

SUSTAINING FORT POLK'S ENVIRONMENT FOR A SECURE FUTURE

2015

Environmental Management Performance Review



Published March 2016



AN ANNUAL REPORT TO
JRTC AND FORT POLK'S TOP MANAGEMENT

Environmental Management Performance Review

An Annual Report to
Joint Readiness Training Center
and Fort Polk's Top Management

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FOREWORD

It is intended that the publication of this comprehensive annual Environmental Management Performance Review (EMPR) will prove to be a helpful resource for the Joint Readiness Training Center (JRTC) and Fort Polk leadership, installation planners, and environmental impact analysts. This document presents environmental program performance information in the form of concisely written topical overviews supplemented by tables and charts which track changes from year to year. This annual review can significantly assist post leaders in identifying long-term trends in program performance and in planning for the future of the JRTC and Fort Polk. Since its first publication in 2001, this document has been especially helpful in maintaining compliance with the National Environmental Policy Act and in carrying out the tasks required by the Fort Polk Environmental Management System (EMS).

This EMPR includes performance indicators, performance standards, and an overall evaluation of program performance for each environmental program area. This EMPR method of analysis reflects the intention of the Installation's Top Management to monitor and objectively measure Fort Polk's environmental performance.

Special thanks are due to Mr. Jim Caldwell, Public Affairs, Kisatchie National Forest for the cover photograph of the restored Longleaf Pine Forest. The technical writing skills and final editing by Anne Tollett are gratefully acknowledged.

**Charles H. Stagg, Chief
Environmental and Natural Resources Management Division
Directorate of Public Works**

2015 EMPR Program Summary

Program Areas	Program Components	Driver	2015 Rating
Program Management	EMS	EO, AR	GREEN
	IEAP	AR	AMBER
	EPAS	AR	AMBER
	Environmental Training	PL, AR	GREEN
Conservation	NEPA	PL, AR	AMBER
	Conservation Ecology	AR	GREEN
	Endangered Species	PL, AR	GREEN
	Cultural Resources	PL, AR	AMBER
	Pest Management	PL, AR	AMBER
	Maneuver Training Impacts & Mitigative Measures	AR	GREEN
Environmental Compliance	Storm Water Protection	PL	GREEN
	Surface Water Quality	PL	AMBER
	Hazardous Waste Generation	PL	GREEN
	Hazardous Materials	AR	GREEN
	Installation Restoration	PL	GREEN
	Solid Waste	PL	GREEN
	Petroleum Storage Tanks	PL	GREEN
	Asbestos	PL	GREEN
	Lead Based Paint	PL	GREEN
	EPCRA	PL	GREEN
	Indoor Air Quality	AR, PL	GREEN
	Air Quality	PL	GREEN
	Petroleum and Hazardous Material Spills	PL	GREEN
	Pollution Prevention	AR	GREEN
	Recycling	AR	GREEN
	Noise	PL, PC	AMBER

PL – Public Law PC – Public Commitment EO – Executive Order AR – Army Regulation

SECTION 1
SOCIOECONOMIC INDICATORS

1.1 Population (*LaVersa M. Wiltz*)

Population data for Fort Polk have been recorded since the first quarter of Fiscal Year (FY) 1980. The population data is collected from the Army Stationing and Installation Plan Common Operating Picture, which is produced by DA, and reflects the authorized planning population for all Army Installations. The data is collected in two categories, military personnel and military dependents. From 1980 to 1991, while the 5th Infantry Division was at Fort Polk, the military personnel ranged from a high of 20,999 military personnel to a low of 12,036 military personnel. During 1991, the 5th Infantry Division was transferred from Fort Polk to Fort Hood and the JRTC was stationed at Fort Polk. As a result, the population at Fort Polk began to decrease annually. In 1995, the population decrease began to stabilize. From 1995 to date, the military personnel population remained in a range of a high of 9,837 to a low of 8,802 and the military dependent population remained in a range of a high of 14,952 dependents to a low of 12,086 dependents. The annual population data from 1980 to date is shown in Table 1-1.1 below.

In 2015, the military personnel population decreased by 210 personnel from 8,497 personnel in 2014 to 8,287 personnel in 2015, a 2.5% decrease in military personnel. The military dependent population also decreased in 2015 by 231 dependents from 12,915 dependents in 2014 to 12,684 dependents in 2015, also a 1.8 % decrease in military dependents.

The school enrollments of military dependents in Vernon and Beauregard Parishes were obtained from data maintained by local school districts. The large majority of the military children have attended school in Vernon Parish in the Leesville area. The federal government requires parishes to maintain enrollment data for five years and compensates each school district on a per child basis. The 1991-92 school year witnessed the highest military dependent school enrollment with over 5,200 children. Since then, the military dependent school enrollment has fluctuated between about 2,900 and 4,000 students. In 2015, the number of students enrolled in Vernon Parish and Beauregard Parish schools increased by 203 students from 3,035 students in 2014 to 3,238 students in 2015, a 6.3 % increase in enrolled students.

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**TABLE 1.1-1
POPULATION**

FISCAL YEAR	TOTAL MILITARY PERSONNEL	TOTAL MILITARY DEPENDENTS	SCHOOL ENROLLMENT
1980	12,036	12,622	No Data
1981	13,171	13,872	No Data
1982	13,237	15,549	No Data
1983	14,022	16,922	No Data
1984	14,432	18,551	No Data
1985	14,384	19,091	No Data
1986	14,335	19,582	No Data
1987	14,690	21,184	No Data
1988	14,757	22,549	No Data
1989	14,574	20,979	No Data
1990	15,361	22,144	No Data
1991	20,999	37,890	5,007
1992	15,157	23,500	5,255
1993	11,561	18,117	4,052
1994	10,613	16,445	3,708
1995	9,497	13,667	3,766
1996	8,376	13,361	3,231
1997	7,802	12,402	3,324
1998	8,331	12,909	3,194
1999	8,328	12,504	3,343
2000	8,490	12,557	3,585
2001	8,703	12,967	3,379
2002	9,077	13,656	3,343
2003	8,385	12,745	3,521
2004	8,873	13,487	3,574
2005	8,089	12,295	3,118
2006	7,951	12,086	2,930
2007	8,997	13,675	2,900
2008	9,078	13,799	3,062
2009	9,506	14,449	3,507
2010	9,837	14,952	3,609
2011	9,536	14,495	3,326
2012	9,583	14,566	3,352
2013	9,390	14,273	3,284
2014	8,497	12,915	3,035
2015	8,287	12,684	3,238

FIGURE 1.1-1

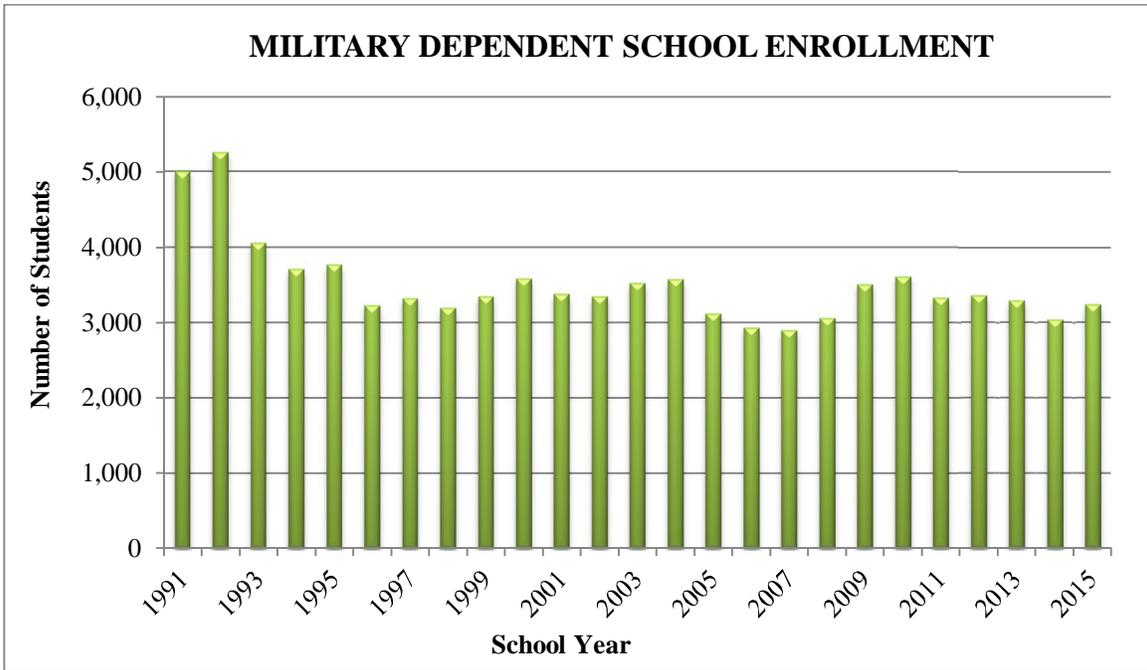
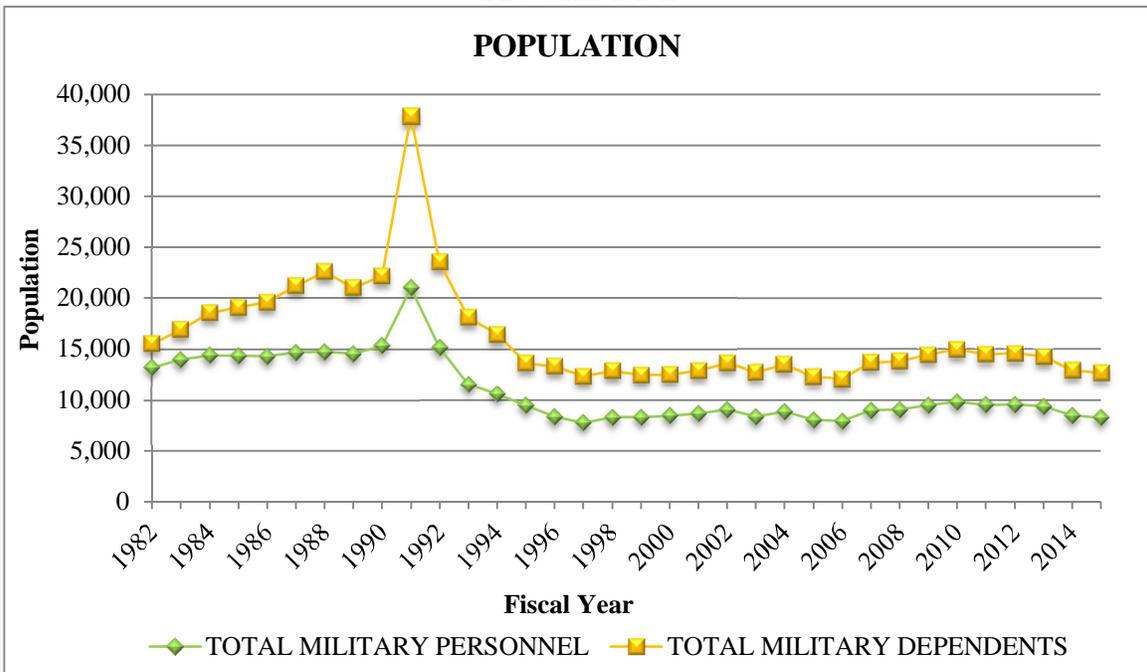


FIGURE 1.1-2



1.2 Economic Impact (*LaVersa M. Wiltz*)

Fort Polk directly affects local economies through personnel payroll for military, civilian, and contract employees; retiree pay (military and DA civilian); construction projects; supply and equipment purchases; utilities; and impact aid for local schools. The annual total economic impact of Fort Polk on Louisiana and east Texas is calculated each year using the initial fiscal year budget. Initial projections for each year are typically updated six months later on the basis of year-to-date expenditures and projected expenditures for the remainder of the year. The installation's current economic impact is compared to the 1993 baseline, which is the first year the residual troop numbers from the 5th Infantry Division transfer from Fort Polk to Fort Hood and the stationing of the JRTC at Fort Polk was totally complete.

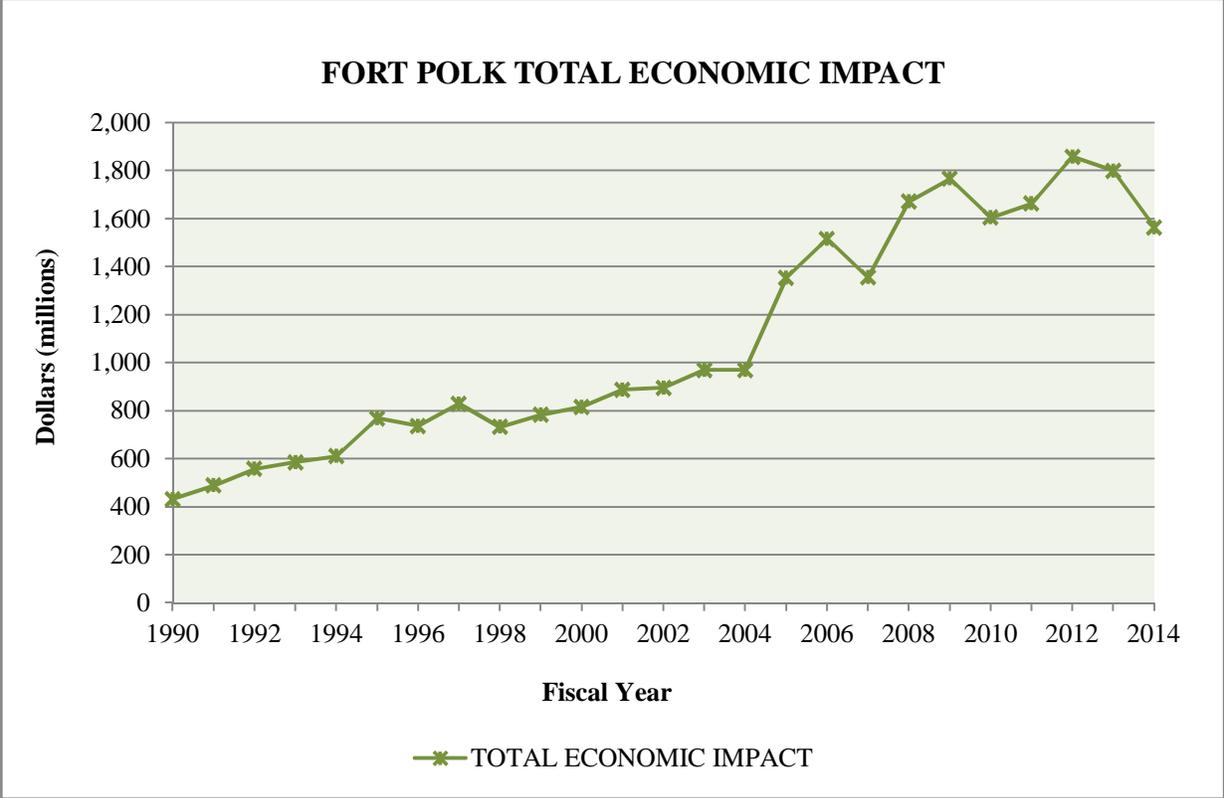
In 2014, the estimated total economic impact of Fort Polk on the region was \$1,564 million dollars. From FY93 to FY14, the annual economic impact has increased by \$978 million dollars. The total economic impact of Fort Polk on the surrounding area has exceeded \$100 million dollars annually since 2005. Payroll (military, civilian, PX, contracts) and retiree pay account for approximately 93% of JRTC and Fort Polk's FY14 economic impact. In FY14, major construction projects accounted for 1.2% of the total economic impact. The remaining 5.8% is accounted for by equipment, supply purchases, utility expenditures, leases, purchased care, Residential Communities Initiative (RCI) Housing, and aid to schools. From FY93 to FY14, the military payroll increased by \$276 million, but decreased by \$19 million from FY13 to FY14. The civilian payroll also increased from FY93 to FY14 by \$37 million, but decreased by \$6 million from FY13 to FY14.

From FY93 to FY14, the economic impact from retiree pay increased \$247 million, and increased by \$1 million from FY13 to FY14. In FY14, the economic impact from supply and equipment purchases decreased by \$15 million from FY13. Major construction projects (over \$750,000) have a significant impact on the area's economy. Economic impacts from these large projects have ranged from a low of \$10 million in FY97 to a high of \$198 million in FY09. From FY13 to FY14, the economic impact from major construction projects decreased by \$24 million. In addition to major construction projects, capital investment by the privatized partners has remained strong. Since 2005, \$374 million has been used for RCI Housing. Fort Polk purchases electricity and natural gas from local, private utility companies. Annual utility expenditures have ranged from a low of \$11 million to a high of \$36 million in FY13. From FY13 to FY14, the annual utility expenditures decreased by \$19 million. Aid for local schools has ranged from a low of \$2 million to a high of \$8 million. In FY14, the aid for local schools was \$6 million, no change from FY13. The payroll and economic impact from all categories are shown in Table 1.2-1 and the total annual Fort Polk economic impact is shown in Figure 1.2-1.

**TABLE 1.2-1
ANNUAL PAYROLL AND ECONOMIC IMPACT**

ANNUAL PAYROLL (millions)										
FISCAL YEAR	MILITARY	DA CIVILIAN	PX, CONTRACTS AND OTHER (Leases, Purchased Care, Tuition Assistance)	MILITARY & CIVILIAN RETIREE PAY	UTILITIES	SUPPLIES & EQUIPMENT	MAJOR CONSTRUCTION	RESIDENTIAL HOUSING (RCI)	IMPACT AID FOR LOCAL SCHOOLS	TOTAL ECONOMIC IMPACT
1990	315	71	43	*	*	*	*	*	4	433
1991	384	72	33	*	*	*	*	*	*	489
1992	264	76	37	143	12	22	0	0	4	558
1993	200	77	57	149	11	51	37	NA	4	586
1994	200	89	56	155	12	71	24	NA	4	611
1995	211	96	115	211	14	75	44	NA	3	769
1996	205	96	112	224	14	61	23	NA	3	738
1997	284	97	99	232	14	92	10	NA	2	830
1998	201	102	104	238	12	62	12	NA	3	734
1999	209	102	104	241	13	100	12	NA	3	784
2000	219	107	116	248	14	93	16	NA	4	817
2001	243	109	115	255	18	109	35	NA	4	888
2002	253	110	129	260	11	109	19	NA	5	896
2003	290	120	141	263	12	109	30	NA	5	970
2004	290	120	141	263	12	109	30	NA	5	970
2005	373	84	386	273	14	104	86	28	7	1,355
2006	373	86	418	286	14	178	117	36	8	1,516
2007	373	96	310	301	19	90	111	49	7	1,356
2008	405	105	568	336	19	121	52	58	7	1,671
2009	407	113	448	361	18	149	198	66	7	1,767
2010	440	116	368	375	24	137	83	56	6	1,606
2011	533	131	461	373	27	73	36	25	5	1,664
2012	439	150	659	391	22	93	82	16	7	1,859
2013	495	120	621	395	36	63	44	20	6	1,800
2014	476	114	467	396	17	48	20	20	6	1,564

FIGURE 1.2-1



1.3 Water Use

Fort Polk purchases the potable water supplied to the installation from American Water Military Services Group. Potable water provided by American Water originates from 12 supply wells located on the installation. In October 1991, there were 17 active supply wells on post. Since 1991, six wells have been capped and one additional water supply well has been installed. The installation utilizes four water treatment plants to treat potable water obtained from these active supply wells.

Presently, seven supply wells obtain groundwater from the Williamson Creek Aquifer and range in depth from 573 feet to 912 feet below ground surface. Five other wells obtain groundwater from the Carnahan Bayou Aquifer. The depths of these wells range from 635 to 1,415 feet below ground surface. The Williamson Creek and Carnahan Bayou aquifers also provide water to local communities and rural residences. The recharge area for both aquifers is located 7 to 15 miles northwest of Fort Polk (USGS, 1989).

Annual water production totaled for the period October 2014 to October 2015 was 732,191 gallons. This includes water production for South Fort Polk, North Fort Polk, and the North Fort Polk Housing water treatment plants. Fort Polk's annual water production rate since 1997 has ranged from a high of 1.315 billion gallons in 1999 to a low of 686,027 million gallons in 2013.

**TABLE 1.3-1
ANNUAL FORT POLK WATER USE**

FISCAL YEAR	NORTH FORT (000)	NORTH FORT HOUSING (000)	SOUTH FORT (000)	TOTAL GALLONS	MGD
1997	163,807	94,623	722,978	981,408,000	2.68
1998	187,228	123,410	869,455	1,180,093,000	3.23
1999	214,877	217,618	882,194	1,314,689,000	3.60
2000	197,385	150,037	786,333	1,133,755,000	3.10
2001	220,210	114,871	716,580	1,051,661,000	2.88
2002	216,016	117,430	821,753	1,155,199,000	3.16
2003	213,460	89,166	798,255	1,100,881,000	3.02
2004	228,975	98,129	786,796	1,113,900,000	3.05
2005	180,480	81,873	760,338	1,022,691,000	2.80
2006	113,586	91,697	734,755	940,038,000	2.58
2007	96,492	87,758	686,729	870,979,000	2.39
2008	115,205	128,665	615,657	859,527,000	2.35
2009	126,855	65,458	591,880	784,193,000	2.15
2010	157,508	82,198	604,722	844,428,000	2.30
2011	191,573	71,047	683,502	946,122,000	2.59
2012	174,294	69,015	561,411	804,720,000	2.20
2013	98,357	64,459	523,211	686,027,000	1.88
2014	82,821	66,731	615,340	764,892,000	2.10
2015	109,662	67,805	554,724	732,191,000	2.01

MGD= million gallons per day

FIGURE 1.3-1

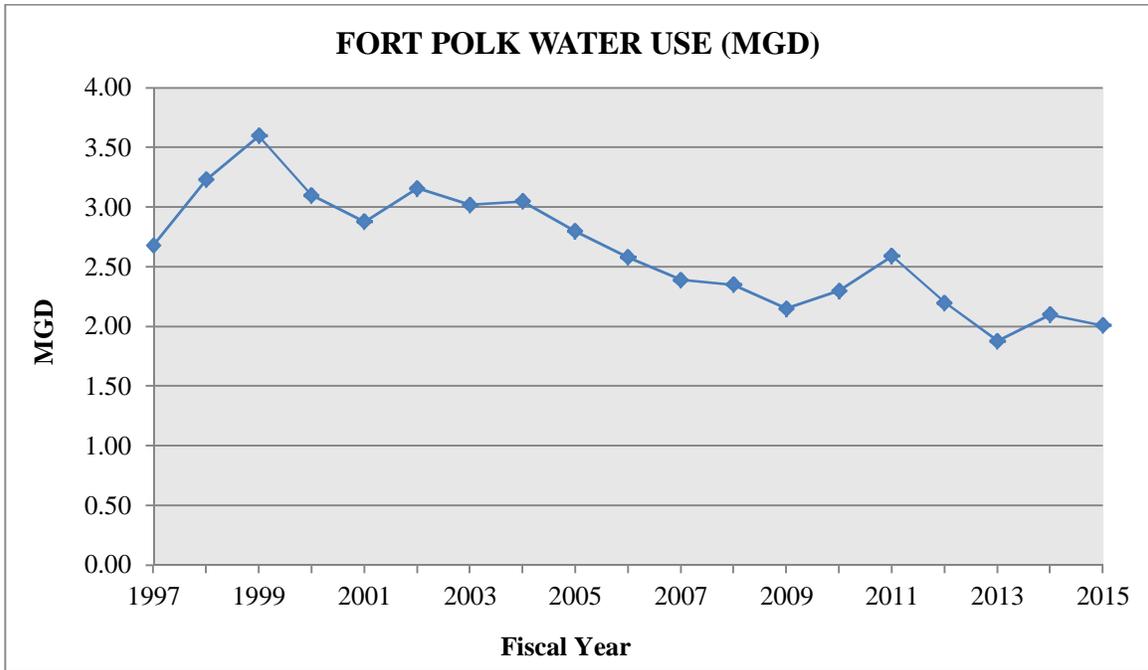


FIGURE 1.3-2

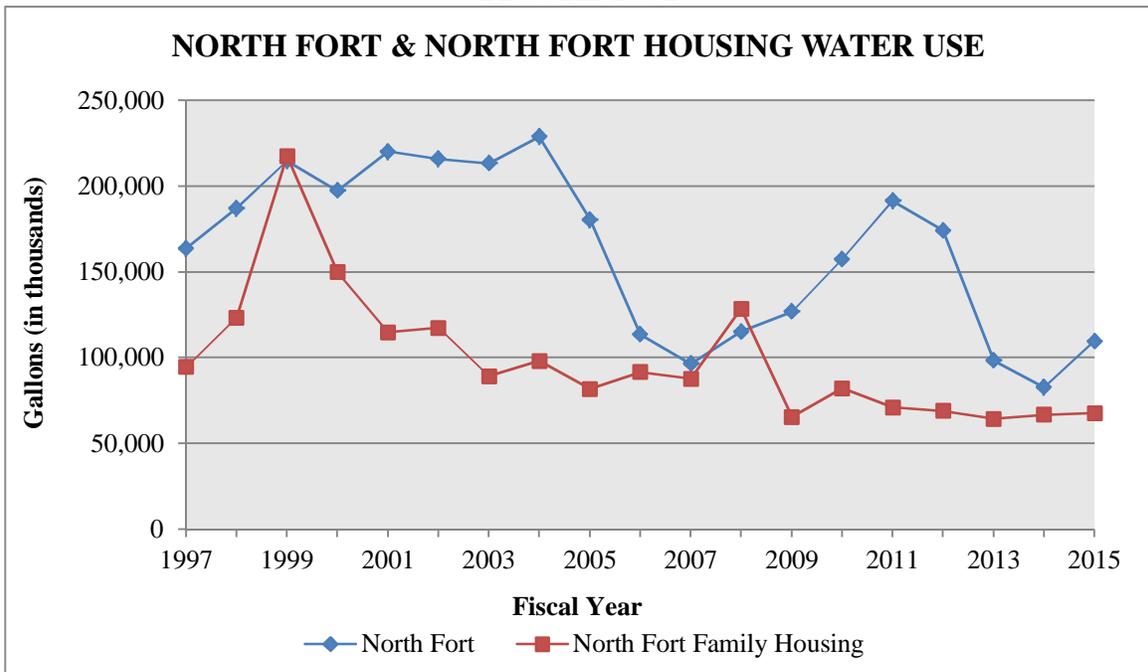
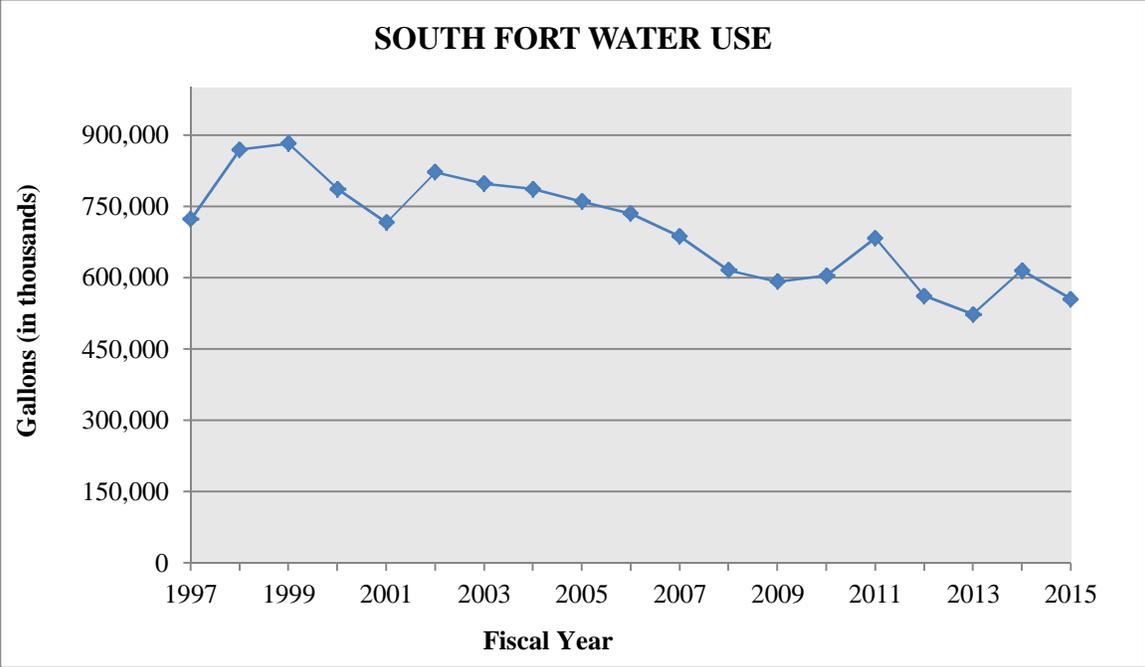


FIGURE 1.3-3



1.4 Energy Use (*Betty M. Beinkemper*)

The two primary energy sources utilized by Fort Polk are natural gas and electricity. Natural gas is measured in thousand cubic feet (KCF) and electricity is measured in megawatt-hours (MWH). Energy use is tracked in the cantonment area. The quantity of energy used in the cantonment area is compared to building space to obtain energy consumption per square foot of building space. Fort Polk housing is privatized and is not included in the building space used to determine consumption per square foot. The installation's current energy consumption levels are compared to the 1991 consumption baseline, which is the first year data was collected for this document.

Fort Polk's 2015 natural gas consumption decreased by 47,099 KCF from 251,339 KCF in 2014 to 204,240 KCF in 2015, which is a 19% decrease. Overall, the consumption of natural gas has decreased since 1991 from 543,495 KCF to 204,240 KCF in 2015, a 62.42% decrease. This is a total decrease of 339,255 KCF from 1991 consumption levels, cutting the installation's consumption of natural gas significantly since 1991. Fort Polk's 2015 electricity consumption decreased by 3,843 MWH from 145,253 MWH in 2014 to 141,410 MWH in 2015, which is a 2.65% decrease. Overall, the consumption of electricity has decreased since 1991 from 207,611 MWH in 1991 to 141,410 MWH in 2015, a 31.89% decrease. This is a total decrease of 66,201 MWH from 1991 consumption levels, cutting the installation's consumption of electricity significantly since 1991.

Building space in the cantonment area decreased from 9,281,000 square feet in 1991 to 8,473,000 square feet in 2015. In 2015, the post demolished 67,488 square feet of building space. Natural gas consumption per square foot of building space decreased from 0.059 KCF in 1991 to 0.024 KCF in 2015. Electricity use per square foot of building space has increased from 0.0124 MWH in 1991 to 0.0241 MWH in 2015.

In 2014, the installation published a revised energy policy and adopted a post-wide energy strategy designed to further reduce consumption. A renewable energy workshop was also conducted targeting reductions in a) overall consumption, b) rates of consumption, and c) dependency on fossil fuels. The new energy strategy will reduce Fort Polk's overall consumption in the long-term; however, the installation's annual energy consumption is affected by the number of Soldiers deployed during a given year.

