

# SUSTAINABILITY AND ENVIRONMENTAL MONITORING PLAN FISCAL YEAR 2006 ANNUAL REPORT



## Dear Friends of Fort Polk and the Kisatchie National Forest:

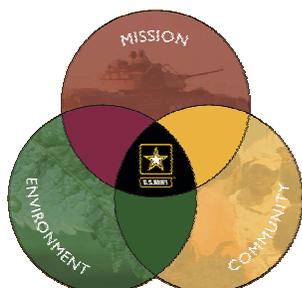
The Army is transforming how it fights, how it trains, how it does business, and how it interacts with others in order to continually improve and provide for the Nation's security. As a part of this ongoing transformation, the Joint Readiness Training Center (JRTC) and Fort Polk, in partnership with the Kisatchie National Forest (KNF), is committed to sound environmental stewardship and to working with surrounding communities to promote a high quality of life for Soldiers and civilians alike.

The second *Sustainability and Environmental Monitoring Plan Annual Report* provides an update on our progress during fiscal year 2006 toward goals and objectives for sustainable training lands, biological resources and infrastructure, and for serving as good neighbors to those who live, work and play near Fort Polk and the Vernon Unit of KNF.

We are pleased to present this report, and we welcome your feedback and support as we journey toward a sustainable future.

David G. Sage  
Colonel, US Army  
Commanding

Lisa Lewis  
Calcasieu District Ranger  
Kisatchie National Forest



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## APPENDIX A: SEMP

## APPENDIX B: FY 2006 Task-Level Results for Objectives 1-1 and 2-1

*"We must strive to become systems thinkers if we are to benefit from the interrelationships of the **triple bottom line** of sustainability: mission, environment, and community."*

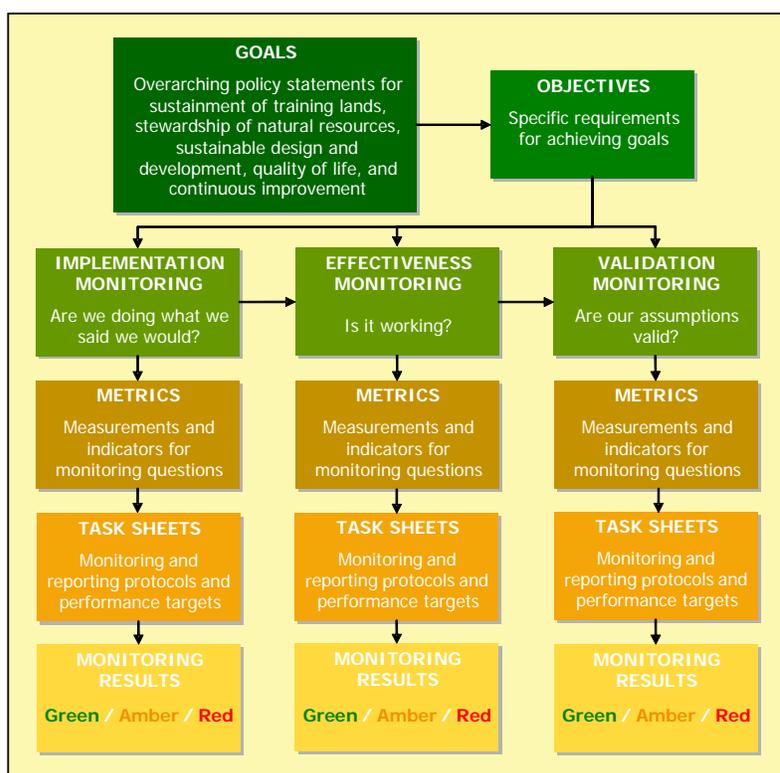
– R. L. Brownlee, Acting Secretary of the Army  
– Peter J. Schoomaker, General, United States Army, Chief of Staff

# Implementation Status: Where Are We?

Fort Polk and the Kisatchie National Forest (KNF) developed the *Sustainability and Environmental Monitoring Plan (SEMP)* in 2004 to monitor and evaluate progress toward goals and objectives established in five areas:

- ❖ Sustainable training lands;
- ❖ Biodiversity and sustainable ecosystems;
- ❖ Sustainable facilities;
- ❖ “Be Good Neighbors”; and
- ❖ Continual improvement.

The SEMP was developed as a part of the Army’s Final Environmental Impact Statement (EIS) for 2<sup>nd</sup> Armored Cavalry Regiment transformation, installation mission support, and long-term military training use of KNF lands. Fort Polk and KNF, along with the Federal Aviation Administration, worked together to complete the EIS.



**Figure 1.** SEMP structure.

The structure of the SEMP is shown in the Figure 1 above. The SEMP contains 5 goals and 14 objectives, which are linked to mitigation and environmental stewardship measures adopted in the Army and Forest Service Records of Decision for the EIS described above. Three types of monitoring questions—implementation, effectiveness and validation—are specified in the SEMP for each objective. Metrics and performance target criteria are then established by a joint Fort Polk-KNF Oversight Committee to assess whether or not goals and objectives are being met. A copy of the SEMP goals, objectives and monitoring questions is provided in Appendix A.

The Oversight Committee met three times during fiscal year (FY) 2006. Key accomplishments included development and approval of new metrics and associated performance targets, monitoring and reporting protocols in the following four areas:

- ❖ Maneuver damage identification and repair (Objective 1-1);
- ❖ Red-cockaded woodpecker population management (Objective 2-1);
- ❖ Sustainable Range Awareness training for Soldiers (Objectives 1-1, 2-1, 2-3, 4-1, and 4-3); and
- ❖ Online publication of information on opening/closure of areas on the Fort Polk and Peason Ridge Wildlife Management Areas for hunting, and scheduled training activities in the Limited Use Area of the Vernon Unit (Objective 4-1).

The FY 2006 implementation status of monitoring and evaluation for SEMP objectives is shown in Table 1. Metrics and performance targets were developed and monitoring and reporting was fully implemented for Objectives 1-1 and 2-1. Development of metrics and performance targets was also begun for Objectives 1-2, 2-2 and 4-1. A copy of the metrics and performance targets approved as of the end of FY 2006 is provided in Appendix B.

## Implementation Status: Where Are We?

**Table 1.** Summary of implementation status of monitoring and evaluation for SEMP objectives, FY 2006. Year = actual/estimated fiscal year of completion; Green = metrics and performance targets are developed, and monitoring and evaluation is ongoing; Amber = development of metrics and performance targets is in progress; Gray = development of metrics and performance targets will begin in future years.

