REQUEST FOR STATEMENTS OF INTEREST
NUMBER W9126G-20-2-SOI-2762
PROJECT TO BE INITIATED IN 2020

Project Title: Integrated Training Area Management (ITAM) Support at Fort Polk

Responses to this Request for Statements of Interest will be used to identify potential investigators for a project to be funded by Fort Polk, which provides professional and technical support for its Integrated Natural Resources Management Plan (INRMP) in order to facilitate successful implementation of the 16 USC 670c-1 Sikes Act. Approximately $3,863,750.00 is expected to be available (if all tasks are funded) to support this project for the base period. Additional funding may be available for additional tasks and/or follow on work in subsequent fiscal years to the successful Recipient/Awardee.

NOTE: Attached to this document you will find a DRAFT Statement of Work for your reference only. Again, at this time we are only requesting that you demonstrate available qualifications and skills for performing similar or same type of work. A full study proposal and proposed budget are NOT requested at this time.

Background:

Provide support to the Fort Polk, Louisiana, ITAM Program activities.

Type of Award:

In accordance with the Sikes Act (Sec. 103A [16 USC 670c-1]) “the Secretary of a military department may enter into cooperative agreements with States, local governments, Indian Tribes, non-governmental organizations, and individuals” This project is in support of the Integrated Natural Resources Management Plan, as directed in the Sikes Act, and as a result, it is anticipated that a cooperative agreement through the CESU program will be awarded. Such awards may be administered through a CESU only upon mutual agreement and official authorization by both parties of the acceptance of the application of the CESU Network IDC rate (17.5%).

NOTE: Must be a non-federal partner in the Cooperative Ecosystem Studies Units (CESU) Program to be qualified for consideration. Suggested area is Colorado Plateau or Great Plains CESU Regions.
Brief Description of Anticipated Work:
This research focuses on the following objectives:

1) Provide Land Rehabilitation and Maintenance (LRAM) support by developing and documenting in the ITAM Plan, land management objectives that address specific landscape conditions and mission requirements; identification of repair, maintenance, and reconfiguration projects and detailing those projects as activities in the ITAM Work plan; developing initial/planning level project designs and specifications and documenting those designs and specifications in the ITAM Work plan; coordinating and conducting project planning fieldwork with ITAM staff, Range Operations Staff, Home Station and JRTC Units, and Department of Public Works (DPW) personnel (Natural and Cultural Resources, Environmental Compliance, and Real Property); preparing and coordinating projects for NEPA, permits and approvals in cooperation with the DPW; and acquiring and maintaining materials, equipment, and supplies.

2) Provide geospatial analysis and cartographic (GIS) support with an emphasis on training scenario development, hunting area status maps, and training area status maps to Range Operations personnel; gather and create geospatial data, perform geospatial analysis, and develop maps depicting landscape conditions (constraints, alternatives analysis, restrictions, operational overlay, safety/regulatory/stewardship, airspace, and critical infrastructure) for Range Modernization; develop and maintain geospatial data, perform geospatial analysis, and create training support cartographic products in support of the Joint Readiness Training Center and unit training; and serve as the site Data Steward for all Sustainable Range Program (SRP) proponent geospatial data layers by coordinating all range-related facility data with the installation real property office to ensure correct real property attributes are included in the geospatial data and real property databases.

3) Provide Range Training Land Assessment (RTLA) support will include Assessment Design, which consists of: 1) Delineation of proposed assessment areas using GPS as appropriate and using GIS software to create maps as needed; 2) Coordination with GIS personnel to ensure assessments are captured and maintained current in the installation GIS database and included in the ITAM Plan; 3) Upload maps depicting assessment areas into the ITAM Work plan as part of the complete Work plan activity package; 4) Develop assessment specifications that include location and extent (area/dimensions) of the management action being applied, materials and equipment required, and the analysis to be performed on collected data; 5) Detail assessment specifications in the ITAM Work plan as part of the complete Work plan activity package; and 6) Maximize the use of available information from all installation land management programs as applicable. Assessments will include Training Lands, Maneuver Trails, Training Clearings, Fort Polk Maneuver Damage Assessment (Rotational Training Unit component and Home Station component), and Extreme Weather.

4) Provide Sustainable Range Awareness (SRA) through training courses and use of materials such as posters, DVDs, logos, maps, field handbooks, and reference cards. Activities will
include developing/updating/distributing materials and information for training land users such as soldier cards and safety briefings.

5) Support Training Requirements Integration (TRI) by facilitating installation training mission goals through inclusion of environmental compliance requirements, range facilities requirements, and landscape condition requirements in the development of range and training land management decisions and the coordination of mission needs with garrison facility and environmental plans. TRI also includes providing decision support by obtaining information from appropriate offices regarding the conditions of ranges and training lands, and providing recommendations to the installation Directorate of Plans, Training, Mobilization, and Security (DPTMS) and ITAM offices on potential impacts and permitting requirements of relevant environmental, natural, and cultural resources for the proposed training. Cooperator is expected to attend training briefings, land management coordination meetings, and other range and training land planning and scheduling meetings; provide written and verbal input, as appropriate, on potential issues; and recommend changes to range and training land schedules. Cooperator is also expected to coordinate the inclusion of the Range Complex Management Plan (RCMP) mission goals and objectives into the installation Integrated Natural Resources Management Plan (INRMP) and subordinate plans, and coordinate mission needs with analysis of the INRMP required by the National Environmental Protection Act (NEPA) to ensure proposed training land management actions are included in the NEPA approval process.

NOTE: At this time we are only requesting that you demonstrate available qualifications and skills for performing similar or same type of work. The Cooperator shall provide a Project Manager/Principal Investigator with at least 3 years of experience at an installation as an ITAM, RTLA, or LRAM Coordinator. You will be evaluated for a request for a proposal based on skills and qualifications demonstrated in your SOI.

Period of Performance. The base year of agreement will extend 15 months from award. There will be six 15-month option years based on availability of funding. Also, there will be additional tasks based on available funding.

Materials Requested for Statement of Interest/Qualifications:

Please provide the following via e-mail attachment to: sandra.k.justman@usace.army.mil and brian.d.hesford@usace.army.mil (Maximum length: 2 pages, single-spaced 12 pt. font).

1. Name, Organization, Cage Code, Duns number, and Contact Information (Email)
2. Brief Statement of Qualifications (including):
   a. Biographical Sketch
   b. Relevant past projects and clients with brief descriptions of these projects,
   c. Staff, faculty or students available to work on this project and their areas of expertise,
   d. Any brief description of capabilities to successfully complete the project you may wish to add (e.g. equipment, laboratory facilities, greenhouse facilities, field facilities, etc.).

Note: A full study proposal and proposed budget are NOT requested at this time.
**Review of Statements Received:** All statements of interest received will be evaluated by a board comprised of one or more people at the receiving installation or activity, who will determine which statement(s) best meet the program objectives. Based on a review of the Statements of Interest received, an investigator or investigators will be invited to prepare a full study proposal. Statements will be evaluated based on the investigator’s specific experience and capabilities in areas related to the study requirements.

**Please send responses or direct questions to:**

USACE  
Sandra Justman, Contract Specialist  
CESWF-CT  
Email: sandra.k.justman@usace.army.mil  
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Brian Hesford, Project Manager  
CENWO-PM  
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**Timeline for Review of Statements of Interest:** RSOI is required to be posted on [www.grants.gov](http://www.grants.gov) for a minimum of 30 days. Review of Statements of Interest will begin **April 11 2020**.

[End of RSOI]

[See below for **DRAFT** Statement of Work]
STATEMENT OF OBJECTIVES (SOO)
For
INTEGRATED TRAINING AREA MANAGEMENT PROGRAM
SUPPORT
For
JOINT READINESS TRAINING CENTER (JRTC) AND FORT POLK, LOUISIANA

Cooperative Ecosystems Studies Unit (CESU) Cooperative Agreement

1. PURPOSE

1.1. The Joint Readiness Training Center (JRTC) and US Army Garrison Fort Polk integrated environmental program ensures military mission activities are conducted in compliance with all applicable environmental laws, regulations and policies. Article I B of the master agreement states the objectives of the Cooperative Ecosystems Studies Units (CESU) are to: provide research, technical assistance and education to federal land management, environmental and research agencies and their potential partners; develop a program of research, technical assistance and education that involves the biological, physical, social sciences needed to address resource issues and interdisciplinary problem-solving at multiple scales and in an ecosystem context at the local, regional, and national level; and place special emphasis on the working collaboration among federal agencies and universities and their related partner institutions.