FIGURE 1.4-1

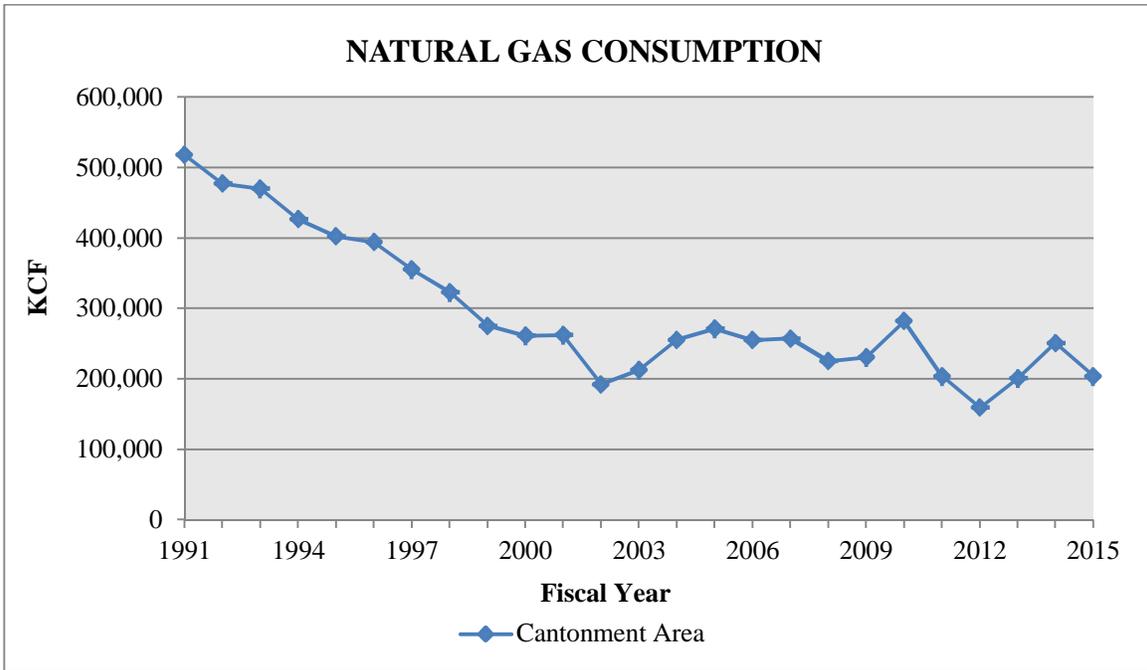


FIGURE 1.4-2

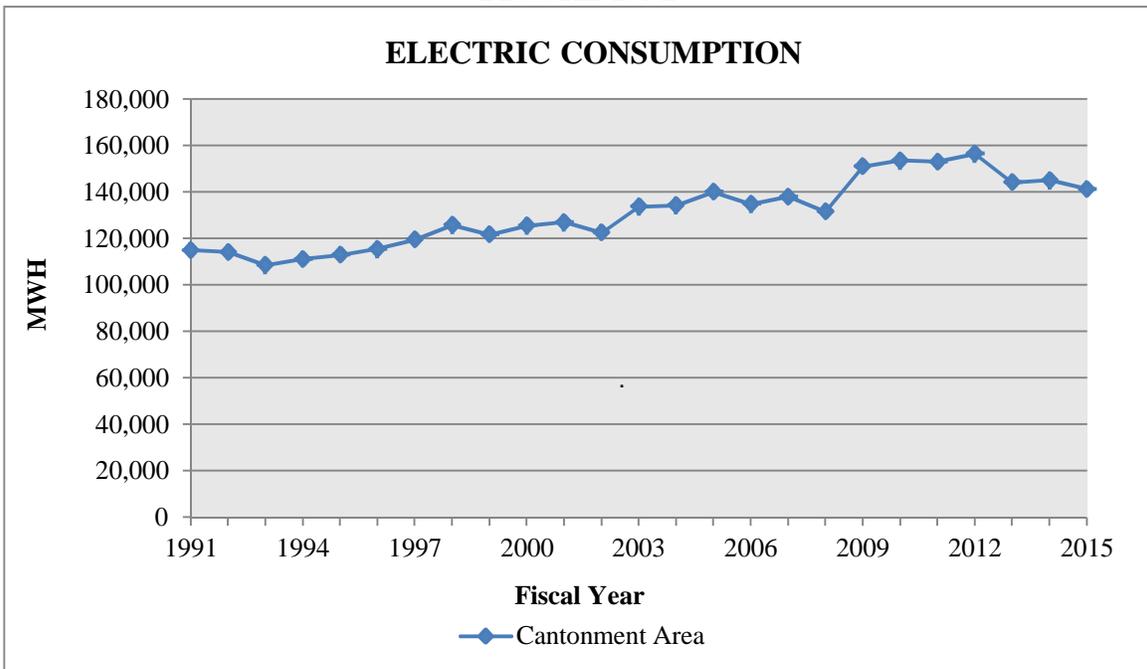


TABLE 1.4-1
ENERGY USAGE

FISCAL YEAR	TOTAL GAS (KCF)	TOTAL ELECTRIC (MWH)	CANTONMENT AREA GAS (KCF)	HOUSING GAS (KCF)	CANTONMENT AREA ELECTRIC (MWH)	HOUSING ELECTRIC (MWH)
1991	543,495	207,611	518,182	25,313	115,108	92,503
1992	503,485	201,988	477,836	25,649	114,316	87,672
1993	490,080	190,460	470,514	19,566	108,627	81,833
1994	447,618	200,877	426,997	20,621	111,206	89,671
1995	425,397	202,477	402,848	22,549	112,979	89,498
1996	433,141	185,897	394,743	21,905	115,632	70,007
1997	377,588	182,033	355,756	21,832	119,575	62,458
1998	346,602	191,322	323,803	22,799	125,897	65,425
1999	280,502	184,010	275,918	4,584	121,826	62,184
2000	266,178	189,245	261,594	4,584	125,574	63,671
2001	267,278	200,273	262,694	4,584	127,102	73,171
2002	197,225	192,315	192,641	4,584	122,673	69,642
2003	217,615	182,331	213,031	4,584	133,814	48,517
2004	260,241	194,066	255,797	4,584	134,370	59,696
2005	271,753	151,607	271,753	0*	140,098	11,059*
2006	255,214	142,474	255,214	0*	135,009	7,465*
2007	257,542	141,889	257,542	0*	138,087	3,802*
2008	225,389	132,241	225,389	0*	131,699	542*
2009	230,993	151,141	230,993	0*	151,141	0*
2010	282,584	153,756	282,584	0*	153,756	0*
2011	204,310	153,141	204,310	0*	153,141	0*
2012	159,584	156,851	159,584	0*	156,581	0*
2013	201,286	144,232	201,286	0*	144,232	0*
2014	251,339	145,253	251,339	0*	145,253	0*
2015	204,240	141,410	204,240	0	141,410	0

KCF = Thousand Cubic Feet

MWH = Mega Watt Hours

*Housing was privatized in 2004.

1.5 Fuel Use (*Harvey D. Skinner*)

The major types of vehicle and equipment fuel used on Fort Polk are Jet A (previously JP-8), diesel, and Gasoline Unleaded Regular (GUR) previously referred to as MOGAS. The Directorate of Logistics (DOL) Transportation Motor Pool (TMP) maintains records of the amount of fuel dispensed for military vehicles and equipment, as well as vehicles utilized by government civilian employees and contractors through the General Service Administration (GSA).

Fuel can be obtained from four primary locations on the installation: the North Fort Fueling Point, the South Fort Bulk Fueling Point (Fort Polk Airfield), the JRTC Operations Group (OPS) Maintenance Yard, and the DOL Prepositioning (PREPO) Yard. Additionally, fuel is dispensed for aviation activities by the DOL-TMP at the Fort Polk Airfield. GSA vehicles can also obtain fuel from the Army Air Force Exchange Service (AAFES) service stations using government credit cards. However, fuel records from AAFES facilities are maintained separately from DOL records. The annual consumption of all fuels on the installation is affected by the number of Soldiers deployed each year.

Historically, many military vehicles and equipment used diesel. Since 1988, the Army has been transitioning its diesel and GUR powered vehicles and equipment to use JP-8. Beginning in 2015 the DOD began to phase out JP-8 and transition to Jet A. Jet A fuel is logistically a more readily available fuel compared to JP-8. Total military diesel fuel consumption, by both tenant and JRTC rotational units, decreased by 69% overall from CY99 (477,382 gallons) to CY14 (135,744 gallons). There were small increases in diesel usage in CY04 to CY05, and declines in CY06, CY07 and CY14. From CY14 to CY15, an increase in diesel usage of 67,684 gallons was noted. In 2009, limited quantities of B20 biodiesel became available for use in some TMP vehicles. From CY09 to CY15, Fort Polk has consumed over 225,731 gallons of biodiesel, an average of 32,247 gallons per year. Equipment and vehicles such as generators, buses, heavy equipment, and National Guard vehicles on Fort Polk still use conventional diesel fuel.

The quantity of GUR issued by Fort Polk generally increased from CY00 (347,150 gallons) to CY05 (537,690 gallons) due to expansion of training and services on the installation. In CY06, CY07, CY13 and CY14 the quantity of GUR issued by Fort Polk decreased. From CY14 to CY15, there was an increase of 12,704 gallons in the quantity of GUR issued. The amount of GUR issued by AAFES annually has generally increased since CY00 and has never fallen below the 4,349,563 gallons issued in CY00.

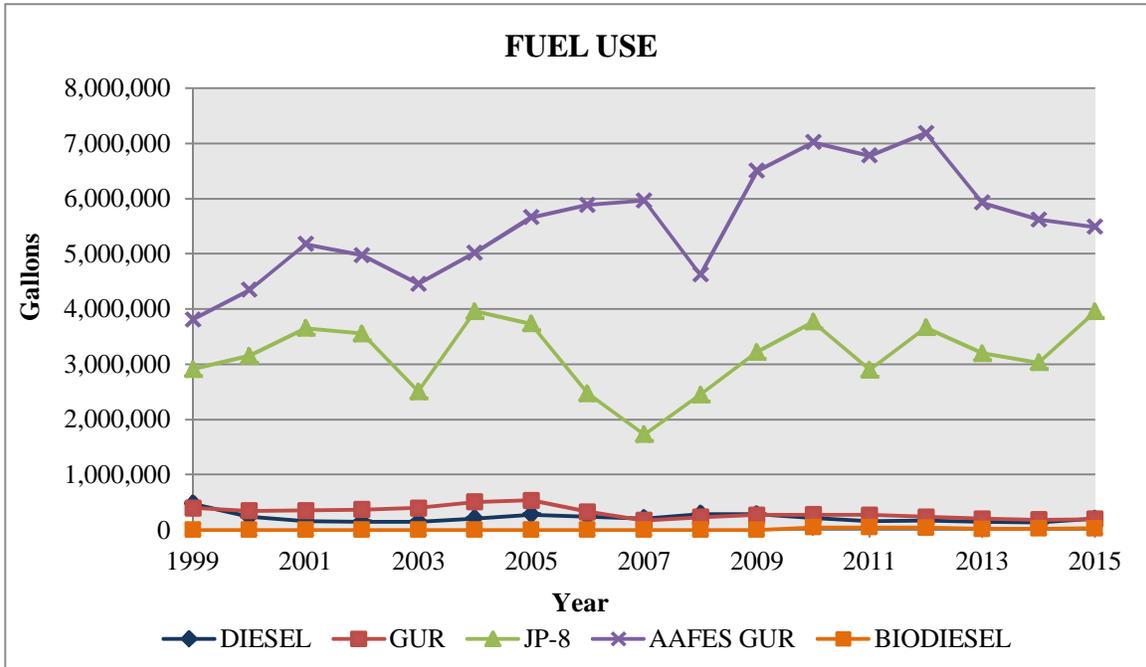
The amount of JP-8 issued by Fort Polk significantly increased between CY99 (2,916,073 gallons) and CY05 (3,737,485 gallons). In CY07, the quantity of JP-8 was 30% less (1,732,187 gallons) than the quantity issued in CY06. From CY14 to CY15, an increase of (919,507 gallons) Jet A issued was noted. Since 1999, DOL has been responsible for dispensing all JP-8 or Jet A used on the installation. Jet A use at the airfield sometimes exceeds 20,000 gallons per day. Including the AAFES fuel issued, more gallons of GUR were issued on the installation in CY15 than the quantities of Jet A, diesel and biodiesel combined.

**TABLE 1.5-1
FUEL USE**

YEAR	DIESEL	BIODIESEL	GUR	JP-8	AAFES GUR
1999	477,382	--	399,279	2,916,073	3,812,567
2000	239,616	--	347,150	3,155,087	4,349,563
2001	166,747	--	354,001	3,659,295	5,178,969
2002	152,604	--	372,650	3,562,972	4,978,169
2003	154,484	--	403,235	2,510,841	4,460,336
2004	213,029	--	508,701	3,962,196	5,025,825
2005	280,160	--	537,690	3,737,485	5,665,434
2006	247,426	--	330,935	2,477,686	5,891,398
2007	209,547	--	174,569	1,732,187	5,969,288
2008	293,708	--	232,219	2,451,887	4,627,622
2009	286,510	4,522	276,223	3,227,190	6,506,370
2010	221,389	47,903	279,221	3,774,263	7,022,743
2011	160,720	47,435	275,945	2,900,728	6,782,011
2012	178,447	41,734	237,910	3,670,897	7,193,262
2013	148,300	22,115	205,893	3,203,508	5,929,913
2014	135,744	28,313	186,002	3,038,081	5,626,685
2015	203,428	33,709	198,706	3,957,588	5,494,112

Figures are in gallons

FIGURE 1.5-1



1.6 Military Training (*Stephen W. Chadwick*)

Fort Polk was initially established in 1941 as Camp Polk. Construction of the installation began in January of that same year. The installation is named after the Right Reverend Leonidas Polk, the first Episcopal Bishop of the Diocese of Louisiana and an important field general in the Confederate Army. Camp Polk was used during the Louisiana Maneuvers, a series of large-scale, armored maneuvers conducted prior to the United States' entry into World War II. During World War II, approximately eight million troops were trained on the installation. Following the war, the installation was closed in 1946.

The installation was reopened in 1950 due to the beginning of the Korean War. Approximately 30,000 Soldiers were trained at Fort Polk during the war. Two large-scale exercises called Sage Brush and King Cole were also conducted at the installation during this time period. The installation was closed again in 1954. Eighteen months later, the installation was reopened and served as the home of the 1st Armored Division until 1958 when it was again closed.

The occurrence of the Berlin Crisis prompted the reopening of Fort Polk in 1961. The 49th Armored Division and its 12,000 troops were the major tenants of the installation during this time. In 1962, Fort Polk became an infantry training center. In 1965, advanced infantry training began at the installation in preparation for the Vietnam War. Due to the dense, jungle-like vegetation that occurs on portions of the installation, Fort Polk was used extensively for basic training of Soldiers being deployed to Southeast Asia. In 1973, Fort Polk was the only infantry training center in the United States Army. Basic infantry training continued at Fort Polk until 1976. From 1961 to 1976, over one million troops received their basic infantry training, advanced infantry training, or combat support training at Fort Polk. Over 600 individual courses were taught as part of these training programs.

The 5th Infantry Division was permanently garrisoned at Fort Polk from 1974 until 1993. During this time, the divisional strength was approximately 15,000 troops. In 1993, the 5th Infantry Division was renamed the 2nd Armored Division and transferred to Fort Hood following the end of the Cold War. This move was completed in 1994. During this same time period, extensive training was conducted at Fort Polk in 1990 for Operation Desert Storm. Approximately 8,000 troops were trained on the installation in December 1990.

The JRTC was initially established at Fort Chaffee, Arkansas as a test in 1987. JRTC training is focused on training light infantry with support from armor, mechanized equipment, and aircraft. The JRTC was assigned to Fort Polk in 1991. The first JRTC training rotation was conducted at Fort Polk in September 1993.

In August 1995, the North Atlantic Treaty Organization conducted a Partnership for Peace training exercise at the installation called Exercise Cooperative Nugget 95. A second Partnership for Peace exercise was conducted in 1997. Since 1997, the JRTC has conducted mission rehearsal exercises to prepare troops for deployment to Bosnia, Kosovo, and the Middle East.

Other tenant units were assigned to Fort Polk following the transfer of the 5th Infantry Division. Major Subordinate Commands at Fort Polk currently include the JRTC Operations Group, 3rd Brigade Combat Team (BCT), 10th Mountain Division, 115th Combat Support Hospital, 46th Engineer Battalion, 519th Military Police Battalion, and the 5th Aviation Battalion.

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These units also conduct training on the installation. In May of 2009, the 162nd Infantry Training Brigade (ITB) was activated and became Fort Polk's newest brigade. This 162nd ITB's mission is to train military transition teams as combat advisors. On 30 September 2014, the 162nd ITB was inactivated. One of its organic battalions, the 3rd Bn 353rd Armor, was retained and attached to JRTC Operations Group. On 1 May 2014, the 1st Bn 509th Infantry, the Opposing Force (OPFOR) for JRTC, received authorization to increase its strength by 165 Soldiers. It subsequently activated Companies C and E increasing its capabilities.

JRTC normally conducts ten rotations at Fort Polk each year, training an average of 42,641 Soldiers. JRTC rotations have involved as many as 7,477 Soldiers and as few as 300. The number of troops involved in a specific rotation depends on the objectives of each training scenario. Historically, rotations are not conducted during the months of July and December. In 2015, JRTC conducted nine rotations, training a total of 61,074 troops averaging 6,786 troops per rotation. BCTs are the building block of a rotation.

JRTC and Fort Polk provides realistic doctrinal training and scenario specific mission training tailored to replicate operational mission requirements worldwide. Soldiers and units trained at JRTC and Fort Polk were key elements of the Army force structure required to support missions such as Operation Enduring Freedom, Operation Iraqi Freedom, Operation New Dawn, the Global War on Terrorism, and other major Army worldwide war fighting mission requirements.

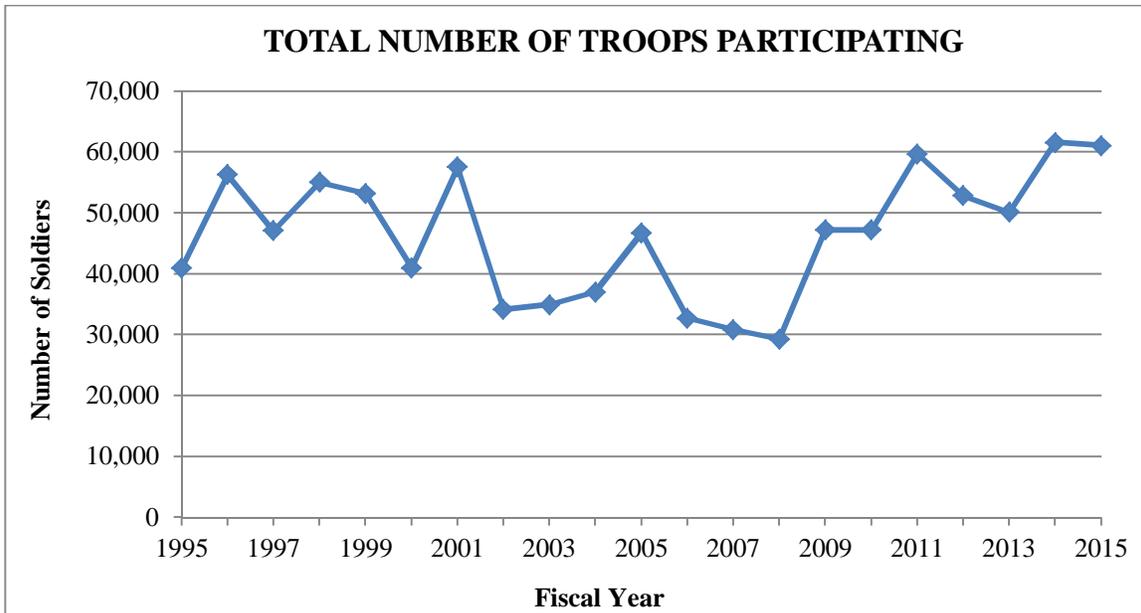
Beginning in FY12, the addition of Security Force Advisory & Assistance Teams to the BCT for selected rotations, increased the rotational size and complexity for training. These teams would meet the additional requirements for training coalition partners in Operation Enduring Freedom.

Table 1.6-1 and Figure 1.6-1 below do not include the additional 7,029 Soldiers assigned to home station units, which also train on Fort Polk.

**TABLE 1.6-1
FORT POLK JRTC MILITARY TRAINING**

FISCAL YEAR	TOTAL NO. TROOPS PARTICIPATING	AVERAGE NO. TROOPS PER ROTATION
1995	41,017	4,102
1996	56,317	5,632
1997	47,119	5,235
1998	55,039	5,504
1999	53,223	5,322
2000	40,984	4,554
2001	57,551	5,755
2002	34,120	3,412
2003	34,952	3,884
2004	36,995	3,699
2005	46,766	4,251
2006	32,750	4,094
2007	30,849	3,427
2008	29,296	3,213
2009	47,231	4,723
2010	47,231	4,723
2011	59,731	5,973
2012	52,867	4,806
2013	50,127	5,013
2014	61,608	7,701
2015	61,074	6,786

FIGURE 1.6-1



SECTION 2
ENVIRONMENTAL PROGRAM MANAGEMENT

2.1 Sustainability (*Tammy G. Veillon*)

2.1.1 Program Description

The word sustainability is derived from the Latin *sustinere* (*tenere*, to hold; *sus*, up). Although there is no universally accepted meaning, the most commonly quoted definition of sustainability and sustainable development is “development that meets the needs of the present without compromising the needs of future generations to meet its own needs” (Brundtland Commission, 1987). Implicit in most definitions of sustainability is the concept of improving the quality of human life while living within the limits of life-supporting ecological systems. Many definitions of sustainability also recognize three pillars — environment, society and economy — that must be optimized to best meet the needs of all.

Within the Army, sustainability is not a single program area, but a planning and organizing principle that is being considered as part of everything the Army does, including training, equipping, and operations, to ensure that Soldiers are capable of achieving any task given them, now and in the future. The Army uses the definition of sustainability from The Army Strategy for the Environment – Sustain the Mission, Secure the Future. This states a sustainable Army “simultaneously meets current as well as future mission requirements worldwide, safeguards human health, improves quality of life, and enhances the natural environment.” From the Army’s perspective sustainability means using available resources wisely so they do not become depleted or permanently damaged for future generations, thereby compromising future mission requirements.



2.1.2 Program Background

From an environmental perspective the Army is transitioning from compliance-based environmental programs to a mission-oriented approach based on the principles of sustainability. This transition is needed to provide the Army with a systems approach to the “Triple Bottom Line” of mission, environment, and community, plus economic considerations. For the past 30 years, environmental management in the U.S. (and the Army) has been compliance-based, with the goal of many environmental programs being to reduce releases of pollutants and avoid costly violations. Although compliance with the law provides some level of environmental protection, it does not protect the ability of the Army to train and deploy Soldiers, nor does it necessarily lead to a more sustainable future, either inside or outside the installation fence-line. The modern Army installation requires, among other things, thousands of acres of undamaged training lands, a secure and plentiful source of drinking water, and affordable energy services to power its buildings and vehicles. An installation subject to severe training restrictions or a rapidly increasing cost of energy or water may not be able to maintain readiness. Therefore, an approach to environmental management is needed that goes beyond compliance.

2.1.4 Program Requirements

The 2014 Army Sustainability Report states, “A ready and resilient Army must be able to rapidly deploy, fight, sustain itself in austere environments, and win in an ever-changing, complex strategic environment. To maintain readiness and capability, we are managing our installations in a manner that preserves our resources, budgets, and manpower for the operational Army. We are also establishing a resource-informed culture that will increase our resilience.”

In recent years, the Army has strived to:

- Institutionalize sustainability in doctrine, policy, training, operations, and acquisition,
- Implement approaches that maximize efficiencies and focus resources and efforts,
- Increase awareness, cooperation, and support for sustainable practices,
- Enable up-front investments that will result in lower operating costs, and
- Instill a sustainability ethic and personal commitment from Soldiers and civilians through the highest Army leadership.

Key sustainability objectives for the Department of Defense (DoD) as reported in the 2014 Army Sustainability Report include:

1. Reduce the use of fossil fuels
2. Improve water resources management
3. Reduce Greenhouse Gas (GHG) emissions associated with Army operations
4. Assess climate change risks and improve resiliency
5. Minimize and optimally manage solid waste
6. Minimize the use and release of chemicals of environmental concern
7. Make sustainability practices the norm

These objectives are managed through various organizations at Fort Polk. The Environmental and Natural Resources Management Division (ENRMD) organization has historically focused on reducing GHG emissions, minimizing solid waste, minimizing the use and release of hazardous chemicals, and making sustainability practices the norm. These, and all the Army sustainability objectives, are addressed through various programs and organizations on the installation.

One of the Army’s sustainability initiatives, called Net Zero, is focused on addressing sustainability as it relates to energy, water and waste. The Net Zero approach is comprised of five interrelated steps: reduction, re-purpose, recycling, energy recovery, and disposal. In April 2011, Fort Polk was selected by the Assistant Secretary of the Army for Installations, Energy & Environment as a Net Zero Waste (NZW) pilot facility for the Army. A NZW installation is an installation that reduces, reuses and recovers waste streams, converting them to resource values with zero waste to landfills. Fort Polk is one of six pilot installations that was challenged to eliminate all installation generated solid waste from entering a landfill by 2020. The components of Net Zero solid waste start with reducing the amount of waste generated, re-purposing waste, maximizing recycling of waste streams to reclaim recyclable and compostable materials, recovery to generate energy as a by-product of waste reduction, with disposal being non-existent.

2.1.5 Annual Program Developments and Performance Review

Fort Polk's sustainability efforts are being managed through the installation Environmental Quality Control Committee (EQCC) using the established Environmental Management System (EMS) on behalf of the Garrison. In addition, some sustainability activities were also tracked through the Installation Planning Board via the Installation Priority List. The efforts of the sustainability program in 2014 focused on waste reduction in support of the NZW goal to eliminate landfilled waste by 2014.

A number of projects were implemented and reported through the EQCC in support of the sustainability objectives. These projects included:

2.1.5.1 Net Zero Waste

2.1.5.1.1 Reduce

- A Green Procurement program was implemented via the creation of a Green Procurement Working Group. The mission of this group is to influence purchasing decisions which can significantly enhance the environmental performance of the installation, since the procurement process heavily influences the wastes and emissions that must be managed and paid for. In 2015, Fort Polk issued a Green Procurement policy, developed an implementation plan, and provided installation personnel training in green procurement.

2.1.5.1.2 Reuse

- An Office Supply and Packaging ReStore program was implemented and marketed across the installation to make it easy for office supplies and packaging supplies to be reused for government purposes.

2.1.5.1.3 Recycle

- In 2014 Fort Polk was selected as a site to conduct a pilot study on the use of pulverized paper as a soil amendment in coordination with ERDC/CERL. All pulverized paper on the installation was being landfilled. During 2015, specific test sites were selected for application of the pulverized paper as a soil amendment and plans have been made to begin implementation in 2016.
- Efforts were made to maximize recycling of the common recyclables such as white paper, mixed paper, aluminum cans, #1 PETE plastic and cardboard.
- The curbside collection program, funded by Directorate of Public Works (DPW), was enhanced to collect not only white and mixed paper, but also pulverized paper, #1 PETE plastic and aluminum cans. Outreach efforts were increased to improve participation and reduce contamination of recycled commodities. This program is in place to make recycling more convenient within the garrison, with the ultimate goal being to increase participation.
- A 24-hour recyclable drop off point continues to be used for cardboard, aluminum and #1 PETE clear plastics to make it more convenient for everyone to participate in recycling at Fort Polk.

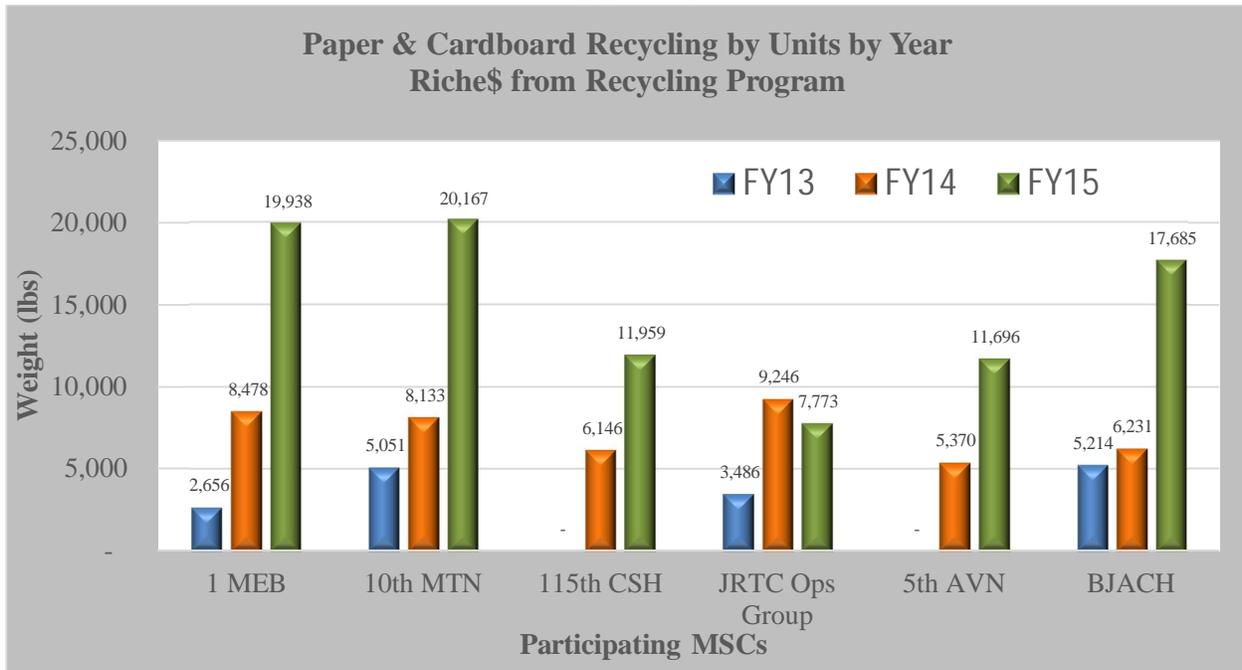
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- Recycling is incentivized within military units through the “Riche\$ from Recycling” Program, allowing some of the monetary benefits achieved from recycling to be funneled back into the units for DFMWR activities.
- A consolidated recycling point for cardboard and scrap metal is used within the rotational training area to encourage training units to reduce waste.
- Cardboard recycling roll-off containers were placed in the Housing areas to make it easier for Housing residents to recycle. These containers proved to be heavily used.
- The installation’s facility management program was expanded to include the training of recycling coordinators who are responsible for the recycling processes in their buildings. In 2015, assessments were conducted at administrative buildings to allow the recycling coordinators to know what is working, areas that need improvement and provides the installation leadership with measurable metrics for improvement in the program.

2.1.5.2 Outreach and Education

- A vigorous outreach campaign was executed to educate everyone on the installation of the value of reuse and recycling, along with the installation procedures to include on-site surveys at all MSCs and major installation events, booths at the CIF, Spouses Luncheon and FRG Leader Training, newspaper articles, weekly posts on social media, and maintaining the NZW internet site. During the year 3,680 people were reached through a combination of NZW training classes and event activities.
- Short Public Service Announcement videos were produced and made available to everyone on the installation to use in staff meetings, as well as to use at the installation movie theater before feature presentations to help raise awareness of the waste reduction initiative. A longer educational video was produced to help educate Fort Polk personnel and visitors about the procedures for reducing, reusing and recycling on the installation.
- A rigorous social media campaign was also developed during 2015 which resulted in over 26,000 people reached.
- A Riche\$ from Recycling Program exists at Fort Polk to encourage Soldiers to recycle paper & cardboard through a rewards program that allows some of the profits from recycling to be transferred back to units. Figure 2.1 below shows the increase in paper & cardboard collection from FY13 to FY15 that occurred as a result.

FIGURE 2.1



Paper recycling has increased as a result of the Riche\$ from Recycling Program and Outreach efforts.

2.1.5.3 Green Procurement

- A Green Procurement Working Group was formed to address the development and implementation of a green procurement program. This group exists to ensure that products and services purchased at Fort Polk will be done in accordance with the DoD requirements for green procurement.

2.1.5.4 Other Program Coordination

- A new sustainability objective was proposed and approved by the EQCC along with two new supporting sustainability targets. The objective requires installation wide compliance with mandated sustainability practices outlined in EO 13423 and 13514. Adopted sustainability targets focus on reductions in electricity consumption and water consumption.
- Additional sustainability projects at Fort Polk were managed within DPW, but outside of ENRMD, that focused on the conservation of both energy and water. A major energy reduction project included sustainable design of new barracks. Major water reduction projects included upgrades to the water distribution system to aggressively eliminate water leaks and major improvements to the Fort Polk Waste Water Treatment Plant which will help reduce the amount of potable water used at Fort Polk.