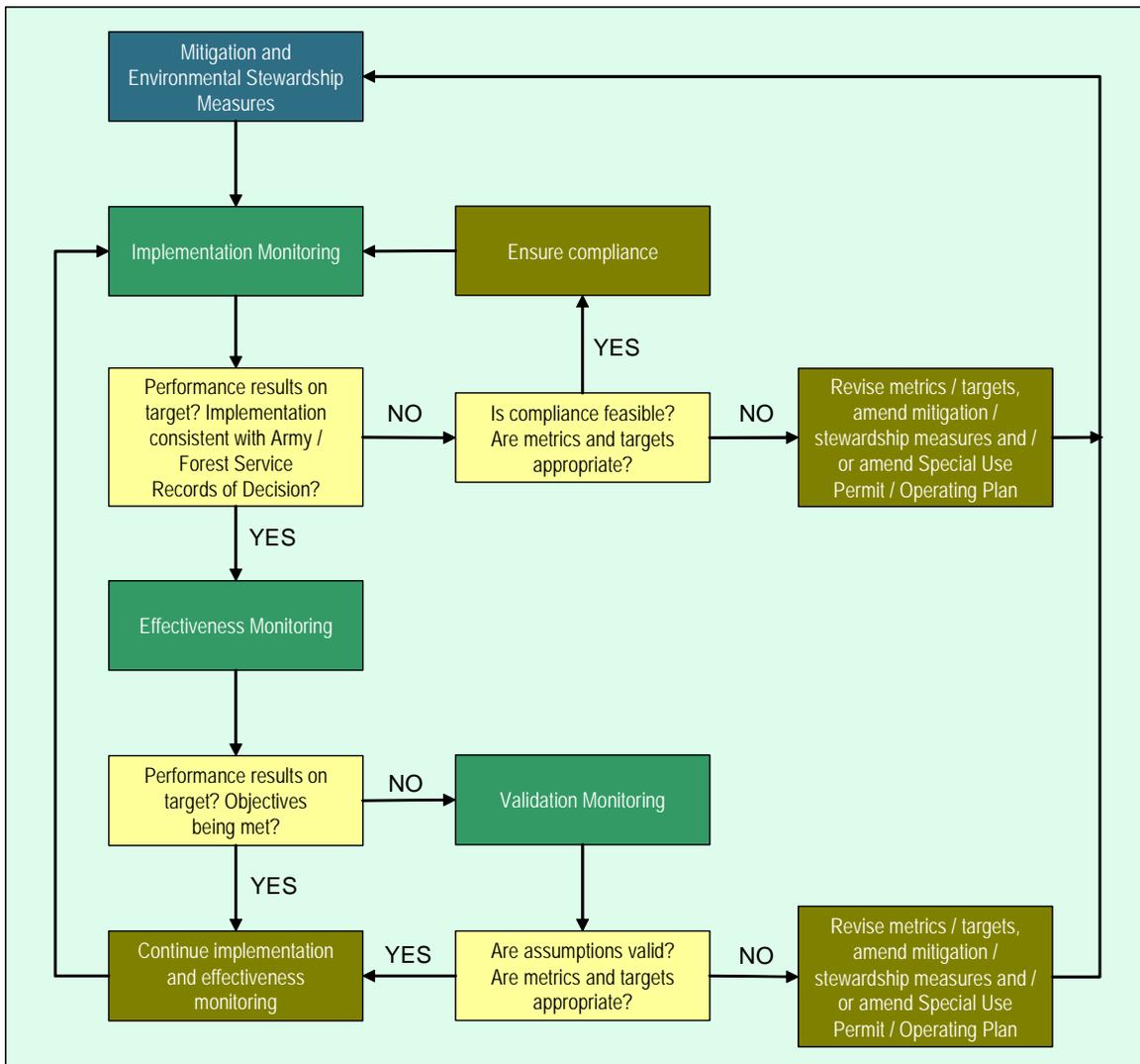
Goal	Objective	Implementation Status
Goal 1 – Ensure that training lands are sustained for long-term use. Protect and conserve soil, water and land resources.	Objective 1-1: Minimize or avoid degradation of training lands and long-term damage to soils and natural resources through identification and correction of maneuver damages and soldier Sustainable Range Awareness (SRA) training.	2006
	Objective 1-2: Sustain training land conditions and soil productivity through land rehabilitation and maintenance and watershed management practices.	2007
	Objective 1-3: Maintain high water quality and aquatic ecosystems through maintenance of stream and wetland crossing structures, roads and trails; maintenance of sediment basins; and restrictions on training activities within streams, wetlands and riparian areas	2008
Goal 2 – Manage for biological diversity and ecological integrity. Protect and conserve threatened, endangered and rare species, and restore and maintain ecosystems and ecological processes.	Objective 2-1: Promote recovery of the Vernon-Fort Polk Red-Cockaded Woodpecker (RCW) population through cooperative Fort Polk and KNF management and monitoring strategies and Soldier SRA training.	2006
	Objective 2-2: Provide high-quality habitat for the RCW, Louisiana pine snake (LPS), and other rare species native to longleaf pine landscapes. Use prescribed fire forest thinning to achieve Desired Future Conditions.	2007
	Objective 2-3: Promote viability of the LPS through cooperative management strategies, Soldier SRA training, identification of probable LPS habitat, and construction project planning.	2008
	Objective 2-4: Protect rare plants and unique wetlands habitats through identification, marking and monitoring of hillside seeps and bogs.	2008
Goal 3 – Provide functional, healthy, low-impact and cost-effective facilities through sustainable design and development.	Objective 3-1: Avoid or minimize impacts to environmentally sensitive resources and promote installation sustainability through early integration of master planning and environmental concerns.	2008
	Objective 3-2: Ensure that new facilities are designed and built to comply with requirements under the Clean Water Act, Clean Air Act, Endangered Species Act, and National Environmental Policy Act through project planning and construction phase monitoring.	2008
Goal 4 – Act as “good neighbors” to residents and communities near Fort Polk and the KNF and serve as good stewards of public lands and resources.	Objective 4-1: Support public recreation and multiple uses on the Fort Polk and Peason Ridge Wildlife Management Areas, Limited Use Area (LUA) and Special Limited Use Area (SLUA) through public outreach, scheduling activities, and Soldier SRA training.	2007
	Objective 4-2: Protect the quality of life for residents near the installation boundaries through noise monitoring, boundary line marking, fire response and suppression, and road repairs and upgrades.	2008
	Objective 4-3: Avoid risks to public safety and conflicts with civilian activities and land uses in the LUA and SLUA.	2008
Goal 5 – Monitor progress toward goals and objectives and evaluate opportunities for continual improvement of environmental and natural resource management.	Objective 5-1: Jointly monitor implementation and effectiveness of mitigation measures in the EIS/Records of Decision for 2d ACR transformation, installation mission support, and long-term military use of KNF lands; and the EA/Decision Notice on increased military use of the LUA.	2008
	Objective 5-2. Jointly evaluate and report monitoring results, and adapt operations and management accordingly.	2008

# Performance Results: How Are We Doing?

The SEMP monitoring and evaluation process is shown in Figure 2. The Fort Polk and KNF Oversight Committee reviewed monitoring results on a quarterly and annual basis in FY 2006 to evaluate the implementation and effectiveness of mitigation and environmental stewardship measures adopted by both agencies. Average FY 2006 performance results for Objectives 1-1 and 2-1 are provided in Table 2, and detailed results for each monitoring task are included in Appendix B.

Overall, performance results were Green (on target) for Objective 1-1. However, the percent of maneuver damage repairs/corrective actions completed within 30 days from the date that damages were identified (Task 1-1.3) and the percent of maneuver damage repairs that were effective (Task 1-1.5) were Red (unsatisfactory) during one or more quarters (Appendix B). These results were due in part to lag time associated with personnel transitions in installation organizations responsible for the repairs. High numbers of maneuver damages also contributed to a backlog of repairs.

The overall results for Objective 2-1 were also Green. Growth of the Vernon-Fort Polk red-cockaded woodpecker (RCW) population, as measured by the number of groups (Task 2-1.6), lagged slightly behind the target of 4.5 percent for calendar year 2005. Results for this task were Amber (below target), but all other Objective 2-1 monitoring results were Green (Appendix B).



