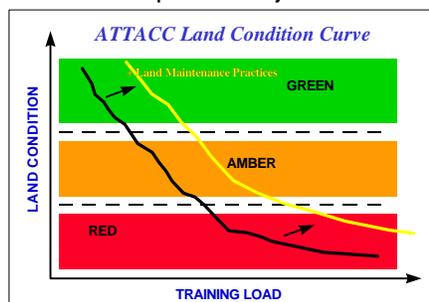
## ITAM GIS REGIONAL SUPPORT CENTER (RSC)

The ITAM Geographic Information System (GIS) Regional Support Center (RSC) concept is being demonstrated at Ft. Hood, Ft. A.P. Hill, and Utah State University (for the National Guard). Regionalization of support, such as GIS is being tested for its ability to meet the support needs of ITAM installations in a timely, efficient, cost-effective manner.

GIS support is directed toward maximizing training readiness and sustaining Army training lands by reducing duplicative costs, pooling assets, maintaining a central clearing house for lessons learned, and decreasing the ITAM GIS learning curve for satellite installations. Technical support includes: (1) the manipulation and development of geospatial and tabular data to product cartographic outputs (maps) for use in installation training land management; (2) consulting, research, and analysis; (3) assistance with SOW development and computer procurement decisions; and (4) education of installation personnel so that they can become more self-sufficient. For further information, please contact Ms. Terri Bright, USAEC, at (410) 671-1563, DSN 584-1563.

## Basic Training -- ATTACC by Ms. Leslie Winters, USATSC

1. ITAM is the Army's program for managing training land. One of the major objectives of ITAM has been to develop a method for estimating *training land carrying capacity*, and then to incorporate this concept into training land management decisions. ITAM defines training land carrying capacity as "the amount of training which a given parcel of land can accommodate in a sustainable manner based on a balance of usage, condition and maintenance practices". ATTACC is the standard ITAM methodology for estimating training land carrying capacity by relating training load, land condition, and land maintenance practices. When the cost of these land maintenance practices are considered, ATTACC also provides a means for estimating future Land Rehabilitation and Maintenance (LRAM) costs based on future training requirements. This is a second important objective of the ITAM program.



2. The ATTACC relationship between training load, land condition, and land maintenance practices for a given parcel of land can be represented by a Land Condition Curve, as pictured above. As training load increases, land condition deteriorates. As land maintenance practices are applied, the land condition curve shifts, reflecting improved land condition and capacity for all levels of training. Land condition is expressed qualitatively on a Red-Amber-Green scale, with red indicating poor land condition and green indicating good land condition. Training land carrying capacity is derived from the Land Condition Curve as the training load which corresponds to a target land condition and the planned land maintenance practices. ATTACC cost factors are calculated from the cost and effectiveness of these land maintenance practices. (Continued on Page 18)

**Basic Training: ATTACC (Continued from Page 17)**

3. ATTACC principles have application throughout the installation, MACOM, and HQDA training land management process. Through the Range Facility Management Support System (RFMSS), ATTACC will provide decision support to the installation training land manager in his/her objective of optimizing training land usage while minimizing repair and maintenance requirements. ATTACC also can assist the installation planner in assessing long range training land requirements based on the installation training population, land condition objectives, and land maintenance practices. At MACOM and DA level, ATTACC can aid in stationing and resourcing decisions, and ATTACC cost factors can be applied to the DA Training Resource Model (TRM) to predict LRAM costs Army-wide.

4. ATTACC Specifics. ATTACC measures training load in terms of *Maneuver Impact Miles*, or MIM. One MIM is the equivalent impact of an M1A2 tank traveling one mile while participating in an armor battalion field training exercise. The impacts of all mission activities are converted to MIM using data from the ATTACC Training Model (ATM) in combination with Training Impact Factors (TIF). The ATM includes prescribed tactical vehicle mileage by vehicle, unit, and event and is derived from the Battalion Level Training Model (BLTM), Programs of Instruction (POI), and materiel test plans. TIF are multipliers which express the relative severity of impact of events and vehicles and are derived largely using Subject Matter Experts and tactical vehicle characteristics. Using MIM, the impact of all mission activities can be aggregated and expressed as a single training load. MIM values for a given mission activity remain constant across the Army, regardless of location.