2.1.6 Sustainability Program Performance Objectives

During FY15, the EQCC approved three objectives and related targets that were directly related to the Sustainability and NZW program as follows:

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- EMS Objective 5.0: By 1 Nov 17, develop and implement new Net Zero Waste management practices and process initiatives that facilitate a reduction in the quantity of solid waste disposed, increase the quantity of materials recycled and reused, and reduce the quantity of materials procured on Fort Polk.
 - EMS Target 5.1: By 31 Dec 15, meet and/or exceed the diversion of 20 percent of the installation's FY15 generated green waste from the current Municipal Solid Waste (MSW) stream.
 - EMS Target 5.2: By 1 Oct 16, increase the tonnage of cardboard processed through the JRTC and Fort Polk Recycling Center by 225 tons, relative to the 2013 baseline.
 - EMS Target 5.3: By 30 Sep 15, increase the quantity of used office and mixed paper collected curbside and recycled by 10 tons, relative to the 2014 baseline.
 - EMS Target 5.4: By 30 Sep 15, reduce the tonnage of Fort Polk cantonment solid waste disposed in a landfill to no more than 4500 tons.
 - EMS Target 5.5: By 1 Nov 15, complete a market analysis and economic feasibility study of three additional recyclable commodities for recycling.
- EMS Objective 6.0: By 1 Jan 16, implement an installation-wide Green Procurement Program on Fort Polk in accordance with the Army's GPP implementation guide.
 - EMS Target 6.1: By 1 Dec 14, establish an installation Green Procurement (GP) Working Group.
 - EMS Target 6.2: By 1 Feb 15, publish a Fort Polk Green Procurement Program (GPP) Policy.
 - EMS Target 6.3: By 1 May 15, publish a Fort Polk Green Procurement Program (GPP) implementation plan.
- EMS Objective 7.0: By 1 Oct 17, implement installation-wide Sustainable Practices to comply with mandated requirements of EO 13423 "Strengthening Federal Environmental, Energy, and Transportation Management: and EO 13514 "Federal Leadership in Environmental, Energy, and Economic Performance".
 - EMS Target 7.1: By 1 Nov 15, reduce Fort Polk's electricity consumption by 3 percent, relative to the 2014 baseline.
 - EMS Target 7.2: By 1 Nov 15, reduce Fort Polk's potable water consumption by 2 percent, relative to the 2014 baseline.

2.1.7 Sustainability Program Performance Reporting

The EQCC tracks progress on its targets quarterly. The Solid Waste Activity Report is used to summarize and calculate the amount of municipal solid waste that is diverted and the amount that is committed for disposal in a landfill. The paper curbside collection project requires the service provider to weigh recycled paper by unit and organization, and to report that generation amount daily. The Qualified Recycling Program (QRP) operates the Recycling

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Center in the 3600 Block and provides monthly summaries for display, analysis, and tracking progress. That data source is used to monitor progress toward the installation goals.

2.1.8 Sustainability Program Performance Review

Sustainability Program Performance		
Objective/Target	2015 Performance	Evaluation
EMS Target 5.1: By 31 Dec 15, meet and/or exceed the diversion of 20% of the installation's FY15 generated green waste from the current Municipal Solid Waste (MSW) stream.	In 2015 all green waste was ordered to be taken to the Green Waste facility on Fort Polk. The QRP was given the go ahead to purchase a drum wood chipper for processing of green waste into mulch.	Progress being made toward goal. Goal expected to be reached.
EMS Target 5.2: By 1 Oct 15, increase the tonnage of cardboard processed through the JRTC and Fort Polk Recycling Center by 20 tons, relative to the 2013 baseline.	65.1 tons of cardboard were processed through the JRTC and Fort Polk Recycling Center in 2015 as compared to 14.2 tons in 2014. Across the entire installation, 772.4 tons of cardboard were processed for recycling.	Goal met.
EMS Target 5.3: By 30 Sep 15, increase the quantity of used office and mixed paper collected curbside and recycled by 10 tons, relative to the 2014 baseline.	151 tons of used office and mixed paper were processed through the JRTC and Fort Polk Recycling Center in 2015 as compared to 48.5 tons in 2014.	Goal met.
EMS Target 5.4: By 30 Sep 15, reduce the tonnage of Fort Polk cantonment solid waste disposed in a landfill to no more than 4500 tons.	4,471 tons of municipal solid waste (MSW) was landfilled in FY2015, representing a 50% diversion of MSW. Total waste generated in FY2015 was 8,940 tons.	Goal met.
EMS Target 5.5: By 1 Nov 15, complete a market analysis and economic feasibility study of three additional recyclable commodities for recycling.	A market analysis and economic feasibility study of glass, mattresses and non-PETE #1 plastics was performed.	Goal met.
EMS Target 6.1: By 1 Dec 14, establish an installation Green Procurement (GP) Working Group.	A Fort Polk Green Procurement Working Group was established at Fort Polk on 10 Feb 2015.	Goal met.

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Sustainability Program Performance		
Objective/Target	2015 Performance	Evaluation
EMS Target 6.2: By 1 Feb 15, publish a Fort Polk Green Procurement Program (GPP) Policy.	A Fort Polk Green Procurement Program Policy is in place.	Goal met.
EMS Target 6.3: By 1 May 15, publish a Fort Polk Green Procurement Program (GPP) implementation plan.	A Fort Polk Green Procurement Program implementation plan is in place.	Goal met.
EMS Target 7.1: By 1 Nov 15, reduce Fort Polk's electricity consumption by 3 percent, relative to the 2014 baseline.	Work is ongoing for this target.	Revised for 2016 target.
EMS Target 7.2: By 1 Nov 15, reduce Fort Polk's potable water consumption by 2 percent, relative to the 2014 baseline.	Work is ongoing for this target.	Revised for 2016 target.

2.2 Environmental Management System (*Edward Mazion*)

2.2.1 EMS Program Description

Fort Polk's Environmental Management System (EMS) encompasses the entire installation, from "fence line to fence line". The installation's EMS is inclusive of installation missions and facilities within the control of JRTC and Fort Polk. Fort Polk's EMS is a systematic approach to identify, manage, and control the impact of installation operations and activities on the natural environment and the mission. It provides a structure for managing and integrating environmental responsibilities into mission operations and activities. The EMS structure is a framework of interlocking elements: a) Policy; b) Planning; c) Implementation and Operation; d) Checking and Corrective Action; and, e) Management Review. These elements are tailored to Fort Polk to improve its environmental performance (e.g., improved cost-effectiveness, mission support, compliance, and reduce significant impacts). Implementation of the EMS elements produce a continuous cycle of planning (Plan), implementing (Do), reviewing (Check), and improving (Act) to guide the actions the installation takes to meet its environmental obligations. EMS addresses the installation's structure, planning, activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining environmental policy. The installation environmental policy is the driver for implementing and improving Fort Polk's EMS so that the installation can maintain and potentially improve its environmental performance. Fort Polk's current Environmental Policy Statement is presented in Figure 2.2-1. The environmental policy expresses guiding principles for conducting mission operations, activities, and services at the JRTC and Fort Polk in a manner that protects the natural and human environment. The overall objective of EMS implementation is continual improvement in environmental and mission performance on the installation.

2.2.2 EMS Program Background

The Army selected the International Standards Organization (ISO) 14001 International Standard Environmental Management Systems, an auditable standard, to demonstrate EMS conformance and environmental performance improvement. On 13 July 2001, DA issued an action memorandum directing Army installations to adopt the ISO 14001 EMS standard and begin implementing EMS. On 27 January 2003, the installation's Commanding General signed the Fort Polk EMS Master Document initiating Fort Polk's EMS implementation. On 10 July 2003, DA issued the Army EMS Policy requiring installations to fully implement an ISO 14001 conformant mission focused EMS by 31 December 2005. Fort Polk reports its EMS implementation and conformance status to IMCOM through a number of reporting systems.

2.2.3 EMS Program Requirements

The Garrison Commander is responsible for implementing the installation EMS with the participation and support of tenant units and other organizations on the installation. The EMS Management Representative (EMSMR) is required to oversee and manage the day-to-day EMS implementation and functions. Fort Polk's senior leadership serves as "Top Management" for the installation's EMS. Top Management is required to conduct recurring management reviews of the EMS to ensure its continuing suitability, adequacy, and effectiveness. Management reviews of the installation's EMS are conducted during quarterly Environmental Quality Control Committee meetings, which identify opportunities for improvement of the installation's environmental performance and EMS.

A primary requirement of the EMSMR is to track, evaluate, and report Fort Polk's EMS conformance status to DA. Fort Polk's EMS is required to maintain conformance with the ISO 14001 standard, Executive Order (EO) 13423 requirements and Army directed EMS requirements. Fort Polk reports its EMS conformance status through the DA Environmental Quality Reporting database. The Army requires Fort Polk to submit documentation declaring the installation's EMS is fully conformant with all established EMS requirements following an external EMS audit every three years.

The establishment of objectives and targets is a key EMS requirement. Fort Polk continues to develop new objectives and targets as part of the installation's effort to continually improve its environmental performance. Each installation objective is an individual stairway, and each target is an individual step on a sustainability stairway. The achievement of a target and action is a step toward accomplishing an installation objective. In addition, the achievement of an installation objective is the completion of a stairway that leads to a sustainable Fort Polk future. In 2011, Fort Polk transferred its sustainability objectives and targets developed to meet EO 13423 requirements into the Installation Strategic Sustainability Plan (ISSP). The intent of the ISSP was to integrate the principles of sustainability into the Fort Polk Garrison strategic plan. In 2013, Fort Polk again initiated the development of new sustainability objectives and targets to address issues and requirements not currently captured within Fort Polk strategic plan.

On 19 March 2015, the federal government published EO 13693, "Planning for Federal Sustainability in the Next Decade" and revoked EO 13423. EO 13693 does not specifically state the requirement for installations to implement a mission-focused EMS. In November 2015, DA issued an EMS guidance memorandum informing installations that the requirement to implement a mission-focused EMS as stated in EO 13423 remains in effect as outlined in EO 13423.

2.2.4 EMS Annual Program Developments

The Environmental and Natural Resources Management Division (ENRMD) conducted an internal audit of Fort Polk's EMS on 5 October through 9 October 2015. The audit was conducted in conjunction with the installation's Annual Environmental Performance Assessment (AEPA) audit. The audit resulted in two minor non-conformance findings. The minor non-conformances were written against the *Control of Documents* element and *Internal Audit* element of the standard. The audit results and recommended corrective action plan were briefed to the installation Garrison Commander. Based on the results of this internal audit, Fort Polk implemented the command approved corrective action plan to correct both minor non-conformances. Fort Polk's Garrison Commander submitted a memorandum outlining the audit findings and corrective action plan to Installation Management Command (IMCOM). Fort Polk's EMS is currently fully conformant with the ISO 14001 standard and other Army EMS requirements. In 2015, the installation achieved zero of six objectives and 20 of 23 targets, all six objectives remain in progress. During the 1st Qtr. FY16 EQCC, the installation's Top Management approved 13 new EMS supporting targets. As of December 2015, Fort Polk has six EMS objectives and 13 supporting targets. The list of FY16 approved EMS objectives and targets is presented in Figure 2.2-2, and is available on the installation intranet and at the environmental office. Throughout 2015, the EMSMR continued to revise EMS procedures and other EMS documents as necessary to capture installation mission changes and continually improve the EMS based on recommendations from Top Management.

2.2.5 EMS Program Performance Indicators

Performance indicators were developed for the installation EMS program based on known HQDA, IMCOM, and installation data and information requirements. The installation evaluates the performance of Fort Polk's EMS program based on the following performance indicators:

1. Number of ISO 14001 major non-conformances identified during the most recent internal and/or external assessments,
2. Number of ISO 14001 minor non-conformances identified during the most recent internal and/or external assessments,
3. Number of ISO 14001 non-conformances uncorrected from the most recent internal and/or external assessment,
4. Installation Commander re-declared EMS conformance as required,
5. Percent of EMS procedures reviewed and revised, as required, and
6. Completion of annual EMS management review.

2.2.6 EMS Program Performance Indicators

The installation has developed a performance standard for each of the performance indicators. Each performance indicator is evaluated based on a Red, Amber, or Green performance standard. The following performance standards apply to the performance indicators listed above:

EMS Program Performance	
Performance Indicators	Performance Standards
1. Number of ISO 14001 major non-conformances identified during the most recent internal and/or external assessments	a) GREEN: Zero non-conformances b) AMBER: One non-conformances c) RED: Two or more non-conformances
2. Number of ISO 14001 minor non-conformances identified during the most recent internal and/or external assessments	a) GREEN: Zero – Two non-conformances b) AMBER: Three – Four non-conformances c) RED: Five or more non-conformances
3. Number of ISO 14001 non-conformances uncorrected from the most recent internal and/or external assessment	a) GREEN: Zero non-conformances b) AMBER: One minor and zero major non-conformances c) RED: Two or more minor and/or one major non-conformance
4. Installation Commander re-declared EMS conformance as required	a) GREEN: Yes b) RED: No
5. Percent of EMS procedures reviewed and revised as required	a) GREEN: 100% - 80% b) AMBER: 79% - 70% c) RED: 69% or less
6. Completion of annual EMS management review	a) GREEN: Management review completed within the calendar year b) RED: Management review completed after calendar year
Program Overall Performance	a) GREEN: Five or more green and no red b) AMBER: Three or more amber, and no red c) RED: One or more red

2.2.7 EMS Program Annual Performance Review

The EMS program evaluation for 2015 is GREEN. All six performance indicators are rated green, resulting in overall program rating of green. The specific results for each performance indicator are listed below:

EMS Program Performance		
Indicators	2015 Performance	Evaluation
1. Number of ISO 14001 major non-conformances identified during the most recent internal and/or external assessments	The 2015 EMS internal audit identified zero major non-conformances.	GREEN: Zero major non-conformances
2. Number of ISO 14001 minor non-conformances identified during the most recent internal and/or external assessments	The 2015 EMS internal audit identified two minor non-conformances.	GREEN: Zero – two minor non-conformances
3. Number of ISO 14001 uncorrected non-conformances identified during the most recent internal and/or external assessments	Zero uncorrected non-conformances remaining from the 2015 internal EMS audit.	GREEN: Zero non-conformances
4. Installation Commander re-declared EMS conformance as required	Installation Commander declared Fort Polk’s EMS conformance in 2014. Fort Polk submits EMS conformance re-declarations based on external audits not internal audits.	GREEN: Yes. EMS conformance declarations are not submitted after internal audits.
5. Percent of EMS procedures reviewed and revised as required	15 of 15 procedures were reviewed in FY15 for 100%.	GREEN: 100%-80%
6. Completion of annual EMS management review	Management Review completed in FY15.	GREEN: Management review completed within calendar year.
Program Overall Performance	All green	GREEN

**Figure 2.2-1
GC Environmental Policy Statement**



REPLY TO
ATTENTION OF:

DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT POLK
6661 WARRIOR TRAIL, BLDG 350
FORT POLK, LOUISIANA 71459-5339

IMPO-PWE

JUL 18 2015

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Garrison Policy Memorandum # 8 – JRTC and Fort Polk Environmental Policy

1. References.

a. Army Regulation 200-1, Environmental Protection and Enhancement, 13 December 2007.

b. Joint Readiness Training Center (JRTC) and Fort Polk Regulation 200-1, Installation Environmental Performance Requirements, 1 March 2011.

2. Purpose. To prescribe policy and establish guidelines that ensure JRTC and Fort Polk organizations and individuals conduct all mission operations, activities, and services in a manner that protects the natural and human environment.

3. Applicability. This policy applies to all military, civilian, tenant, and contract personnel within JRTC and Fort Polk.

4. Intent.

a. Embrace the concepts of sustainability and environmental stewardship to achieve and maintain a quality installation that trains Soldiers, leaders, and combat teams to deploy, fight, and win.

b. Use the installation's Environmental Management System (EMS) as the management framework for performing mission support operations and establishing objectives and targets that will lead to a sustainable future.

c. Achieve JRTC and Fort Polk mission and environmental goals.

5. Guidance. All organizations, activities, leaders, and individuals will adhere to this policy and work to establish, support, and enforce initiatives and programs that promote sustainability and environmental stewardship, and provide cost effective mission benefits. JRTC and Fort Polk will align its mission priorities with this policy and will:

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Environmental Management Performance Review*

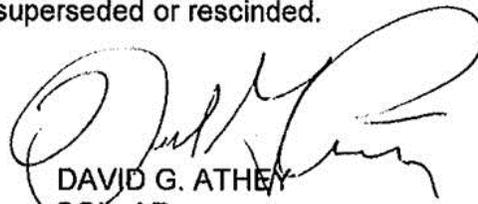
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SUBJECT: Garrison Policy Memorandum # 8 – JRTC and Fort Polk Environmental Policy

- a. Comply with applicable Federal, State, Department of Defense, Army, and installation environmental laws, regulations, executive orders (EOs), and signed agreements.
- b. Perform all mission operations, activities, and services in a manner that protects the natural and human environments.
- c. Integrate environmental factors and considerations into all decision-making processes and operations.
- d. Protect, preserve, and conserve natural and cultural resources.
- e. Prevent pollution and minimize adverse environmental impacts.
- f. Continually improve JRTC and Fort Polk's mission and environmental performance.
- g. Train and educate members of the JRTC and Fort Polk community on their roles and responsibilities as environmental stewards.
- h. Work cooperatively with communities and agencies outside Fort Polk to achieve common environmental goals and objectives.

6. Proponent. The Directorate of Public Works, Environmental Office is the proponent for this policy.

7. This policy will remain in effect until superseded or rescinded.


DAVID G. ATHEY
COL, AR
Commanding

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Figure 2.2-2

Fort Polk Command Overview of Environmental Management System (EMS) Objectives and Targets for FY16			
Objective	Target	Target Description and Status	
<p style="text-align: center;">1.0</p> <p>Achieve and maintain compliance with all Federal, State, and Army environmental regulations applicable to Fort Polk by the end of FY17.</p>	2016-1.1	Implement a backflow prevention program IAW all Federal and State requirements by 30 Sep 16.	
	<p style="text-align: center;">2.0</p> <p>Fully implement the Fort Polk Integrated Natural Resources Management Plan, Integrated Cultural Resources Management Plan, Integrated Pest Management Plan, and achieve compliance with 32 CFR Part 651 (Environmental Analysis of Army Actions) by the end of FY17 and adapt management as needed to ensure effective mission support.</p>	2016-2.1	By 1 March 2016, plant 304 acres of Longleaf Pine in compartments 10, 13, and 33.
2016-2.2		By 30 Sep 16, complete contracted Level I cultural resources survey field work/reports and protect potentially eligible sites, through marking, for new training lands purchased from timber companies (all large tracts).	
2016-2.3		By 30 Sep 16, complete 50% of the surveys for Army-owned standing structures on the new lands under administrative control as of 30 September 2015. And, utilizing survey data provide management recommendations for demolition, repurposing, or protection of these structures.	
2016-2.4		By 30 Mar 16, secure Garrison Commander approval to request Louisiana Department of Wildlife and Fisheries to append new land east of Highway 117 to the Peason Ridge WMA.	
<p style="text-align: center;">3.0</p> <p>Fully implement the Fort Polk Forest Management Plan by the end of FY17 and adapt management as needed to ensure ecologically and economically sound management of Fort Polk's established forests and newly acquired training lands.</p>	2016-3.1	Between 1 Nov 15 and 30 Sep 16, prescribe burn 33,000 acres of Fort Polk training lands.	
	2016-3.2	By 30 Sep 16, construct and maintain firebreaks on newly purchased Army lands having completed cultural and natural resources inventories.	
	2016-3.3	By 30 Sep 16, complete an inventory of 100% of forests on all newly purchased Army lands.	

Fort Polk Command Overview of Environmental Management System (EMS) Objectives and Targets as FY16			
Objective	Target	Target Description and Status	
<p style="text-align: center;">4.0</p> <p>By the end of FY20, develop and implement new Net Zero Waste management practices and process initiatives that facilitate a reduction in the quantity of solid waste disposed, increase the quantity of materials recycled and reused, and reduce the quantity of materials procured on Fort Polk.</p>	2016-4.1	By 30 Sep 16, increase the quantity of used office and mixed paper collected curbside by 10 tons, relative to the FY15 baseline.	
	2016-4.2	By 30 Sep 16, reduce the tonnage of Fort Polk municipal solid waste disposed in a landfill to no more than 3,600 tons in FY16.	
<p style="text-align: center;">5.0</p> <p>By the end of FY17, implement an installation-wide Green Procurement Program (GPP) on Fort Polk IAW the Army's GPP implementation guide.</p>	2016-5.1	By 30 Sep 16, integrate GPP requirements into the government purchase card holder training and ECO training.	
<p style="text-align: center;">6.0</p> <p>By the end of FY17, implement installation-wide Sustainable Practices to comply with mandated requirements of EO 13693 "Planning for Federal Sustainability in the Next Decade".</p>	2016-6.1	By 30 Sep 16, reduce Fort Polk's electricity consumption by 3%, relative to the FY15 baseline.	
	2016-6.2	By 30 Sep 16, reduce Fort Polk's potable water consumption by 2%, relative to the FY15 baseline.	

2.3 Sustainability and Environmental Monitoring Plan (Stacy Basham-Wagner)

2.3.1 SEMP Program Description

Fort Polk's Sustainability and Environmental Monitoring Plan (SEMP) is a performance-based mitigation and monitoring plan focused on specific aspects and impacts of Fort Polk and Kisatchie National Forest (KNF) operations. The SEMP is an element of the installation's EMS and contains 5 goals and 14 objectives in the following areas:

- § Sustainable training lands,
- § Biodiversity,
- § Sustainable facilities and infrastructure,
- § "Be good neighbors," and
- § Continual improvement.

The SEMP is administered by a joint Fort Polk and KNF Oversight Committee co-chaired by the Deputy Garrison Commander and the KNF Military Liaison Officer. The Oversight Committee meets quarterly. The status of SEMP implementation (i.e., the percentage of monitoring and reporting requirements that are implemented) and the performance results for ongoing monitoring tasks are reported to the Oversight Committee each quarter and periodically to the Environmental Quality Control Committee (EQCC).

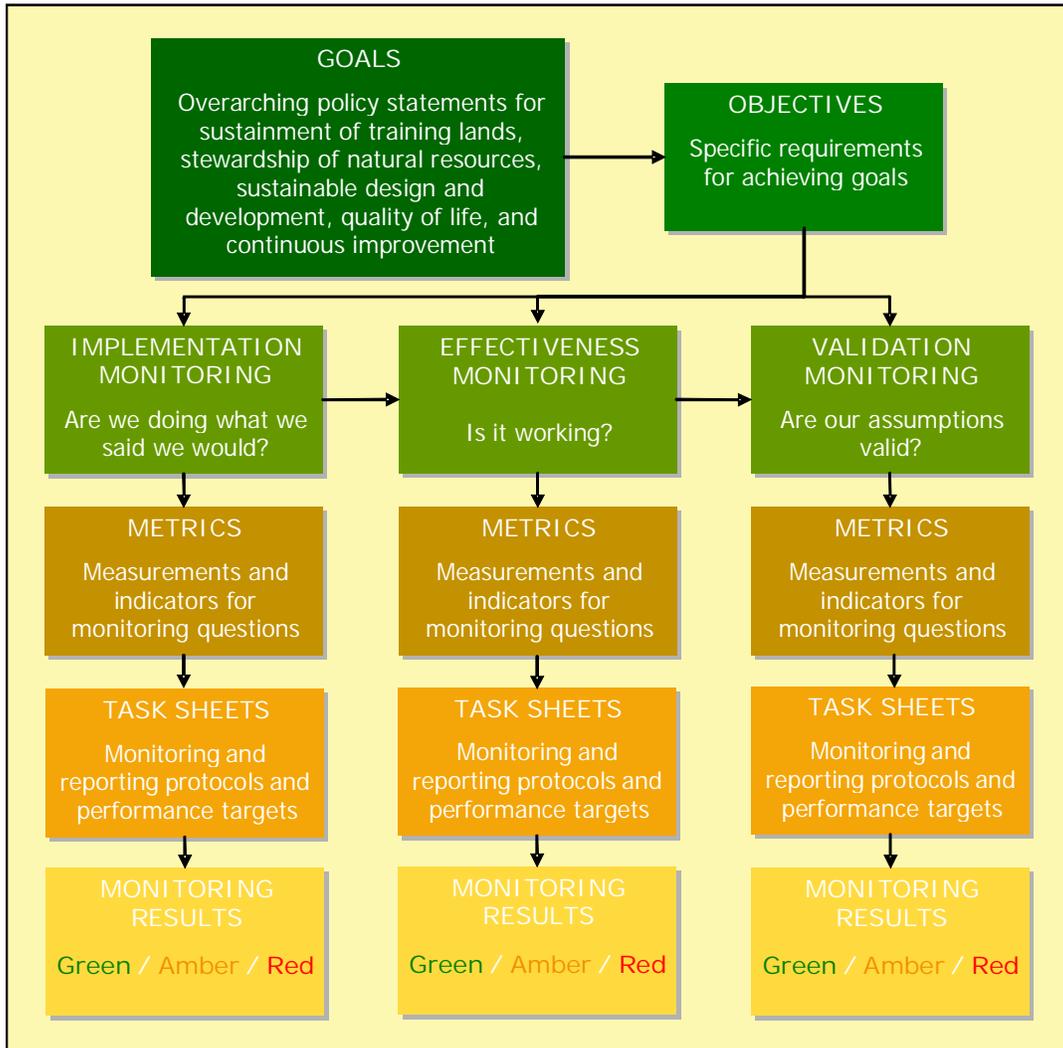
2.3.2 SEMP Program Background

The SEMP was developed by Fort Polk and the KNF as part of an Environmental Impact Statement (EIS) completed in 2004 to analyze the potential impacts associated with proposed force transformation and mission operations at the JRTC and Fort Polk, as well as the impacts connected with long-term (20 year) military use of KNF lands. The EIS identified 15 mitigation and monitoring measures to address potential effects to the natural and human environment expected to result from the Army and Forest Service proposed actions. The SEMP was developed to track implementation of the mitigation measures, best management practices and environmental stewardship measures described in the EIS and to evaluate their effectiveness.

The structure of the SEMP is shown in Figure 2.3-1. The SEMP integrates mitigation and monitoring requirements under NEPA with the installation's EMS and other existing monitoring programs. For each objective in the SEMP, a series of implementation, effectiveness and validation monitoring questions was published as part of the Final EIS. A copy of the Final EIS appendix containing the SEMP is available online at:

http://www.jrtc-polk.army.mil/SEMP/Appendix_V-Final_29JAN04.pdf.

**Figure 2.3-1
Structure of the SEMP**



2.3.3 SEMP Program Requirements

Under the SEMP, monitoring and evaluation activities are conducted by both Fort Polk and KNF staff, and results are reported to the Oversight Committee at least quarterly, so that adjustments and corrective actions can be made in a timely manner. For each SEMP objective, an interdisciplinary, inter-agency working group develops and recommends quantitative metrics and performance targets under each monitoring question. The Oversight Committee is then responsible for reviewing and approving the metrics and performance targets and for evaluating the monitoring results. The results are categorized and reported in a green/amber/red format for each objective based on the quantitative performance criteria established by the Committee. The results of monitoring are then reported as needed to the Fort Polk EQCC, which is chaired by the Garrison Commander and consists of the “Top Management” of the installation. This process and structure provides regular feedback to the Commander and allows management actions to be readily adapted based on the results of monitoring.

2.3.4 SEMP Annual Program Developments

Full implementation of the SEMP is a multi-year process. To date, metrics and performance targets have been developed and monitoring and reporting initiated for 11 of 14 objectives. In FY15, the Oversight Committee met quarterly and completed approval of proposed metrics and performance targets for Objective 2-3, Louisiana Pine Snake (LPS) Conservation, with the adoption of four additional monitoring tasks. The LPS is a candidate species for listing under the Endangered Species Act. The Committee also adopted a set of six metrics and performance targets under Objective 1-3, Water Resource Protection / Stream Crossing and Sediment Basin Maintenance, and reporting is anticipated under this objective beginning in FY16. As of October 2015, a total of 81 out of an estimated 103 metrics had been developed and adopted under the SEMP. Annual SEMP implementation status and performance results for FY15 and prior years are published in the form of tabular reports and made available to the public at the following website: <http://www.jrtc-polk.army.mil/SEMP/index.htm>.

In addition to developing new metrics and targets for performance monitoring, working groups under the SEMP are responsible for conducting root cause analyses for monitoring results that are “Red”, i.e., performance is off-track. The root cause analyses seek to identify the underlying reason(s) for poor performance and to identify solutions. In FY13, the Oversight Committee approved a new procedure whereby Fort Polk and KNF divisions/offices responsible for monitoring activities recommend to the Oversight Committee which “Red” results call for a root cause analysis. The Committee then selects those monitoring tasks for which a root cause analysis will be conducted. In FY15, three root cause analyses were completed for three annual monitoring tasks with “Red” results in FY14. As a result of those analyses, one metric was modified, and new procedures were adopted for two other monitoring tasks.

Implementation of the SEMP was formerly tracked as an objective under Fort Polk’s EMS. However, in FY15, this EMS objective was closed, because it was duplicative of reporting already occurring to the SEMP Oversight Committee.

2.3.5 SEMP Program Performance Indicators and Standards

As described under Section 2.3.3 above, metrics and performance targets are established for the monitoring questions contained in the SEMP. These metrics and targets, along with the results of quarterly and annual monitoring, are published on the SEMP website at <http://www.jrtc-polk.army.mil/SEMP/index.htm> and are available for public review. A summary of the implementation status for each of the 14 SEMP objectives and the average objective level performance results for FY15, where available, are provided in Tables 2.3-1 and 2.3-2 below. The average objective level performance results shown in Table 2-3.2 are calculated based on the quarterly and /or annual results for each monitoring task and a point system, where each “Green” result receives one point, each “Amber” result receives 0.5 points, and each “Red” result receives 0 points. The points achieved for each objective are summed, and a mean score is calculated by dividing the sum of points achieved by the total number of possible points. SEMP objectives receiving a mean score > 0.66 are rated “Green;” objectives receiving a mean score ≤ 0.66 and > 0.33 are rated “Amber;” and objectives receiving a mean score ≤ 0.33 are rated “Red.

2.3.6 SEMP Program Annual Performance Review

The overall SEMP program evaluation for 2015 is GREEN. The SEMP Oversight Committee established implementation priorities in 2011 to guide efforts to develop and

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implement monitoring and reporting requirements for remaining SEMP objectives, and implementation is proceeding according to those priorities. The FY15 performance results for individual SEMP monitoring tasks will be published by 30 March 2016 on the SEMP website at <http://www.jrtc-polk.army.mil/SEMP/index.htm>.

Table 2.3-1. Summary of monitoring and evaluation status for SEMP objectives, FY15. Year = actual/estimated fiscal year in which the monitoring and evaluation process was/will be implemented for the objective; Green = metrics and performance criteria are developed, and monitoring and evaluation is ongoing; Amber = development of metrics and performance criteria is in progress; Red = development of metrics and performance criteria has not begun.

Goal	Objective	Implementation Status & Year
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.	2016
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.	2015
	Objective 2-4: Protect rare plants and unique wetlands habitats through identification, marking and monitoring of hillside seeps and bogs.	2012
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.	2009
	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.	2017
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.	2011
	Objective 4-3: Avoid risks to public safety and conflicts with civilian activities and land uses in the LUA and SLUA.	2016
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.	2009
	Objective 5-2: Jointly evaluate and report monitoring results, and adapt operations and management accordingly.	2009

Table 2.3-2. Summary of results for SEMP objectives, FY15. Score = average of task level results on scale of 0.00-1.00 (calculated from sum of task level points, with point distribution as follows: Green= 1 pt., Amber = 0.5 pts, Red = 0 pts). Green = Objective score > 0.66; Amber = Objective score ≤ 0.66 and > 0.33; Red = Objective score ≤ 0.33; Gray = results not yet available. Year = estimated fiscal year when first performance results will be available

Goal	Objective	Performance Results, FY15
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.	Score = 0.88
	Objective 1-2: Sustain training land conditions and soil productivity through land rehabilitation and maintenance and watershed management practices.	Score = 0.80
	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	2016
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.	Score = 0.67
	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.	Score = 0.30
	Objective 2-3: Promote viability of the LPS through cooperative management strategies, Soldier SRA training, identification of probable LPS habitat, and construction project planning.	Score = 0.58
	Objective 2-4: Protect rare plants and unique wetlands habitats through identification, marking and monitoring of hillside seeps and bogs.	Score = 1.00
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.	Score = 0.25
	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.	2016
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.	Score = 1.00
	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.	Score = 0.75
	Objective 4-3: Avoid risks to public safety and conflicts with civilian activities and land uses in the LUA and SLUA.	2016
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.	Score = 0.67
	Objective 5-2: Jointly evaluate and report monitoring results, and adapt operations and management accordingly.	Score = 1.00

2.4 Internal Environmental Assessment Program (*Edward Mazion*)

2.4.1 Internal Environmental Assessment Program Description

The installation Internal Environmental Assessment Program (IEAP) prepares Fort Polk for external inspections and evaluates the installation's environmental compliance status and performance. It is a systematic environmental compliance assessment of installation processes, facilities, programs, practices, and environmental media areas. The IEAP describes how Fort Polk conducts an installation-wide environmental compliance assessment annually. The IEAP is a tool for organizations and Environmental Program Managers to better manage and improve all environmental compliance processes and practices. The IEAP provides a snapshot in time evaluation of Fort Polk's environmental compliance status and helps the installation achieve and sustain environmental compliance.