**Figure 2.** SEMP monitoring and evaluation process.

## Performance Results: How Are We Doing?

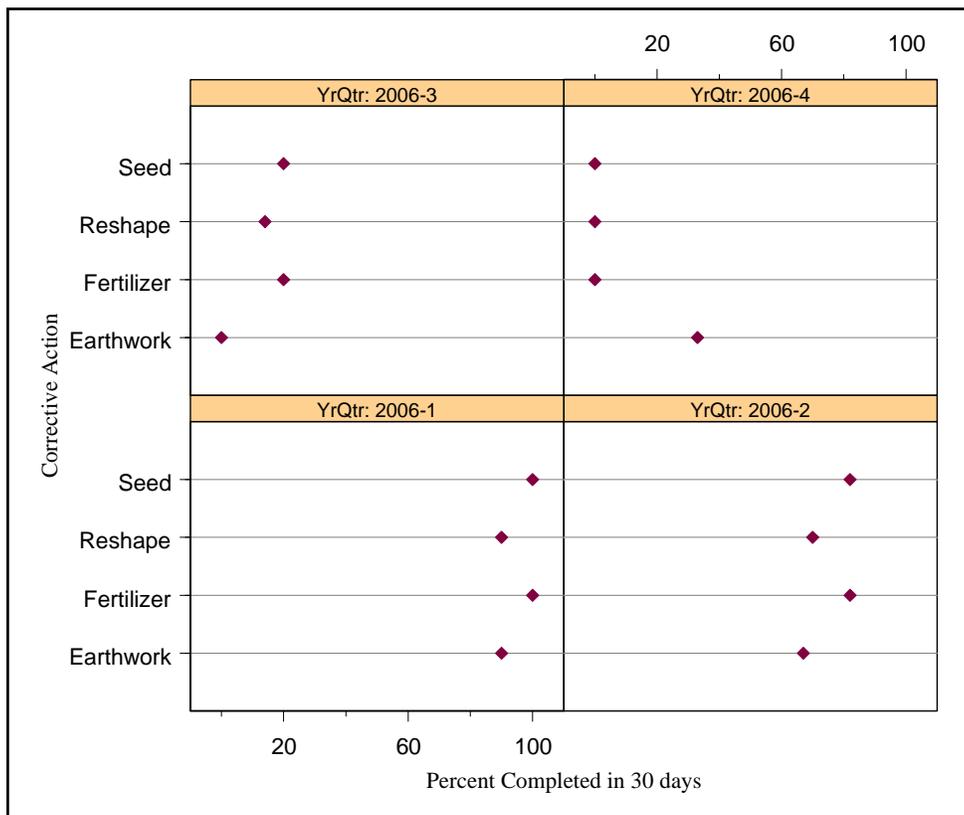
**Table 2.** Summary of average performance results for SEMP objectives. Green, Amber and Red task-level performance results are assigned points, which are summed and averaged to determine objective-level results. Year = actual/estimated fiscal year in which initial performance results are or will be available; Green = average of task level results is  $\geq 66.7$ ; Gray = results not yet available.

Goal	Objective	Performance Results
Goal 1 – Ensure that training lands are sustained for long-term use. Protect and conserve soil, water and land resources.	Objective 1-1: Minimize or avoid degradation of training lands and long-term damage to soils and natural resources through identification and correction of maneuver damages and soldier Sustainable Range Awareness (SRA) training.	2005
	Objective 1-2: Sustain training land conditions and soil productivity through land rehabilitation and maintenance and watershed management practices.	2007
	Objective 1-3: Maintain high water quality and aquatic ecosystems through maintenance of stream and wetland crossing structures, roads and trails; maintenance of sediment basins; and restrictions on training activities within streams, wetlands and riparian areas	2008
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	Objective 5-2: Jointly evaluate and report monitoring results, and adapt operations and management accordingly.	2008

## Fort Polk Maneuver Damage Control Program

In FY 2006, field inspectors identified over 350 maneuver damages resulting from military training activities occurring on Fort Polk and the Vernon Unit of the KNF, which is used by Fort Polk under a Special Use Permit and Operating Plan. The inspectors—from Fort Polk’s Range Division, the Environmental and Natural Resources Management Division, and the Calcasieu Ranger District of KNF—work together following Joint Readiness Training Center (JRTC) training exercises to locate maneuver damages and prescribe corrective actions. Their aim is to find the damages quickly so that Directorate of Public Works crews can go to work repairing the land and reestablishing vegetation. The underlying objective is to minimize and avoid long-term degradation of training land and natural resource conditions by preventing relatively small and minor damages from becoming larger and more severe.

A majority of maneuver damages identified in FY 2006 consisted of damages to roads and road rights-of-ways and ground disturbance/loss of ground cover. Other types of damages included excavations, rutting and creation of new trails. Prescribed corrective actions included earthwork, reshaping, seeding and fertilization. Figure 3 shows the percent of each type of corrective action that was completed in less than 30 days from the date that damages were identified in FY 2006. A total of 50 percent of corrective actions were completed in 30 days or less for the fiscal year as a whole. A total of 76 percent of corrective actions were completed in 60 days or less, and 98 percent of corrective actions were complete in 120 days or less.



**Figure 3.** Percent of corrective actions for maneuver damages that were completed in less than or equal to 30 days from date of identification, by fiscal quarter and corrective action type, FY 2006.

## Mitigation and Environmental Stewardship Highlights: Biodiversity and Sustainable Ecosystems

### Red-cockaded Woodpecker (RCW) Population Recovery



Fort Polk and the KNF cooperate extensively to manage the Vernon-Fort Polk RCW population, which is designated by the U.S. Fish and Wildlife Service (USFWS) as a “primary core population” for recovery of the species. The USFWS has established an overall population recovery goal of 481 active RCW clusters or 350 potential breeding groups. Forest

Service and Army property goals for population recovery are 302 and 179 active clusters, respectively. Because the RCW population spans Army and Forest Service lands used for military training, it is critical that management activities are coordinated between agencies and integrated with military training activities. Without such cooperation, the likelihood that either agency would reach its population recovery goals would be greatly diminished

Fort Polk and KNF have established target population growth rates of at least 4.5 percent per year and at least 4.5 percent over the past five years, in order to meet both short- and long range RCW population recovery goals. The number of RCW groups is the primary measure of interest when assessing population trends. Trend in the number of groups is modeled as the constant rate of change over each unit of time.

RCW population data are collected by Fort Polk and KNF during the breeding season and other time during the calendar year. For SEMP reporting purposes, the RCW population data are reported in the fiscal year following the year of collection to allow time for data processing and analysis.

As a whole, the Vernon-Fort Polk RCW population grew by 4 percent for calendar year 2005. The 5-year population growth rate (2001 through 2005) was 3 percent, with upper and lower 90 percent confidence intervals of 1.10 and 0.97, respectively<sup>1</sup>. These data indicate that, considering year-to-year variability, the population as a whole was stable to increasing over the 5-year period. The number of RCW groups in the Vernon-Fort Polk population from 1999 through 2005 is shown in Figure 4.

<sup>1</sup> Confidence intervals measure the precision of an estimated value. The interval represents the range of values, consistent with the data, that is believed to encompass the “true” value with high probability. Wider intervals indicate lower precision, narrow intervals greater precision.

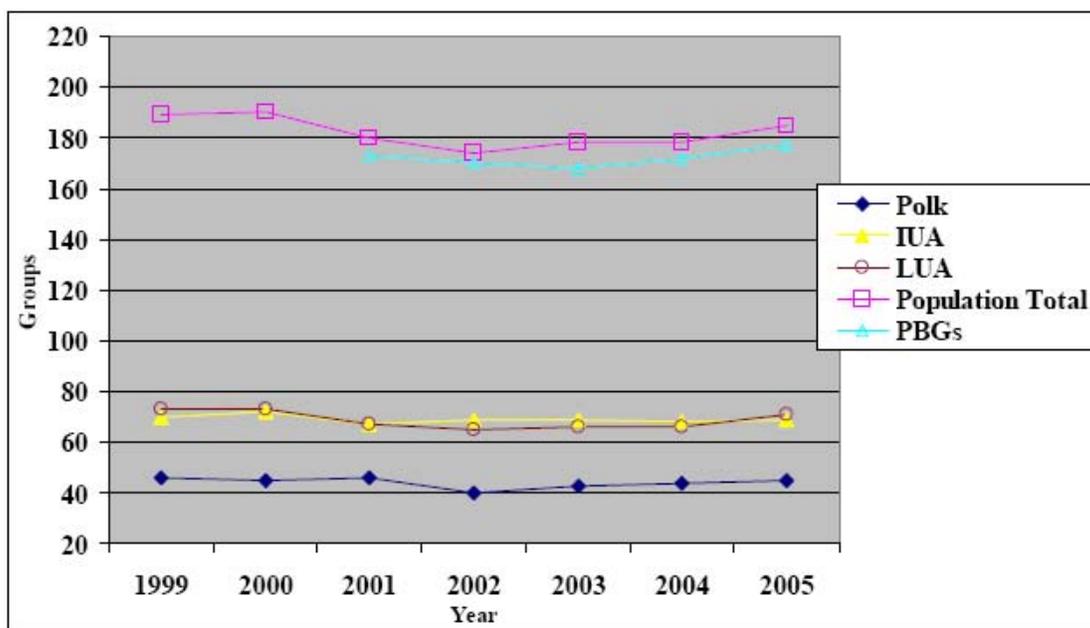
### Army Compatible Use Buffer (ACUB) Program

In June 2006, the Assistant Chief of Staff for Installation Management formally approved Fort Polk’s ACUB proposal. The Fort Polk ACUB program is a partnership between Fort Polk and The Nature Conservancy (TNC).