1.2. The objective of the work to be performed under this task order is to provide JRTC and Fort Polk with support for Integrated Training Area Management (ITAM) program implementation. The ITAM Program is the U.S. Army’s comprehensive approach to land management. ITAM is based on the integration of military mission, natural and cultural resource management and environmental compliance. Fort Polk’s ITAM Program is an integral part of the soil sustainability and erosion component of the installations Integrated Natural Resource Management Plan (see INRMP section d.5). The Fort Polk ITAM Plan is found at appendix D10 of the Fort Polk INRMP. The intent of the ITAM Program is to provide training land management capability across the total Army. This allows the Army to manage its land in an environmentally sound manner to ensure no net loss of training lands for accomplishing primary activities (training and testing) or for impacting the overall training capability. The effective integration of stewardship principles into training land and conservation management practices ensures that the Army’s lands remain viable to support future training and mission requirements indefinitely. It integrates elements of operational, environmental, master planning, and other programs to identify and assess land use alternatives. The ITAM Program thus supports sound natural and cultural resource management practices to provide stewardship of land assets, while sustaining those assets to support training, testing, and other installation missions. All of the components of the ITAM program are supported: (1) Land Rehabilitation and Maintenance (LRAM), (2) Sustainable Range Program
SRP) Geographic Information Systems (GIS), (3) Range and Training Land Assessment (RTLA), (4) Sustainable Range Awareness (SRA), and (5) Training Requirements Integration (TRI). These components combine to provide the means to understand how Army's training requirements impact land management practices; impact from training to the land; how to mitigate and repair these impacts; and to communicate the ITAM message to soldiers and the public. Geographic Information Systems (GIS) is a foundational support element that provides geographic information that assists land managers in making their decisions and range operations with safely conducting training at the installation.

Project work shall take place on JRTC and Fort Polk Louisiana. Work at this location includes implementation of all components of the ITAM program. ITAM program goals and objectives provide the following: uniform training land management capability across the total Army; sound land management to ensure no net loss of training capabilities; support for current and future training requirements; assessment of land quality, monitoring of land conditions, and recommendations of land rehabilitation options. ITAM integrates training and testing requirements with training land carrying capacity. The program educates land users to minimize adverse impacts. The ITAM program includes rehabilitation and maintenance of training lands. The Army recognizes that the execution of training to doctrinal standards must be under realistic combat conditions and these actions will affect the environment. The ITAM program repairs damaged lands and implements improvements to promote better and safer land utilization while protecting resources. In addition to maintaining the original 175,000 acres of training lands, the ITAM program is reconfiguring to stabilize and ensure the land can support training while limiting environmental degradation approximately 43,000 acres of training lands acquired since 2012. ITAM activities establish a framework for decision-making and management of Army training lands that demonstrate the U.S. Army commitment to environmental stewardship and recognizes its obligation to public lands protection.

2. AUTHORITY

The AUTHORITY TO ISSUE A COOPERATIVE AGREEMENT IS... Section 670c-1, Title 16 United States Code, Sikes Act.

2.1. In agreement with the above stated goals, the non-Federal entity (NFE) agrees to provide the necessary personnel, equipment, and materials required to implement, in part, JTRC and Fort Polk responsibilities pursuant to the Sikes Act Improvement Act (16 USC 670 et seq.).

2.2. In accordance with section 6305 – Using cooperative agreements of the Federal Grant and Cooperative Agreements Act of 1977 (31 U.S.C. § 6301 et seq.), all CESU projects must carry out a public purpose of support or stimulation, instead of acquiring goods or services for the exclusive direct benefit of the United States Government. Examples of carrying out a public purpose may include, but are not
limited to, the following:

- Project results/outputs add to the scientific literature/knowledge base, with applicability and utility beyond the scope of the project footprint/study area
- Academic and other nonfederal partner institutions (and their personnel) gain professional experience, increase knowledge, and develop skills and abilities
- Students benefit from direct interaction with federal scientists, program and technical staff, and field unit managers

2.3. In accordance with section 6305 – Using cooperative agreements of the Federal Grant and Cooperative Agreements Act of 1977 (31 U.S.C. § 6301 et seq.), substantial involvement is expected between the Department of Defense (DoD) and the recipient when carrying out the activity contemplated by the cooperative agreement. The DoD agrees to participate at a national level in support of the CESU program as accepted in the Master MOU for the establishment and continuation of the CESU program Article II 1-4 and Article VI 1-7.

The installation further (hence DoD) agrees to provide substantial involvement as directed under the appropriate master agreement to include, but are not limited to, the following:

- Involved in development of study methodology, data gathering, analysis, and/or report writing.
- Actively participates and collaborates in carrying out the project plan of work, reviews and approves activities, helps train or select project staff or trainees.
- Coordinate research activities with other installation entities and scheduling of range time.
- Technical assistance and guidance.
- Participation in status meetings including kick off meeting and weekly, monthly, and quarterly project update meetings.

3. SAFETY

SECTION I - GENERAL REQUIREMENTS

A. Safety Program Requirements. While performing work under this project the Cooperator shall comply with all applicable federal, state, local and the specific Army regulations (in the absence of specific OSHA standards or Army unique requirements such as: Fire Prevention in government facilities, emergency evacuation and response procedure, etc.) regarding occupational safety and health addressed in the basic cooperative statement of objectives (SOO), task order SOO. As Part of the Army safety requirements, all contractor personnel shall call into and out of training areas through Fort Polk Range Operations at (337) 531-5445 daily. This applies to all sub-cooperators working under this cooperative agreement. The cooperator will implement a safety program that ensures protection of Government personnel and property. The program will consist of, as a minimum:
1. Mishap notification/reporting as defined in paragraph B. below.
2. A Safety Program that addresses, as a minimum, the subjects listed in Safety Program Elements, Section II and to be used during performance of the work described in the contract.

B. Mishap Notification.
1. The Cooperator shall notify the Grants Officer (GO), within eight (8) hours of any damage to government property where the dollar value exceeds $500,000.00 and within two workdays, for any damage to government property less than $500,000.00 during the execution of the contract. The cooperator shall notify the (GO) within eight (8) hours of any injury to cooperator personnel which occur while on a government installation.

Mishap notifications shall contain, as a minimum, the following information:
   a. Cooperative Agreement Number, Name and Title of Person(s) Reporting
   b. Date, Time and exact location of accident/incident
   c. Brief Narrative of accident/incident (Events leading to accident/incident)
   d. Cause of accident/incident, if known
   e. Estimated cost of accident/incident (material and labor to repair/replace)
   f. Nomenclature of equipment and personnel involved in accident/incident
   g. Corrective actions (taken or proposed)
   h. Other pertinent information

If requested by the designated Grants Officer, the Cooperator shall immediately secure the mishap scene/damaged property and impound pertinent maintenance and training records, until released by the Procuring Safety Office. Cooperators will not dispose of cooperative agreement data related to a mishap until notified to do so by the GO.

C. The safety provisions of this cooperative agreement, shall apply to any sub-cooperators associated with this project.

NOTE: Individual Task Order SOOs issued under the Cooperative Agreement will have a separate Safety Requirements Section(s) C if required. Submit Initial Task Orders to safety to determine if a Safety Section is required.

SECTION II - SAFETY PROGRAM ELEMENTS
It is the Cooperator’s responsibility to ensure: The Cooperator’s Safety Program shall clearly define procedures, personnel qualifications, facilities and required equipment necessary to fulfill the following elements as to the type of work being performed within the scope of the contract.

Element/Requirement Referenced Benchmark
OSHA Standards for General Industry 29 CFR 1910

4. DESCRIPTION OF OBJECTIVES

In accordance with the Sustainable Range Program (SRP) guidelines, the Cooperator shall provide the necessary resources (except for those identified as Government furnished property
or assistance) to support JRTC and Fort Polk training objectives.

4.1. TASK 1 – Land Rehabilitation and Maintenance (LRAM)

LRAM is a sustainable preventive and corrective land rehabilitation and maintenance program that reduces the long-term impacts of training and testing on installation lands. Its primary function is to maintain land to ensure its capability to support the mission. It mitigates mission and training and testing effects by combining preventive and corrective land rehabilitation, repair, and/or maintenance practices to reduce the impacts of training and testing on an installation. It includes training area redesign and/or reconfiguration to meet training requirements.