ATTACC measures land condition in terms of the *Erosion Status*. Erosion Status is the ratio of predicted erosion rates to tolerable erosion rates, with values greater than one indicating that more soil is being lost than can be replaced naturally, and values less than one indicating that there is no net soil loss. Erosion rates are estimated using the Revised Universal Soil Loss Equation (RUSLE), a scientifically accepted method utilizing percent vegetative cover, climate, soil type, length/slope (a derivative of topography), and a

conservation practice factor. The effects of training load and land maintenance practices on erosion rates are captured in the RUSLE by adjusting values of the percent vegetative cover, length/slope, and conservation practice factor accordingly.

ATTACC cost factors are used to predict land maintenance costs and consist of an overall cost factor expressed in \$/MIM and individual vehicle cost factors expressed in \$/Mile for each vehicle type. The overall cost factor is calculated using the historical cost of land maintenance practices and the effectiveness of the practice in influencing elements of the RUSLE calculation, thus shifting the Land Condition Curve. Individual vehicle cost factors are derived from the overall cost factor by deconstructing MIM into miles per individual vehicle using the ATM. Since land maintenance costs and effectiveness are influenced by the characteristics of the land, ATTACC cost factors are being developed for each ecological region of the country during the current ATTACC Implementation process.

## 5. ATTACC POCs:

**ATTACC Environmental Component  
& Implementation**

Mr. Steve Sekscienski  
Army Environmental Center  
(410) 612-7079  
e-mail: sekscien@aec2.apgea.army.mil

**ATTACC Training Component  
& Systems Applications**

Ms. Leslie Winters  
Army Training Support Center  
(757) 878-3090  
e-mail:wintersl@eustis-emh20.army.mil

## The ITAM Questionnaire



Dear ITAM Program Participant:

We'd like to take this opportunity to get your feedback on what you think about the ITAM Home Page and Quarterly Newsletter: The Bridge. The purposes of The ITAM Home Page and The Bridge are to provide the ITAM community with useful information that is relevant to military land management. We want to know if is intended to do, and how we can make it better.

Please take a moment to answer the questions below. We will use your responses to measure our performance and help shape future editions.

Complete and FAX this questionnaires to us at :

**COM (410) 671-1680**

**ATTN: Ms. Terri Bright**

**DSN 584-1680**

You may also email your comments to [ITAM\\_master@aec.apgea.army.mil](mailto:ITAM_master@aec.apgea.army.mil).

**Very Useful      Useful      Not Useful      N/A**

1. What is your general opinion of The Bridge?
2. What is your general opinion of ITAM Homepage?
3. How would you rate the information included in the Bridge?
4. How would you rate the information included on the ITAM Homepage?
5. What topics would you like to see featured in future editions of The Bridge?
6. Are you happy with the recently released version 2.0 of the ITAM Home Page? If not, what problems are you having?
7. What recommendations do you have for improving The Bridge and ITAM Home Page?
8. Other comments or concerns?

**We value your input!**

## CONTENTS OF SPRING 1997 - ISSUE 2

- RFMSS and ITAM Integration
- 6th Annual ITAM Workshop Update
- Army Training and Testing Area Carrying Capacity (ATTACC)
- ITAM Partnering and Leadership in the NGB
- ETSC Facilitates the ITAM Program
- SIBER Stakes
- LRAM Equipment
- Cultural Resources Army Regulation and Pamphlet
- ITAM Short Course
- The USMA ITAM Program
- Bullet Trap
- Tularosa Basin Ecosystems: Past and Present
- Photogrammetric Technical Center of Expertise
- More! More! More!

Area  
Aberdeen Proving Ground, MD 21010-5401

# ...IN THIS ISSUE OF THE BRIDGE

## **The Bridge**

US Army Environmental Center  
Building E-4435, Edgewood