The primary goal of the Fort Polk program is to reduce and avoid restrictions on training capabilities resulting from endangered and candidate species management requirements. By protecting high quality habitat for the red-cockaded woodpecker (RCW) on private lands, Fort Polk can gain greater flexibility for use and development of Army property. Protection of habitat occupied by the Louisiana pine snake can promote survival of the species and reduce the need to list it under the Endangered Species Act, thereby avoiding potential future restrictions on training.

Under a cooperative agreement with Fort Polk, TNC will work with willing sellers to acquire conservation easements, fee title or development rights for properties in target areas. TNC will then manage the properties in perpetuity for conservation purposes. The first objectives under Fort Polk’s ACUB program will be to protect parcels containing good RCW habitat along the southern border of the Vernon Unit of the KNF. Possible conservation easements in this area would allow commercial timber production using longer rotations and other management practices compatible with RCW habitat requirements.

## Mitigation and Environmental Stewardship Highlights: Biodiversity and Sustainable Ecosystems



**Figure 4.** Number of groups (includes single bird clusters) in the Vernon-Fort Polk RCW population annually from 1999-2005 by administrative unit and for the population as a whole, and number of potential breeding groups (PBGs) by year (2001-2005) for the population as a whole.

In addition to joint RCW population monitoring activities, Fort Polk and KNF cooperate to accomplish RCW cluster management requirements. Annual cluster management activities include painting/repainting of white bands around cavity trees and orange bands around cluster buffer trees, and placement of signage on cluster buffer trees so that they are readily identifiable by military troops in the field. In addition, in order to reduce the risk of loss of or damage to RCW cavity trees due to wildfire, excess fuel (herbaceous and woody plant material) near the base of the trees is removed mechanically. Fort Polk and KNF biologists assess cluster conditions during the year to determine management needs, and management accomplishments are tracked in a shared database. In FY 2006, all prescribed management activities were completed, with work performed at more than 100 RCW clusters on Fort Polk, Peason Ridge and the Vernon Unit (Table 3).

**Table 3.** RCW cluster management accomplishments for FY 2006.

Management Action	Fort Polk			Peason Ridge			Vernon Unit			Total		
	# Available <sup>a</sup>	# Completed <sup>b</sup>	% Completed	# Available	# Completed	% Completed	# Available	# Completed	% Completed	# Available	# Completed	% Completed
Buffer - Establish	0	0	--	0	0	--	0	0	--	0	0	--
Buffer - Repaint	7	7	100	20	20	100	95	95	100	102	102	100
Buffer - Sign	2	2	100	9	9	100	101	101	100	103	103	100
Remove Excess Fuel Around Trees	47	47	100	22	22	100	68	68	100	115	115	100
<b>Total</b>	<b>56</b>	<b>56</b>	<b>100</b>	<b>51</b>	<b>51</b>	<b>100</b>	<b>264</b>	<b>264</b>	<b>100</b>	<b>320</b>	<b>320</b>	<b>100</b>

Notes: a Number of clusters for which the management action was recommended; b Number of clusters where the recommended management action was completed.

## Mitigation and Environmental Stewardship Highlights: Biodiversity and Sustainable Ecosystems

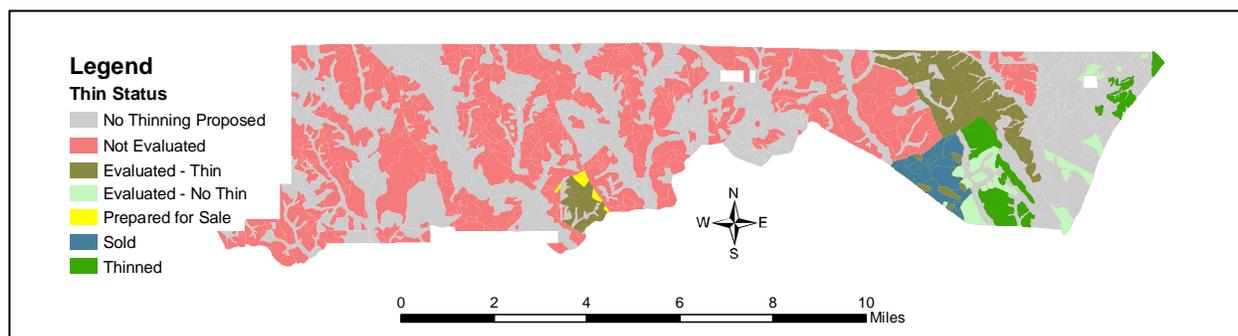
### Intensive Use Area (IUA) Forest Thinning

Beginning in 2004, the KNF began a multi-year effort to thin approximately 21,500 acres of overstocked upland pine stands in the IUA (northern portion) of the Vernon Unit. The thinning, which was evaluated in the EIS for 2<sup>nd</sup> Armored Cavalry Regiment transformation, installation mission support, and long-term land use (see Implementation Status section above), is needed to improve habitat conditions for the endangered RCW and to improve the utility of the IUA for maneuver training exercises. The thinning was planned to occur over a ten-year period, with initial targets established to conduct detailed stand inventories.

The timber sale process generally requires from 24 to 36 months to complete, from inventory to harvest. The sale process begins with an inventory of forest stands to validate the need for thinning, followed by an appraisal and timber sale, if warranted, and finally the harvest of marked timber. After inventory, stands that are determined to be unsuitable for sale are identified and removed from further consideration. The remaining stands are then appraised. Following the appraisal, merchantable acreage is identified and sale boundaries, which include many forest stands, in whole or part, are constructed. Because sale boundaries are based on the results of the appraisal, and the acres offered for sale can be less than the acres appraised, the total acres that will be offered for sale in a given year cannot be determined until after the appraisal. Likewise, the total acres that will be offered for sale over the term of the thinning project are unknown.

Figure 5 and Table 3 show the IUA thinning accomplishments from 2004 through 2006. From 1,300 to 3,100 acres were initially programmed for inventory each year. KNF has achieved 94 percent of its 2006 cumulative stand inventory goal, and 100 percent of the acres available for sale have been sold through 2006 (cumulative sale goal). However, appraisals have been completed on just 44 percent of the acres identified as suitable for appraisal through 2006. As a result of the lag in appraisal accomplishments, the overall timeline for completion of the IUA thinning could be protracted.

KNF's ability to meet its targets for IUA timber sales in 2004 and 2005 was limited by Forest Service budget reductions and staffing constraints. In addition, extensive salvage harvests of storm-damaged timber from Hurricanes Katrina and Rita decreased market demand for timber. In 2006, Fort Polk and KNF worked together to secure additional funding to help meet the IUA thinning targets and reduce the 10-year timeline for completion. The Army will provide funding to KNF in FY 2007 and 2008 to support sale preparations. The supplemental funding in FY 2007 and FY 2008 should help to speed the appraisal and sale process in future years to alleviate the gap between acres inventoried and acres sold. As this gap is closed, the overall timeline for completion of the IUA thinning can be expedited, leading to better habitat for RCWs and better training for Soldiers.