4.1.1. Fort Polk LRAM Management

Planning and Coordination: LRAM projects are iterative and require coordination with multiple installation offices. Planning and coordination efforts are completed in a timeframe that ensures projects are executed as dictated by range schedules. Project development and associated staffing actions are conducted in a manner that allows frequent and rapid revisions. LRAM planning and coordination includes: 1) Developing and documenting in the ITAM Plan, land management objectives that address specific landscape conditions and mission requirements, 2) Identifying and repair, maintenance, and reconfiguration projects and detailing those projects as activities in the ITAM Workplan 3) Developing initial/planning level project designs and specifications and documenting those designs and specifications in the ITAM Workplan, 4) Coordinating and conducting project planning fieldwork with ITAM staff, Range Operations Staff, Home Station and JRTC Units, and Department of Public Works (DPW) personnel (Natural and Cultural Resources; Environmental Compliance; Real Property); 5) Preparing and coordinating projects for the National Environmental Policy Act (NEPA), permits and approvals in cooperation with the DPW; and 6) Acquiring and maintaining materials, equipment, and supplies.

Project Design: LRAM projects are adaptive to scope changes resulting from weather, training schedules, environmental compliance requirements, and evolving mission needs. Project design efforts and associated staffing actions are conducted in a manner that allows frequent and rapid revisions. Project designs are developed to ensure Army training lands are maintained in safe conditions, remain environmentally compliant, and support unit training tasks. Project designs will be prepared and maintained current for each LRAM project, including the following steps:

1) Delineate LRAM project locations using a Global Positioning System (GPS) as appropriate and GIS software to create maps to analyze land areas and features for the purpose of setting project priorities (preferred project locations, alternative project locations), and update location changes training mission shifts, natural and cultural resources restraints and/or environmental compliance requirements; 2) Upload maps depicting approved LRAM project locations into the ITAM Workplan as part of the complete Workplan activity package; 3) Develop project specifications that include location and extent (area/dimensions) of the management action being applied, materials and equipment required, and project drawings and photos; 4) Detail project design specifications in the ITAM Workplan as part of the complete Workplan activity package; 5) Prepare for the implementation of best management practices
(BMPs) as required, through coordination efforts with DPW; and 6) Prepare project design information for DPW review.

**Project Approvals:** Provide supporting documentation and analysis for DPW approvals to the Department of Army ITAM Civilian Staff (Fort Polk ITAM, GIS, and LRAM coordinators). The LRAM project approval requires coordination with appropriate DPW offices and agencies to ensure ITAM actions are compliant with the National Environmental Protection Act (NEPA), the Clean Water Act, the Endangered Species Act, the National Historic Preservation Act, the Clean Air Act, and other applicable laws and regulations prior to project execution. Timelines associated with these approvals are established by the approving authority. The timelines associated with project execution will be based on the project approval process. Project approvals may also require the Cooperator to complete the following steps: 1) Coordinate with DPW to gain dig permits (if necessary); and 2) Ensure Clean Water Act permitting requirements will be met (National Pollutant Discharge Elimination System (NPDES)) (Note: If the DPW is not capable of procuring Clean Water Act permits and overseeing associated permit monitoring requirements in support of LRAM projects, the ITAM Program acquires the permits and assumes responsibility for conducting associated monitoring requirements).

**Project Execution:** Final LRAM project designs, installation reviews, approvals, NEPA, and required permits are obtained/completed prior to project execution. The LRAM project execution process is adaptive to changes resulting from weather and training schedules. Project execution efforts and associated staffing actions will be conducted in a manner that allows frequent and rapid revisions. The Cooperator must coordinate with range operations for accessibility and reprioritize projects based on training calendar and weather events.

Manage LRAM staff and support actions to enable continuous operations, including: manage daily LRAM staff actions to include project priorities/scheduling; daily communication to LRAM Coordinator; coordinate Rotational Unit maneuver damage with other projects; coordinate training and temporary duty assignments (TDYs); and identify and procure project materials, vehicles, equipment, and fuel.

**Travel:** It is anticipated that the Assistant LRAM Coordinator will attend required training under the SRP/ITAM program umbrella. One such annual training is the SRP/ITAM workshop.

### 4.1.2. Project Implementation

The Land Rehabilitation and Maintenance component consists of strategies and resource allocations to maintain and/or repair training areas as the need arises. The LRAM program includes programming, planning, designing, and executing land rehabilitation and LRAM is a mitigative measure for minimization of impacts of the military mission at Fort Polk. LRAM projects are specifically designed to maintain quality military training lands; minimize long-term costs associated with land rehabilitation; ensure compliance with environmental laws and regulations; modify training areas to enhance training; and reduce erosion.

LRAM project funding applies to sites damaged by training and/or are negatively impacting
training. It also applies to projects in training areas that enhance training possibilities that fall within current training constraints. Cooperator staff (i.e., field staff consisting of the Assistant LRAM Coordinator and Heavy Equipment Operators) working with the ITAM and LRAM Coordinators, who are Department of the Army Civilians (DACs); will plan, prioritize, and implement all projects.

Per Army implementation guidance, LRAM tasks may include (but are not limited to) the following anticipated tasks identified through ongoing TRI and RTLA efforts and inserting into the work plan and tasks which are not currently anticipated, but are permissible if the need arises due to changing circumstances. All repair and/or maintenance requests identified out of cycle will be addressed as soon as possible; giving safety the priority:

Anticipated Cooperator tasks:

- Rotational and home station maneuver damage repairs. Ten JRTC rotations and other tenant unit damages are anticipated resulting in an estimated 450 - 700 acres over 700-800 sites across the entire maneuver training area, but actual number of rotations varies between 8 and 13. Rotational exercise calendars generally known 6 months in advance, but can be updated/adjusted monthly. Cooperator will provide necessary field oversight, personnel, equipment, materials and supplies to repair identified sites following each rotation. It is expected 80% of repairs will be made within 30 days of assignment. Repair location and date will be kept in a GIS database maintained by the ITAM GIS component.

- Maneuver Trail maintenance and light repair. Overall, the maneuver trail network is approximately 488 miles. Cooperator will provide necessary personnel, equipment, materials and supplies to perform maintenance duties. LRAM Coordinator will provide a list of trails requiring maintenance and frequency necessary each fiscal year; however, the list may be modified depending on changes to Senior Mission Commander Goals, level of use and/or weather events. Timing of these activities will require the Cooperator to coordinate with Range Operations and is weather dependent.
  - Semi-annual and Quarterly Maintenance tasks include bush-hogging ditches, grading surfaces and removal of encroaching vegetation.
  - Light repair will also include placement of aggregate in targeted locations; repair and maintenance of low water crossings; and/or culvert maintenance/installation (5-8 culvert replacement installations per year) to address water management issues. Tasks associated with implementation of repairs will be identified and completed by the Cooperator. Trails requiring multiple light repairs will be assigned at the beginning of each year; however, additional “trail maintenance task” locations will be assigned for repair continuously following weather events, training exercises and results of completed RTLA assessments; anticipating 40 locations annually.
  - Actual trail maintenance and repair activity locations completed will be captured daily by field crews on maps and reported on Weekly Progress Reports (refer section 4.1.4.1). Daily progress GIS data of actual maintenance sites will be geospatially recorded in the QAP LRAM geodatabase capturing week of application and type of maintenance activity completed.
  - Maneuver Trail major repair consists of significant trail rebuilding, typically requiring large quantities of aggregate, expanding trail surfaces, removing vegetation, installing new
water management structures and/or large low water crossings. Cooperator will provide initial design and estimated level of effort/resources required for all trail repair projects with final approval of design and estimated budget generated by the LRAM Coordinator. LRAM Coordinator will assign project priority for each fiscal year. Cooperator required to schedule project implementation based on priority, training calendar, resource availability and weather conditions.