The program's overall objective is to ensure installation organizations and activities are continually complying with environmental regulatory requirements. The IEAP also accomplishes the following objectives:

- a. Determines the installation's environmental compliance status,
- b. Evaluates the installation's environmental performance,
- c. Prepares for Federal, State, and Army environmental inspections, and
- d. Identifies and corrects environmental program deficiencies.

The IEAP is a three-tier assessment system. Each tier assigns the appropriate level of environmental expertise to perform the assessment. Assessments are performed by operators, Environmental Compliance Officers (ECOs), Environmental Customer Service Technicians (ECSTs), and Environmental Office Program Managers. IEAP assessments are performed on a daily, weekly, monthly, quarterly, semi-annual, and annual basis as part of the installation's routine operations. Assessments are performed using the appropriate approved checklists, which are derived from the Federal Team Guide, and the Team Guides State, and Army supplements.

The Tier-III capstone component of the IEAP is an installation-wide week-long Annual Environmental Performance Assessment (AEPA). The AEPA is a scheduled installation-wide environmental compliance assessment to verify Tier-I and Tier-II assessment results and provides a snapshot in time evaluation of Fort Polk's overall environmental compliance status. The AEPA also serves to focus the entire installation on environmental stewardship and reinforces environmental awareness at all levels of the installation and increases leadership involvement and understanding of environmental compliance. The AEPA ensures the installation is prepared for any external Federal, State, and DA environmental compliance inspections. The AEPA results and recommended corrective actions are reviewed by the command and documented into the Installation Corrective Action Plan (ICAP).

2.4.2 IEAP Program Background

Fort Polk developed the IEAP in 2003 and fully implemented it in FY04. The installation developed the IEAP to meet requirements established by the Installation Management Command (IMCOM), HQDA policy; Army Regulation 200-1; and the Environmental Management System (EMS). The Installation Garrison Commander approved Fort Polk's IEAP on 1 September 2003

for implementation. The historical finding results of Fort Polk's IEAP Tier-III installation-wide capstone AEPA assessment are shown in Table 2.4-1 and Figure 2.4-1.

2.4.3 IEAP Program Requirements

The IEAP requires installation organizations to have their operators and ECOs perform Tier-I and Tier-II daily, weekly, monthly, quarterly assessments as outlined in JRTC and Fort Polk Regulation 200-1 as part of their day-to-day operations. The IEAP also requires the Environmental Program Managers to perform Tier-III semi-annual risk-based assessments and the annual week-long installation-wide AEPA.

Tier-I assessments are conducted by unit and organizational personnel or ECOs on specific activities utilizing a checklist designed to monitor and prevent the potential environmental impacts that can result from performing specific activities or tasks. The intent of Tier-I assessments is to have operators or point personnel responsible for performing specific activities/tasks check designated environmental compliance requirements along with operational and maintenance requirements necessary for the activity and facility to accomplish its mission tasks. Tier-I assessment results are reviewed by organizational ECOs.

Tier-II assessments are conducted by organizational ECOs. The assessments monitor and control the potential negative environmental impacts that can result from performing an organization's common, routine, and repetitive mission activities and tasks. The intent of Tier-II assessments is to have ECOs monitor and assess the status of those environmental aspects associated with day-to-day operations and mission functions without disrupting the organization's normal operational flow. ECOs perform Tier-II assessments of their entire organizational area each month. Once each quarter, ECOs conduct a joint Tier-II assessment with the ECST assigned to that organization. Tier-II assessments are documented on the Environmental Compliance Checklist. Tier-II assessments results are reviewed by ECSTs and Program Managers.

Tier-III assessments are conducted by installation environmental program managers. These programmatic assessments are used to determine overall installation compliance with applicable environmental regulatory requirements for each environmental media area. Tier-III assessments cover all installation processes, facilities, programs, practices, and environmental media areas. The intent is to focus program manager efforts on those installation activities that have the potential to produce significant negative environmental impacts or those activities that have historically demonstrated substandard environmental performance. Although program managers are responsible for assessing all environmental program requirements within their media area throughout the year, Tier-III semi-annual assessments allow program managers to prioritize the activities and organizations to assess within their media area. In addition to semi-annual Tier-III assessments, program managers also conduct the Tier-III AEPA. The AEPA is the installation's internal equivalent of the Army's Environmental Performance Assessment System (EPAS) inspection. AEPA assessments include all operations and activities within the installation boundary (including contractors, tenant activities, and other activities under the purview of the Army), or a representative sample of similar activity types.

Tier-III AEPA assessments are conducted using HQDA approved Federal, State, and Active Army protocols. AEPA findings are placed in one of the following categories:

- **CLASS I:** Noncompliance with existing Federal or State regulations, noncompliance with future regulatory requirements (effective within next 6 months);

- **CLASS II:** Noncompliance with future regulatory requirements (effective in 6 months to 2 years);
- **CLASS III:** Noncompliance with Department of Defense, Army, or Fort Polk regulations, directives, standard operating procedures (SOPs), or inconsistent with good management practices; or
- **POSITIVE:** Above and beyond regulatory requirements or exemplary performance.

AEPA negative findings are further categorized by the following:

- **New:** Identified for the first time when compared to the previous assessment;
- **Repeat:** Identified previously and corrected, but identified again during this assessment; or
- **Carryover:** Identified previously but never corrected.

Tier-III assessment results are reviewed by the Installation Environmental Officer. IEAP assessment findings are reported by the assessor up the organization's chain of command to the appropriate or designated supervisor and to the next level of environmental expertise. The chain of command is responsible for developing corrective action plans and ensuring corrective actions are implemented and maintained. The environmental staff is responsible for providing environmental guidance to units and activities to support development of corrective action plans, tracking deficiencies, scheduling follow-up assessments, and reviewing and analyzing the assessment findings to determine if systemic and recurring problems exist. AEPA findings and corrective actions are briefed to the command and installation staffs.

Tier-I and II assessment deficiencies are documented on the checklist used to conduct the assessment. As appropriate, Tier-I and II assessment results are used by Environmental Program Managers to conduct Tier-III assessments. Tier-III deficiencies are documented on the AEPA Finding Form. Once the appropriate environmental expert has reviewed and analyzed the deficiencies, the findings are further documented in the Army EPAS database by the ICAP Manager. The database contains the details of each deficiency and corrective action plan which allows further review for additional root cause and historical analyses. The status of all findings and corrective actions entered into the ICAP are briefed to the installation's senior leadership during quarterly Environmental Quality Control Committee (EQCC) meetings.

2.4.4 IEAP Annual Program Developments

The 2015 IEAP capstone AEPA assessment was conducted on 5-9 October 2015. The installation environmental staff conducted the assessment using The Environmental Assessment and Management (TEAM) Guide and associated State and Army supplements. The 2015 AEPA assessed all environmental media areas and resulted in six Class I findings, eight Class III findings, and five positive findings. The six Class I findings consisted of one Air Emissions finding, two POL findings, one Solid Waste finding, one Wastewater finding, and one Water Quality finding. Of the 14 negative findings, there were four carryover Class I findings and no repeat findings identified. The assessment also resulted in five positive findings, which consisted of four Hazardous Materials findings and one Recycling finding. The installation Garrison Commander and staff were briefed on the 2015 AEPA results and corrective action plan. The installation corrected all eight Class III findings and one Class I finding prior to the

assessment command out-brief and corrected an additional Class I finding after the command out-brief. The Garrison Commander notified IMCOM of the AEPA results by forwarding the internal assessment notification memorandum. As of December 2015 four Class I findings remain uncorrected from the 2015 AEPA assessment.

2.4.5 IEAP Program Performance Indicators

Performance indicators were developed for the installation IEAP program based on known HQDA, IMCOM, and installation data and information requirements. Metrics and requirements from HQDA Common Levels of Support, Installation Status Report, Environmental Quality Reporting (EQR), and IMCOM Key Garrison Measures were used to develop the IEAP program indicators and standards. The installation evaluates the performance of the Fort Polk IEAP program based on the following performance indicators:

1. The number of findings by Class from the most recent assessment,
2. The number of open/uncorrected findings by Class from the most recent assessment,
3. Number of repeat findings by Class from the most recent assessment,
4. Number of carryover findings by Class from the most recent assessment,
5. The AEPA finding entered into the ICAP database,
6. The submission of the IMCOM internal audit notification memo by 30 November annually, and
7. The IEAP and AEPA SOPs reviewed and updated as required annually.

2.4.6 IEAP Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each IEAP program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the IEAP program. The following performance standards apply to the performance indicators listed above:

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IEAP Program Performance Metrics	
Performance Indicators	Performance Standards
1. The number of findings by Class from the most recent assessment	Trend Data - See Table 2.4-1 and Figure 2.4-1
2. The number of open/uncorrected findings by Class from the most recent assessment	Trend Data - See Table 2.4-2 Note: If no assessment is conducted that calendar year, the open findings from the previous assessment are shown.
3. Number of repeat findings by Class from the most recent assessment	a) GREEN: Zero repeat Class I and Class II findings; and no more than one repeat Class III finding b) AMBER: No more than one repeat Class I finding and no more than two repeat Class II findings; and no more than three repeat Class III findings c) RED: Two or more repeat Class I findings; and/or more than three repeat Class II findings; and/or more than four repeat Class III findings
4. Number of carryover findings by Class from the most recent assessment	a) GREEN: Zero carryover Class I and Class II findings; and no more than one carryover Class III finding b) AMBER: No more than one carryover Class I finding and no more than two carryover Class II; and no more than three carryover Class III findings c) RED: Two or more carryover Class I findings; and/or more than three carryover Class II findings; and/or more than four carryover Class III findings
5. The AEPA findings entered into the ICAP database	a) GREEN: Within 30 days following the assessment b) AMBER: 31 - 45 days following the assessment c) RED: 46 or more days following the assessment
6. The submission of the IMCOM internal audit notification memo by 30 November annually	a) GREEN: Notification memo submitted prior to 30 November b) AMBER: Notification memo submitted between 30 November and 31 December c) RED: Notification memo submitted after 31 December
7. The IEAP and AEPA SOPs reviewed and updated annually	a) GREEN: IEAP and AEPA SOPs reviewed and updated as necessary within 12 months of the last review and update b) AMBER: IEAP and AEPA SOPs reviewed and updated between 12 and 13 months of the last review and update c) RED: IEAP and AEPA SOPs not reviewed and updated within 14 months of the last review and update
Program Overall Performance	a) GREEN: No more than one amber and no red b) AMBER: No more than one red c) RED: Two or more red

2.4.7 IEAP Program Annual Performance Review

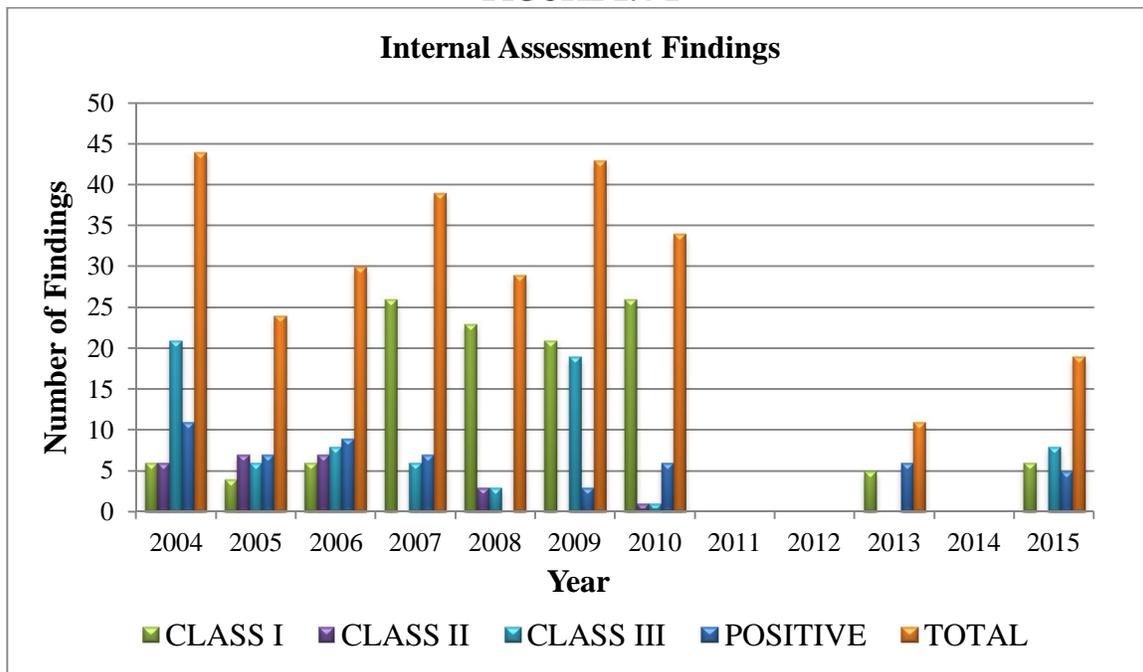
The IEAP program evaluation for 2015 is AMBER based on assessment results. Four performance indicators are rated GREEN and one performance indicator is rated red, which give the program an overall rating of AMBER for 2015. The specific results for each performance indicator are listed below.

IEAP Program Performance		
Indicators	2015 Performance	Evaluation
1. The number of findings by Class from the most recent assessment	Trend Data: Six Class I Findings Eight Class III Findings	Trend Data - See Table 2.4-1 and Figure 2.4-1
2. The number of open/uncorrected findings by Class from the most recent assessment	Trend Data: Four Class I Findings	Trend Data - See Table 2.4-2 Note: If no assessment is conducted that calendar year, the open findings from the previous assessment are shown.
3. Number of repeat findings by class from the most recent assessment	The 2015 AEPA identified no repeat finding	GREEN: Zero repeat findings
4. Number of carryover findings by Class from the most recent assessment	The 2015 AEPA identified four carryover finding	RED: Four carryover Class I findings
5. The AEPA findings entered into the ICAP database	The 2015 AEPA identified four findings for entry into the ICAP for 2015.	GREEN: Within 30 days following the assessment
6. The submission of the IMCOM internal audit notification memo by 30 November annually	Fort Polk submitted its AEPA notification memorandum to IMCOM on 23 October 2015	GREEN: Notification memo submitted prior to 30 November
7. The EPAS SOPs reviewed and updated annually	The IEAP and AEPA SOP were updated in 2015.	GREEN: IEAP and AEPA SOPs reviewed and updated within 12 months of the last review and update.
Program Overall Performance	Four green and one red	AMBER

**TABLE 2.4-1
Internal Assessment Findings**

YEAR	CLASS I	CLASS II	CLASS III	POSITIVE	TOTAL
2004	6	6	21	11	44
2005	4	7	6	7	24
2006	6	7	8	9	30
2007	26	0	6	7	39
2008	23	3	3	0	29
2009	21	0	19	3	43
2010	26	1	1	6	34
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	5	0	0	6	11
2014	0	0	0	0	0
2015	6	0	8	5	19

FIGURE 2.4-1



**TABLE 2.4-2
AEPA uncorrected Findings by Class**

YEAR	CLASS I	CLASS I OPEN	CLASS II	CLASS II OPEN	CLASS III	CLASS III OPEN	TOTAL
2010	26	25	1	1	1	1	27
2011	0	3	0	0	0	1	4
2012	0	3	0	0	0	0	3
2013	5	5	0	0	0	0	5
2014	0	0	0	0	0	0	0
2015	6	4	0	0	8	0	4

2.5 Environmental Performance Assessment System (Edward Mazion)

2.5.1 EPAS Program Description

The Environmental Performance Assessment System (EPAS) is the Army's program for assessing installation-level environmental performance and conformance with International Organization for Standardization (ISO) 14001:2004(E), Environmental Management Systems standard (EMS). EPAS provides Garrison Commanders with an objective assessment of their statutory compliance posture and the effectiveness of their EMS. The U.S. Army Environmental Command (AEC) executes the Headquarters Installation Management Command (HQ, IMCOM) external EPAS at all Installations on a 3-year cycle.

The EPAAS program objectives are to:

- Provide Command emphasis on environmental programs and management system;
- Serve as a tool to help installation leaders achieve, maintain, and monitor environmental compliance for highest risk media areas; and
- Help prevent fines and regulatory actions that hinder mission activities.

2.5.2 EPAS Program Background

The EPAS was previously known as the Environmental Compliance Assessment System (ECAS) and then Environmental Performance Assessment System (EPAS). The ECAS program was developed and implemented by HQDA in 1991 in response to recommendations made by the Environmental Protection Agency in 1986. In 1991, HQDA developed and implemented a schedule to assess all Active Army installations for environmental compliance performance. Upon completion of each installation's initial ECAS assessment, installations were then scheduled for subsequent ECAS assessments approximately every three years. In 2001, HQDA adopted the ISO 14001 EMS standard and directed all installations to implement an EMS that is fully conformant with the ISO 14001 standard.

The traditional Army philosophy was that effective environmental management involved the implementation of programs to meet regulatory requirements and helped an organization avoid negative consequences; the ECAS program supported that philosophy. With the adoption of EMS, the philosophy changed to one of effective environmental management, using EMS to support mission accomplishment and sustainability, while integrating environmental goals throughout the entire Army and installation culture. To reflect this new environmental philosophy, the Army expanded the ECAS program and renamed the ECAS program to EPAS in 2001. The historical results of Fort Polk's ECAS/EPAS findings are shown in Table 2.5-1 and Figure 2.5-1.

2.5.3 EPAS Program Requirements

The EPAS program provides the installation leadership with a snapshot in time of the installation's compliance with Federal, State, and local environmental laws and regulations, as well as DoD, Army, and installation compliance and performance requirements. EPAS assessments will: (1) identify noncompliance; (2) identify nonconformance with the ISO 14001 EMS standards and Army EMS requirements; and (3) provide recommended corrective actions.

EPAS assessments will include all operations and activities within the installation boundary (including operational ranges and other training areas), or a representative sample of similar activity types. The EPAS will evaluate overall environmental program performance and conformance with ISO 14001 standard. The assessments will include tenant activities, out-grants, leases, and other activities under the purview of the Army.

EPAS assessments will be conducted using a team of independent assessors having the necessary organizational and subject matter expertise, and not associated with the installation. This expertise will include the requisite environmental media and regulatory expertise as well as expertise in the functional mission areas that are the subject of the assessment. EPAS assessments will be conducted using HQDA approved Federal, State, and Active Army protocols.

Assessment findings will be placed in one of the following categories:

- **CLASS I:** Noncompliance with existing Federal or State regulations, noncompliance with future regulatory requirements (effective within next 6 months);
- **CLASS II:** Noncompliance with future regulatory requirements (effective in 6 months to 2 years);
- **CLASS III:** Noncompliance with DoD, Army, or Fort Polk regulations, directives, SOPs, or inconsistent with good management practices; or
- **POSITIVE:** Above and beyond regulatory requirements or exemplary performance.

Assessment negative findings are further categorized by the following:

- **New:** Identified for the first time when compared to the previous assessment;
- **Repeat:** Identified previously and corrected, but identified again during this assessment; or
- **Carryover:** Identified previously but never corrected.

Individuals performing external assessments will input required assessment data into the Army approved application/database to assist in producing the final Environmental Performance Assessment Report (EPAR) and the Installation Corrective Action Plan (ICAP). Fort Polk will prepare the ICAP, identify corrective actions, and secure resources for correction through the chain of command. Assessment results and ICAP will be made available to the EQCC.

2.5.4 EPAS Annual Program Developments

Fort Polk did not receive an EPAS in 2015. The USAEC conducted Fort Polk's 2014 EPAS from 24-27 February 2014. USAEC assessed 12 different media areas: Air Emissions, Hazardous Materials, Hazardous Waste, Operational Noise, POLs, Pollution Prevention, Solid Waste, Storage Tanks, Waste Munitions, Water Quality/Drinking Water, Wastewater/Storm Water and Installation Restoration (IR). USAEC conducted its assessment of the IR Program from 19-21 November 2013. Even though USAEC assessed the IR Program in advance of the 2014 EPAS, the media area is included as one of the media areas assessed for the 2014 EPAS. The 2014 EPAS resulted in a total of 14 Class I findings, two Class III findings and two positive findings. The Fort Polk Noise and Wastewater Programs both received positive findings. There was one carryover finding in the Drinking Water for an inadequate backflow/cross connection program. Fort Polk did not receive any repeat findings. As of December 2015, there are four

Class I findings uncorrected in the Fort Polk ICAP from the 2014 EPAS. Fort Polk's next EPAS is scheduled for 2017.

2.5.5 EPAS Program Performance Indicators

Performance indicators were developed for the installation EPAS program based on known HQDA, IMCOM, and installation data and information requirements. Metrics and requirements from HQDA Common Levels of Support (CLS), Installation Status Report (ISR), and Environmental Quality Reporting were used to develop the EPAS program indicators and standards. The installation evaluates the performance of the Fort Polk EPAS program based on the following performance indicators:

1. The number of findings by Class from the most recent assessment,
2. The number of open/uncorrected findings by Class from the most recent assessment,
3. Number of repeat findings by Class from the most recent assessment,
4. Number of carryover findings by Class from the most recent assessment,
5. Number of open or uncorrected Class I findings from most recent assessment,
6. The ICAP database reviewed and updated as required quarterly, and
7. The EPAS SOPs reviewed and updated as required annually.

2.5.6 EPAS Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each EPAS program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the EPAS program. The following performance standards apply to the performance indicators listed above:

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EPAS Program Performance Metrics	
Performance Indicators	Performance Standards
1. The number of findings by Class from the most recent assessment	Trend Data - See Table 2.5-1 and Figure 2.5-1
2. The number of open/uncorrected findings by Class from the most recent assessment	Trend Data - See Table 2.5-2
3. Number of repeat findings by Class from the most recent assessment	a) GREEN: Zero repeat Class I and Class II findings, and no more than one repeat Class III finding b) AMBER: No more than one repeat Class I finding and no more than two repeat Class II findings, and no more than three repeat Class III findings c) RED: More than two repeat Class I findings; and/or more than three repeat Class II findings; and/or more than four repeat Class III findings
4. Number of carryover findings by Class from the most recent assessment	a) GREEN: Zero carryover Class I and Class II findings, and no more than one carryover Class III finding b) AMBER: No more than one carryover Class I finding and no more than two carryover Class II findings, and no more than three carryover Class III findings c) RED: More than two carryover Class I findings; and/or more than three carryover Class II findings; and/or more than four carryover Class III findings
5. Number of open or uncorrected Class I findings from most recent assessment	a) GREEN: Zero Class I findings uncorrected b) AMBER: One Class I finding uncorrected c) RED: Two or more Class I uncorrected findings
6. The ICAP database reviewed and updated quarterly	a) GREEN: ICAP reviewed and updated quarterly b) AMBER: ICAP reviewed and updated annually c) RED: ICAP not reviewed or updated
7. The EPAS SOPs reviewed and updated annually	a) GREEN: EPAS SOPs reviewed and updated as necessary annually b) AMBER: EPAS SOPs reviewed but not updated annually c) RED: EPAS SOPs not reviewed or updated
Program Overall Performance	a) GREEN: No more than one amber and no red b) AMBER: No more than one red c) RED: More than two red

2.5.7 EPAS Program Annual Performance Review

The EPAS program evaluation for 2015 is AMBER based on the 2014 EPAS assessment results. There are three performance indicators rated GREEN, one performance indicator rated AMBER and one performance indicator rated RED resulting in an overall program rating of AMBER. The specific results for each performance indicator are listed below:

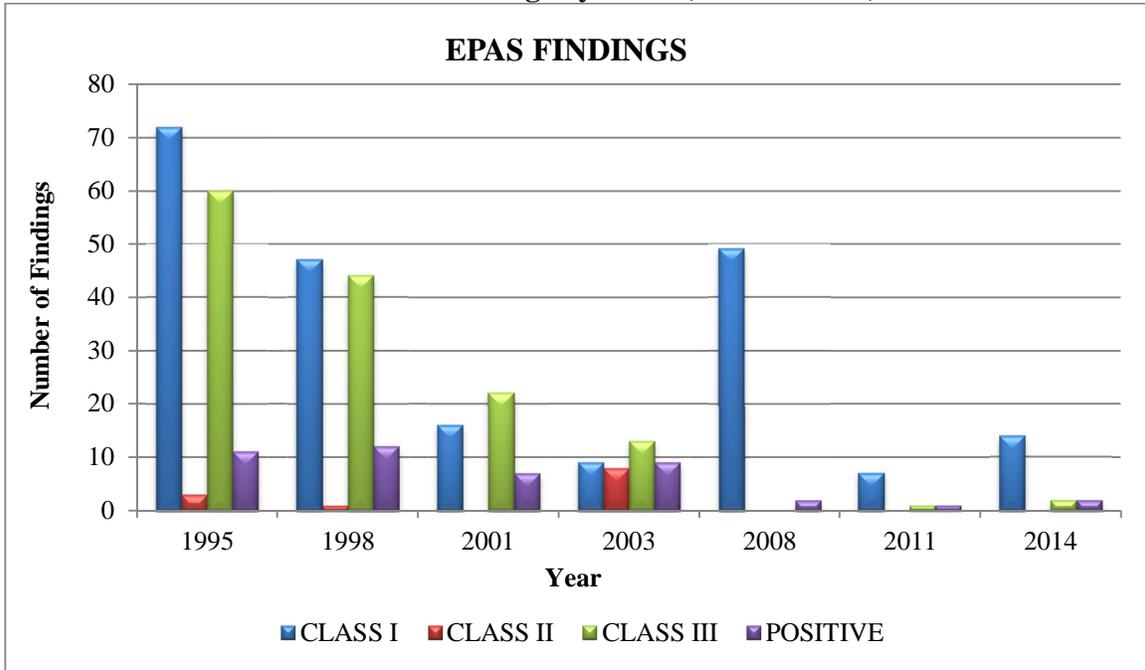
EPAS Program Performance		
Indicators	2015 Performance	Evaluation
1. The number of findings by Class from the most recent assessment	Trend Data: 14 Class I findings 0 Class II findings 2 Class III findings	Trend Data - See Table 2.5-1 and Figure 2.5-1
2. The number of open/uncorrected findings by Class from the most recent assessment	Trend Data: Four Class I findings identified during the 2014 EPAS remain uncorrected as of December 2015.	Trend Data - See Table 2.5-2
3. Number of repeat findings by Class from the most recent assessment	The 2014 EPAS identified zero repeat findings.	GREEN: No repeat findings
4. Number of carryover findings by Class from the most recent assessment	The 2014 EPAS identified one carryover finding.	AMBER: One carryover finding.
5. Number of open or uncorrected Class I findings from most recent assessment	Four Class I findings identified during the 2014 EPAS remain uncorrected as of December 2015.	RED: Four uncorrected Class I findings
6. The ICAP data based reviewed and updated quarterly	The ICAP was reviewed and updated each quarter of FY15.	GREEN: ICAP reviewed and updated as necessary quarterly.
7. The EPAS SOPs reviewed and updated annually	The EPAS SOP was updated in 2015.	GREEN: EPAS SOPs reviewed and updated as necessary annually.
Program Overall Performance	Three green, one amber and one red	AMBER

The RED rating for the fifth performance indicator pulled the overall EPAS program rating down to AMBER. To improve the EPAS overall program rating, the installation will focus renewed effort on working with the responsible organizations for specific EPAS findings in order to support timelier implementation of corrective actions for all findings. The RED rating for the fifth performance indicator is also the result of the fact that installation-wide Class I findings required un-programmed funding and take several years to implement corrective action plans.

**TABLE 2.5-1
Number of Findings by Class (Indicator # 1)**

YEAR	CLASS I	CLASS II	CLASS III	POSITIVE	TOTAL
1995	72	3	60	11	146
1998	47	1	44	12	104
2001	16	0	22	7	45
2003	9	8	13	9	39
2008	49	0	0	2	51
2011	7	0	1	1	9
2014	14	0	2	2	18

**FIGURE 2.5-1
Number of Findings by Class (Indicator # 1)**



**TABLE 2.5-2
Number of Uncorrected Findings by Class
From Most Recent Assessment (Indicator #2)**

ASSESSMENT YEAR	CLASS I	CLASS I OPEN	CLASS II	CLASS II OPEN	CLASS III	CLASS III OPEN
1995	72	12	3	1	60	8
1998	47	9	1	0	44	5
2001	16	5	0	0	22	3
2003	9	3	8	2	13	1
2008	49	2	0	0	0	0
2011	7	4	0	0	1	1
2014	14	5	0	0	2	1

2.6 Environmental Training (*Ira B. Crawford*)

2.6.1 Environmental Training Program Description

The Environmental Training Program at Fort Polk is designed to assist installation personnel and help them comply with local, state and federal regulatory training requirements. The training program ensures individuals understand their roles in controlling pollution, protecting the environment, and achieving specific environmental goals and objectives. Through these efforts, environmental factors are given proper consideration, along with mission and economic factors, during the installation planning and decision-making process. The program also encourages installation personnel to participate in projects that produce environmental benefits.

2.6.2 Environmental Training Program Background

Environmental training was initially developed at Fort Polk to comply with Army Regulation (AR) 200-1 and to educate Soldiers and civilian employees working and training at Fort Polk. The Environmental and Natural Resources Management Division (ENRMD) started a limited, but formal, environmental training program in 1989. Current training procedures and a standard curriculum were implemented in 1995. Training is offered for two primary courses: Environmental Compliance Officer (ECO) certification and Observer Coach Trainer (OCT) Training. Additionally, refresher training for each of these classes is also offered. A course on environmental issues involving the U.S. Forest Service Limited Use Area (LUA) was added to the schedule of classes at Fort Polk in FY98 then replaced with a more comprehensive field awareness class, Sustainable Range Awareness Training (SRAT), in June 2005.

Students who successfully complete the 40-hour initial ECO course are certified as ECOs. The 40-hour course covers pollution prevention, hazardous and solid waste management, employee health and safety, air and water quality, field awareness, Environmental Management System (EMS), training records and reports, and energy awareness. The 40-hour course consists of 4.5 days of lecture and a half-day field trip. All military units, civilian organizations, tenant units and contractors working on the installation are required to have a certified primary and an alternate ECO. In the initial year of training, 657 students attended 24 individual classes. The number of students dropped to 354 in 18 classes during 1997 due to contracting issues with the training provider. From FY98 through FY15, 391 40-hour ECO classes have been conducted and 5,947 students trained. After completing the initial 40-hour ECO training course, all ECOs must attend an annual 8-hour refresher course. From FY98 through FY15, 450 8-hour ECO refresher classes have been conducted and 4,772 students trained.

The Energy Awareness Officer (EAO) course, offered in conjunction with the ECO course, was modified in January 2011 to meet installation requirements. Previously a 2-hour block of instruction with no recertification requirements was given. Fort Polk policy now requires 4 hours of instruction for Facility Managers and Energy Officers with an annual 2-hour refresher. The 4-hour course is offered in conjunction with the ECO 40-hour course, and as of January 2011, the required 2-hour EAO refresher is offered in conjunction with the ECO recertification course.

OCTs are affiliated with the JRTC and serve as on-site evaluators of troops participating in JRTC training exercises. OCTs are responsible for helping troops comply with the rules of the

exercise, as well as rules concerning use of training facilities, including those related to environmental protection. The OCT environmental training course is an 8-hour course designed to educate OCTs about topics including EMS, waste management in the field (wastewater, hazardous materials, medical waste), vehicle refueling procedures, spill response, protection of natural and cultural resources (red-cockaded woodpeckers, bogs, other sensitive areas), erosion control, and fire prevention and response. All OCTs receive the SRAT course as well. A total of 4,588 OCTs have been trained in 209 classes since FY95. OCT refresher courses are required annually. Since FY98, 631 Soldiers have completed OCT refresher courses in 60 classes. No refresher classes were scheduled in FY15. OCTs may, and often do, attend the regularly scheduled OCT Academy course to obtain recertification.

The Combat Advisors (CAs) formally known as Small Group Advisors (SGAs), were assigned to the 162nd INF BDE, which has been deactivated and re-designated as the 353rd Infantry Regiment and is now under the control of the JRTC OPS GRP. The unit continues to serve as on-site evaluators for Combat Advisor Teams (CATs) participating in training exercises at Fort Polk. The CAs are responsible for helping CATs comply with the rules of the exercise, as well as rules concerning use of training facilities, including those related to environmental protection. The CAs attend the OCT environmental course in order to receive proper environmental protection training. All SGAs (CAs) receive the SRAT course as well. Since its inception in FY09, a total of 252 SGAs were trained in a total of five classes until the SGA course was completely integrated into the OCT Academy course. As of FY13 the SGA Academy has not been offered as a stand-alone course. The 162nd INF BDE deactivate in FY14.