**Figure 5.** IUA timber stands evaluated and prepared for sale, sold and thinned through FY 2006.

## Mitigation and Environmental Stewardship Highlights: Biodiversity and Sustainable Ecosystems

**Table 4. Annual and cumulative IUA timber sale accomplishments through FY 2006.**

Fiscal Year	Initial IUA Acres Programmed for Inventory	Annual Acres Inventoried	Percent of Annual Inventory Goal Accomplished	Annual Inventory Acres Identified for Appraisal	Annual Acres Appraised	Percent of Annual Appraisal Goal Accomplished	Actual IUA Acres Programmed for Sale	Annual Acres Sold	Percent of Annual Sale Goal Accomplished
2004	1,292	1,464	113%	1,210	830	69%	728	452	62%
2005	2,048	1,512	74%	1,170	1,059	91%	858	351	41%
2006	2,186	2,199	101%	1,950	0	0%	0	783	100%
2007	3,101								
2008	2,915								
2009	1,509								
2010	1,631								
2011	1,898								
2012	1,960								
2013	1,528								
2014	1,985								
<b>Total</b>	<b>22,053</b>	<b>5,175</b>	<b>23%</b>	<b>4,330</b>	<b>1,889</b>	<b>44%</b>	<b>1,586</b>	<b>1,586</b>	<b>100%</b>
Fiscal Year	Cumulative Initial IUA Acres Programmed for Inventory	Cumulative IUA Acres Inventoried for Sale	Percent of Cumulative Inventory Goal Accomplished	Cumulative Inventory Acres Identified for Appraisal	Cumulative Acres Appraised	Percent of Cumulative Appraisal Goal Accomplished	Cumulative Actual Acres Programmed for Sale	Cumulative Acres Sold	Percent of Cumulative Sale Goal Accomplished
2004	1,292	1,464	113%	1,210	830	69%	728	452	62%
2005	3,340	2,976	89%	2,380	1,889	79%	1,586	803	51%
2006	5,526	5,175	94%	4,330	1,889	44%	1,586	1,586	100%
2007	8,627								
2008	11,542								
2009	13,051								
2010	14,682								
2011	16,580								
2012	18,540								
2013	20,068								
2014	22,053								

### Limited Use Area Stream Crossings

Fort Polk and KNF are working together to protect wetlands, water quality and aquatic habitat by improving stream and wetland crossing points for military vehicles in the southern portion of the Vernon Unit, known as the Limited Use Area (LUA). Fort Polk and KNF began the process of jointly identifying and evaluating potential stream crossing locations in the LUA in 2000. The crossing locations are needed to support east-west maneuvers in the LUA and to help enlarge the JRTC “maneuver box”. The environmental impacts of constructing a total of 20 proposed crossing structures were analyzed in the EIS for 2<sup>nd</sup> Armored Cavalry Regiment transformation, installation mission support, and long-term land use. Permits were obtained under Section 404 of the Clean Water Act to construct 17 of the 20 structures, which are located on small first- and second-order streams. Bridge spans and additional permits will be required for three larger crossings located on State-designated “Natural and Scenic” streams.

Fort Polk has now completed 15 of the stream crossing structures. An example crossing structure is shown in Figure 6. A majority of the structures consist of concrete bottoms installed slightly below grade to allow for more natural stream flow. The approaches to the crossings were reinforced with a layer of sand and gravel and paved with interlocking bricks to avoid erosion from vehicle movement and high stream flows.

Fort Polk is also working to systematically designate and improve stream and wetland crossing locations on the IUA and on Army-owned lands. Surveys were conducted to update the location and condition of historic crossing sites and develop baseline information. A map of approximately 110 “approved” crossing locations for military vehicles was then developed based on the updated surveys. The approved historic stream and wetland crossing locations include both improved and unimproved sites. Fort Polk plans to install crossing structures at the unimproved sites as funds become available. The sites will be prioritized for improvement by the installation’s Range and Training Lands Facilities Board, which includes a KNF representative. Both mission factors and environmental factors will be considered in establishing priorities for crossing site improvements. The map of approved stream/wetland crossing sites is also used to limit proliferation of new vehicle crossing sites. The map is provided to military units as a planning aid, and units are instructed to limit vehicle crossings to the approved locations.



**Figure 6.** Stream crossing structure in the Limited Use Area of the Vernon Unit, KNF.

## Mitigation and Environmental Stewardship Highlights: Sustainable Facilities

### Renewable Energy Workshop

The DoD is the nation's largest single consumer of energy, and the Army is the largest utilities consumer. These two facts spell trouble when coupled with other current realities: rising worldwide population, rising energy demand and prices, declining oil reserves, and high levels of instability in key oil-producing countries. With these facts in mind, in July 2006, Fort Polk hosted a sustainability workshop focused on the installation's long-term energy needs. The purpose of the workshop was to identify strategies for reducing Fort Polk's total energy consumption and increasing its use of clean, renewable energy. Representatives from Fort Polk, the Assistant Chief of Staff for Installation Management (ACSIM) and subject matter experts from the private sector attended the workshop. Don Juhasz, chief of energy and utilities policy at ACSIM, spoke about the coming paradigm shift with respect to energy and the need to decrease the nation's dependence on oil. He outlined the Army's Energy Campaign Plan, which provides a roadmap for meeting the Army's energy and water needs through the next 25 years. Keys to reducing energy consumption are: eliminate wasteful behavior; increase the efficiency of all equipment used; conserve water sources; secure energy infrastructure; and start now to switch to renewable, alternative energy sources. Workshop participants developed a series of specific goals and objectives for energy savings and transition from fossil fuels to renewable energy sources, such as solar energy, bio-diesel and ethanol. Fort Polk is developing and implementing action plans to achieve the goals and objectives developed at the workshop, along with other Federal targets for energy, environment and sustainability.



### LEED™ Training

Fort Polk staff from the Directorate of Public Works, Fort Worth District US Army Corps of Engineers, and other organizations gathered in July 2006 to learn how to design and operate buildings that are more energy efficient, healthy and environmentally friendly. The U.S. Green Building Council (USGBC) provided a two day training session at Fort Polk on its Leadership in Energy and Environmental Design (LEED) Green Building Rating System™. LEED is a nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by establishing performance standards in five areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. Structures can achieve Certified, Silver, Gold or Platinum rating levels, depending upon how many of the standard requirements they achieve. Starting in FY 2008, all new military vertical building construction projects must be capable of achieving a LEED Silver level. Benefits of LEED can include reduced environmental impact; enhanced occupant comfort and productivity; reduced operating costs; reduced or neutralized first costs; increased asset value; and optimized lifecycle economic performance. Increased performance comes from early and ongoing integration of all design disciplines. Fort Polk will identify a LEED pilot project in FY 2007 for design of a new facility and for a major building renovation project. Expertise gained through LEED training and future project experience will help Fort Polk meet its goals and objectives for sustainable design and development.



## Mitigation and Environmental Stewardship Highlights: “Be Good Neighbors”

### Noise Monitoring at Digital Multi-purpose Battle Area Course (DMPBAC)<sup>2</sup>

Fort Polk began construction of a DMPBAC at Peason Ridge training area in 2004. The course, which was largely complete in December 2006, has more than 300 moving and stationary targets, two ballistic live fire villages, and a ballistic urban assault course. The DMPBAC will support the training needs of a variety of military units from company to battalion and above. Operations at the DMPBAC are scheduled to begin in 2007, which will bring an increase in live fire activities and associated air and ground traffic moving to and from the area.

Residents living near the DMPBAC expressed concerns to Fort Polk that noise from the new live fire range would disrupt their day-to-day activities and affect their quality of life. Fort Polk’s Public Affairs Office has long maintained a dedicated phone line to receive complaints about noise and other military-related concerns. Complaints are forwarded to the appropriate organization for resolution, and steps are taken to avoid reoccurrences. The complaining citizen is then contacted with an explanation of how their complaint was addressed. But anticipated future increases in noise levels at the DMPBAC prompted Fort Polk to take a more proactive approach.

In June 2006, the environmental staff at the Fort Polk Directorate of Public works conducted a test to determine how to reduce future noise levels at the DMPBAC. Because most noise complaints at Fort Polk have historically been related to military aircraft operations, the study focused on how aircraft flight paths and altitudes could be modified to reduce noise impacts on neighboring communities. Portable noise monitoring equipment (Figure 7) was set up at five points along a 1.5 mile stretch of LA Hwy 117, just east of the DMPBAC, to measure the decibel level of aircraft at various altitudes and airspeeds. Three types of aircraft—Kiowa (OH-58) and Blackhawk (UH-60) helicopters and an F-16 fighter jet—flew along designated approach routes to the DMPBAC where houses were absent. Helicopter noise levels were collected at altitudes ranging from 200 to 1,000 feet and speeds of 120 to 160 knots. Noise from the F-16 was measured at altitudes from 200 to 5,000 feet, including a low altitude pass using the plane’s afterburners.