<table>
<thead>
<tr>
<th>Maneuver Trail Maintenance (Miles)</th>
<th>Base</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biannual Maintenance</td>
<td>36.42</td>
<td>43.49</td>
<td>59.61</td>
<td>72.20</td>
<td>97.87</td>
<td>105.36</td>
<td>110.55</td>
</tr>
<tr>
<td>Quarterly Maintenance</td>
<td>245.06</td>
<td>340.81</td>
<td>366.94</td>
<td>398.57</td>
<td>418.43</td>
<td>426.78</td>
<td>433.87</td>
</tr>
<tr>
<td>Light Repair</td>
<td>8.74</td>
<td>10.05</td>
<td>6.83</td>
<td>8.12</td>
<td>7.10</td>
<td>8.50</td>
<td>8.63</td>
</tr>
<tr>
<td>Major Repair</td>
<td>6.22</td>
<td>2.37</td>
<td>3.01</td>
<td>4.72</td>
<td>1.79</td>
<td>1.50</td>
<td>1.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>290.23</strong></td>
<td><strong>394.36</strong></td>
<td><strong>433.38</strong></td>
<td><strong>478.88</strong></td>
<td><strong>523.40</strong></td>
<td><strong>542.14</strong></td>
<td><strong>554.3</strong></td>
</tr>
</tbody>
</table>

- Training Openings: creating, maintaining, and controlling erosion and vegetation on or around training openings. Types of openings include but are not limited to Helicopter Landing/Pickup Zones (LZ/PZ); Observation Points (OP); Artillery Firing Points (PAA); Tactical Assembly Bivouac Sites (TABS).
  - Reconfiguration of new clearing tasks may include soil stabilization; hardening with gravel and other like materials; clearing of vegetation on and around training site (bush hogging or removal of trees and stumps); installation of terraces; installation of drop pipes; installation of sediment basins; re-vegetation with appropriate species; and application of fertilizer to be completed by the Cooperator. Estimate 5 sites to reconfigure (150 acres).
  - For sites requiring terraces, drop pipes and/or sediment basins, Cooperator will provide design prior to implementation for completion of necessary project approvals. Cooperator will provide as-built GIS data of all structures and clearing boundaries for inclusion in the QAP LRAM geodatabase.
  - Semi-annual maintenance on multi-purpose clearing tasks to include bush hogging and application of seed/fertilizer as needed in the cool and warm seasons using agricultural tractors and associated implements (i.e. bush hog, broadcast seeders, cultipackers, etc.). Occasionally, some clearings will require additional bush hogging due to exceptional growing conditions in Louisiana.
  - Light repair maintenance on multi-purpose clearing tasks to include repairs of minor erosion, removal of undesirable vegetation and installation of terraces/drop pipes as needed. Typically, these types of maintenance tasks are generated after training and/or weather events and are identified by the Cooperator and other Department of the Army Civilians (DACs) on Fort Polk throughout the fiscal year.

<table>
<thead>
<tr>
<th>Multi-purpose Clearings (Sites-Acres)</th>
<th>Base</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
<th>+4</th>
<th>+5</th>
<th>+6</th>
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<tbody>
<tr>
<td>Semi-Annual Maintenance</td>
<td>53-545</td>
<td>54-575</td>
<td>55-605</td>
<td>56-635</td>
<td>57-645</td>
<td>58-660</td>
<td>59-675</td>
</tr>
<tr>
<td>Light Repair Maintenance</td>
<td>10-50</td>
<td>10-50</td>
<td>10-50</td>
<td>10-50</td>
<td>10-50</td>
<td>10-50</td>
<td>10-50</td>
</tr>
</tbody>
</table>
- Mortar Firing Points (MFP): Erosion control, soil stabilization, bush hogging, seeding, clearance of vegetation on or around (including removal of trees and stumps), and hardening of Artillery and Mortar Firing Points to include construction of permanent mortar pits. Permanent mortar pits require excavation of poor materials and importation of various layers of compacted aggregate. Estimate 1 to reconfigure and 10 to maintain.
- Training land stabilization including decommissioned training aids and repairing historic erosion sites causing safety concerns, environmental concerns or training stoppage. Tasks include soil stabilization, vegetation management (tree and stump removal and application of appropriate seed/fertilizer combination) and aggregate application up to 5 sites annually (approximately 40 acres).
- Invasive Species, Noxious Weed, and Encroaching Vegetation Management: where species inhibits maneuver in the training area and line of site for artillery. Invasive weed management includes application of herbicides, mowing/bush hogging, and the use of other mechanical techniques to control the plants. Estimate aerial herbicide project for the Peason and Fort Polk impact areas of up to 600 acres annually.
- Training Site Maintenance: Cooperator will assist Range Operations with maintenance of training sites to include: vegetation management, installation/removal of fencing, filling of abandoned wells, removal of field debris and other tasks as assigned related to maintaining training sites not captured in DPW Real Property.

Permissible tasks:

- Capping of Cultural sites: where site inhibits maneuver and capping of the site will provide unrestricted maneuver over the site.
- Erosion: Repairing erosion directly caused by maneuver training or training activities, or erosion related to the use of Maneuver Trails in the training area.
- Turn pads and Road Crossings: construction and maintenance on maneuver trails where they intersect Training Area Tank Trails or Training Area Roads.
- Amphibious Launch Sites: Maintenance and repair.
- Flight Landing Strips (FLS): Vegetation control on or around Flight Landing Strips.
- Unmanned Aerial Systems (UAS): Vegetation control on or around UAS Flight Landing Strips.
- Forward Aerial Refuel and Rerrm Points (FARRP): Creating, maintaining, control of erosion and vegetation on or around FARRP including hardening helicopter pads with aggregate and constructing berms on the site.
- Helicopter Pads: vegetation and erosion control in areas surrounding Helicopter Pads located in the training area.
- Dust Control: to support training mission and training safety on maneuver trails, OPs, artillery and mortar firing points, FLS, UAS, FARRPs, helicopter pads and helicopter landing/pickup zones.
- Storm Damage: Repairing LRAM erosion control structures and Maneuver Trails damaged by storms, and removing storm debris from Maneuver Trails. Coordinate with the Installation DPW and Forestry office.
- Marking of Threatened and Endangered Species Sites or Habitat, and Cultural Sites.
  Purchase of markers to designate sites as off-limits.
- Position Area for Artillery: create and maintain clearings conducive for field artillery training requirements.
- Observation Point: create and maintain clearings conducive for observation training requirements.
- Maneuver damage repairs resulting from home station and JRTC Rotation Exercises.
- Maneuver Trail: create and maintain maneuver trails for cross country maneuvers through the training areas.

**Equipment.** The Cooperator heavy equipment operator support staff members shall be skilled in the operation of heavy and light equipment, including, but not limited to dozers, excavators, trackhoes, backhoes, vibratory rollers, tractor/trailer transports, motor graders, dump trucks, hydro-mulchers, hay blowers, agricultural tractors and multiple implements associated with sustainable agronomic practices. Some but not all heavy equipment may be leased. Some of the agricultural equipment is government owned and maintained, and some is Cooperator owned and maintained. The Cooperator support staff members shall be skilled in the use of power and manual hand tools, augers and bits used on projects.

Leased equipment to include but not limited to:

- 2 D6 (or equivalent) Dozers, 3 D7 (or equivalent) Dozers, 1 D7 with Bull Blade,
- 3 Excavators with thumb attachment (minimum size 210 JD or equivalent), 1 low boy rig – cab only, 1 14 yd. dump truck, 4’ roller, 1 John Deere 670G (or equivalent) Motor Grader, 1-1/4 ton pickup, 3-3/4 ton pickups, 1 -1 ton pickup, 1 – F550 flat-bed pickup, 1 mini excavator with side arm bush hog attachment.

Cooperator owned equipment to include but not limited to:

- 2 -100 - 140 HP agricultural tractor and implements (cultipacker, bush hog, front end loader, forks), 40’ gooseneck trailer, 40 ton transport truck, 46’ low boy trailer, hay blower, root rake for D7 equivalent dozer, 25’ tilt trailer, 16’ tilt bed trailer,

The Cooperator shall retain ownership of equipment purchased under the agreement for the duration of the ITAM Program implementation by Cooperator. Ownership will revert to Fort Polk upon expiration of Cooperator ITAM activities on Fort Polk.

**4.1.3. Herbicide Treatment**
Cooperator or contractor hired by the Cooperator shall perform herbicide application as requested (aerial or ground) for line of sight projects on training lands. Estimate 600 acres to be treated annually.

**4.1.4. Reports**
The Cooperator shall provide:

**4.1.4.1.**  HEO Weekly Progress Reports submitted weekly to the LRAM Coordinator. These reports capture location of work, equipment used, tasks completed, aggregate
applied/accepted, quantities of materials, etc.

4.1.4.2. Weekly updates on project progress to the ITAM Coordinator or Range Officer throughout the Period of Performance.