The SRAT course was first offered in June 2005. This two-part course is designed to inform students about issues on both Fort Polk and U.S. Forest Service ranges and training areas. The first portion of the course is web-based and all personnel conducting training on Fort Polk are encouraged to complete this portion. The second portion is held in a classroom environment and given in conjunction with the G3 Range Safety class. All Range Safety Officers (RSOs) and Officers in Charge (OICs) must complete both the web based and classroom training in order to obtain their Range Safety Certification. Due to the 2005 mid-year transition from LUA class to SRAT, there was a sharp increase in the number of students in FY06.

The installation's G3 Training Officer has responsibility for coordinating the SRAT training course. The content of this course includes natural and cultural resource protection issues, training guidelines, endangered species protection, environmental compliance, Environmental Management System (EMS), and special provisions of the Special Use Permit Agreement (SUPA) between the U.S. Forest Service and the Army.

2.6.3 Environmental Training Program Requirements

Applicable laws and regulations include: 29 CFR, 40 CFR, 49 CFR, ISO 14001, AR 200-1, JRTC & FP 200-1, and Executive Order 13423. Strengthening Federal Environmental, Energy, and Transportation Management, Applicable State Environmental Regulations and permits (Lead and Asbestos Management, Storm Water Management, Spill Response, Solid Waste Management).

2.6.4 Environmental Training Annual Program Developments

Annual Environmental Training program development information is displayed in Table 2.6-1 and Figure 2.6-1.

2.6.5 Environmental Training Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Environmental Training program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the program.

Environmental Training Program Performance	
Performance Indicators	Performance Standards
1. Annual number of courses conducted by type (no./yr)	Trend Data
2. Annual number of students trained by course type (no./yr)	Trend Data
3. Percent of SOPs reviewed and updated annually (100 % yr)	a) GREEN: 100% of SOPs reviewed and updated b) AMBER: 99% - 75% of SOPs reviewed and updated c) RED: Less than 75% of SOPs reviewed and updated
4. Annual percent of training courses reviewed and updated (100 % /yr)	a) GREEN: 100% of courses reviewed and updated b) AMBER: 99% - 75% of courses reviewed and updated c) RED: Less than 75% of courses reviewed and updated
5. Training records database updated and maintained and backed up monthly (Yes)	a) GREEN: Yes b) RED: No
Program Overall Performance (Green)	a) GREEN: All green b) AMBER: Any amber c) RED: Any red

2.6.6 Environmental Training Program Annual Performance Review

The Environmental Training program evaluation for 2015 is GREEN.

Environmental Training Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual number of courses conducted by type (no./yr)	Trend Data	Trend Data - See Table 2.6-1
2. Annual number of students trained by course type (no./yr)	Trend Data	Trend Data - See Table 2.6-1
3. Percent of SOPs reviewed and updated annually (% yr)	100% of SOPs reviewed and updated	GREEN
4. Annual percent of training courses reviewed and updated (%/yr)	100% of Training Courses reviewed and updated	GREEN
5. Training records database updated and maintained and backed up monthly	Completed as indicated	GREEN
Program Overall Performance	All green	GREEN

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TABLE 2.6-1
FORT POLK ENVIRONMENTAL TRAINING

FISCAL YEAR	ECO COURSES	ECO REF COURSES	OCT COURSES	OCT REF COURSES	SGA COURSES	SGA REF COURSES	LUA/SRAT COURSES	EAO	EAO REF	TOTAL STUDENTS
1995	24	24	8	-	-	-	-	-	-	1,150
1996	23	24	10	-	-	-	-	-	-	1,217
1997	18	15	6	-	-	-	-	-	-	642
1998	22	20	13	3	-	-	2	-	-	1,041
1999	24	23	9	4	-	-	14	-	-	1,127
2000	24	18	10	1	-	-	11	-	-	1,169
2001	22	19	16	7	-	-	39	-	-	1,887
2002	23	19	12	10	-	-	57	-	-	1,926
2003	22	19	12	5	-	-	57	-	-	1,792
2004	21	22	12	5	-	-	51	-	-	1,652
2005	23	22	10	6	-	-	38	-	-	1,439
2006	22	26	8	5	-	-	*	-	-	4,766
2007	22	25	10	3	-	-	*	-	-	2,244
2008	20	25	11	3	-	-	*	-	-	2,254
2009	22	24	8	1	3	0	*	-	-	**4,278
2010	20	23	6	1	2	0	*	-	-	2,786
2011	19	24	10	0	0	0	*	19	-	***4,726
2012	21	26	7	0	0	0	*	22	15	3,314
2013	22	22	5	0	-	-	*	22	22	3,161
2014	20	24	4	0	-	-	*	20	24	2,226
2015	24	26	6	0	-	-	*	24	26	2,316

ECO = Environmental Compliance Officer

ECO REF = Environmental Compliance Officer Refresher

OCT = Observer Coach Trainer

OCT REF = Observer Coach Trainer

SGA = Small Group Advisory

SGA REF = Small Group Advisory Refresher

LUA = US Forest Service Limited Use Area

SRAT = Sustainable Range Awareness Training

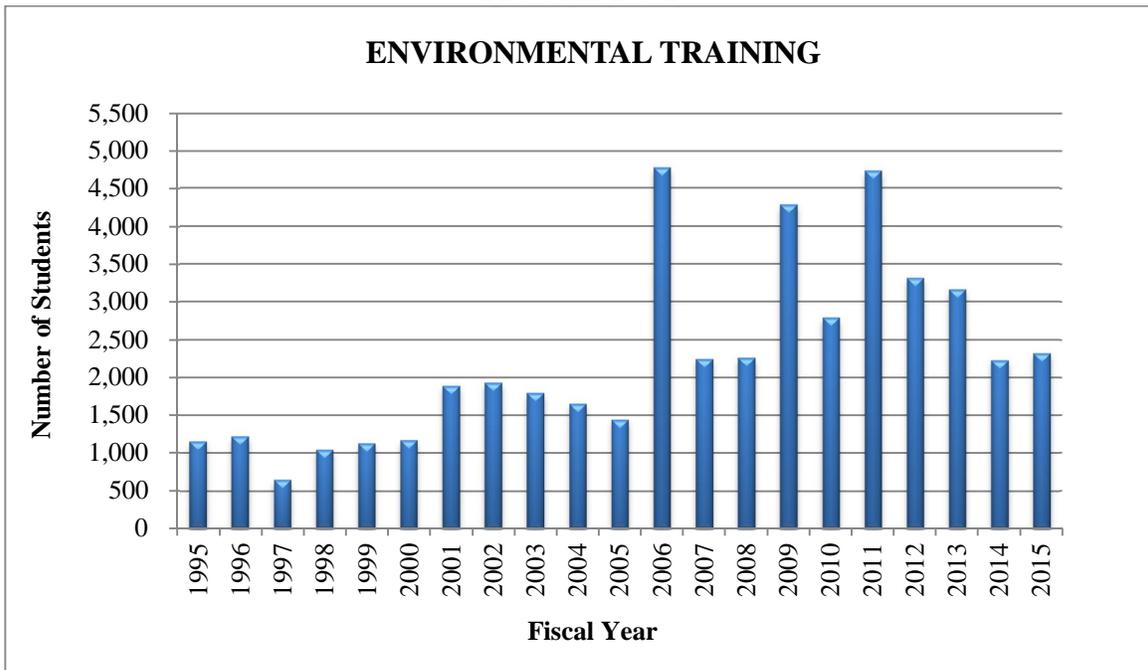
- Not Applicable or Course not required/offered

* The SRAT course replaced the LUA course in 2005. SRAT is tracked by number of students and not number of courses. The total number of students includes both web-based training and classroom instruction.

** Sharp increase due to redeployed units attending

*** Increase due to modification of EAO course and an increased number of OCT and SGA students

FIGURE 2.6-1



**SECTION 3
CONSERVATION**

3.1 National Environmental Policy Act (*Allison M. Cedars*)

3.1.1 NEPA Process Description

In 1969, the federal government passed the National Environmental Policy Act (NEPA). NEPA is a procedural act that requires federal agencies to consider the environmental effects of proposed actions. The purpose of the NEPA is to include environmental considerations into federal agency planning and actions. This is done by providing decision-makers and other stakeholders with information they need to understand any potentially significant environmental impacts resulting from an action.

The NEPA evaluation process is performed during the planning phase of all major federal actions. Efficiently and effectively informing Army planners and decision makers will help integrate environmental considerations into the decision-making process. NEPA procedures insure environmental information is made available to public officials and citizens before decisions are made and before actions are taken. NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

The NEPA process is initiated early on in the planning process by the proponent (person, unit or organization requiring the proposed action) identifying the proposed action. Additionally, the proponent is responsible for identifying the purpose and need, alternatives, and is responsible for funding the completion of the appropriate level of NEPA for the proposed action, mitigation actions, and any additional NEPA documentation if the identified mitigation action(s) are not adequate for implementing the proposed action.

The level of analysis and documentation required under the NEPA varies depending upon the nature of the action, project scope, and the severity of the potential effects. There are three levels of NEPA documentation: (1) A Record of Environmental Consideration (REC) is the lowest level of NEPA documentation requiring minimal environmental analysis and generally utilizes Categorical Exclusions (CX). If the proposed action meets the screening criteria for use of a CX, or if it can be tiered to an existing Environmental Assessment (EA) or Environmental Impact Statement (EIS), then the proposed action qualifies for a REC. (2) An EA is completed for proposed actions exceeding the thresholds of a REC. This document determines whether possible impacts may be significant and provides an in-depth analysis of the potential impacts the proposed action will have. The completion of an EA results in the issuance of either a Finding of No Significant Impact (FNSI) or a Notice of Intent (NOI) to prepare an EIS. A FNSI is issued if no significant environmental impacts are identified and disclosed in the EA. Following the issuance of a FNSI, the proposed action can proceed. (3) An EIS is prepared if the proposed action exceeds the scope of an EA, if the proposed action clearly has a significant impact to natural resources, or if an EA cannot conclude in a FNSI. An EIS documents the environmental impacts of a proposed action. The NEPA process does not prohibit projects with significant environmental impacts; however, NEPA requires that those impacts be documented and either minimized or mitigated to the most practical extent possible.

3.1.2 NEPA Program Description

Currently, the Army implements the NEPA by following the *32 Code of Federal Regulations (CFR) Part 651 Environmental Analysis of Army Actions; Final Rule (29 March 2002)* for evaluation of environmental impacts. Additionally, Fort Polk has developed several Standard Operating Procedures to provide consistent guidelines and procedures for NEPA implementation. Figures 3.1-1

and 3.1.2 show the trend in the number of RECs and higher level documents received over time for NEPA analysis. Figure 3.1-3 shows the number of higher level documents completed over time in the program to support installation and mission initiatives.

FIGURE 3.1-1

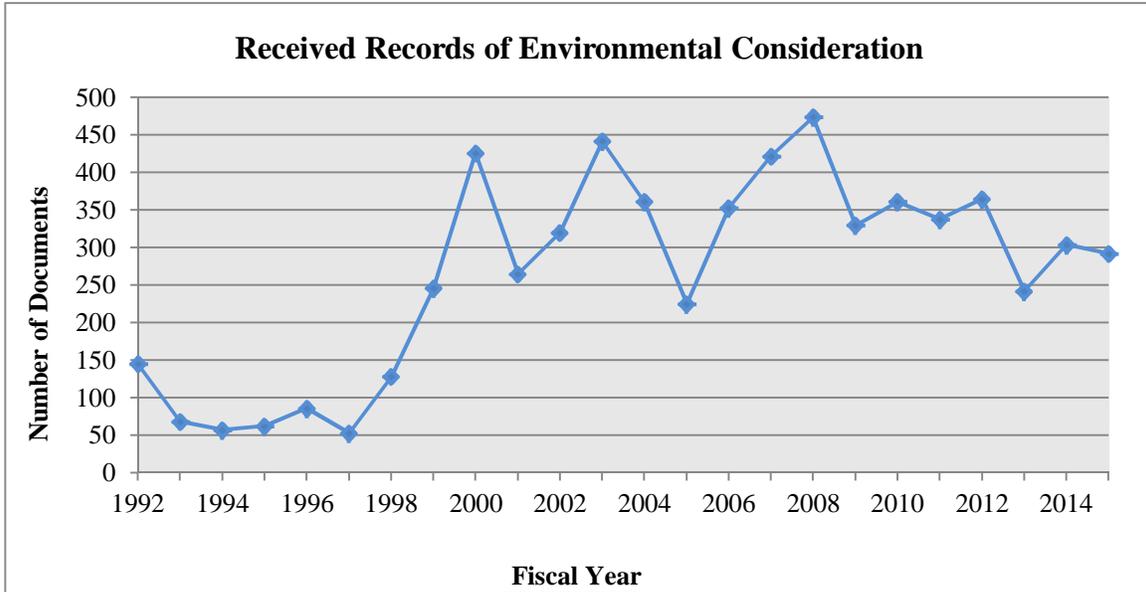
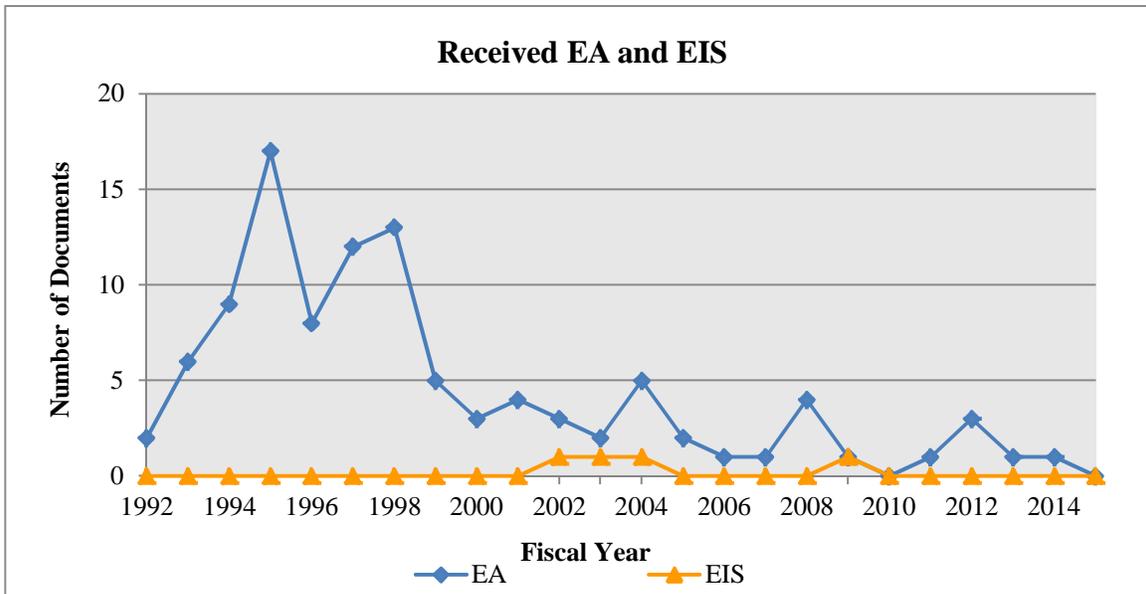


FIGURE 3.1-2



Transformations, re-stationing of Soldiers and Army realignment actions have meant changes to the infrastructure and landscape at Fort Polk. Over the years, the NEPA program at Fort Polk has played an important role in documenting the environmental impacts of changes occurring in Fort Polk’s mission and the Army’s transformation program as well as the training landscape. Many buildings, roads and ranges will continue to undergo changes necessary to meet the needs of the Army as it transforms into a 21st century force.

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The NEPA program directly reflects the installation's initiatives, projects and mission changes by the number of NEPA documents completed each year. Over the past twenty years, the number of NEPA documents has fluctuated but since 1999 the number of received REC's has averaged 339 annually. This increase over the average from 1984 through 1998 of 63 documents annually is the result of efficiencies in coordination and early integration of environmental considerations in the planning process. Table 3.1-1 shows the trend for NEPA documents completed since 1984.

TABLE 3.1-1
NEPA DOCUMENTS COMPLETED

FISCAL YEAR	REC	EA	EIS
1984	18	10	1
1985	5	3	0
1986	23	5	0
1987	40	5	0
1988	57	5	0
1989	65	3	0
1990	58	0	0
1991	66	4	0
1992	82	2	0
1993	68	6	0
1994	57	3	0
1995	62	2	0
1996	86	1	0
1997	85	1	0
1998	92	1	0
1999	244	0	0
2000	340	3	0
2001	204	1	0
2002	228	2	0
2003	584	4	0
2004	379	1	1
2005	282	3	0
2006	249	3	0
2007	460	1	0
2008	446	0	0
2009	325	1	0
2010	376	3	1
2011	237	2	0
2012	460	0	0
2013	219	4	0
2014	284	0	0
2015	304	0	0

3.1.3 NEPA Program Requirements

The process used in complying with NEPA is very similar to the decision-making process taught to Army leaders. The first step in the NEPA process is to receive a mission assignment. If that mission assignment involves the potential for construction, or earth disturbing, or planning on either of those actions, you are now in the NEPA process. Within this step, the purpose and need of the action is developed.

The second step is to develop alternative courses of action. This is the heart of the NEPA document and should present an assessment of the potential environmental impacts of the proposal and each alternative. The "no action" alternative will be included for objective evaluation.

The third step is to compare and evaluate alternatives. This involves collecting data relating to the proposed action and the alternatives, and then evaluating each alternative by predicting the probable outcome based on the data gathered. The next and final part of this step is to analyze the potential impacts of each alternative course of action.

Step four requires the comparison of the potential impacts of each alternative course of action. Another action in this step, if applicable, is to evaluate mitigations needed to address problems that could arise from implementing any of the alternatives.

Step five requires the decision maker to select an alternative to the proposed action.

Step six in the process is to implement the decision, then monitor the results and monitor what, if any, mitigation were implemented along with the preferred alternative.

3.1.4 NEPA Annual Program Developments

In 2015, the program worked on 292 NEPA documents. The increase in the number of NEPA documents prepared on the installation since the 1990's is an indicator of the proactive approach to NEPA that the installation has taken. The NEPA process is an integral part of the early planning process for all proposed actions and projects on the installation.

3.1.5 NEPA Program Performance Indicators

The NEPA program has developed three performance indicators (Table 3.1-2) that measure the performance of the program and indicate how well the program is performing at those indicators. Program indicators are based on measurable aspects of the program.

1. Timely review and analysis of Records of Environmental Consideration in accordance with Program Standard Operating Procedures.
2. Completion of Environmental Assessments in accordance with the 32 CFR part 651 (the starting point for this performance indicator is the point in time that a draft proposed action has been received from the proponent)
3. Percent completion of Conservation Branch planned actions, aimed at accomplishing commitments and mitigations documented through the NEPA process.

3.1.6 NEPA Program Performance Standards

The Environmental and Natural Resources Management Division has developed a performance standard for each of the performance indicators. Each performance indicator is evaluated based on a Red, Amber, or Green performance standard, and/or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the NEPA program. The following performance standards apply to the performance indicators listed above in section 3.1.5.

Table 3.1-2, NEPA Program Performance Metrics	
Performance Indicators	Performance Standards
1. Percent of RECs completed in less than 14 days and in accordance with Program Standard Operating Procedures.	a) GREEN: 95%-100% b) AMBER: 75%-94% c) RED: 50% - 74%
2. Time required to complete Environmental Assessments in accordance with the 32 CFR part 651 starting at the point of time the draft proposed action has been received from the proponent.	a) GREEN: EAs completed in six months or less b) AMBER: EAs completed in seven to twelve months c) RED: EAs completed in thirteen months or longer
3. Percent completion of Conservation Branch planned actions, aimed at accomplishing commitments and mitigations documented through the NEPA process.	a) GREEN: 90% - 100% b) AMBER: 70% - 89% c) RED: Less than 70%
Program Overall Performance	a) GREEN: All green; or two green and one amber b) AMBER: two amber c) RED: one or more red

3.1.7 NEPA Program Annual Performance Review

The NEPA program evaluation for 2015 is AMBER based on the output and outcome measures derived from the performance target criteria. There are one each performance indicator rated GREEN and AMBER, and one performance indicator was not rated for the year, resulting in overall program rating of AMBER. The specific results for each performance indicator are listed in Table 3.1-3:

Table 3.1-3, NEPA Program Performance Metrics		
Indicators	2015 Performance	Evaluation
1. Percent of RECs completed in less than 14 days and in accordance with Program Standard Operating Procedures.	87% RECs were processed in accordance with mandated time periods. This number falls within the AMBER category as per performance standards	AMBER
2. Time required to complete Environmental Assessments in accordance with the 32 CFR part 651 starting at the point of time the draft proposed action has been received from the proponent.	Although efforts were expended toward Environmental Assessments, no EAs were completed in the FY	Not recorded- as no EAs were completed in the performance period
3. During the reporting year, percent of Conservation Branch planned actions, aimed at accomplishing commitments and mitigations establishes through the NEPA process, that have been completed.	6 out of 6 planned actions in support of commitments and mitigations were completed by the Conservation Branch. They include: 1) Monitor low water crossings and sediment basins to recommend repairs; survey down range projects for presence of pocket gophers; 3) Identify and mark bogs; 4) Attempt to turn on new lands to WMA; 5) implement stream gage monitoring; 6) monitor the tree line for the FY12 MPMG Range	GREEN
Program Overall Performance	One green and one amber	AMBER

3.2 Conservation Ecology (*Sarah E. Pearce*)

3.2.1 Conservation Ecology Program Description

Ecological management of Army-owned land at Fort Polk is mandated through the Sikes Act, which is the main driver for the Integrated Natural Resources Management Plan (INRMP). The INRMP provides for projects designed to facilitate non-game and game fish, wildlife monitoring and management, botanical resources monitoring and management, forest-timber management, and game fish and wildlife-oriented recreation for Soldiers and general public alike. Additional management activities are also mandated under the Endangered Species Act, Migratory Bird Treaty Act, Noxious Weeds Act, Department of Defense (DoD) and Army Regulations, and cooperative natural resources ecosystem management agreements with the Louisiana Department of Wildlife and Fisheries (LDWF), U.S. Forest Service (USFS) and U.S. Fish and Wildlife Service (USFWS). These projects discussed in this section 'Conservation Ecology' are generally divided into game, non-game and botanical resources sections within the INRMP, Conservation Branch (CB), Environmental and Natural Resources Management Division (ENRMD), Directorate of Public Works (DPW), Fort Polk. These projects consist of monitoring for rare and sensitive plant and animal populations, game fisheries and wildlife management, invasive species control, management of high quality special natural areas, migratory birds, and other projects to maintain and improve the ecological condition of training lands.

Fort Polk provides for holistic, ecosystem based management through the integrated compartment prescription process within the installation INRMP. Forest prescriptions for timber and forest management are inventoried for 10% of the entire landscape each year, resulting in an evaluation of approximately 10,000 acres per year. In conjunction with this forest management activity; game, non-game and botanical sections evaluate the same forest compartment to provide management recommendations for botanical resources, game fisheries and wildlife resources, rare and sensitive animal resources, and other key natural resource management areas. Recommendations for the management of each compartment is then combined into a single integrated forest compartment prescription, which guides the specific management of that land area for the next 10 years. In addition to providing management recommendations, botanists map each compartment to ascertain the location and extent of ecological habitat types, such as bogs, baygalls, upland hardwood areas, prairies, and other locally distinct ecotypes. This map is entered into a master GIS file to provide an inventory and location for all ecological resources on the installation. The newly purchased lands south of Peason Ridge will be incorporated into the compartment prescription process in the near future.

3.2.2 Non-Game Program Background

The non-game section of the INRMP provides for management of native vertebrate and inveterate species, rare and sensitive species, botanical resources, and ecological landscape management. Several state rare and sensitive species are found on the landscape, which includes DoD species at risk such as, the Louisiana pine snake, bog coneflower, Sprague's pipit, and alligator snapping turtle.

Conservation Branch staff manage and monitor non-game species populations using national and state program methodologies for Monitoring Avian Productivity and Survivorship, Louisiana Amphibian Monitoring Program, National Amphibian Monitoring Program, Christmas

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Bird Count, North American Butterfly Association, Hawk Watch, other regional, local efforts and other INRMP project execution. Currently, 236 avian, 50 reptile, 21 amphibian, 45 mammal and 82 butterfly species have been identified on Fort Polk and Peason Ridge. These data are utilized to assist in tracking INRMP execution, trend reporting and contributes additionally to nationwide management and monitoring. Local management efforts include providing breeding boxes for key species, such as the Southeastern American kestrel, wood ducks, and Eastern bluebirds. Non-game species monitoring partnerships with the LDWF, Army Corps of Engineers, Engineering and Research Development Center, DoD Partners in Flight, and several universities have identified Fort Polk as a key land base for non-game species. For example, collaboration with McNeese State University, Fort Polk and USFS has begun to identify the abundance and distribution of alligator snapping turtles, a DoD species at risk and USFWS petitioned species for the endangered species list, on the installation and Kisatchie National Forest.

Fort Polk and Peason Ridge harbors the Louisiana pine snake (LPS), a candidate for the endangered species list. The species is currently protected from unauthorized collection in both Louisiana and Texas. Fort Polk works jointly with a multi-agency consortium for the management of the LPS on DoD properties and has entered into a Candidate Conservation Agreement (CCA) with the USFWS, USFS, LDWF, Texas Parks and Wildlife, Audubon Zoo, and other key managing partners for a collective management approach across all populations to prevent listing of this species. Fort Polk monitoring and management activities revolve primarily around live trapping efforts to provide key occurrence data, opportunistic road cruising, cooperative research and monitoring projects, and maintaining the open/frequently burned Longleaf pine habitat that it utilizes.

Fort Polk main post LPS Habitat Management Unit (HMU) consist of 22,882 acres. 27 LPS encounters have occurred on Fort Polk main post since the early 1990's. Peason Ridge HMU consists of 5,641; and eight LPS encounters have occurred on Peason Ridge since the early 1990's. Figure 3.2-1 and Figure 3.2-2 show current HMU and LPS encounters since the 1990's.

FIGURE 3.2-1
FORT POLK LPS HMU AND ENCOUNTER LOCATIONS

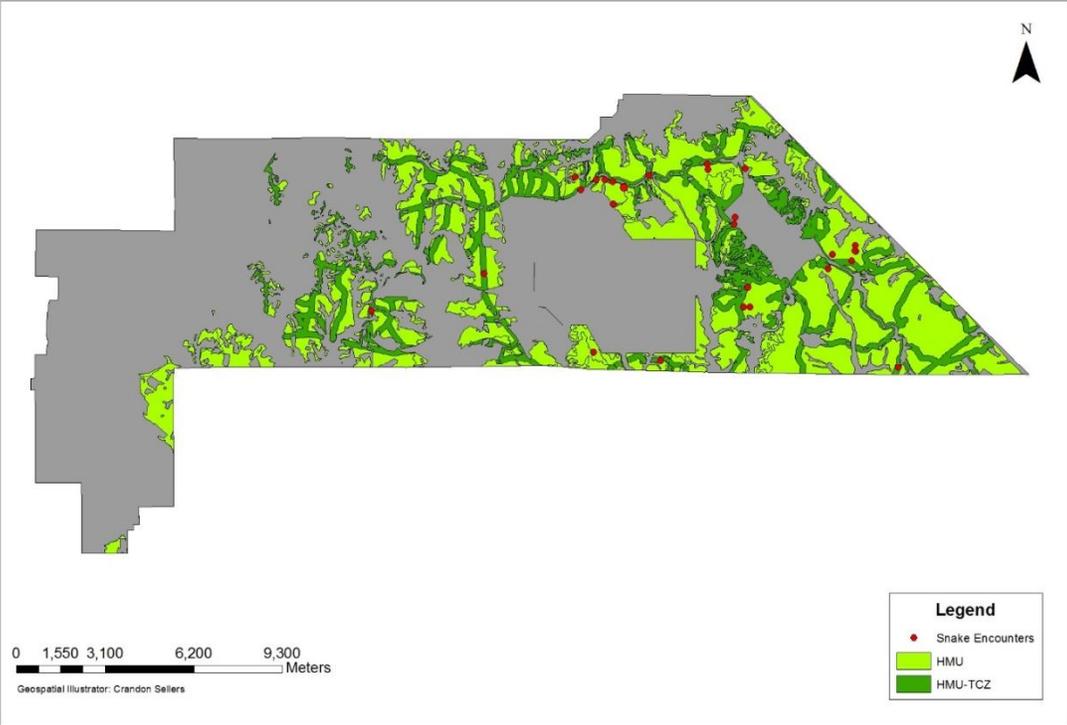
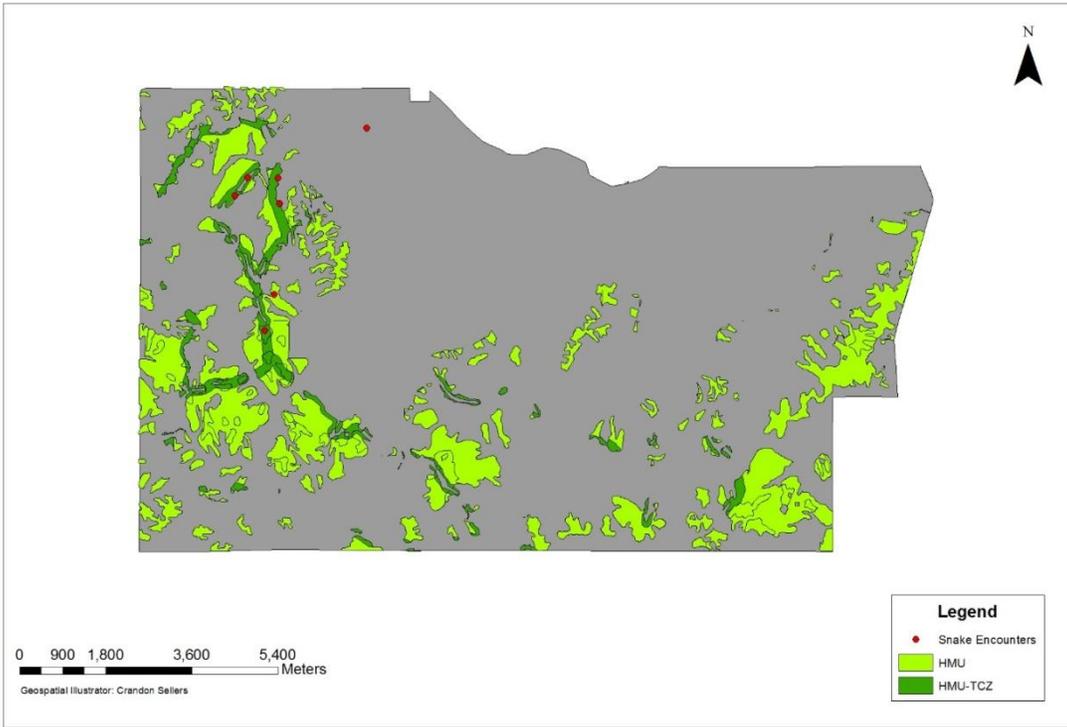


FIGURE 3.2-2
PEASON RIDGE LPS HMU AND ENCOUNTER LOCATIONS



The Federal Noxious Weeds Act provides for the control and management of nonindigenous weeds and plants that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. This Act requires that each federal agency: develop a management program to control undesirable plants on federal lands under the agency's jurisdiction; establish and adequately fund the program; implement cooperative agreements with state agencies to coordinate management of undesirable plants on federal lands; establish integrated management systems to control undesirable plants targeted under cooperative agreements. Fort Polk actively inspects training lands through the integrated compartment prescription process and other programs to identify and eradicate invasive plants that have the potential to negatively affect the natural landscape. Currently, 64 invasive species occur on Fort Polk.

Conservation Branch staff use the integrated compartment prescription process to map the vegetation types across the installation entering six of 60 compartments each year. Figure 3.2-3 and Figure 3.2-4 shows these vegetation associations.