The data collected from the test allowed Fort Polk to determine how much noise was created by each type of aircraft along its flight path and for approximately three quarters of a mile in either direction. The test results indicate that operation of the aircraft at lower altitudes produces lower noise levels that are less likely to produce complaints. The lowest decibel levels were at the following altitudes: Kiowa, 200 to 300 feet; Blackhawk, 200 to 1,000 feet; and F-16, 1,000 to 2,000 feet. Fort Polk will use these data to adjust future aircraft operations at the DMPBAC as needed to “fly friendly”.



**Figure 7.** A noise monitor records the decibel level of a Kiowa helicopter as it approaches the DMPBAC.

In addition to the noise test described above, Fort Polk has installed five permanent noise monitors near the boundary of the Peason Ridge training area. The permanent monitors were set up to determine baseline (pre-DMPBAC) noise levels and to record noise levels on an ongoing basis. The data collected can be used to better respond to noise complaints and to identify adaptive measures to mitigate noise impacts on adjacent residents.

<sup>2</sup> Adapted from Fort Polk Guardian article dated July 28, 2006, and other sources.



Sustainability and  
Environmental  
Monitoring Plan



# Sustainability and Environmental Monitoring Plan

Goal and Objective	Monitoring Question	Monitoring Level
<b>Goal 1:</b> Ensure that training lands are sustained for long-term use and maintained in world-class conditions. Protect and conserve basic soil, water and land resources so that forest ecosystems endure for future generations.		
<b>Objective 1-1:</b> Minimize or avoid degradation of training lands and long-term damage to soils, vegetation, streams and wetlands, and sensitive environmental resources through identification and correction of maneuver damages and soldier Sustainable Range Awareness education.	Are maneuver damages identified following all home station and rotational training exercises? Are adequate opportunities for maneuver damage inspections and repairs provided on the training calendar?	Implementation
	Are maneuver damages corrected within reasonable time periods? Are adequate opportunities for maneuver damage inspections and repairs provided on the training calendar?	Implementation
	Are soldiers with all units training at JRTC and Fort Polk provided Sustainable Range Awareness instruction on ways to protect soils, vegetation, streams and wetlands, and sensitive environmental resources during field operations?	Implementation
	Are programs for identification and correction of maneuver damages, installation range regulations for environmental protection, and soldier education programs minimizing or avoiding long-term damage to soils, vegetation, streams and wetlands, and sensitive environmental resources?	Effectiveness
	Is the maneuver damage inspection and repair program adequately identifying and repairing damages that need corrective action?	Validation
	Are maneuver damage inspection and repair procedures adequate?	Validation
<b>Objective 1-2:</b> Sustain training land conditions and long-term soil productivity. This is accomplished by implementing land rehabilitation and maintenance practices designed to minimize soil erosion and compaction, limit soil loss, restore or maintain vegetative cover, and restore disturbed or degraded areas to natural conditions. Develop and update watershed management plans for Fort Polk and Kisatchie National Forest (KNF) training lands and prioritize land rehabilitation and maintenance activities within and across watersheds based on watershed conditions and training area carrying capacity.	Are land rehabilitation and maintenance (LRAM) practices being implemented to minimize erosion, compaction, and loss of soil productivity?	Implementation
	Are adequate opportunities for LRAM or other training land sustainment activities provided on the training calendar?	Implementation
	Are watershed management plans completed or in development for all training lands where ground disturbing activities are permitted? Are plans reviewed annually to evaluate the need for updates?	Implementation
	Are rehabilitation and maintenance activities prioritized and applied within and across watersheds based on watershed conditions and training area carrying capacity?	Implementation
	Are disturbed and degraded areas being restored and revegetated to a natural condition?	Effectiveness
	Are allowable soil loss rates being exceeded? Are bare or sparsely vegetated areas increasing within some or all training areas?	Effectiveness
	Are LRAM practices improving or maintaining conditions within training areas and watersheds?	Validation
<b>Objective 1-3:</b> Protect and maintain high water quality and aquatic ecosystems by preventing excessive siltation to surface water resources due to training activities, conserving wetlands and streamside/riparian areas, providing for stream bank stability and natural flow regimes. This is achieved through maintenance of stream and wetland crossing structures, roads and trails, and sediment basins; and restrictions on training activities within streams, wetlands and riparian areas	Are stream and wetland crossing structures, roads and trails on Fort Polk and KNF lands maintained to prevent siltation to streams and wetlands and to preserve natural flow regimes?	Implementation
	Are sediment basins inspected and maintained in a functional condition?	Implementation
	Are training aids kept current on designated stream/wetland crossing points for military vehicles?	Implementation
	Are maintenance practices for stream and wetland crossing structures, roads and trails preventing siltation to streams and wetlands and maintaining natural hydrology?	Effectiveness
	Are sediment basins protecting downstream water resources?	Effectiveness
	Are troops crossing stream/wetland areas at designated sites only?	Effectiveness
	Are management practices protecting and maintaining water quality and aquatic ecosystems?	Validation
<b>Goal 2 –</b> Manage for biological diversity and ecological integrity. Protect and conserve threatened, endangered and rare species, and restore and maintain ecosystems and ecological processes at landscape and local scales.		

## Sustainability and Environmental Monitoring Plan

Goal and Objective	Monitoring Question	Monitoring Level
<b>Objective 2-1:</b> Promote recovery of the Vernon-Fort Polk Red-Cockaded Woodpecker (RCW) population through cooperative Fort Polk and KNF management and monitoring strategies. Conduct population monitoring in accordance with the Joint Monitoring Plan, educate soldiers on the RCW and its habitat, and maintain RCW cluster resources to minimize the occurrence of unauthorized training activities within cluster boundaries and reduce the threat of cavity tree loss due to military related wildfires.	Are Fort Polk and the KNF cooperating to promote recovery of the Vernon-Fort Polk RCW population? Is RCW population monitoring conducted in accordance with the Joint Monitoring Plan?	Implementation
	Are soldiers with home station and rotational units provided instruction on the RCW, its habitat, and restricted activities within RCW clusters?	Implementation
	Are RCW cavity trees and cluster boundaries painted and marked with signage so that they are identifiable during daytime and nighttime hours by troops in the field? Are excess fuels removed within RCW clusters to reduce the potential for loss of cavity trees due to military related wildfires?	Implementation
	Are management practices, installation regulations, and troop educational programs preventing damage or disturbance to RCW clusters due to training activities?	Effectiveness
	Is the Vernon-Fort Polk RCW population growing? Are population recovery goals being met?	Validation
<b>Objective 2-2:</b> Provide high-quality habitat for the RCW, Louisiana pine snake, and other rare species native to longleaf pine landscapes. Use prescribed fire to maintain open longleaf pine forest conditions and natural plant communities, with an emphasis on growing season burns, and conduct thinning as planned on approximately 21,500 acres of upland pine stands within the Intensive Use Area to achieve Desired Future Conditions. Maintain suitable RCW habitat at the appropriate scale and distribution as identified in the Fort Polk Endangered Species Management Plan (2003) and the Revised Land and Resource Management Plan for the KNF (1999).	Are open, frequently burned longleaf pine forest conditions being maintained to provide suitable habitat for the RCW and other native species?	Implementation
	Are both Fort Polk and the KNF meeting annual prescribed burning goals?	Effectiveness
	Are sufficient opportunities provided on the annual training calendar for prescribed burning, both inside and outside of designated Green Periods?	Effectiveness
	Is the KNF meeting annual goals for thinning of upland pine stands on the IUA?	Effectiveness
	Are sufficient opportunities provided on the annual training calendar for IUA thinning, both inside and outside of designated Green Periods?	Effectiveness
	Is suitable habitat for the RCW available at the scale and distribution designated in the Fort Polk ESMP and Revised KNF Plan?	Validation
<b>Objective 2-3:</b> Promote viability of the Louisiana pine snake (LPS) through cooperative management strategies designed to minimize the potential for listing of the LPS as a threatened/endangered species. Minimize or avoid adverse impacts to the snake and its habitat through soldier education, identification of probable LPS habitat, and through integration of LPS habitat/pocket gopher mound survey and monitoring data with project planning.	Are Fort Polk and the KNF conducting management strategies designed to minimize the potential for listing of the LPS as a threatened/ endangered species, in accordance with the Candidate Conservation Agreement for the Louisiana Pine Snake on Federal Land in Louisiana and Texas?	Implementation
	Are soldiers training at the JRTC and Fort Polk provided instruction on the LPS and ways to identify and protect it and its habitat?	Implementation
	Are surveys for LPS and its habitat/pocket gopher mounds conducted at proposed construction sites or sites proposed for other fixed operations/improvements (e.g., LRAM projects, log decks, firing points, assembly areas)?	Implementation
	Are Fort Polk and KNF management strategies minimizing or avoiding harm to the LPS and pocket gopher mounds or other areas identified as probable habitat?	Effectiveness
	Is the LPS population responding positively to Fort Polk and KNF management strategies?	Validation
<b>Objective 2-4:</b> Protect rare plants and unique wetlands habitats through identification, marking and monitoring of hillside seeps and bogs. Develop and maintain GIS locations and data on the condition of high quality seeps and bogs on Fort Polk and KNF training lands, and monitor annually for potential training impacts. Maintain signage marking high quality seeps and bogs "off-limits" to vehicle movement and digging in the LUA.	Are GIS locations and data maintained on the condition of high quality hillside seeps and bogs on Fort Polk and KNF lands? Are high quality seeps and bogs monitored annually for potential training impacts?	Implementation
	Are signs maintained around high quality hillside seeps and bogs in the LUA, including a buffer area, to identify them as off-limits to vehicle movement and digging?	Implementation
	Are management strategies adequately protecting high quality seeps and bogs from adverse impacts due to training?	Effectiveness