4.1.4.3. Provide quarterly and annual LRAM metric data for inclusion in the Fort Polk Sustainability Environmental Monitoring Plan.

4.1.4.4. Provide quarterly updates to the LRAM QAP GIS layers.

4.1.4.5. Maintain an up-to-date Maneuver Damage Geospatial Database.

4.1.4.6. Maintain an up-to-date LRAM Database.

4.1.4.7. Quarterly Report of ITAM accomplishments by program component and project type for inclusion in an installation annual ITAM accomplishments report (by fiscal year).

4.1.4.8. Annual Report of ITAM accomplishments by program component and project type for inclusion in an installation annual ITAM accomplishments report (by fiscal year).

4.2. TASK 2 – GEOGRAPHIC INFORMATION SYSTEMS (GIS) SUPPORT

The GIS Program achieves information excellence by providing accurate, complete, and standardized spatial data, GIS products, analysis, and applications that adhere to Federal, Department of Defense (DoD) and U.S. Army spatial data standards. GIS support includes the development of standard GIS databases meeting SRP GIS data requirements. Spatial data are available to support all components of the ITAM Program.

The SRP GIS mission is to create, manage, and distribute authoritative spatial information, products, and services for the execution of training strategies and missions on U.S. Army ranges and training lands. Through information excellence, one of the three tenets upon which the SRP was founded, the SRP GIS Program strives to provide the SRP Community, Trainers, and Soldiers with the ability to leverage the most accurate and complete datasets through easily accessible and user-friendly products and applications.

4.2.1. GIS Administration

The Fort Polk SRP GIS program supports the military training community by managing the GIS hardware, software and data for map production and scenario development. GIS hardware consists of computers, servers, Global Positioning System (GPS) data capture devices, and the network connectivity between all the hardware needed to facilitate GIS delivery. The primary GIS software used is the Environment Systems Research Institute (ESRI) suite of desktop and enterprise software. This is also supported by database software, GPS software, Microsoft Office software and the Microsoft OS. The hardware and software allow for the creation, management and most importantly the use of GIS data for map production, and Army Installation Geospatial Information & Services (IGI&S) Quality Assurance Program (QAP) compliance. Data such as geodatabases, imagery, tabular data with grid information, and shape files are acquired, updated and maintained.

In accordance with the Sustainable Range Program (SRP) GIS mission and guidelines, Cooperator GIS staff shall support the SRP GIS program by contributing to the development and maintenance of an annual Plan and Work plan, administration of schedules, preparing required reports, acquiring office and computer supplies, coordinating information technology support, and conducting required travel and training. SRP GIS support functions are inherently iterative, require frequent coordination, reviews, and approvals with other Garrison offices, and
are subject to individual installation timelines and processes. Actions to support SRP GIS include but are not limited to:

- Coordinate with the ITAM Coordinator, GIS Coordinator and other Range staff to identify GIS related software updates/requirements, hardware replacement/requirements, supplies, imagery acquisition requirements, and other data acquisition needs.
- Map out Department of Army (DA) reporting schedules, and major program deliverable schedules, and assist in ITAM and Range compliance with those schedules.
- Coordinate with the installation Network Enterprise Center (NEC) for SRP GIS software and IT-related support (e.g., software installation, license upgrades); manage ESRI software under the SRP ESRI Enterprise License Agreement (ELA).
- Maintain a monthly GIS support log of all geospatial data layers developed and map products produced.
- Oversee SRP GIS task execution and/or contract requirements; document execution in the ITAM Work plan.
- Attend installation IGI&S and Army GIS working group meetings (including the SRP GIS User Working Group) which may include Fort Polk Quarterly GIS user group meetings.
- Provide SRP GIS reports including monthly status reports (MSRs), task execution reports, and input for ITAM Plan annual execution report. Identify draft budgets necessary to support these items and provide information for inclusion in ITAM Work plan. To perform these actions the following guidance, standards, and procedures shall be followed.
- Adhere to Federal, DoD, and Army geospatial data standards; the US Army Installation Geospatial Information & Services (IGI&S) Data Prepotency, Common Installation Picture (CIP), and Quality Assurance Plan (QAP) Memorandum, Department of the Army Management Office – Training Simulations (DAMO-TRS) SRP Geospatial Data Development Strategy Memorandum, and associated geospatial data Quality Assurance Plans (QAPs) and guidance.
- Ensure that support personnel executing SRP GIS functions are trained and knowledgeable in SRP, Army, and Federal geospatial data standards (which include, but are not limited to: SRP Geospatial Data Quality Assurance Plans (QAPs), Federal Geographic Data Committee (FGDC), and the Spatial Data Standard for Facilities Infrastructure and Environment (SDSFIE) suite of standards).
- Ensure support personnel executing SRP GIS functions remain fully trained and maintain capabilities to implement the most current versions of these capabilities and the current releases of GIS, Global Positioning System (GPS), and image processing software, including: The ESRI suite of enterprise GIS software, Trimble GPS software used on GPS units as well as Trimble software used on workstations. Other software and operating systems needed to support ESRI GIS and Trimble GPS, including web-based software. Ensure support personnel executing SRP GIS support tasks successfully complete Range Officer Professional Development (ROPD), or equivalent level of technical training, familiarization, and/or qualification.
- Ensure personnel conducting Range Operations/Safety GIS related functions/capabilities (i.e. the use of the Range Manager's Toolkit [RMTK]) have successfully completed the Range Safety Course (Intermediate), or equivalent level of technical training,
familiarization, and/or qualification. Ensure personnel are thoroughly knowledgeable of AR 350-19, AR 385-63, AR385-10, Department of the Army (DA) Pamphlet (PAM) 385-63, DA PAM 385-64, Training Circular (TC) 25-8, TC 25-1, and military weapon systems.

- Manage and track ArcGIS licenses provided under the SRP ESRI ELA. Verify licenses and users annually when requested by SRP GIS.
- Working with the ITAM Coordinator and/or Range Officer, Cooperator staff shall develop/update/manage and close out as completed ITAM Work plan activities.
- During the Fiscal Year (FY) as the Work plan changes, Cooperator shall update current/execution year ITAM Work plan, to include rescheduling unexecuted activities to future FY work plan years.
- Working with the ITAM Coordinator and/or Range Officer, Cooperator staff shall develop and coordinate status information for input to the Installation Status Report (ISR).
- Facilitate training and travel requirements for SRP GIS Cooperator staff.

4.2.2. GIS Support to Range Operations
Cooperator GIS support shall be provided to Range Operations personnel with an emphasis on training scenario development, hunting area status maps, and training area status maps.

Cooperator shall provide geospatial analysis and cartographic support to Range Operations.

- Attend meetings as required with Range staff to identify geospatial data and mapping requirements in support of Range Operations.
- Prepare/provide geospatial data, perform geospatial analysis, and provide map products to support range operations planning, and range scheduling/planning reviews, including the creation of danger zones, the development of noise contours, and the development of range operations map products using the Range Managers Toolkit (RMTK) suite of applications. Estimate 150-250 Military Installation Maps (MIMs) and 75-125 custom map products shall be produced quarterly.
- Perform Range Facility Management Support System (RFMSS) enhanced Graphic Fire Desk (eGFD) fielding tasks per the DA, DAMO-TRS SRP Range Facility Management Support System (RFMSS) eGFD Deployment Memorandum. Maintain and configure geospatial data to support automated range scheduling. Perform geospatial data development, formatting, upload, and maintenance of geospatial data and maps necessary to support the RFMSS eGFD. Data will include layers, MIMs, and aerial imagery as requested by Range Operations. Serve as liaison to SRP technical staff for bug reporting and upgrades. Provide RFMSS system integration support to ensure that RFMSS continues to function properly as underlying systems change or are upgraded.
- Perform Hunting Area Manager application (HAMS) tasks per Range Operations requirements. Maintain and configure geospatial data to support creation of hunting management maps. Maintain and update map documents as map design evolves. Coordinate programming contractor as Range Operations requirements change as required.
- Facilitate and coordinate basic GIS training for range personnel.
• Perform Low Water Crossing (LWC) Status map project tasks per Range Operations requirements. Maintain and configure geospatial data to support LWC status updates that documents water levels on monitored stream crossings. Maintain and update map documents as design evolves.

• Facilitate and coordinate basic GIS training for range personnel.