FIGURE 3.2-3

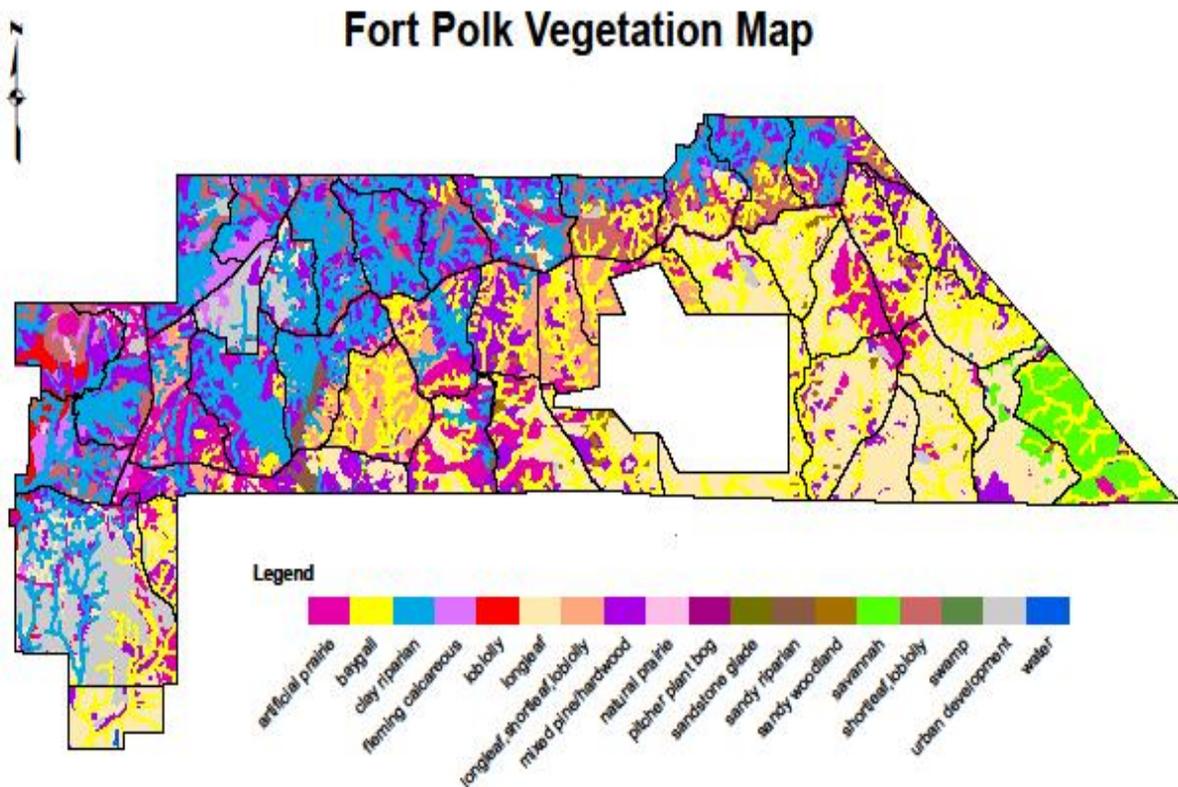
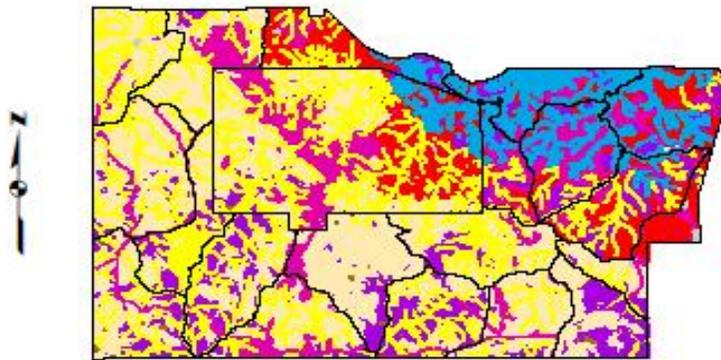


FIGURE 3.2-4

Peason Ridge Vegetation Map



Conservation Branch staff actively surveys for rare plant occurrences and locations through the integrated compartment prescription process, and additional special surveys. When rare species are located, they are catalogued into a master database file with metadata for species type, location, condition, persistence, and other parameters. Management recommendations for these species locations are captured in the integrated compartment prescription. Exceptionally rare species or species at risk of disturbance are protected by special perimeter markings and monitored annually. Fort Polk tracks 78 rare plant species with some state listed and others considered as Fort Polk Rare's. All potential landmark tree species are monitored with currently 181 trees listed from 107 species. Fort Polk identifies and monitors heritage plants (mostly non-native species that were planted by home sites and persists today). Currently, Fort Polk has recorded 293 heritage plants representing 41 species.

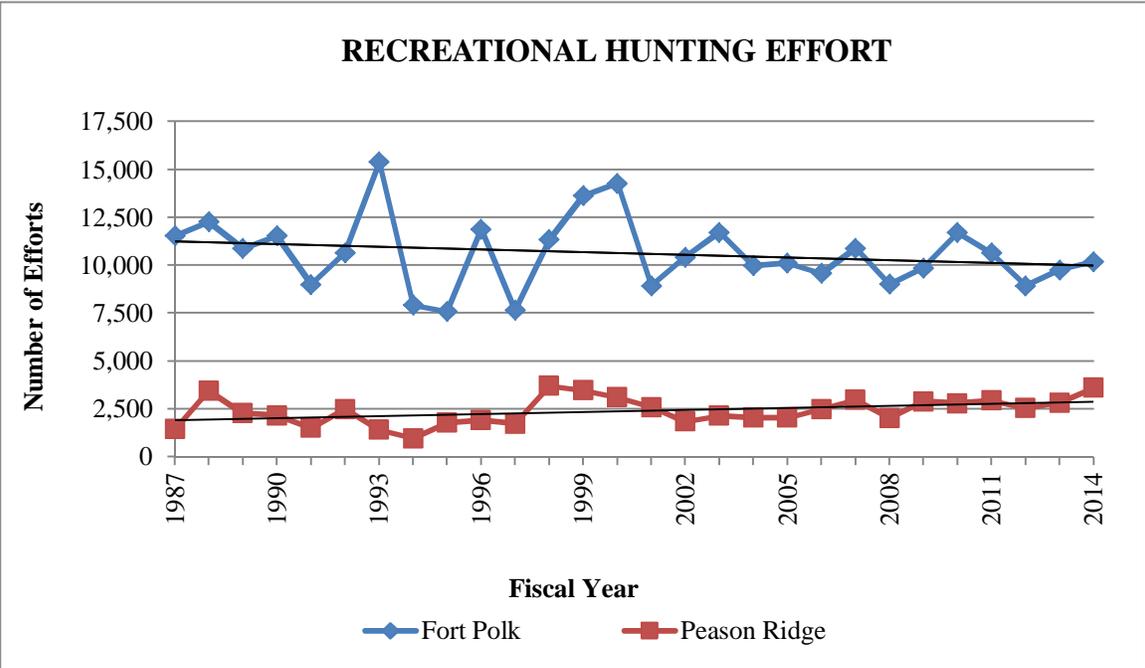
3.2.3 Game Fisheries and Wildlife Management Program Background

This program provides a wide variety of recreational opportunities to Soldiers, civilian employees, and the general public. Hunting is among these recreational opportunities. A variety of species are commonly hunted on the installation including white-tailed deer, turkey, bobwhite quail, mourning dove, gray and fox squirrels, rabbits, feral hogs, woodcock, and several species of duck.

Hunting data are collected by the LDWF, Wildlife Management Area (WMA) staff, in coordination with the Conservation Branch, ENRMD. Hunters report to self-clearing stations at the start and end of each day. These stations provide hunters with maps of areas open to hunting and have registration forms that hunters must fill out at the start and conclusion of each days hunt. Completed forms are deposited into a box at the station. Hunters failing to complete the self-registration process are subject to fines and possible loss of hunting privileges on the installation. Initially, records were kept by Directorate of Emergency Services, Game Enforcement Office by issuing daily hunter permits. Although this method provided a very accurate count of hunters, the process of issuing daily permits was time-consuming and inefficient. Often, long lines of hunters would form at the Fort Polk Game Enforcement Office to obtain permits. In 1982, Fort Polk began issuing Annual Hunting/Fishing/Trapping Permits that were valid from September to August of each year. In 2014, the Fort Polk hunter permits were eliminated to align with LDWF requirements for the WMA.

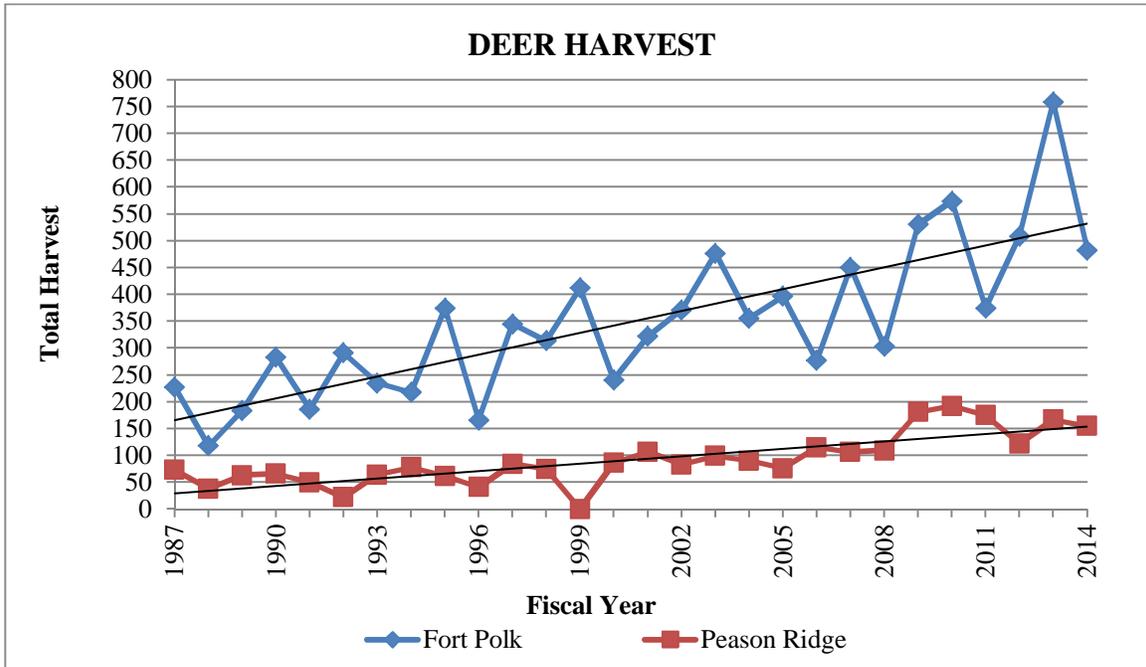
Registration forms are collected on a daily basis from the check-in stations. Data from these forms are compiled into a daily Hunting/Trapping Report. These reports, kept since 1987, are on file in the Fort Polk Game Enforcement Office, the LDWF, and Conservation Branch Game Fisheries and Wildlife Management Section. Data are divided into several categories, including the number of small and large game hunters, number of hunters per harvest method (archery, muzzleloader, rifle), and harvest statistics. Figure 3.2-5 shows recreational hunting effort trend on For Polk since 1987 has declined slightly and on Peason Ridge has increased slightly.

FIGURE 3.2-5



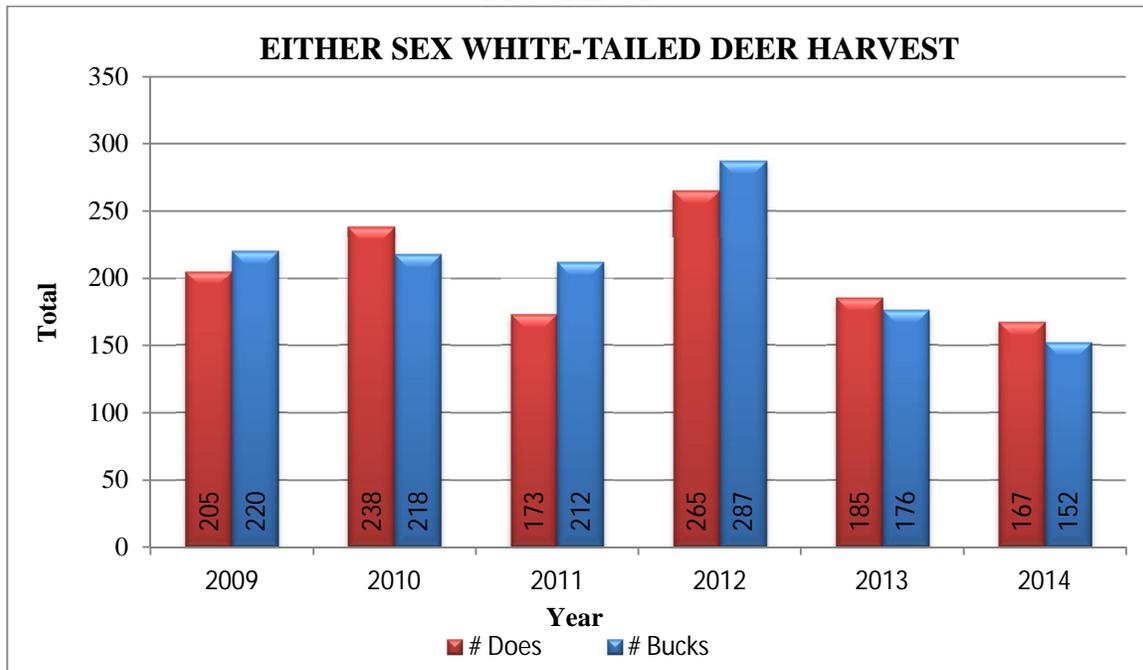
White-tailed deer are the most commonly hunted game species on the installation. Deer season begins at Fort Polk in September and ends in January. The cantonment area is restricted to bow hunting only. Both bucks and does can be harvested by bow. Remaining training lands of Fort Polk and Peason Ridge are open to other methods of hunting, but are restricted to harvest of bucks only, except during special either-sex days. Harvest goals for deer on the installation are 50% bucks and 50% does, but can vary from year to year depending on the current season's deer population and land availability during either-sex hunts. The largest total deer harvest occurred in 2010-2011 (574) on Fort Polk and on Peason Ridge (192). Figure 3.2-6 shows a positive trend in deer harvest on both Fort Polk and Peason Ridge since 1987.

FIGURE 3.2-6



Two managed either-sex hunts are held by the LDWF on Fort Polk and Peason Ridge WMAs in which Conservation Branch staff assists. In 2013 the newly purchased lands south of Peason Ridge and west of LA Hwy 117 were appended to the Peason Ridge WMA and opened to hunting. Data corresponding specifically to the managed either-sex deer hunts is also maintained by the Conservation Branch, ENRMD. The data collected contains information about the number of hunter efforts, bucks harvested, does harvested, deer ages and general deer health.

FIGURE 3.2-7



3.2.4 Conservation Ecology Program Requirements

Non-game program management performance is contingent largely on the ability of resource managers to access training lands to perform management and monitoring activities. Given the current operational tempo required for the Combat Training Center, access has been somewhat limited, but successful coordination with the trainers has allowed for adequate access to perform all management activities. Additional constraints due to mandated service level decreases coupled with funding issues has limited the program to providing for a more moderate level of project execution.

Hunter effort and success is driven completely by non-compatible training activities that preclude providing access for hunting on much of the Fort Polk and Peason Ridge lands. Training conflicts can limit hunter effort during key seasons.

3.2.5 Conservation Ecology Annual Program Developments

Key program elements for non-game management were conducted at a base minimum due to programmatic reductions, but accomplished at a level considered to be adequate in the short term providing that further reductions in capability are not realized. The CCA for the Louisiana pine snake (originally signed in 2003) was revised in 2013 and new signatures of all parties were secured. The species is scheduled to be reviewed for listing under the Endangered Species Act in FY16. During 2014, efforts to conference with the USFWS on the species were initiated. All necessary documentation to complete conferencing was provided to the USFWS. This conferencing will cover current training and management activities as well as on Army Compatible Use Buffer (ACUB) properties in Bienville Parish, should the land owner be willing to work with The Nature Conservancy (TNC) who is the installations ACUB partner. Also a portion of the new land was appended to the Peason WMA allowing additional acreage for outdoor recreational opportunities in 2014 and 2015.

3.2.6 Conservation Ecology Program Performance Indicators

Game fisheries and wildlife management performance indicators are a direct measure of providing hunter access during key season dates (opening weekends of squirrel and turkey seasons, and Thanksgiving deer either-sex weekend), but are susceptible to large scale change due to shifts in priority military training missions.

Non-game performance indicators are reflective of successful completion of non-game projects (i.e. vertebrate and invertebrate) monitoring and management activities, rare plant monitoring and management, candidate endangered species monitoring, and successful completion of compartment prescription inventories and management recommendations.

3.2.7 Conservation Ecology Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each program performance indicator is evaluated based on a RED, AMBER, or GREEN performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the both the non-game, botanical and game fisheries and wildlife management sections of the INRMP. The following performance standards apply to the performance indicators listed above:

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Conservation Ecology Program Performance Metrics	
Performance Indicators	Performance Standards
1. Percent of total hunting acre-day capacity that is open for hunting during periods of interest (opening weekends of squirrel and turkey seasons, and Thanksgiving deer either-sex weekend) on the Fort Polk and Peason Ridge Wildlife Management Areas	a) GREEN: Total acre-day capacity open to hunting during periods of interest is >75% for Fort Polk and >50% on Peason Ridge b) AMBER: Total acre-day capacity open to hunting during periods of interest is 51% - 75% on Fort Polk and 25% - 49% on Peason Ridge c) RED: Total acre-day capacity open to hunting during periods of interest is <50% for Fort Polk, or <25% on Peason Ridge
2. Compartment prescription inventories are completed and management recommendations incorporated into compartment prescriptions	a) GREEN: All 6 compartment prescriptions are completed within mandated time frames b) AMBER: 4 - 5 compartment prescriptions are completed within mandated time frames c) RED: <4 compartment prescriptions are completed within mandated time frames
3. Tier 1 rare plant species sites are monitored and managed annually	a) GREEN: 100% Tier 1 plant sites are monitored and managed annually b) AMBER: 90% - 99% of Tier 1 plant sites are monitored and managed annually c) RED: <90% of Tier 1 plant sites are monitored and managed annually
4. Scheduled invasive species control activities are completed as per the invasive species control annual work plan	a) GREEN: 90% - 100% of scheduled control activities are completed annually b) AMBER: 75% - 89% of scheduled invasive species control activities are completed annually c) RED: <75% of scheduled invasive species control activities are completed annually
5. Louisiana pine snake monitoring activities are completed in accordance with the CCA	a) GREEN: 95% - 100% of LPS traps are monitored and maintained annually b) AMBER: 85% - 94% of LPS traps are monitored and maintained annually c) RED: <85% of LPS traps are monitored and maintained annually
6. Management and monitoring activities for INRMP non-game projects implemented	a) GREEN: 95% - 100% of INRMP non-game projects executed annually b) AMBER: 85% - 94% of INRMP non-game projects executed annually c) RED: <85% of INRMP non-game projects executed annually
Program Overall Performance	a) GREEN: All program indicators are green or amber with no more than three being amber b) AMBER: All program indicators are green or amber or all program indicators are green or amber with one being red c) RED: Two program indicators are red

3.2.8 Conservation Ecology Program Annual Performance Review

The Conservation Ecology program evaluation is GREEN. There are five performance indicators rated GREEN, one performance indicators rated AMBER, and none rated RED, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Conservation Ecology Program Performance Metrics		
Indicators	2014/15 Performance	Evaluation
1. Percent of total hunting acre-day capacity that is open for hunting during periods of interest on the Fort Polk and Peason Ridge WMAs	Fort Polk was open 75.96% of its acre-day capacity (GREEN rating) and Peason Ridge was open 85.63% of its acre-day capacity (GREEN rating). Peason Ridge WMA values includes new lands west of LA 117. The overall rating of this performance indicator was GREEN.	GREEN
2. Compartment prescription inventories are completed and management recommendations incorporated into compartment prescriptions	100% of scheduled compartment prescription (6 of 6) inventories were completed, and management recommendations incorporated into prescriptions within scheduled time frames.	GREEN
3. Tier 1 rare plant species sites are monitored and managed annually	The Tier 1 rare plant sites were monitored and protection measures as set forth in compartment prescriptions were accomplished.	GREEN
4. Scheduled invasive species control activities are completed as per the invasive species control annual work plan	75% of scheduled control activities were completed.	AMBER
5. Louisiana pine snake monitoring activities are completed in accordance with the CCA	100% of LPS traps were successfully monitored. Two road-mortalities were encountered.	GREEN
6. Management and monitoring activities for INRMP non-game projects implemented	100% of the INRMP non-game projects were implemented.	GREEN
Program Overall Performance	Five green and one amber	GREEN

3.3 Endangered Species (*Kenneth R. Moore*)

3.3.1 Endangered Species Program Description

The ENRMD is responsible for management of endangered species occurring on Fort Polk. The only endangered species that occurs on the installation is the Red-Cockaded Woodpecker (RCW). Surveys are conducted annually to determine the demographics of the RCW population on Army land. A pre-breeding survey is conducted to document the total number of active RCW clusters and the number of solitary and potential breeding groups. Data collected during the breeding season include the number of breeding groups, nest attempts, nest failures, eggs per nest, successful nests, re-nest attempts, and number and sex of fledglings in each nest. Post-breeding season data collected include the number and role of adults, the sex of adults and juveniles, the number of juveniles available to meet current translocation needs, and documentation of the presence and role of translocated individuals.

3.3.2 Endangered Species Program Background

The RCW (*Picoides borealis*) was federally-listed as an endangered species on 13 October 1970. The RCW is a non-migratory species that prefers mature stands of longleaf pine. The primary cause of decline in RCW populations over much of its range is loss of habitat. In the region in which Fort Polk is located, the majority of this habitat loss occurred during the period from 1890 to 1930 when much of the forest was subjected to extensive clear-cutting.

The RCW Management Program at Fort Polk began in the 1970s and is unique within the Department of Defense (DoD) due to its joint recovery population responsibilities with the adjacent United States Forest Service (USFS) lands. The installation manages two RCW populations, Fort Polk and Peason Ridge. Fort Polk and the adjacent United States Forest Service land of the Vernon Unit comprise one of the 12 designated recovery populations critical to the long-term survival of the RCW (United States Fish and Wildlife Service, 2003). Fort Polk assists the USFS with monitoring and management of their portion of the Vernon-Fort Polk RCW population. The RCW program is based on guidelines established by the U.S. Fish and Wildlife Service in 1996 and 2007, as well as the RCW Recovery Plan and has been modified numerous times to incorporate new scientific knowledge and maintain compliance.

Intensive monitoring and management of RCW populations on Fort Polk and Peason Ridge began in 1993. Incorporated into the INRMP, the installation has prepared an Endangered Species Management Component (ESMC) for the RCW which describes the policy of compliance with Army regulations and, USFWS biological opinions and recovery guidelines. In addition, the ESMC includes detailed descriptions of the management techniques used to analyze and improve RCW habitat and population.

Additionally, throughout the year the Endangered Species Program provides outreach programs about the RCW and Louisiana Pine Snake to the public and Army units visiting Fort Polk. In an effort to reduce training violations the program began giving briefings regarding these two species in mid-2015 to visiting rotational units as part of the Observer Controller Training Program.

TABLE 3.3-1

FISCAL YEAR	FORT POLK				PEASON RIDGE			
	POTENTIAL BREEDING GROUPS	NUMBER OF ACTIVE CLUSTERS	NUMBER OF NEST ATTEMPTS	NUMBER OF SUCCESSFUL NESTS	POTENTIAL BREEDING GROUPS	NUMBER OF ACTIVE CLUSTERS	NUMBER OF NEST ATTEMPTS	NUMBER OF SUCCESSFUL NESTS
1993	No Data	31	20	11	No Data	11	8	7
1994	30	31	24	20	No Data	22	18	15
1995	36	40	28	18	25	25	25	19
1996	40	44	35	32	25	28	25	20
1997	42	45	34	27	23	26	21	17
1998	39	43	36	28	23	27	22	12
1999	41	48	38	31	23	26	22	16
2000	46	48	39	31	20	24	18	13
2001	43	51	36	27	20	25	19	12
2002	40	47	37	32	24	30	23	15
2003	40	49	35	28	26	34	23	12
2004	42	47	35	25	28	35	26	14
2005	43	50	40	32	31	40	26	21
2006	46	53	43	30	30	35	26	19
2007	47	53	43	27	29	32	29	16
2008	48	53	47	37	26	33	22	16
2009	53	58	46	38	26	28	25	14
2010	53	60	46	33	25	29	21	16
2011	54	60	46	38	20	29	20	16
2012	50	59	41	32	22	29	19	14
2013	50	57	44	33	22	25	18	12
2014	49	58	46	32	22	24	19	12
2015	44	53	39	28	20	23	13	8

RED-COCKADED WOODPECKER (RCW)

FIGURE 3.3-1

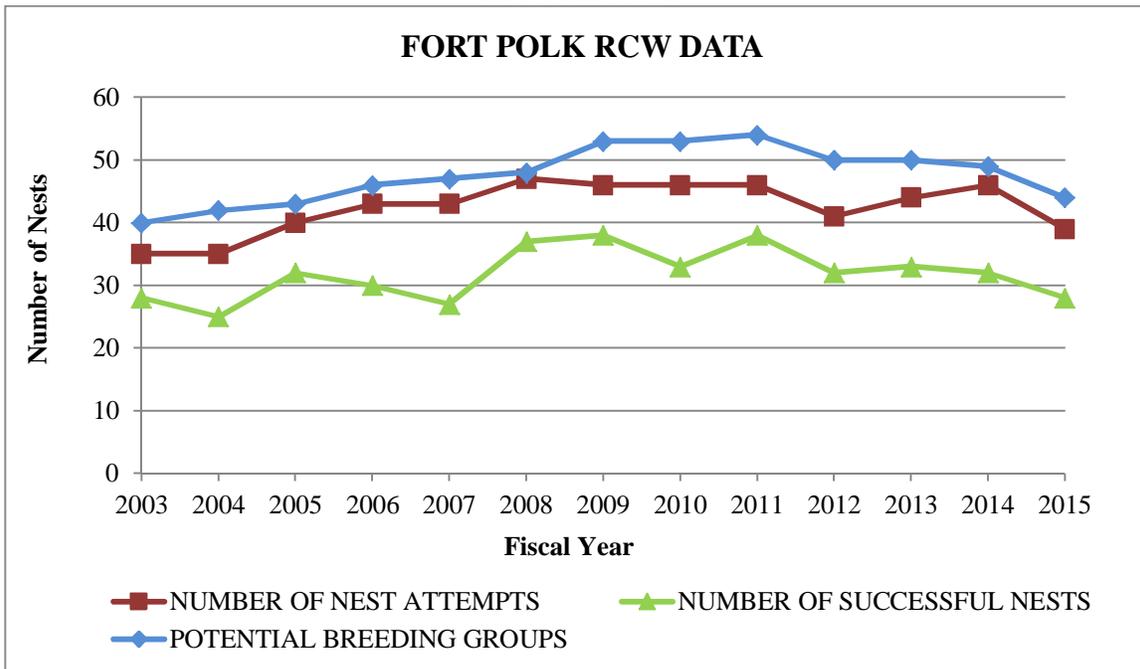
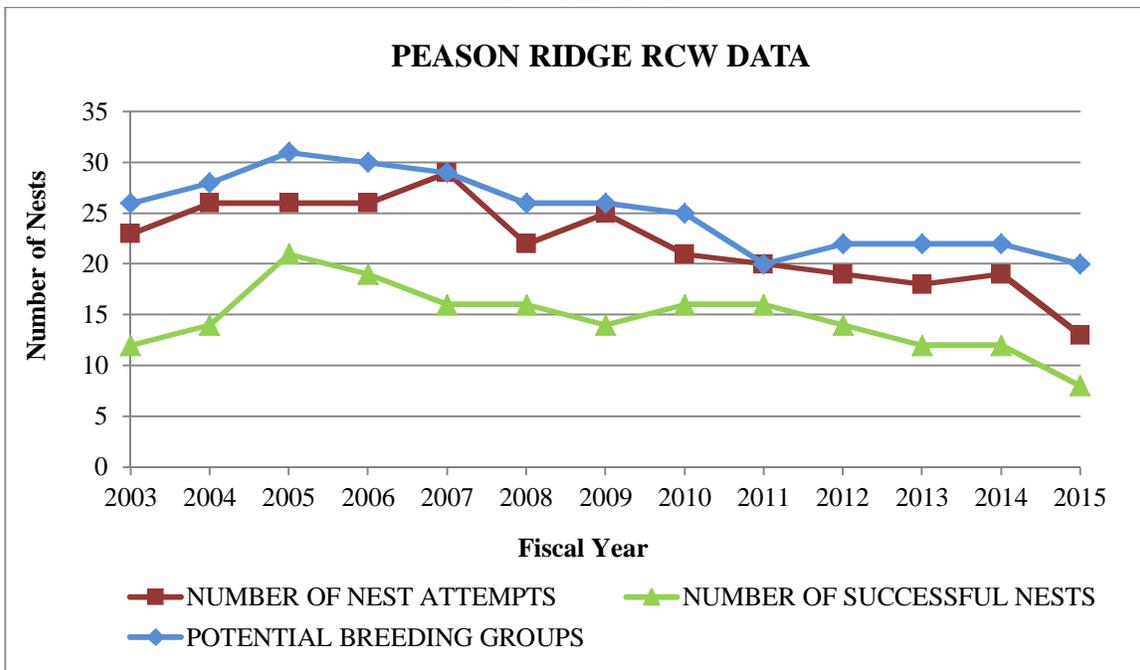


FIGURE 3.3-2



3.3.3 Endangered Species Program Requirements

The Endangered Species Program is required to comply with the Endangered Species Act of 1973 and the subsequent USFWS Recovery Plan. Compliance is accomplished through guidelines established in the Endangered Species Management Component of the Joint Readiness Training Center and Fort Polk Integrated Natural Resources Management Plan (INRMP, 2011). The ESMC describes the installation's policy of compliance with Army regulations (including AR 200-1).

The Endangered Species Program is tasked with the conservation and recovery of RCWs on Fort Polk and Peason Ridge while maintaining the installation's ability to fulfill the mission of military readiness. The success of RCWs on Fort Polk may be related to several factors: the use of artificial cavities, intensive habitat management including use of prescribed burning, more accurate surveys once all clusters and birds were identified, and restriction of military training activities near clusters. Cavity trees in each cluster are painted with two white bands, approximately four to six inches wide and one foot apart to make the trees visible to Soldiers. A 200-foot buffer zone is marked around the aggregate area of each cluster of cavity trees. Selected trees in the boundary of the buffer zone are marked with reflective material and yellow warning signs, to indicate an exclusion zone where a number of training activities are prohibited. Based on available data, it is projected that it will take about 25 years for the RCW population on the installation to reach "recovered" status of 92 potential breeding pairs.

3.3.4 Endangered Species Annual Program Developments

All clusters located on Army land, both at Fort Polk and Peason Ridge, have been monitored to determine activity status and group size. Individual birds have been counted and identified with bands with unique color combinations. The number of RCW nests on Fort Polk has increased from 20 in 1993 to a high of 47 in 2008. Since 2008, the number of nests has remained flat with a total of 46 in 2014, but dip to 39 in 2015. Since 1997, the average nest success rate is 77%. The number of active clusters has shown an increase from an initial count of 31 in 1993 to 53 in 2015.

On Peason Ridge, the number of RCW nests has increased from eight in 1993 to a high of 29 in 2007, which is the highest number recorded since records have been kept. Peason Ridge had 13 nest attempts in 2015, a decrease of 6 compared to 2014. Successful nest numbers decreased from 12 to 8 in 2015. Since 1997, the average nest success rate is 68%. The number of active clusters has increased from 11 in 1993 to 23 in 2015, with a high of 40 in 2005. A lack of suitable habitat and demographic isolation of the Peason Ridge RCW population appear to have precluded natural population expansion, but the population has stabilized over the four years after a six year decline from 2006 - 2011.

Since 2011 the population has decreased in Fort Polk. Habitat, demographics and rainfall were three main factors that were looked at as the cause in the population decline. Although there was not a strong statistical correlation between rainfall and RCW demographical numbers, it is still believed that the drought of 2010-2011 played a significant part in the population decline. No other factors such as habitat or management has changed significantly during the period the population decline. It is still undetermined what other factors are involved in the population decline since 2011.

3.3.5 Endangered Species Program Performance Indicators

There are seven program indicators/questions for the Endangered Species Program that are incorporated to measure key aspects of performance.

The Endangered Species Management Component (ESMC) is incorporated into INRMP. The ESMC has recently been updated to include the Louisiana Pine Snake. It is anticipated that the data for the Louisiana Pine Snake will be shifted into the endangered species program in the future.