## Sustainability and Environmental Monitoring Plan

Goal and Objective	Monitoring Question	Monitoring Level
<b>Goal 3 – Provide for and maintain functional, healthy, low-impact and cost-effective facilities and infrastructure by integrating master planning, engineering and environmental concerns. Conserve natural resources and energy, and reduce generation of wastes and pollutants by fully incorporating the principles of sustainable design and development.</b>		
<b>Objective 3-1:</b> Avoid or minimize impacts to environmentally sensitive resources and promote installation sustainability through early integration of master planning and environmental concerns.	Are screening/ alternatives analyses conducted as needed during the site selection process for new facilities?	Implementation
	Are new facilities sited to avoid or minimize impacts to sensitive environmental resources?	Effectiveness
	Are master planning practices helping promote sustainable facilities and infrastructure in a cost effective manner?	Validation
<b>Objective 3-2:</b> Ensure that new facilities are designed and constructed to comply with requirements under the Clean Water Act (CWA), Clean Air Act (CAA), Endangered Species Act (ESA), and National Environmental Policy Act (NEPA). This is achieved by including limits of construction and clearing, Section 401/404 permit requirements, site-specific mitigation measures and other environmental conditions in construction design plans and specifications; ensuring that Storm water Pollution Prevention Plans (SWP3) are implemented for all construction sites one acre or more; and by monitoring during and after construction to ensure adherence to plans and specifications.	Do construction plans and specifications clearly identify environmental protection requirements under the CWA, CAA, ESA and NEPA, including Section 401/404 permit conditions, US Fish and Wildlife Service Biological Opinions, mitigation measures and other environmental requirements?	Implementation
	Is an SWP3 implemented for each construction site one acre or greater (cumulative acreage for project)?	Implementation
	Are construction sites monitored at appropriate intervals during and after construction to ensure compliance with construction plans and specifications and other applicable environmental requirements?	Implementation
	Are new facilities constructed in accordance with applicable requirements under the CWA, CAA, ESA and NEPA?	Effectiveness
	Are construction practices, including storm water management practices, preventing excessive discharge of pollutants to streams and wetlands?	Effectiveness
	Are facility design and construction programs/procedures adequate to ensure compliance with the CWA, CAA, ESA and NEPA?	Validation
<b>Goal 4 – Act as “good neighbors” to residents and communities near Fort Polk and the KNF and serve as good stewards of public lands and resources. Manage training lands and resources for public safety and provide fair public access to training lands for recreation and other non-training uses.</b>		
<b>Objective 4-1:</b> Support opportunities for public recreational and other multiple use activities on the Fort Polk and Peason Ridge Wildlife Management Areas (WMAs), the Limited Use Area (LUA) and Special Limited Use Area (SLUA). This is accomplished by providing up-to-date information on area closures, training schedules and activities on the WMAs, LUA, and SLUA; maximizing opportunities for hunting on opening weekends/ special hunts for deer (modern fire arms), turkey and squirrel seasons; scheduling training activities to accommodate recreational events and other public activities on the LUA and SLUA; and by educating soldiers on training restrictions for the use of recreational facilities and maintained recreational trails.	Is up-to-date information on training schedules/activities in the LUA and SLUA, and on areas open for hunting on the WMAs published on the internet, information kiosks and other media?	Implementation
	Are opportunities provided for hunting during opening weekends/special hunts for deer (modern fire arms), turkey and squirrel seasons?	Implementation
	Are recreational events or other public activities in the LUA and SLUA accommodated?	Implementation
	Are soldiers provided instruction on restrictions for use of recreational facilities and maintained recreational trails in the LUA/SLUA?	Implementation
	Are methods adequate for publicizing information on training schedules/activities in the LUA and SLUA, and on areas open for hunting on the WMAs?	Effectiveness
	Have opportunities for hunting on the Fort Polk or Peason WMAs, or in the LUA, been affected by military training activities? Are areas and time periods that are not used for training made available for hunting?	Effectiveness
	Are conflicts that arise between training activities and recreational events in the LUA/SLUA effectively resolved?	Effectiveness
	Are military activities resulting in damages to recreational facilities or maintained recreational trails in the LUA and SLUA?	Effectiveness
	Overall, are hunting and other approved recreational uses of the WMAs, LUA and SLUA adversely affected by military activities?	Validation

## Sustainability and Environmental Monitoring Plan

Objective	Monitoring Question	Monitoring Level
<b>Objective 4-2:</b> Protect the quality of life for residents and communities living in the LUA and near the installation boundaries. This is accomplished by monitoring of noise levels in the LUA and near the Peason Ridge Training Area boundary; maintaining land line markings, fire lines and wildfire fire response plans to avoid trespass and damage to private property; repairing military-related damages to public roads in the LUA in accordance with agreements with Vernon Parish Policy Jury, and upgrading LUA roads as required to support military traffic; and responding expeditiously to public concerns and complaints regarding military activities.	Are noise levels monitored continuously in the LUA and adjacent to the NE boundaries of Peason Ridge?	Implementation
	Unless otherwise requested by the property owner, are land lines between private property and KNF lands clearly marked on the ground as needed to alert soldiers to avoid private lands?	Implementation
	Are permanent fire lines maintained around private property in the LUA?	Implementation
	Is the use of incendiary devices suspended as needed on "high risk" days for forest fires?	Implementation
	Are plans in place to respond to military-related wildfires in the LUA?	Implementation
	Are maneuver damages to LUA roads repaired in a timely manner?	Implementation
	Are LUA roads upgraded when necessary to support increased military use?	Implementation
	Is the Fort Polk PAO complaint hotline operational? Is an initial response to public concerns/complaints regarding training activities in the LUA and SLUA provided within 24 hours of receipt?	Implementation
	Are Fort Polk guidelines for off-post noise levels exceeded?	Effectiveness
	Are land line markings and other mechanisms adequate to avoid trespass by troops on private lands?	Effectiveness
	Are fire control and response measures adequate to protect public safety, private property and natural resources in the LUA from training-related wildfires?	Effectiveness
	Is military traffic adversely affecting the condition of public roads in the LUA?	Effectiveness
	Are military activities causing disruption of civilian traffic in the LUA?	Effectiveness
	Overall, are military activities adversely affecting the quality of life for LUA residents and communities living near the installation?	Validation
	Is Fort Polk experiencing encroachment on its training mission from development or other uses or policies governing private lands?	Validation
<b>Objective 4-3:</b> Conduct military activities in a manner to avoid risks to public safety or conflicts with other activities in the LUA approved under Forest Service Special Use Permits (SUP) or other authorizations. This is achieved by scheduling military convoys to avoid school bus routes; conducting blackout driving in accordance with SUP/Operating Plan terms and conditions; identifying pipelines and utility lines on the ground and on training maps; scheduling/conducting training activities to provide access for other permitted uses; and by educating soldiers on other permitted uses and activities in the LUA and related training restrictions.	Are military convoys scheduled to avoid school bus routes in the LUA?	Implementation
	Is blackout driving in the LUA conducted in accordance with SUP/Operating Plan terms and conditions?	Implementation
	Are pipelines and utility lines identified on the ground and on training maps/overlays, as needed?	Implementation
	Are training activities scheduled and conducted to avoid conflicts with oil and gas operations or other permitted activities in the LUA?	Implementation
	Are soldiers provided instruction on cattle grazing allotments and other permitted activities in the LUA, and related training restrictions?	Implementation
	Are conflicts occurring between military convoys and school buses?	Effectiveness
	Have damages or conflicts occurred involving blackout driving in the LUA?	Effectiveness
	Have damages or conflicts occurred involving military activities and pipelines, utility lines, or other permitted uses in the LUA?	Effectiveness
	Are military activities resulting in conflicts between cattle grazing allotments or other permitted activities in the LUA?	Effectiveness
	Overall, are military activities compatible with civilian activities and land uses in the LUA?	Validation