4.2.3. GIS Support to Range Modernization
Cooperator GIS Staff shall gather and create geospatial data and perform geospatial analysis to support Range Modernization planning charrettes and Range Modernization reconfigurations to include range siting. Develop range project maps in accordance with Department of the Army, Range Complex Master Planning: A User Guide for U.S. Army Installations and Government guidance to support the Range Complex Master Plan (RCMP). Develop maps depicting landscape conditions, constraints, alternatives analysis, restrictions, operational overlay, safety/regulatory/stewardship, airspace, and critical infrastructure. Currently, there are four types of maps required to support Range Modernization in the RCMP: Safety/Regulatory/Stewardship Considerations Map; Airspace Maps; Range Project Maps; and the Operational Overlay.

Fort Polk is developing the Cold Springs, Kурthwood, and Simpson training areas purchased over the last few years. Support plans for improving the training lands through individual requests as well as working with G3, DPW/Environment and Natural Resources Management Division (ENRMD) Conservation Branch and others shall be required.

4.2.4. GIS Program Development of Training Mission Support Products
Work with GIS Coordinator to provide training support products in direct assistance to the execution of training strategies and missions, at all echelons, on the installation’s ranges and training lands. Develop and maintain geospatial data, perform geospatial analysis, and create training support cartographic products (i.e., maps) in support of JRTC and unit training (G3).

• Develop, maintain, and update Military Installation Maps (MIMs) with the required geospatial data layers in accordance with MIM Production Guidance Documentation (MPGD) to support mission requirements. Maintain, develop, and retain a copy of the geospatial data associated with each MIM to include required geospatial data layers to fill the MIM map extent. Digitally update each MIM annually (in GeoPDF format) unless changes have not been made to range and training land designations and configurations or to training support infrastructure.

• Provide a copy of the geospatial data layers to the JRTC geospatial point of contact (POC) for development of the JRTC Fort Polk Special map product provide to Rotational Training Units.

• Provide standard and customized maps to support unit training making maximum use of the Military Installation Map (MIM) Inventory available on the SRP Web Portal (https://srp2.army.mil/gis/MIM/Forms/AllItems.aspx). Specific map outputs include but are not limited to: standard Military Installation Map (MIM), mission planning maps, training plans, live-fire shot sheets ((with surface danger zones (SDZs)), maneuver area/corridor maps, and maps of individual training facilities/areas including, but not limited to, maneuver training areas, landing zones, MEDEVAC, infantry movement...
corridors, aerial operations, special-use imagery maps, transportation, land navigation, and special use training sites. Standard map scales are 1:25,000 and 1:50,000 scale. Larger scale maps may be required for individual training events or facilities, as well as maps outside the installation footprint.

- Develop daily planning maps as an overlay that reflects training footprints and training facilities assist in identifying suitable ranges and maneuver lands required for scheduling, and represents adjustments based on range scheduling or field conditions that impact the scheduled training event(s). Respond to changing training schedules and/or training location changes stemming from weather, safety, or other factors. Updated support maps may be required in as little as one hour to meet training schedule needs.
- Develop land navigation maps in support of custom courses as needed for unit training.
- Maps are provided electronically (e.g., GeoPDF format) via email, at Fort Polk Range Operations walk in center (paper and DVD copy), through installation portal, or via SRP Web Portal.
- Estimate 200 – 300 standard or custom map products per quarter.

4.2.5. GIS Data Development and Sustainment

The JRTC & Fort Polk SRP GIS program shall develop, update, manage, report, and maintain the DAMO-TRS (SRP) proponent Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) Army Adaptation geospatial data layers in accordance with the DAMO-TRS SRP geospatial Data Development Strategy, the SRP geospatial data Quality Assurance Plans (QAPs), and the SDSFIE Army Adaptation. Serve as the installation/site(s) Data Steward for all DAMO-TRS (SRP) proponent geospatial data layers. GIS Staff shall coordinate all range-related facility data with the installation real property office to ensure correct real property attributes are included in the geospatial data and real property databases. Staff, review, and validate data by the installation subject matter expert (SME) for each data layer (i.e. Range Officer, ITAM Coordinator, Range Safety Officer, etc.).

On a quarterly basis, under the direction of the GIS Coordinator, the Cooperator will:
- Develop and validate DAMO-TRS (SRP) proponent geospatial data layers for compliance with the respective QAP.
- Complete quality assurance/quality control (QA/QC) of each geospatial data layer and associated metadata.
- Submit the data to the installation functional SME (i.e., Range Officer or equivalent) for review of completeness and accuracy.
- Submit geospatial data to the SRP Geospatial Support Center (GSC) for review.
- Conduct reviews of QAPs for geospatial data layers under the Data Steward’s responsibility.
- Submit data to the IGI&S Support Center (Office of the Assistant Chief of Staff for Installation Management [OACSIM] IGI&S) and the SRP GSC.
- Submit map project files, associated data tables, associated map export files, symbology files, metadata, briefings, and all associated documentation collected, developed, and maintained in support of SRP GIS and related SRP functions to the SRP GSC.

4.2.6. Reports
Weekly updates on project progress to the ITAM Coordinator or Range Officer throughout the Period of Performance.

4.2.7. Travel
It is anticipated that travel shall be required for the GIS staff to complete training to include:
- Environmental Systems Research Institute (ESRI) Annual User Conference (annually in San Diego, CA)
- Installation Geospatial Information and Services (IGI&S) conference (if scheduled)
- SRP/ITAM conference (if scheduled)
- Additional GIS training as required for project support.

4.3. TASK 3 – RANGE AND TRAINING LAND ASSESSMENT
Fort Polk RTLA Goals and Objectives are to monitor and update land conditions to support the trainers and installation decision makers. Planning assessments are iterative due to the complexities associated with planning and coordinating LRAM projects. RTLA planning and coordination steps are: 1) Coordinate with ITAM and Range staff to determine LRAM and TRI support priorities; 2) Develop assessments that address the management of landscape conditions identified in the ITAM Plan; 3) Enter assessments results and findings into the ITAM Work plan as activities, and link those assessments to land management objectives created to manage landscape conditions in support of training missions; 4) Develop assessments that address TRI decision support, entering assessments results and findings into the ITAM Work plan as activities, and linking them to the TRI objective; 5) Coordinate and conduct project planning fieldwork with ITAM staff and DPW personnel (Natural and Cultural Resources; Environmental Compliance; Real Property); and 6) Acquire and maintain materials, equipment, and supplies.

4.3.1. Planning and Coordination for Fort Polk RTLA Efforts
Assessment Design: Assessments are adaptive to LRAM scope changes resulting from weather, training schedules, environmental compliance requirements, and evolving mission needs. Assessments and associated staffing actions are conducted in a manner that allows frequent and rapid revisions. All assessments are limited to the minimum number of locations, iterations, and time frame necessary to address the specific mission support management question from the ITAM plan for which the assessment is being executed. Assessments are designed to ensure Army training lands are maintained in safe conditions, remain environmentally compliant, and support unit training tasks. The assessment design steps are: 1.) Delineate proposed assessment areas using GPS as appropriate and using GIS software to create maps as needed; 2) Coordinate with GIS personnel to ensure assessments are captured and maintained current in the installation GIS database and included in the ITAM Plan; 3) Upload maps depicting assessment areas into the ITAM Work plan as part of the complete Work plan activity package; 4) Develop assessment specifications that include location and extent (area/dimensions) of the management action being applied, materials and equipment required, and the analysis to be performed on collected data; 5) Detail assessment specifications in the ITAM Work plan as part of the complete Work plan activity package; and 6) Maximize the use of available information from all installation land management programs as applicable. RTLA is responsible for 6 assessments:
4.3.1.1 LRAM Project Success Assessment: Percent Cover plot sampling will be assigned at 90 days post-project completion by the LRAM Coordinator. Success is determined by > 70% vegetation cover. Fort Polk Sustainable Environment Management Plan (SEMP)-eligible projects are reported annually to the SEMP committee. Any deficiencies will be reported to LRAM Coordinator for repair assignment by Cooperator field crews. Cooperator will continue to monitor the projects every quarter for success for the following year. Should a deficiency be observed, Cooperator will assign and schedule repairs according to program requirements.