The ESMC describes Fort Polk's policy of compliance with Army guidelines, USFWS biological opinions and recovery guidelines. Detailed descriptions of the management techniques used to analyze and improve RCW habitat and population dynamics are included in the ESMC. A timeline for each management activity is given. An annual report is required by the USFWS that outlines ESMC accomplishments related to surveys, monitoring (captured in indicator 1 below), and habitat improvement.

The plan also details a primary objective of habitat management within the Fort Polk and Peason Ridge RCW Habitat Management Units (HMU) to provide RCW foraging and nesting habitat of sufficient quality and quantity to achieve and maintain long-term RCW population goals. All silviculture prescriptions on Fort Polk and Peason Ridge, aside from those designed for ecosystem restoration, will be crafted to move stands closer to achieving Good Quality Foraging Habitat while avoiding reducing foraging habitat within a half mile of active RCW clusters below the "standard for managed stability". This is consistent with the 2007 Army RCW Guidelines directing installations to follow foraging habitat and silviculture management guidelines presented in the RCW Recovery Plan. Indicators 3, 4, and 5 capture habitat management activities.

The USFWS has specified management requirements for cluster resources, which are the vegetation conditions within cluster management areas, cavity trees, and cavities. How Fort Polk will achieve these standards for cluster management is described in detail in the ESMC. In accordance with the Recovery Plan, a minimum of four suitable cavities (or three suitable cavities and two starts) are to be maintained in each RCW cluster on Fort Polk and Peason Ridge. When fewer than four suitable natural cavities are available, the necessary numbers of artificial cavities will be provided in managed clusters. Cluster maintenance activities are captured in indicator 2 below.

1. Percentage of ESMC plan monitoring activities completed within the prescribed time frames.

Percentage of ESMC plan monitoring activities (surveys and monitoring of birds and cavity trees) completed within prescribed time frames.

2. Percent of cluster management activities completed.

What percentage of cluster management activities recorded on Management Recommendation Sheets were completed.

3. Utilizing yearly compartment prescriptions to determine habitat activities to improve habitat for the RCW each year.

Fort Polk's Natural Resource Management Branch (NRMB) conducts a continuous inventory of stand conditions. The purpose of the inventory is to provide the installation with the information needed to manage its forest resources to meet training and natural resource management requirements and goals, including ecosystem management and habitat management for the RCW. Fort Polk and Peason Ridge are divided into a total of 60 compartments that are inventoried by the NRMB and the Conservation Branch on a ten-year rotation; approximately six compartments are inventoried each year. Following compartment inventory, NRMB and Conservation Branch staffs cooperatively develop compartment-level prescribed fire schedules and stand-level silvicultural treatments. Prescriptions are drafted by NRMB staff, and reviewed by Conservation Branch staff to ensure that they meet RCW recovery standards.

4. *Did silvicultural treatments identified in performance metric 3 occur within two years?*

Timber stands identified as requiring a silviculture treatment during the compartment prescription process are expected to be treated within two years after a prescription is signed.

5. *Number of HMU acres undergoing prescriptions burns per year.*

Fort Polk and Peason Ridge are on a two-year burn cycle in longleaf pine dominated forest and a three-year burn cycle for other forest types. The target for number of acres burned each fiscal year for Fort Polk and Peason Ridge combined is approximately 28,000 acres. The goal for both HMUs is to burn 1/3 of the total acres each year, which would be approximately 17,000 acres annually. The final target is to have all the HMU acres burned in a three year period.

6. *Percentage of critical Joint Monitoring Plan (JMP) activities completed within the prescribed time frames.*

The *JMP for the Vernon-Fort Polk Red-Cockaded Woodpecker Population* and annual report was originally designed to assist U.S. Army and United States Forest Service managers and planners, and USFWS personnel in determining if the Army's increased training use of the United States Forest Service LUA negatively affected the Vernon-Fort Polk RCW population (the Population) and to combine the data from each agency into a single population level report. Although the 2003 JMP Annual Report provided satisfactory evidence that military training at Fort Polk has had no deleterious impacts on the population, it is anticipated that the JMP Annual Report will continue to be produced to provide U.S. Army, U.S. Forest Service and USFWS biologists with information on the status and demography of the population, as required under the Terms and Conditions of the Biological Opinion prepared by the USFWS for the Transformation EIS.

7. *Number of Annual Endangered Species Training Violations*

Certain military training activities are limited by type and duration within the boundaries of an RCW cluster in order to prevent harmful take and to reduce activities that may decrease successful reproduction. In order to ensure that these limitations are adhered to, Soldier education is mandated. The ENRMD provides Soldier education modules through the ECO course, where instructors provide training on endangered species restrictions and other environmental aspects. The Directorate of Plans, Training, and Mobilization conduct additional certification programs for Sustainable Range Awareness where Soldiers receive further training

for the protection of endangered species. The number of Soldiers trained in this course is depicted in Table 2.6-1. All potential take (harm to cavity tree or RCW) training violations are reported to the Deputy Garrison Commander so that the command group can emphasize the

importance of complying with published training guidelines. The efficacy of these education programs can be directly measured by the number of training violations occurring within a calendar year. One potential take training violation occurred during FY10, two violations in FY12, three in FY13, and one in FY14.

**TABLE 3.3-2
RED-COCKADED WOODPECKER (RCW)
TRAINING VIOLATIONS REPORTED TO USFWS**

FISCAL YEAR	TRAINING VIOLATIONS
2002	0
2003	0
2004	0
2005	0
2006	0
2007	0
2008	0
2009	0
2010	1
2011	0
2012	2
2013	3
2014	1
2015	0

3.3.6 Endangered Species Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Endangered Species Program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Endangered Species Program. The following performance standards apply to the performance indicators listed above:

Endangered Species Program Performance Metrics	
Performance Indicators	Performance Standards
1. Percentage of ESMC plan monitoring activities (surveys and monitoring of birds and cavity trees) completed within prescribed time frames	a) GREEN: 95%-100% of critical plan activities completed within the prescribed time frame. b) AMBER: >85% of critical plan activities completed within the prescribed time frame. c) RED: <85% of critical plan activities completed within the prescribed time frame
2. Percent of cluster maintenance activities	a) GREEN: 95%-100% of cluster management activities completed within the prescribed time frame. b) AMBER: 85%-94% of cluster management activities completed within the prescribed time frame. c) RED: <85% of cluster management activities completed within the prescribed time frame
3. Utilizing yearly compartment prescription to determine habitat activities to improve habitat for RCW each year; includes thinning, roller chopping and planting then securing funding (GERB, specialized cuts).	a) GREEN: 100% of compartment prescription recommendations completed within the prescribed time frame. b) AMBER: 85%-99% of compartment prescription recommendations completed within the prescribed time frame. c) RED: <85% of compartment prescription recommendations completed within the prescribed time frame
4. Silviculture treatments prescribed in Indicator 3 occur within two years	a) GREEN: 80-100% of management recommendations completed within the prescribed time frame. b) AMBER: <80% or >60% of management recommendations completed within the prescribed time frame. c) RED: <60% of management activities completed within the prescribed time frame
5. Number of HMU acres undergoing prescription burns per year	a) GREEN: Burn >33% (1/3 of total) of the HMU yearly b) AMBER: Burn <33% and >20% per year of the HMU yearly.

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Endangered Species Program Performance Metrics	
Performance Indicators	Performance Standards
	c) RED: Burn less than <20% of the HMU yearly
6. Percentage of critical JMP activities completed within the prescribed time frames	a) GREEN: 95%-100% of critical JMP activities completed within the prescribed time frame. b) AMBER: >85% of critical JMP activities completed within the prescribed time frame. c) RED: <85% of critical JMP activities completed within the prescribed time frame.
7. Number of Annual Endangered Species Training Violations (JRTC-FP 350-10) reported to USFWS	a) GREEN: 0-1 b) AMBER: 2-3 c) RED: >3
Program Overall Performance	a) GREEN: All green, up to two amber and rest green b) AMBER: More than two amber and no more than one red c) RED: Two or more red

3.3.7 Endangered Species Program Annual Performance Review

The Endangered Species Program evaluation for 2015 is rated GREEN based on one performance indicators rated AMBER and six performance indicator rated GREEN.

Endangered Species Program Performance Metrics		
Indicators	2015 Performance	Evaluation
1. Percentage of ESMC plan monitoring activities (surveys and monitoring of birds and cavity trees) completed within prescribed time frames	100% of activities completed within prescribed time	GREEN
2. Percent of cluster maintenance activities	92% complete - 805 of 875 cluster management activities were completed.	AMBER
3. Utilizing yearly compartment prescription to determine habitat activities to improve habitat for RCW each year; includes thinning, roller chopping and planting then securing funding (GERB, specialized cuts)	6 of 6 compartment prescription reviews were conducted to become part the Forestry Compartment Prescription.	GREEN
4. Did previous actions that were prescribed occur within two years?	6 of 6 actions were completed.	GREEN
5. Number of HMU acres undergoing prescription burns per year	22,104 acres of the HMU was burned, target 17,000.	GREEN
6. Percentage of critical JMP activities completed within the prescribed time frames	>85% JMP report was turned in late	AMBER
7. Number of Annual Endangered Species Training Violations (JRTC-FP 350-10) reported to USFWS	There was no reportable training violation in FY15.	GREEN
Program Overall Performance	Six green and two amber	GREEN

3.4 Cultural Resources (*Bradley S. Laffitte*)

3.4.1 Cultural Resources Program Description and Background

Cultural resources on public and/or federal lands are covered by a number of federal laws and regulations, including the Archaeological Resources Protection Act (ARPA), the Antiquities Act, the Native American Graves Protection and Repatriation Act (NAGPRA), and the National Historic Preservation Act (NHPA) as codified in 36 CFR 800. Additionally, Fort Polk's Integrated Cultural Resources Management Plan outlines approaches to be taken on the installation with regard to cultural resources. Fort Polk's Cultural Resources Management team marks significant (eligible and potentially eligible for the National Register) archaeological resources utilizing orange carsonite posts in order to prevent unauthorized access and damage to these resources. Due to prescribed burning and natural deterioration of the posts, replacement and maintenance is an ongoing project. Also, cultural resources management objectives have been integrated into Fort Polk's NEPA program, Integrated Natural Resources Plans, JRTC rotational maneuver damage assessments, and installation construction activities.

The Fort Polk Cultural Resources Management Program is responsible for managing all cultural resources on Army-owned lands. The office also assists in managing cultural resources in the US Forest Service (USFS) Intensive Use Area (IUA) and LUA in accordance with a Special Use Permit Agreement (SUPA). Cultural resources include, but are not limited to, prehistoric and historic archaeological sites as well as historic standing structures.

3.4.2 Cultural Resources Program Background

Since 1972, the Cultural Resource Program has overseen intensive archaeological surveys that have identified 136 archaeological sites eligible for nomination to the National Register of Historic Places, as well as 176 sites that are potentially eligible. In 2004, an initial survey of Army-owned lands, the IUA, and the LUA (168,000 acres total) was completed. In 2010, the Army completed the Land Acquisition EIS in an effort to purchase up to 100,000 acres of new training lands. The purchasing of land began in 2011 and the first survey effort for these new lands started in 2012. The National Park Service (NPS) currently administers Phase-I survey and Phase-II testing contracts under an Interagency Agreement with Fort Polk. A total of 41,879 acres of new training lands have been purchased to-date. Table 3.4-7 provides an overview of eligible sites recorded, potentially eligible sites recorded, cemeteries recorded, acres surveyed, and other data connected to on-going land purchase cultural resources work.

In 2007, the Fort Polk Cultural Resources Program staff, with the support of other Fort Polk personnel, hosted a Heritage Day Workshop that consisted of local community representatives, historians, genealogists, and interested citizens. The workshop was designed to coordinate the development of an appropriate method to recognize, honor, and preserve the history of the families who were displaced by the establishment of Camp Polk in the 1940s. The workshop participants recommended the following: create a monument memorializing the displaced families, host an annual Heritage Day for touring historic downrange landmarks, homesteads and cemeteries, and develop a collection covering the historic period from 1820-1941. Primary copies of this collection are housed in the Fort Polk Curation Facility and a second copy housed at Northwestern State University (NSU) Folk Life Center in Natchitoches, Louisiana. Oral histories have been recorded and a website (www.polkhhistory.org) has been

established to provide information about Fort Polk cemeteries and to display pictures and family documents and histories.

A total of 23 historic cemeteries on Fort Polk have been recorded as archaeological sites in order to maintain them under the ARPA. Fort Polk personnel visit the cemeteries quarterly to assess condition and determine needed maintenance. A Heritage Day Planning Committee was formed to accomplish the goals set at the workshop for a celebration day and to create a monument. The monument Fort Polk created to memorialize displaced families was dedicated during the November 2007 Heritage Day celebration and tours of historic landmarks, homesteads, and cemeteries were conducted. Fort Polk also entered into a Memorandum of Understanding with the USFS and NSU to collect and preserve photographs, documents, and oral histories in reference to historic life on the lands now occupied by Fort Polk.

In October 2015, Fort Polk hosted the ninth annual Heritage Day celebration event. This event included a Command opening ceremony, educational booths, family genealogical booths, folk life demonstrations, outdoor cultural displays, living history displays, and traditional period music. Access was provided to downrange military ranges for guided and self-guided tours of the historic landmarks, homesteads, and cemeteries.

Through effective management and proper compliance with all applicable state, federal, and DoD regulations and guidelines, Fort Polk’s Cultural Resources Program will protect and preserve cultural resources on Fort Polk for current and future generations of Americans. This effective management is being projected on new properties which are being purchased under the Fort Polk Land Purchase Program. Supporting data for the Fort Polk Cultural Resources Management Program are presented in Tables 3.4-1 through 3.4-7.

**TABLE 3.4-1
ARCHAEOLOGICAL SURVEY PROGRAM**

SITES	MAIN POST	IUA	LUA	PEASON RIDGE	NEW LANDS	TOTAL
Ineligible Sites	948	916	761	471	272	3,368
Potentially Eligible Sites	0	0	123	2	51	176
Eligible Sites	33	38	23	37	5	136
Historic Cemeteries	10	3	6	1	3	23
Data Recovery Sites	3	1	0	1	0	5
Total Sites	994	958	913	512	331	3,708

IUA = Intensive Use Area; LUA = Limited Use Area (USFS Sites)

**TABLE 3.4-2
ARCHAEOLOGICAL COLLECTION**

	CUBIC FEET (ft³)	LINEAR FEET
Artifacts	987	
Associated Records		701.5
Re-Accessioned and Cataloged this FY	32	60
Re-Accessioned and Cataloged (Total)	144	60
Re-Accessioned and Cataloged (Total Percent)	14.6%	8.6%

**TABLE 3.4-3
CULTURAL RESOURCES OUTREACH**

RECENT EVENTS (FY 2014)	ESTIMATED PARTICIPANTS
Heritage Day	100
Environmental Learning Center Tours to the Public	100
Environmental Compliance Officers Tours	257
Spring Historic Downrange Tours	80
Total	537

**TABLE 3.4-4
DISPLACED HERITAGE FAMILY SURNAMES**

HERITAGE FAMILIES SURNAMES	COUNT
Main Fort	202
Peason Ridge	53
Total Surnames Recognized	255

**TABLE 3.4-5
HERITAGE FAMILY COLLECTION**

HERITAGE CONTRIBUTIONS	COUNT
Electronic Files (Photos & Documents)	35.4 gigabytes

**TABLE 3.4-6
HERITAGE COLLECTION'S HISTORIC CONTEXT**

FORT POLK'S HERITAGE FAMILY COLLECTION		
Collection Material	Historical Context	Approximate Years
Oral Interviews	Displacement by US Army	1935 to 1943
Oral Interviews	Great Depression/WWII	1920 to 1940
Conveyance Records	Displacement by War Dept.	1935 to 1944
Genealogy Records	Pioneering to present	1820 to 1989
Vital & Medical Records	Pre-WWI through WWII	1900 to 1945
Photographs	Pioneering to WWII	1800 to 1945
Historic Primary & Secondary Sources	Western Expansion to WWII	1820 to 1940

**TABLE 3.4-7
FORT POLK LAND PURCHASE PROGRAM**

NEW PROPERTY CULTURAL RESOURCES SURVEYS		
Action	FY15	Since Inception of Land Purchase Program
Land Acquired (ac)	9,350	41,879
Phase I Surveys (ac)	9,307	32,178
Potentially Eligible Sites Recorded	15	51
Cemeteries Recorded	0	3
Phase II Testing	10	28
Sites Determined Eligible	4	5

3.4.3 Cultural Resources Program Requirements

The Cultural Resources Management Program is required to comply with Federal Laws such as Section 106 and 110 of the NHPA, ARPA, NAGPRA, and Federal regulations such as 36CFR800 and 36CFR79. Additionally, the Program complies with all Army and DoD requirements as stated in Army Regulation 200-4 (or AR 200-4). The Cultural Resources Management Program must also adhere to a 1996 Programmatic Agreement between the Louisiana State Historic Preservation Office (LA SHPO), the Advisory Council on Historic Preservation (ACHP), and the Kisatchie National Forest and to the terms and conditions of the SUPA plan of operation. Compliance with all of the above mentioned laws, regulations, and agreement documents ensures adequate protection and preservation of National Register of Historic Places (NRHP) eligible and potentially eligible archaeological sites, cemeteries, long-term curation of all artifacts and associated records collected from Fort Polk and Peason Ridge, up-to-date inadvertent discovery standard operating procedures, establishment of Comprehensive Agreements with Federally-recognized Native American Tribes, and appropriate consultation with the LA SHPO, ACHP, Native American Tribes, and other interested parties about undertakings which may affect eligible or potentially eligible archaeological sites or Traditional Cultural Properties.

Additionally, the Cultural Resources Management Program is responsible for ensuring the success of the Heritage Program and in coordinating with community members and academics who wish to access the collections in an attempt to answer research questions. Approximately 10 cubic feet of Heritage Family related documents are housed at Fort Polk. Additional documents and photographs are maintained by Fort Polk in electronic format. A total of 63 oral histories have been recorded in an attempt to better document life in the Fort Polk area during the Great Depression, Louisiana Maneuvers, and Army Displacement. These oral histories provide excellent research opportunities for historians, archaeologists, and heritage families interested in their history and genealogy. The most recent oral history conducted recorded information related to the newly acquired lands and the fire tower located on those lands.

Fort Polk's state-of-the-art Curation Facility, housed in the Cultural Resources Program office, provides for the storage of all artifacts and associated records collected during the archaeological surveys conducted at Fort Polk. Undergraduate and graduate students from NSU and Louisiana State University are encouraged to research the collections. The Environmental Learning Center, also housed in the Cultural Resources Program office, is used to educate concerned individuals about Fort Polk's environmental programs. Tours of the Environmental Learning Center and Curation Facility are available with prior coordination through the Cultural Resource Management staff.

3.4.4 Cultural Resources Annual Program Developments

The Cultural Resources Program experienced three major developments throughout the course of the year. First, curation work has been very active this year and includes re-accessioning and properly cataloguing artifacts and records into a searchable database. Another curation technician was acquired to assist with this effort and to help scan 35mm and other important historic documents and photographs into modern media formats for future curation and

preservation. We are assisting the Fort Polk Military Museum in the preservation/digitization of their historical photographs as well.

Second, archaeological work on the new lands was extremely active in 2015 with 9,307 acres of fieldwork being conducted and associated reports, site forms, and curation records/artifacts being reviewed and inventoried. Phase-II work took place at 10 archaeological sites in 2015. A total of 44 sites have been posted to-date. The site posting effort is being accomplished through the assistance of a part-time field technician. We have completed an interagency agreement with the National Park Service this FY, which will include the survey of standing structures and in-holdings starting in FY16.

Third, the Fort Polk Cultural Resources Program was nominated and considered for the Installation Cultural Resources Management Award.

**FIGURE 3.4-1
Fort Polk Land Purchase Survey Progress Over Time**

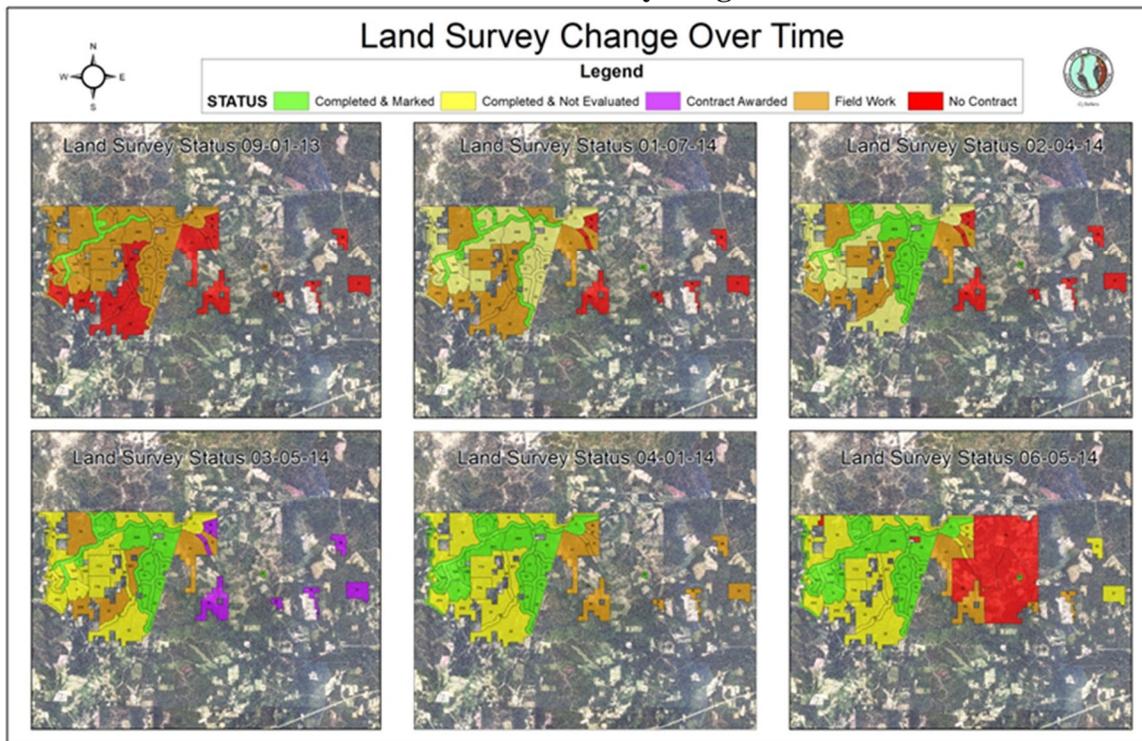


FIGURE 3.4-2
Fort Polk Land Purchase Survey Progress as of 6 November 2014

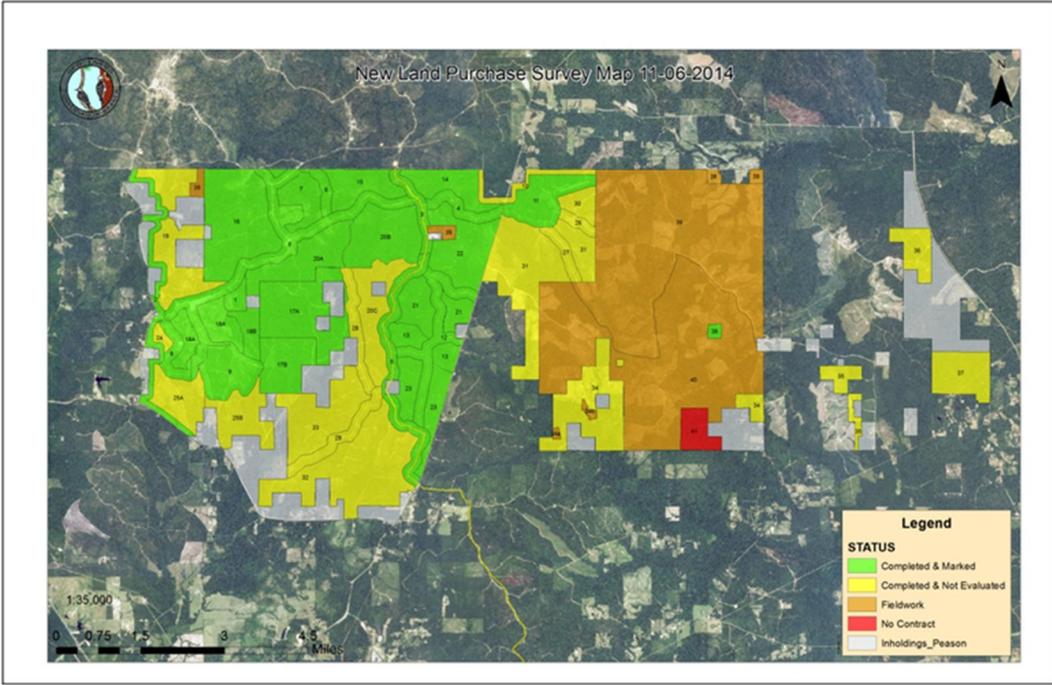
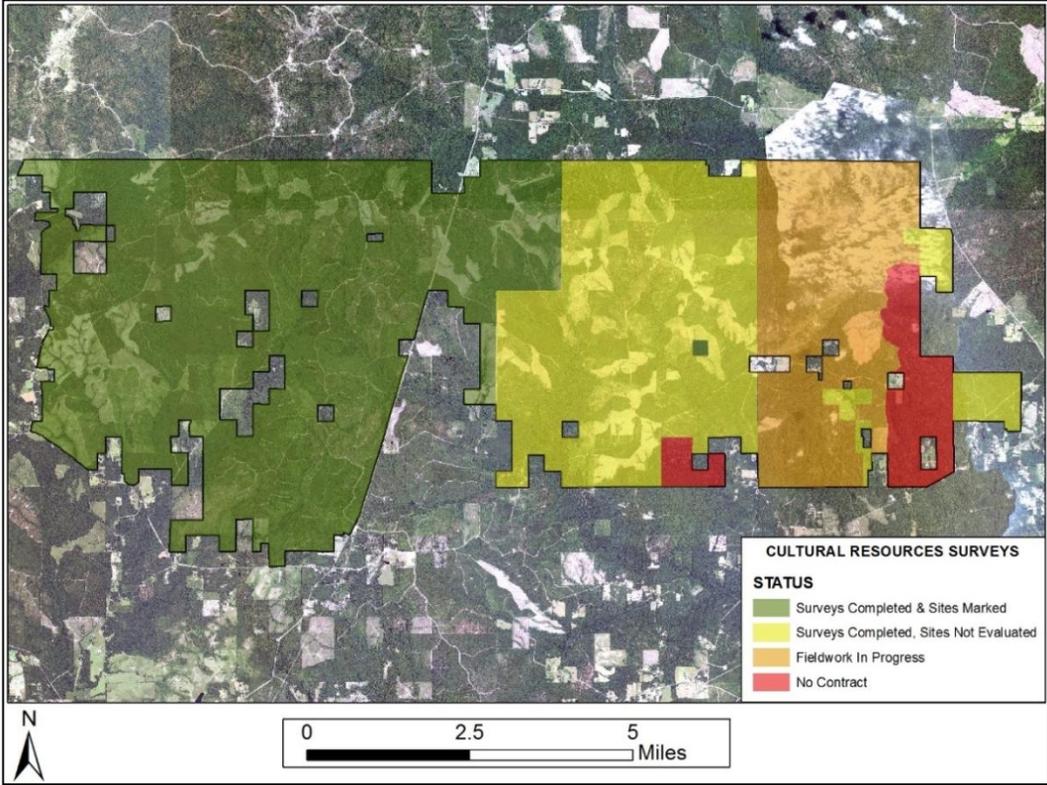
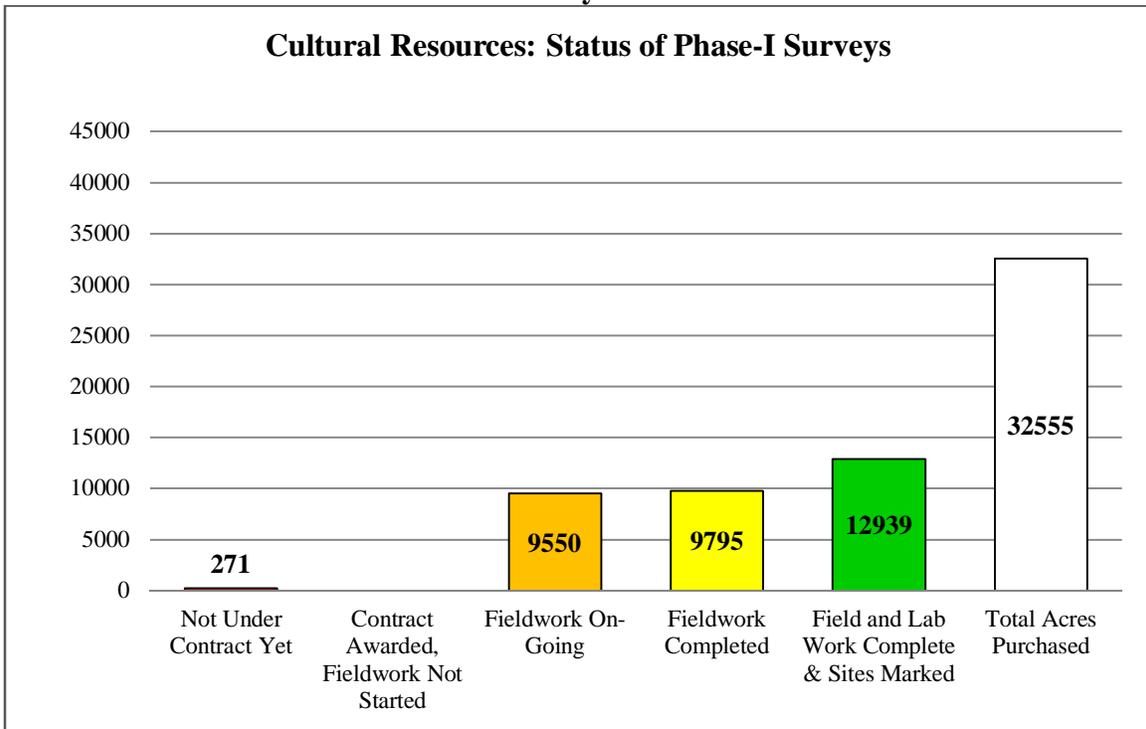


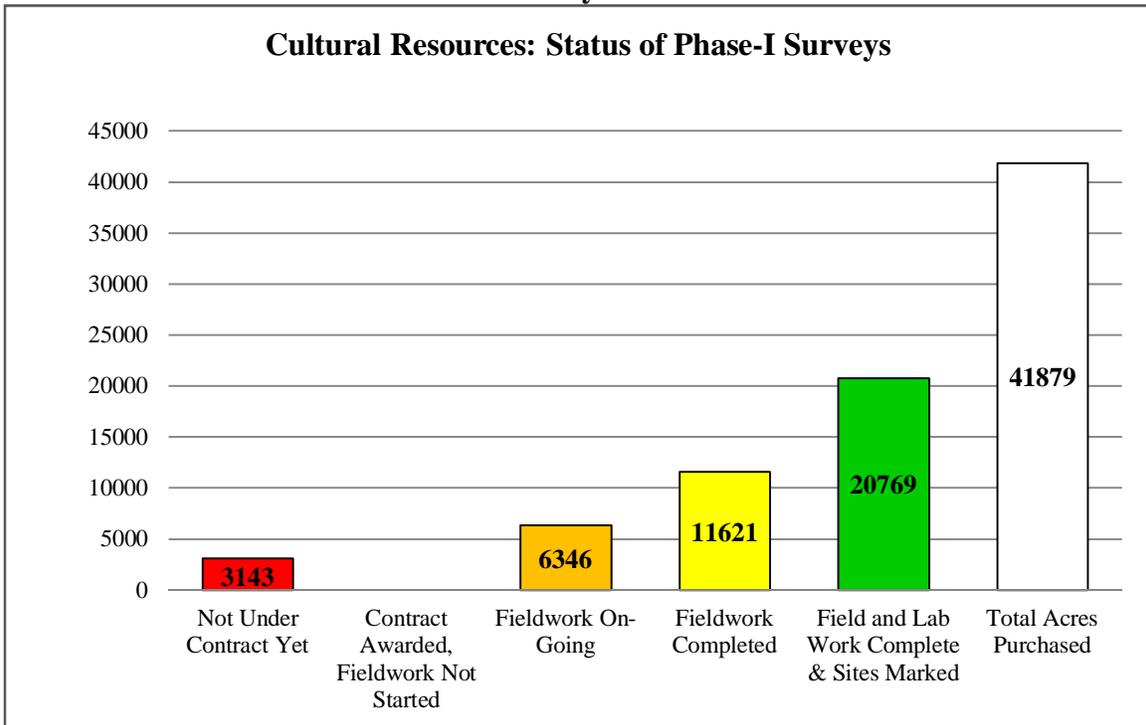
FIGURE 3.4-3
Fort Polk Land Purchase Survey Progress as of 6 November 2015



**FIGURE 3.4-4
Fort Polk Land Purchase Survey Status as of 5 November 2014**



**FIGURE 3.4-5
Fort Polk Land Purchase Survey Status as of 5 November 2015**



3.4.5 Cultural Resources Program Performance Indicators

Several portions of the Cultural Resources Program are difficult to capture numerically due to the nature of the work. However, performance indicators can be created which focus on numerically portraying some of the various aspects of the Program. These aspects include work conducted at archaeological sites, cemeteries, curation activities, and new land purchase-related projects. Work conducted in each of these categories can be measured in a manner that will indicate if duties are being performed effectively while also ensuring that the program stays in compliance with all Cultural Resource laws and regulations.