## Sustainability and Environmental Monitoring Plan

Objective	Monitoring Question	Monitoring Level
<b>Goal 5</b> – Monitor to provide feedback regarding progress toward accomplishing mutual Fort Polk and KNF goals and objectives. Evaluate opportunities for continuous improvement of environmental and natural resource management practices and procedures, and adapt management strategies according to new information..		
<b>Objective 5-1:</b> Jointly monitor to document annual progress for the implementation and effectiveness of mitigation measures identified in the Records of Decision for the EIS on 2d ACR transformation, installation mission support, and long-term military use of KNF lands; and the Decision Notice for the EA on increased military use of the LUA.	Are Fort Polk and the KNF preparing and distributing an annual Sustainability and Environmental Monitoring Report?	Implementation
	Are Fort Polk and the KNF jointly implementing and evaluating mitigation measures and monitoring results?	Implementation
<b>Objective 5-2.</b> Jointly evaluate and report monitoring results, and adapt operations and management accordingly.	Are operations and management practices adapted through time and identified in the annual Sustainability and Environmental Monitoring Report, and in the Special Use Permit/Operating Plan, as needed?	Implementation



Fiscal Year 2006  
Task-Level Results for  
Objectives 1-1 and 2-1



# Fiscal Year 2006 Task-Level Results for Objectives 1-1 and 2-1

Objective 1-1 Metrics, Performance Target Criteria and Performance Results for FY 2006

Task#	Metric	Reporting Frequency	Performance Target Criteria			Performance Results			
			Green	Amber	Red	1 QTR 06	2 QTR 06	3 QTR 06	4 QTR 06
1-1.1	Percent of training exercises for which maneuver damage inspections were accomplished; and percent of training exercises for which adequate time was allocated on the training calendar for maneuver damage inspections.	Quarterly	Inspections were fully completed for 100% of training exercises (home station and rotational events).	Inspections were fully completed for 80 - 99% of training exercises (home station and rotational events).	Inspections were completed for < 80% of training exercises (home station and rotational events).	Green (100%)	Green (100%)	Green (100%)	Green 100%
1-1.2	Percent of repairs/corrective actions completed within 30 days from the date that damages were identified; and percent of required repairs for which adequate time was allocated on the training calendar.	Quarterly	>75% of corrective actions are completed in 30 days or less.	50% - 75% of corrective actions are completed in 30 days or less.	< 50% of corrective actions are completed in 30 days or less.	Green (93%)	Amber (69%)	Red (16%)	Red (20%)
1-1.3	Ratio of SRA certified soldiers to minimum number of required RSOs per MSC; ratio of SRA certified O/Cs to assigned O/Cs.	Annually	≥ 1.0 for all units	< 1.0 for one or more units and ≥ 0.95 for all units	< 0.95 for one or more units	N/A (Annual)	N/A (Annual)	N/A (Annual)	Green (2.2)
1-1.4	Trends for frequency, type and severity of maneuver damages.	Quarterly	N/A	N/A	N/A	No trend	No trend	No trend	No trend
1-1.5	Percent of corrective actions that were determined to be effective based on site re-inspections.	Quarterly	> 90 % of damage repairs are effective.	75-90% of damage repairs are effective	< 75 % of damage repairs are effective.	Green (100%)	Green (100%)	Red (24%)	Green (100%)
1-1.6	Trends for violations of range regulations/permit conditions for environmental protection.	Quarterly	N/A	N/A	N/A	No trend	No trend	No trend	No trend
1-1.7	Percent bare ground for "sandbox" (SB) areas and forest maneuver (FM) areas	Annually	Upper 95% confidence limit of the median percent bare ground is < 20% SB / 5% FM	Upper 95% confidence limit (CL) of the median percent bare ground is ≥ 20% SB / 5% FM, and the median percent bare ground is ≤ 20% SB / 5% FM	Median percent bare ground is > 20% SB / 5% FM	N/A (Annual)	N/A (Annual)	N/A (Annual)	Amber (FM: median = 0, CL = 0; SB: median = 15.6, CL = 28.1)
1-1.8	Number of new historic damage sites identified annually.	Annually	< 15 historic sites identified per year.	15-30 historic sites identified per year.	> 30 historic sites identified per year.	N/A (Annual)	N/A (Annual)	N/A (Annual)	Green (n=2)

## Fiscal Year 2006 Task-Level Results for Objectives 1-1 and 2-1

Objective 2-1 Metrics, Performance Target Criteria and Performance Results for FY 2006

Task#	Metric	Reporting Frequency	Performance Target Criteria			Performance Results
			Green	Amber	Red	4 QTR 06
2-1.1	Percentage of critical JMP activities completed within prescribed time frames.	Annual	100% completion of critical JMP requirements in accordance with prescribed time frames	≥85% completion of critical JMP requirements in accordance with prescribed time frames	<85% completion of critical JMP requirements in accordance with prescribed time frames	Green (100%)
2-1.2	Ratio of SRA certified soldiers to minimum number of required RSOs per MSC; ratio of SRA certified O/Cs to assigned O/Cs.	Annual	≥ 1.0 for all units	< 1.0 for one or more units and ≥ 0.95 for all units	< 0.95 for one or more units	Green (See Report for Task 1-1.3)
2-1.3	Percent of RCW clusters requiring painting, signing and/or fuel removal that received those maintenance activities on Fort Polk and KNF lands utilized by the Army for training.	Annual	Maintenance was accomplished for greater than or equal to 90 percent of clusters that required maintenance on Army and Forest Service land (IUA and LUA)	Maintenance was accomplished for 70-89 percent of clusters that required maintenance on Army and Forest Service land (IUA and LUA)	Maintenance was accomplished for <70 percent of clusters that required maintenance on Army and Forest Service land (IUA and LUA)	Green (100%)
2-1.4	Trends for violation of range regulations for protection of the RCW.	Quarterly	N/A	N/A	N/A	No trend
2-1.6	Change in number of groups within the Vernon-Fort Polk RCW population	Annual	Population (number of groups) increased at a rate of ≥4.5% per year (annual λ) or over the past 5 years (multi-year λ).	Population (number of groups) changed at a rate of between <4.5% increase to <9.5 decrease per year (annual λ) and over the past 5 years (multi-year λ).	Population (number of groups) declined at a rate of ≥9.5 per year (annual λ) or over the past 5 years (multi-year λ) (Critical decline = 10% decline per RCW Recovery Plan).	Amber (2005 growth = 4%; 5-year growth = 3%.)