4.3.1.2 Training Land Assessment: This cyclic assessment, occurring every 5 years, uses remote sensing data to determine potential areas requiring repairs for erosion concerns as a result of little or no vegetation cover. It is intended to be one of the primary sources for development of maneuver area LRAM projects in work plans. The assessment utilizes data such as that found in the U.S. Geological Survey Landsat series to generate a map of bare and sparsely vegetated sites requiring field verification within one year of the geospatial data. Last completed in FY18, the next assessment will begin FY23. GIS staff generate the geospatial data by performing unsupervised classification of satellite imagery to construct a reduced manageable set of reflectance “classes” representing major land use/land cover categories on the Installation. Developed and hardened surfaces (low erosion risk) are difficult to separate from lightly vegetated areas therefore GIS data (master planning layers, high resolution aerial imagery) will be examined to separate hardened from bare areas. RTLA staff complete site visits, documenting conditions observed in the field including erosion risk and acreage impaired. Tabular and map results will be reported to ITAM Coordinator within 30 days of project completion.

4.3.1.3 Maneuver Trail Assessment: This assessment will monitor the status of maneuver trails across the training lands and identify areas requiring LRAM projects. The Cooperator will determine current status of maneuver trails as Good, Requires Maintenance, and Requires Repair for all the maneuver trails in half the Training Areas annually. Additional detail will be provided when it is determined that maintenance or repair is required. Those locations requiring additional work will be added to the LRAM Project List. Currently Fort Polk carries approximately 488 miles of maneuver trail. The Cooperator will maintain a GIS geodatabase of assessment data accessible to the ITAM Program for development of future work plans. Annually, RTLA will hold a meeting no later than May 10 to present an overview of the maneuver trail network indicating trail conditions collected over the previous 12 months, repair requirements and areas of concern.

4.3.1.4 Training Clearings Assessment: This assessment will monitor the status of encroachment and/or erosion on unimproved (i.e. without DPW category codes) clearings to include firing points, position area for artillery (PAAs), LZ/PZs, MFP and OPs. On those locations requiring maintenance or repair actions will be forwarded to appropriate LRAM staff. Approximately 540 acres will be assessed no less than twice annually.

4.3.1.5 Fort Polk Maneuver Damage Assessment (2 components):

   a. Rotational Training Unit (RTU) and Home Station Training damage resulting from maneuver exercises. For RTU maneuver damage assessment, initial data on locations is collected post rotation by ITAM DAC/Cooperator staff, Range Operations, DPW/ENRMD for the Sustainability and Environmental Monitoring Plan (SEMP)
metric. All damage locations are stored in a geodatabase documenting type of damage, area, inspector and associated comments to assist in locating or repairing the site. The damage locations requiring repairs for the sustainment of the training areas are assigned to the Cooperator, who then assesses the locations for accuracy and required resources for repair. The LRAM operators complete the repairs within 30 days as required by the SEMP metric. The damage report is updated with the completion data and returned to ENRMD for entry in the SEMP database and subsequent analysis and reporting.

b. Home Station maneuver damage assessment is completed by ITAM staff, including ITAM coordinator, LRAM coordinator, GIS personnel and Operators. Initially a Range Safety Technician notifies of the general damage and location, then ITAM utilizing GPS identifies the location, assesses resources required for repair and collects additional information in support of SEMP. Data collected includes:

   i. Land Type (Army vs. USFS)
   ii. Site number
   iii. X, Y grid
   iv. Training area
   v. Damage type and quantity
   vi. Comments
   vii. Corrective action
   viii. Date assigned, Target Completion date, Actual completion date.

The LRAM staff completes the repairs, and collected data is sent to DPW/ENRMD for entry into the SEMP database in support of the metric.

4.3.1.6 Extreme Weather Assessment: At Fort Polk, extreme weather events to include heavy rains (upward of 15 inches in a 12 hour period) or tornados/hurricanes occur regularly. Following such events, ITAM staff will determine where completed/in-progress LRAM projects require repair and if Maneuver Trails need maintenance or repair. Assessments are generally windshield cruises to determine damage extent, required repairs, safety posting requirements and prioritization. Locations requiring LRAM attention are maintained in a LRAM maintenance geodatabase.

4.3.2. Reports
After the close of the fiscal year, a complete assessment report by assessment type will be provided to the ITAM coordinator or Range Officer detailing the monitoring, findings and identified and prepared for submission LRAM projects.

4.4. TASK 4 – SUSTAINABLE RANGE AWARENESS
The Sustainable Range Awareness (SRA) component improves troop awareness of environmental issues that affect field exercises. It also improves the military trainer’s awareness of “tactical signature” impacts to the land and its corresponding effect on combat effectiveness. By providing installation-specific guidance about environmental issues, severe environmental damage and its associated costs can be prevented. The SRA program uses multimedia presentations, posters, field cards, specialized maps, and handbooks designed to educate soldiers, leaders, and commanders of their responsibilities to integrate environmental and natural resources conservation procedures, policies, and requirements into mission training events.
During Range Operations briefings, an ITAM representative can present information to all incoming unit leaders on terrain protection measures and resource management requirements.

4.4.1. Conservation Education Materials
SRA is a multi-faceted program supported by ITAM. The program uses education to create a conservation ethic in military personnel and civilian users. Efforts include training courses and use of such materials as posters, DVDs, logos, maps, field handbooks, reference cards, and similar items. Cooperator activities include developing/updating/distributing materials and information for training land users such as soldier field cards and safety briefings. Provide 45,000 to 60,000 soldier cards as needed annually.

Observer/Controller/Trainers (OCTs) receive training through DPW, ENRMD at which time each is presented a Soldier’s Handbook for reference. Officer in Charge (OIC) and Range Safety Officer (RSO) training is provided by Range Operations and Soldier’s Handbooks and Soldier Cards are provided.

Leader’s Environmental Handbook shall be updated and republished. Handbook will require development, approval and printing of 5,000 copies.

4.4.2. Reports
Included in the 4th quarter report shall be a total of training materials provided by Cooperator to Fort Polk.

4.5. TASK 5 – TRAINING REQUIREMENTS INTEGRATION (TRI)
TRI facilitates installation training mission goals through decision support and coordination of training mission needs with other installation plans and work plans. This activity is led by the ITAM Coordinator and supported by Cooperator staff.

4.5.1. Training Mission Goals
Facilitate installation training mission goals by including environmental compliance requirements, range facilities requirements, and landscape condition requirements in the development of range and training land management decisions and the coordination of mission needs with garrison facility and environmental plans.

4.5.2. Decision Support
Provide decision support to range and training land planning, scheduling, modernization, and maintenance. Obtain information from appropriate offices regarding the conditions of ranges and training lands, and provide recommendations to the installation G3 and ITAM offices on potential impacts and permitting requirements of relevant environmental, natural, and cultural resources for the proposed training. Include the use of information from RTLA, LRAM, and SRP GIS in this process. Attend training briefings, land management coordination meetings, and other range and training land planning and scheduling meetings; provide written and verbal input, as appropriate, on potential issues; and recommend changes to range and training land schedules.

4.5.3. Planning and Execution
Actively participate in range and training land management planning and execution; ensure mission needs are considered in environmental and facilities planning; and ensure environmental constraints are considered in mission planning.

4.5.4. Communication
Communicate the installation training mission needs for ranges and training lands for inclusion into the plans and programs of other installation offices involved in the management and oversight of land and related natural, cultural, and environmental resources. Coordinate with the appropriate installation offices to provide mission goals and objectives for inclusion in the planning and resourcing of installation land management programs. Include information from RTLA, LRAM, and SRP GIS in this process. In particular, coordinate the inclusion of the Range Complex Master Plan (RCMP) mission goals and objectives into the installation Integrated Natural Resources Management Plan (INRMP) and subordinate plans, and ensure the various land management programs associated with these participate in the development and submittal of work plans necessary to achieve mission needs. Provide the approved annual ITAM Work plan for inclusion as an INRMP appendix. Coordinate mission needs with analysis of the INRMP required by the National Environmental Protection Act (NEPA) to ensure proposed training land management actions are included in the NEPA approval process. Specifically at Fort Polk, actively participate in or support the ITAM coordinator with product for the NEPA Executive Steering Committee weekly meetings, United States Forest Service (USFS)/Army quarterly meetings, INRMP quarterly meetings and Environmental Quality Control Committee (EQCC) quarterly meetings.

4.5.5. Reports
After the close of the fiscal year, an annual report of proposed projects will which have been identified as a result of TRI will be provided to the ITAM Coordinator or Range Officer.

4.6 OPTIONAL TASKS
All optional tasks indicated below are contingent upon availability of funds.

4.6.1 OPTION TASK 1
The Cooperator shall remove vegetation through mulching. All trees and brush shall be mulched, leaving root systems in-tact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or rotary mowing. Stems over 3” in diameter will be mulched to 4” below the ground surface. This option will be utilized for up to 50 acres.

4.6.2 OPTION TASK 2
The Cooperator shall remove vegetation through mulching. All trees and brush shall be mulched, leaving root systems in-tact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or rotary mowing. Stems over 3” in diameter will be mulched to 4” below the ground surface. This option will be utilized for an additional 50 acres.

4.6.3 OPTION TASK 3
The Cooperator shall remove vegetation through mulching. All trees and brush shall be
mulched, leaving root systems in-tact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or rotary mowing. Stems over 3” in diameter will be mulched to 4” below the ground surface. This option will be utilized for up to an additional 50 acres.

4.6.4 OPTION TASK 4
The Cooperator shall remove vegetation through mulching. All trees and brush shall be mulched, leaving root systems in-tact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or rotary mowing. Stems over 3” in diameter will be mulched to 4” below the ground surface. This option will be utilized for up to 100 acres.

4.6.5 OPTION TASK 5
The Cooperator shall remove vegetation through mulching. All trees and brush shall be mulched, leaving root systems in-tact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or rotary mowing. Stems over 3” in diameter will be mulched to 4” below the ground surface. This option will be utilized for up to an additional 100 acres.

4.6.6 OPTION TASK 6
The Cooperator shall remove vegetation through sheer, pile, and burn. All trees and brush shall be sheered leaving root systems intact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or infrequent rotary mowing. All stems will be sheared off at ground level. This option will be utilized for up to 50 acres.

4.6.7 OPTION TASK 7
The Cooperator shall remove vegetation through sheer, pile, and burn. All trees and brush shall be sheered leaving root systems intact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or infrequent rotary mowing. All stems will be sheared off at ground level. This option will be utilized for up to an additional 50 acres.

4.6.8 OPTION TASK 8
The Cooperator shall remove vegetation through sheer, pile, and burn. All trees and brush shall be sheered leaving root systems intact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or infrequent rotary mowing. All stems will be sheared off at ground level. This option will be utilized for up to an additional 50 acres.

4.6.9 OPTION TASK 9
The Cooperator shall remove vegetation through sheer, pile, and burn. All trees and brush shall be sheered leaving root systems intact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or infrequent rotary mowing. All stems will be sheared off at ground level. This option will be utilized for up to 100 acres.

4.6.10 OPTION TASK 10
The Cooperator shall remove vegetation through sheer, pile, and burn. All trees and brush shall be sheered leaving root systems intact for erosion control. The end result will be an area open for training and able to be maintained either by prescribed fire or infrequent rotary mowing. All stems will be sheared off at ground level. This option will be utilized for up to an additional 100 acres.

5. QUALIFICATIONS
Project Manager / Principal Investigator – The Cooperator should provide a Project Manager or Principal Investigator with at least 3 years of experience at an installation as an ITAM, RTLA, or LRAM Coordinator. The Cooperator will provide a Project Manager with Bachelor of Arts or Sciences degree (Masters of Art or Science preferred) from an accredited college or university in a relevant field (e.g. environmental science, biology, forestry, etc.). A resume for the Project Manager will be submitted with the proposal package.

6. GOVERNMENT FURNISHED PROPERTY AND ASSISTANCE

6.1. Equipment
Office equipment, computers and computer equipment to include printers and plotters, and LAN access, supplies, hand held and truck mounted radios and telephone access for all official duties related to the CA will be provided by Fort Polk.

6.2. Information
Fort Polk and the Cooperator will/shall provide and/or exchange copies of, or access to, all data files, maps, aerial photography, satellite imagery, studies and reports available that are relevant to the implementation of the ITAM program components.

6.3. Purchases of Non-Government Furnished Property
The Cooperator will be responsible for the purchase personal safety wear, office supplies, field supplies, bulk materials (aggregate, seed, fertilizer, hay, lime), culverts, erosion control PVC materials, signage, GPS Trimble handhelds and accessories, ArcGIS and Trimble GPS computer software and maintenance. The Cooperator shall provide office furnishings for ITAM staff.

6.4. Anticipated Staffing
Due to the high pace intensive training conducted at Fort Polk it is not reasonable to have an off-site staff supporting the ITAM program at Fort Polk. It is anticipated three professional (primarily office oriented) Cooperator will be required to provide the GIS, LRAM, and RTLA support set forth in this scope and that 10-12 Heavy Equipment Operators (HEO) (including one lead HEO) shall provide the onsite support outlined in sections 4.1 – 4.5 of this Statement of Objectives. This staffing is pictorially shown in the figure below.
6.5. Workplace Hazards

Cooperators working on site may be required to work under conditions that expose them to potential hazards, many of them unique to military installations. Tasks that employees may be required to perform that add associated risks include, but are not limited to:

- Travel in government passenger vehicles and trucks, as a driver or passenger
- Travel in military wheeled and tracked vehicles
- Travel in military and private aircraft, fixed wing and rotary wing
- Travel in vehicles on unpaved roads and off-road
- Travel on public transportation
- Field work in rough and remote terrain in weather extremes such as thunderstorms, high heat and humidity, severe cold, and wind
- Field work in the proximity of unexploded ordnance
- Field work in the proximity of military training exercises
- Exposure to stinging and biting insects, ticks, spiders, venomous snakes, poisonous plants, spines and thorns
- Control and suppression of prescribed burns and wildland fires
- Use of power equipment such as chain saws, weed cutters, wood chippers, trucks, tractor equipment, aero- and hydro-mulchers, etc.
- Use of hand tools such as axes, rakes, shovels, brush cutters, machetes, saws, etc.
- Exposure to hazardous chemicals
- Handling trespass equine or wildlife and exposure to associated disease organisms.

7. **OPTIONS:** There are 10 optional tasks associated with this Statement of Objectives, they are listed in Section 4.6. Period of Performance for each optional task will be 12 months.

8. **PERIOD OF PERFORMANCE**

A base year and up to six (6) option years. Period of Performance will be 15 months for base and each option period – technical/fieldwork to begin on or approximately 20 June 20XX for the base year (2020) and each subsequent option period. An administrative period of performance will begin upon project award, in an effort to accommodate on-boarding of personnel and subcontractors. Upon completion of the fieldwork/technical support on approximately 19 June 20XX, the Cooperator will have an additional 3 months to complete the required reporting activities between base and each option year.

Optional Task Period of Performance will be 12 months from date of each optional task award.

9. **COORDINATION**

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Brian Hesford  
Environmental Remediation Branch  
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402-995 2759  
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USACE Grants Officer Technical Representative:  
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JRTC and FORT POLK ITAM Coordinator:  
Wayne Fariss  
AFZX-GT-R  
7487 Georgia Avenue  
Fort Polk, Louisiana  
(337)-531-7417  
milton.w.fariss.civ@mail.mil

JRTC and FORT POLK G3 Range Officer:  
Ron Semerena  
AFZX-GT-R
10. DELIVERABLES

In addition to the deliverables listed in the table below, four Quarterly Status Reports due by the third week of the month following the end of the quarter, to include completed tasks detailing quantity, type and customer to the Fort Polk ITAM Coordinator, Fort Polk Range Officer, and USACE Project Manager.

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### 10.1 Annual Inventory – Federally owned property

Federally owned property - an annual inventory listing Federal property (to include description of the property, a serial number or other identification number) that is in the custody of the recipient; Copies to be sent to USACE GOTR and JRTC & Fort Polk ITAM Coordinator.

### 10.2 Annual Inventory – Acquired Property

Acquired Property purchased with funding from award - property records must be maintained that includes description of the property, serial number or other identification number, source of funding, who holds title, acquisition date, cost of property, percentage of Federal participation in project costs, location, use and condition of property, and ultimate disposition including date of disposal and sale price. A physical inventory must be taken and results reconciled every two years. Copies of the inventory to be sent annually to USACE GOTR and JRTC & Fort Polk ITAM Coordinator.

### 11. This cooperative agreement

This cooperative agreement may be administered through a CESU only upon mutual agreement and official authorization by both parties of the acceptance of the application of the CESU Network IDC rate (17.5%).

Any resulting cooperative agreement will be subject to and recipient/cooperator shall comply with 2 CFR 200.313 “Equipment”, 200.314 “Supplies”, and 200.315 “Intangible Property” which includes use of research data.

[End of SOO]