The five performance indicators outlined below include: 1) Eligibility and Potentially Eligible Sites – Monitored and Maintained; 2) Cemetery Monitoring; 3) Curation Accessioning and Database; 4) New Lands Purchase Site Posting; and 5) Phase-I Surveys. All items can be measured using the Red, Amber, Green system. Archaeological sites which are eligible or potentially eligible for the NRHP are monitored and maintained to help ensure protection from looting, vandalism, and maneuver damages. Maintenance is confined to replacing orange carsonite posts to ensure that Soldiers can adequately see that they should not drive into or dig within the site boundaries. The second item represents the number of times cemeteries were monitored to ensure that damages had not occurred (e.g., in the form of fallen trees and fence or headstone damages). An internal goal is to complete accessioning and data entry for the curation database in 10 years (2024). This will require 10% completion annually, which is measured below. Posting archaeological sites on the new lands is important because it opens areas for training; therefore, that performance indicator can be seen below. Additionally, conducting Phase-I surveys in a timely manner is important for training and natural resources management projects and performance indicators for that project can be seen below as well.

3.4.6 Cultural Resources Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Cultural Resource Program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Cultural Resource Program. The following performance standards apply to the performance indicators listed:

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Cultural Resources Program Performance Indicators and Standards	
Performance Indicators	Performance Standards
1. Eligible and Potentially Eligible Sites – Monitored and Maintained	a) GREEN: Eligible sites monitored and maintained twice per year and potentially eligible sites once per year; 90% - 100% completion b) AMBER: Eligible sites monitored and maintained twice per year and potentially eligible sites once per year; 80% - 89% completion c) RED: Eligible sites monitored and maintained twice per year and potentially eligible sites once per year; <80% completion
2. Cemetery Monitoring	a) GREEN: All 19 cemeteries monitored four times annually; 90% - 100% completion b) AMBER: All 19 cemeteries monitored four times annually; 80% - 89% completion c) RED: All 19 cemeteries monitored four times annually; <80% completion
3. Curation Re-Accessioning, Cataloguing, and Database Entry	a) GREEN: All new collections and 10% of old collections (artifacts and associated records/linear and cubic feet) accessioned and entered annually b) AMBER: All new collections and/or 10% of old collections (artifacts and associated records/linear and cubic feet) accessioned and entered annually c) RED: Less than all of the new collections and less than 10% of old collections (artifacts and associated records) accessioned and entered annually
4. New Lands Site Posting Project	a) GREEN: All sites initially determined to be potentially eligible marked within 30 days of notification. b) AMBER: All sites initially determined to be potentially eligible marked within 90 days of notification. c) RED: All sites initially determined to be potentially eligible not marked within 90 days of notification.
5. Phase-I Surveys	a) GREEN: All Phase-I survey completed on lands purchased during previous FY with SHPO/Tribal concurrence received b) AMBER: More than 50% of Phase-I surveys completed on lands purchased during previous FY c) RED: Less than 50% of Phase-I surveys completed on lands purchased during previous FY
Program Overall Performance	a) GREEN: Three or more green and no red b) AMBER: No more than one red with all other green or amber c) RED: More than one red

3.4.7 Cultural Resources Program Annual Performance Review

The Cultural Resources Management Program evaluation for 2015 is AMBER. The specific results for each performance indicator are listed in the table below. Three Cultural Resources Performance Indicators for FY15 were evaluated as GREEN. All sites and cemeteries were monitored accordingly and Phase-I surveys have been continuing at a relatively fast pace on the new lands. The curation accessioning and database project went better than expected last year due to a curator assistant being hired and work on heritage artifacts (which were easier to accession) and eliminating large numbers of excess reports in the associated records. For this FY, the calculation of curation numbers has been changed to more accurately report numbers in a standard curation fashion by sorting artifacts into cubic feet and records into linear feet. As you can see in Table 3.4-2 above, the amount of cubic feet accessioned, catalogued, and entered into the database is lower this year. The reason behind this decrease is connected to the fact that we are currently going through the Servello Collections, which includes several data recovery sites and six years of various projects on the installation. The record keeping for this excavation work was poor due to a lack of standards at the time and we have been forced to re-catalog or create new catalogs, re-bag, and label or re-label artifacts. Poor record keeping and the need to regenerate new records has tremendously slowed down this project. This was expected to some degree with older collections, but the lack of catalogs and general disorganization of old collections made accessioning much more challenging and time consuming. We expect problems like this to occur periodically, but we also expect an increase in productivity as later projects are re-accessioned (due to the greater likelihood that set standards were in place and collections were cataloged and sorted appropriately by provenience). In summary, we anticipate the curation completion numbers to remain lower until we start to get out of the older boxes and collections. The Performance Indicator for curation work is AMBER due to completion of all new lands collections, but the inability to complete 10% of the old collections resulted in a lower rating.

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Cultural Resources Program Performance Metrics and Evaluations		
Indicators	FY 2015 Performance	Evaluation
1. Eligible and Potentially Eligible Sites – Monitored and Maintained	All eligible sites were monitored and maintained twice in FY15 and potentially eligible sites were monitored and maintained once in FY15.	GREEN: All eligible sites were monitored and maintained twice this year and potentially eligible sites were monitored and maintained once this year; 100% completion in FY15.
2. Cemetery Monitoring	All cemeteries were monitored four times per year in FY15.	GREEN: All cemeteries monitored four times annually; 100% completion in FY15
3. Curation Accessioning and Database	Staff did not accomplish the 10% requirement for GREEN or the 5-9% requirement for artifacts in FY15.	AMBER: All new collections were accessioned and entered and 3.2% (Cubic Feet of Artifacts) and 8.6% (Linear Feet of Records) accessioned and entered (see table 3.4-2 above).
4. New Lands Site Posting Project	Staff posted 32 sites this FY, but failed to post all sites within 90 days of notification/report completion.	RED: Sites in Priority 34 have not been posted within the allotted timeframe.
5. Phase-I Surveys	All of Phase-I surveys completed on lands purchased during the previous FY.	GREEN: All areas purchased during the previous FY have been surveyed, but not all site forms/reports received.
Program Overall Performance	Three green, one amber and one red	AMBER

Site posting on the new lands was RED due to: 1) balancing quarterly site monitoring efforts with site posting and other program requirements; 2) equipment shortfall and delays in ordering (carsonite posts); and, 3) prioritization of posting requirements (e.g., posting where the training community/natural resources projects require site protection first). We will continue to work towards accomplishing this goal in FY16 by routinely establishing two monitoring teams each quarter (one directed by the Field Archaeologist and one directed by the Lead Archaeologist) made up of Cultural Resources staff and Conservation Branch staff. The ratings achieved in FY15 can be compared to those observed in previous years below:

**TABLE 3.4-8
HISTORIAL OVERVIEW OF PROGRAM PERFORMANCE**

Performance Indicators	FY11 Evaluation	FY12 Evaluation	FY13 Evaluation	FY14 Evaluation	FY15 Evaluation
1. Eligible & Potentially Eligible Sites – Monitored and Maintained	AMBER	GREEN	GREEN	GREEN	GREEN
2. Cemetery Monitoring	GREEN	GREEN	GREEN	GREEN	GREEN
3. Curation Accessioning and Database	N/A	N/A	N/A	GREEN	AMBER
4. New Lands Site Posting Project	N/A	N/A	N/A	RED	RED
5. Phase-I Surveys	N/A	N/A	N/A	AMBER	GREEN
Program Overall Performance	GREEN	GREEN	RED	AMBER	AMBER

3.5 Pest Management (*Christopher J. Ray*)

3.5.1 Pest Management Program Description

The mission of the Fort Polk Pest Management Program is to safeguard Army personnel from injury and disease, protect Army property and real estate from damage, reduce health and environmental risks associated with pesticides, and support stewardship of natural, cultural and historic resources. The Pest Management program shall use Integrated Pest Management (IPM) to prevent or control pests and disease vectors that may adversely impact readiness or military operations by affecting the health of personnel, or by damaging structures, material, or property. The types of pests that the Program is responsible for include, but are not limited to, disease vectors and medically important pests, household and nuisance pests, noxious and invasive plants, undesirable vegetation, vertebrate pests, ornamental plant and turf pests, and real property pests. Although IPM emphasizes the use of non-chemical strategies, pesticides and herbicides may be an option used in conjunction with other methods. These chemicals are applied to recreational areas, the Fort Polk golf course, parade fields, firing ranges, and in and around buildings and other facilities on the cantonment. The installation has maintained detailed records on use of these chemicals since FY95. Annual reports are filed with the Army Environmental Command (AEC) documenting the types and quantities of these substances that are used. Pesticides and herbicides are measured in pounds of active ingredients (PAI) for tracking purposes.

3.5.2 Pest Management Program Background

Since 1995, private contractors have been tasked with application of pesticides on the installation. From then on, pesticide and herbicide use experienced a downward trend from FY95 to FY98. This was a result of the Army issuing a Measure of Merit Directive in April 1996 requiring a 50% reduction in the PAI used on the installation from a baseline of FY93 by the year 2000. Fort Polk used 1,318 PAI of pesticides and herbicides in FY93, resulting in a reduction goal of 659 PAI by FY00. To achieve this goal, Fort Polk developed and implemented an Installation Pest Management Plan (IPMP). This plan requires the use of other IPM control methods, where feasible, before pesticides are used. IPM is a sustainable approach that incorporates the use of multiple techniques to prevent or suppress pests in a given situation. The IPM principles used to achieve pest control include:

- (1) Physical Control – using energy factors in the environment such as heat, cold, light, sound, x-rays, infrared rays, etc. to kill or deter pests.
- (2) Mechanical Control – removing pests by hand or using mechanical devices to trap, kill, or prevent entry into buildings.
- (3) Biological Control – reduction of pest populations by using living organisms encouraged by man.
- (4) Cultural Control – manipulating environmental conditions to suppress or eliminate pests (includes habitat modification and sanitation).
- (5) Regulatory Control – use of regulations and laws in areas to eradicate, prevent or control infestations or reduce damage by pests.
- (6) Chemical Control – the reduction of pest populations or prevention of pest injury by using materials to poison them, attract them to other devices, or to repel them from specific areas (includes the use of pheromones, insect growth regulators (IGRs), repellents, etc.).

At one time, chemicals were considered to be the most effective control available, but pest resistance rendered many pesticides ineffective. In recent years, the trend has been to use pesticides that have limited residual action. While this has reduced human exposure and lessened environmental impact, the cost of chemical control has risen due to requirements for more frequent application. Since personal protection and special handling and storage requirements are necessary with the use of chemicals, the overall cost of using chemicals as a sole means of control can be quite costly when compared with non-chemical control methods.

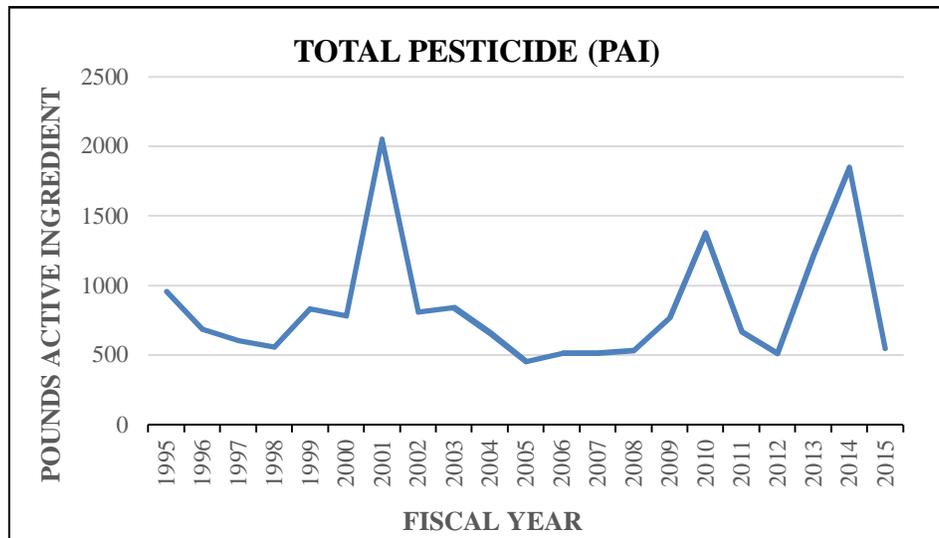
In FY01, a total of 2,049 PAI were used at Fort Polk, of which 1,499 PAI were applied to the Fort Polk golf course. Since then, an overall downward trend has been reported with PAI ranging from 450-850. The only exceptions were FY10, FY13, and FY14 when the PAI exceeded 1,000 due to an aggressive herbicide program and the construction of new facilities. Goals to reduce future pesticide and herbicide use at Fort Polk include discussions with contractors for reduction and closer monitoring and recommendations from IMCOM on types of pesticides and herbicides with low PAI.

The most common pest complaints received by the Installation Pest Management Office (IPMO) involve (in order from most complaints received to least) roaches, ants, spiders, and termites. Pest complaints are forwarded to the IPMO. Representatives from this office verify noted pest problems and contact the appropriate pesticide contractor. Following completion of treatment, the contractor reports the type and amount of chemicals used to the IPMO.

**TABLE 3.5-1
PESTICIDE USE**

FISCAL YEAR	TOTAL PESTICIDE (PAI)
1995	956
1996	689
1997	604
1998	559
1999	836
2000	783
2001	2,049
2002	812
2003	841
2004	662
2005	455
2006	514
2007	514
2008	532
2009	769
2010	1,377
2011	671
2012	512
2013	1,223
2014	1,848
2015	551

FIGURE 3.5-1



3.5.3 Pest Management Program Requirements

In accordance with DoDI 4150.07, DoD installations will maintain an Installation Pest Management Plan (IPMP) that is reviewed and approved by an AEC Pest Management Consultant (PMC) and is annually updated by the Installation Pest Management Coordinator (IPMC). Additionally, chemical usage is recorded and maintained from all activities applying pesticides and herbicides on Fort Polk and properties under its jurisdiction. An annual report documenting pounds of active ingredient (PAI) used is submitted to AEC PMCs to evaluate the efficiency of the overall installation pest program and pest management operations. In addition to DoDI 4150.07, the Pest Management Program complies with Federal Law Section 136 et seq. of title 7, U.S.C., Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and AR 200-1 which mandates the use of IPM techniques in carrying out pest management activities and promote IPM through procurement and regulatory policies, and other activities.

3.5.4 Pest Management Annual Program Developments

Over the years, the Pest Management Office has developed policies and procedures that enable the office to provide a sound Integrated Pest Management (IPM) Program in regards to pests and invasive species. To assist in the overall reduction of PAI used on Fort Polk, a pest management decision-making process was developed to assist pest management staff in determining if pest control services are needed. Once Service Orders are received, the pest management staff will conduct an on-site assessment of the issue. A determination is made as to what type of IPM practices will be used prior to the use of pesticides or herbicides. By physically assessing the severity of the issue first, non-chemical solutions could be implemented without having to request pest control services, ultimately saving time, money, and reducing pesticide use.

3.5.5 Pest Management Program Performance Indicators

There are five program indicators for the IPM Program which includes Pounds Active Ingredients, Trained Pest Management Staff, Scheduled Inspections, Pest Management Requests, and Pest Treatment Completed. Each indicator provides data which provides the Pest Management Office with an easily discernible view of its progress. Program performance can be dictated by varying levels of funding.

3.5.6 Pest Management Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Pest Management program performance indicator is evaluated based on a Red, Amber, or Green performance standard. Trend data is used to show progress of a specific aspect of the Pest Management program. The following performance standards apply to the performance indicators listed above:

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Pest Management Program Performance Metrics	
Performance Indicators	Performance Standards
1. Pounds of Active Ingredients.	a) GREEN: Use <791 PAI (up to 20% increase from 659 measure of merit to allow for mission growth) b) AMBER: Use 791-923 PAI (21% - 40% increase) c) RED: Use more than 923 PAI (>40% increase)
2. Trained Pest Management Staff.	a) GREEN: All staff hold current certification b) AMBER: Certification accomplished in a 20% longer timeframe c) RED: Certification accomplished in a 30% longer timeframe
3. Scheduled Inspections.	a) GREEN: 95% - 100% of scheduled inspections completed monthly b) AMBER: 81% - 94% of scheduled inspections completed monthly c) RED: 65% - 80% of scheduled inspections completed monthly
4. Pest Treatment requests.	a) GREEN: 95% - 100% of Pest treatment requested completed b) AMBER: 81% - 94% of Pest treatment requested completed c) RED: 65% - 80% of Pest treatment request completed
5. Pest Treatments completed Emergency (24 hours); Urgent (7 days); Routine (30 days).	a) GREEN: 95% - 100% of Pest treatment requested completed within timeframe b) AMBER: 81% - 94% of Pest treatment requested completed within timeframe c) RED: 65% - 80% of Pest treatment request completed within timeframe
Program Overall Performance	a) GREEN: <2 performance indicators at amber, 3 or more at green; no red b) AMBER: >2 performance indicators at an amber level with remaining at green; <2 indicators at red; all indicators amber c) RED: >2 indicators at red

3.5.7 Pest Management Program Annual Performance Review

The Pest Management program evaluation for 2015 is AMBER based on mandated reduction of service levels due to funding constraints. Four performance indicators are rated GREEN and one rated RED, resulting in overall program rating of AMBER. The specific results for each performance indicator are listed below:

Pest Management Program Performance Metrics		
Indicators	2015 Performance	Evaluation
1. Pounds of Active Ingredients.	Less than 20% variation from the DoD Measure of Merit	GREEN
2. Trained Pest Management Staff.	All pest staff currently certified	GREEN
3. Scheduled Inspections.	Inspections were completed as scheduled for 15% of requirement due to mandated service performance at a RED capability due to a 2-month absence of certified pest management personnel resulting from personnel turnover, hiring constraints and the time needed to train and certify	RED
4. Pest Treatment requests.	Pest treatment requests were completed at a rate of 96%	GREEN
5. Pest Treatments completed Emergency (24 hours); Urgent (7 days); Routine (30 days).	Pest treatments within mandated time frames were completed at a rate of 96%	GREEN
Program Overall Performance	Four green and one red	AMBER

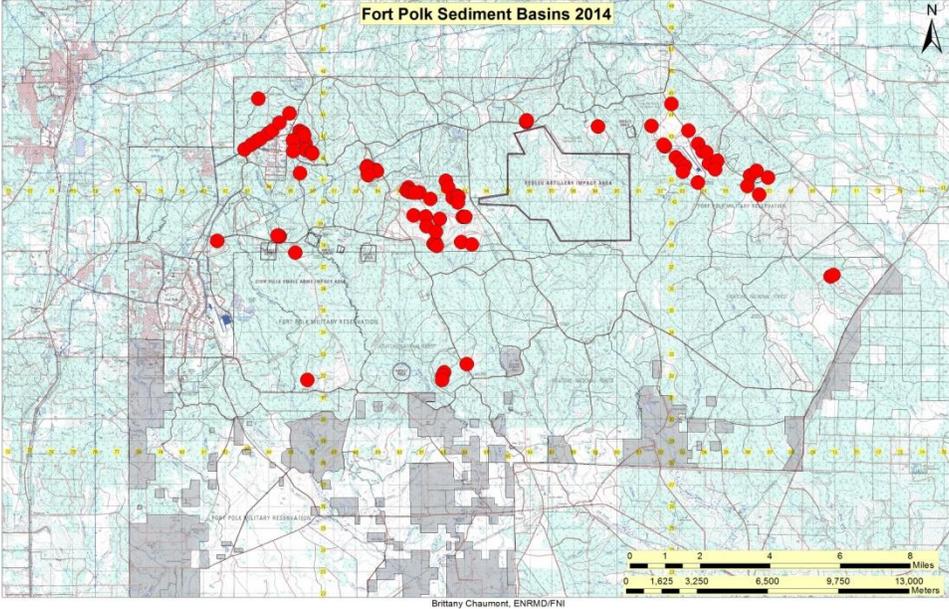
3.6 Maneuver Training Impacts and Mitigative Measures *(Javance E. Jones)*

3.6.1 Maneuver Damage Program Description

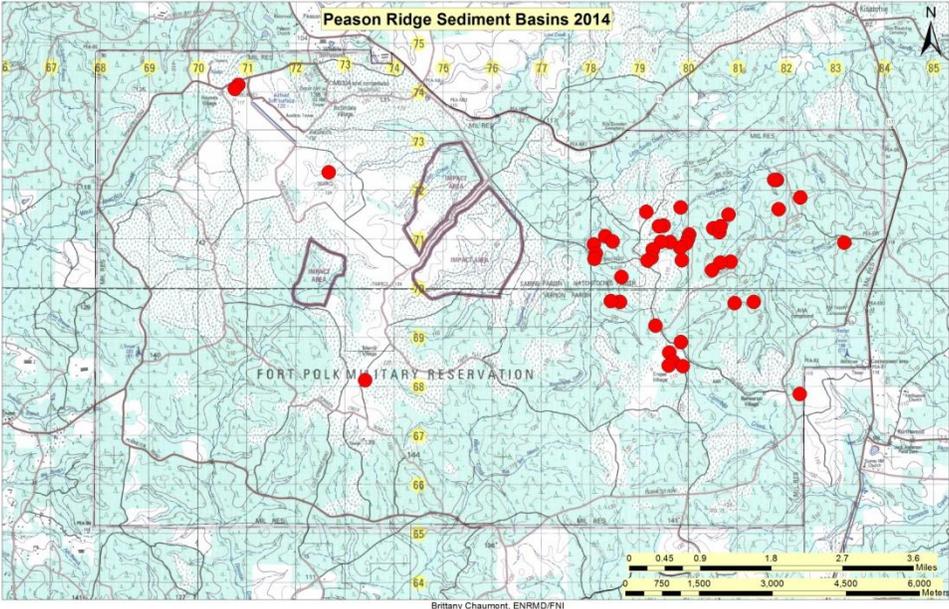
Training activities conducted during training exercises can result in maneuver damage consisting of soil and vegetation disturbance. Soil disturbance during rotations is most commonly caused by Soldiers digging foxholes, constructing fortifications, and operating heavy vehicles and equipment. The primary impacts of maneuver damage to natural resources are ground disturbances, digging, and off road vehicle rutting. These impacts cause a loss of vegetative cover, which may increase the rate of erosion in affected areas.

Fort Polk has established a Maneuver Damage Inspection and Repair Program to identify, repair, monitor damages and to implement Best Management Practices under mitigative measures. Mitigative Measures include inspecting and developing maintenance requirements for Sediment Basins, Low Water Crossing and maintaining Supply Routes and Maneuver Corridors. The location of the sediment basins and low water crossings are shown in Figures 3.6-1 – 3.6-4 below. The program is one tool to monitor routine home station and JRTC training events and to track compliance with applicable environmental protocols and restrictions on Army and U.S. Forest Service lands. The program functions are to minimize soil erosion, thereby lessening the impacts that training has on land and ensuring sustainability. Data collected during the end of a training exercise (ENDEX) is used to identify affected areas and schedule repairs to include re-vegetation. Soil stabilization measures, such as contouring, grading, seeding, and fertilization are implemented for large-scale impacts. During ENDEX, Environmental Inspectors and Range Safety Technicians drive and assess the condition of all roads and trails in the maneuver training area. The Maneuver Damage Coordinator and Maneuver Damage Chief Inspector review all data collected and re-inspect areas identified. From this, maintenance orders are developed and submitted for corrective actions.

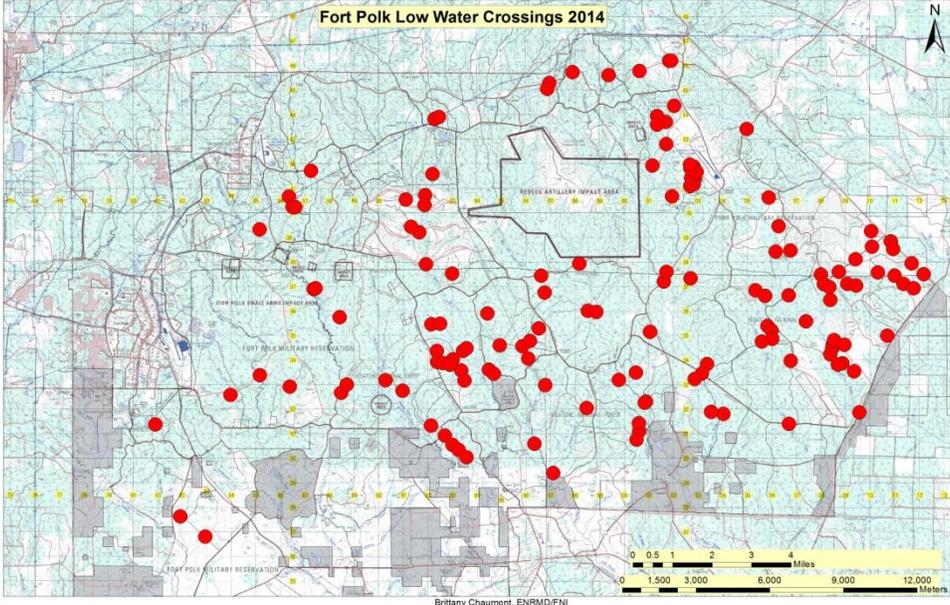
**FIGURE 3.6-1
SEDIMENT BASINS (FORT POLK)**



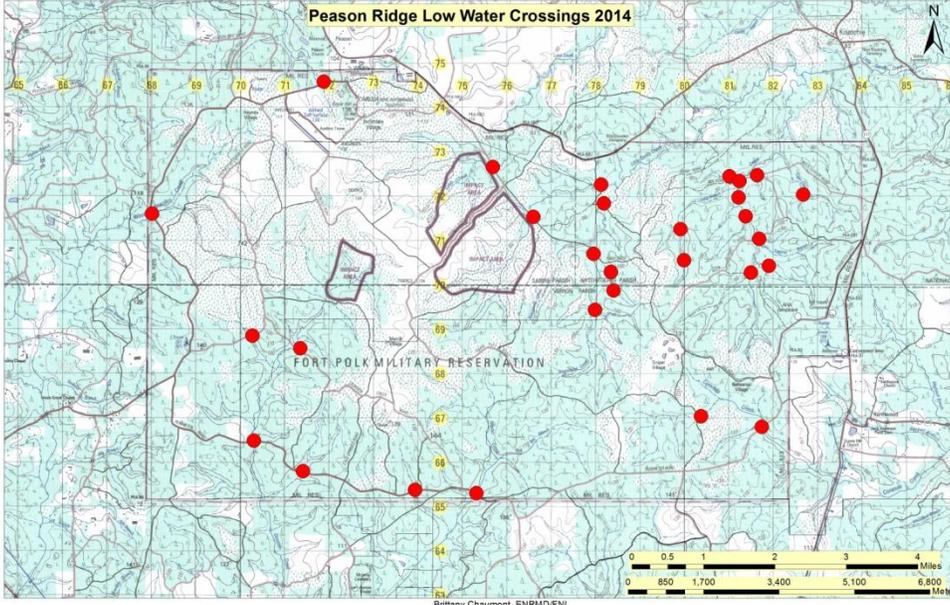
**FIGURE 3.6-2
SEDIMENT BASINS (PEASON)**



**FIGURE 3.6-3
LOW WATER CROSSINGS (FORT POLK)**



**FIGURE 3.6-4
LOW WATER CROSSINGS (PEASON)**



3.6.3 Maneuver Damage Program Background

As part of the JRTC and Fort Polk and the Kisatchie National Forest (KNF) mitigation and monitoring plan, the Maneuver Damage Inspection and Monitoring Program was created in an effort to avoid, minimize, reduce or rectify adverse effects to soils, vegetative cover, water quality and biological resources, as a part of the Final Environmental Impact Statement (FEIS) for proposed actions relating to long-term use of adjacent Forest Service lands. The potential for military training activities to cause maneuver damage depends on the type of training scenarios involved. Training impacts have ranged from a high of 529 acres in FY96 to a low of 69 acres in FY07. There were 102 impacted acres in FY11, 89 acres impacted in FY12, 290 acres impacted in FY13, and for FY14 that number increased to 437 acres impacted by Rotational training events. The number of impacted sites has shown a dramatic increase since FY12, and this trend continues in FY 15 with 608 sites. The number of sites have increase, however; the number of acres damaged showed a decrease which is atypical for force-on force training to urban warfare training scenarios which uses more convoyed type training events. A force-on-force training exercise uses more heavy combat equipment; consequently, there should be an increase in the size of damages but not number of damages.

**TABLE 3.6-1
ROTATIONAL MANEUVER DAMAGE**

FISCAL YEAR	DAMAGED SITES	ACRES DAMAGED	AVERAGE SIZE OF DAMAGE (AC)
1994	58	151	2.60
1995	94	298	3.17
1996	161	529	3.29
1997	124	324	2.61
1998	126	284	2.25
1999	60	255	4.25
2000	48	161	3.35
2001	74	243	3.28
2002	189	453	2.40
2003	153	318	2.08
2004	169	225	1.33
2005	176	319	1.81
2006	340	221	0.65
2007	91	69	0.76
2008	281	149	0.53
2009	269	160	0.59
2010	279	99	0.35
2011	284	102	0.35
2012	218	89	0.41
2013	446	290	0.65
2014	584	437	0.75
2015	608	373	0.61

FIGURE 3.6-5

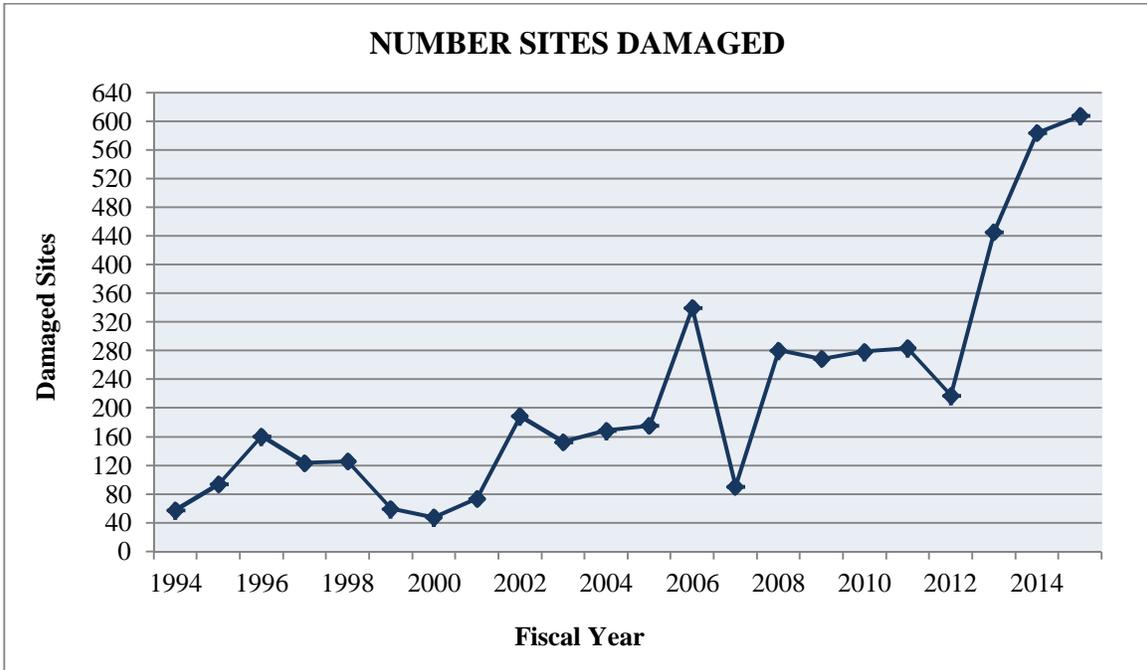


FIGURE 3.6-6

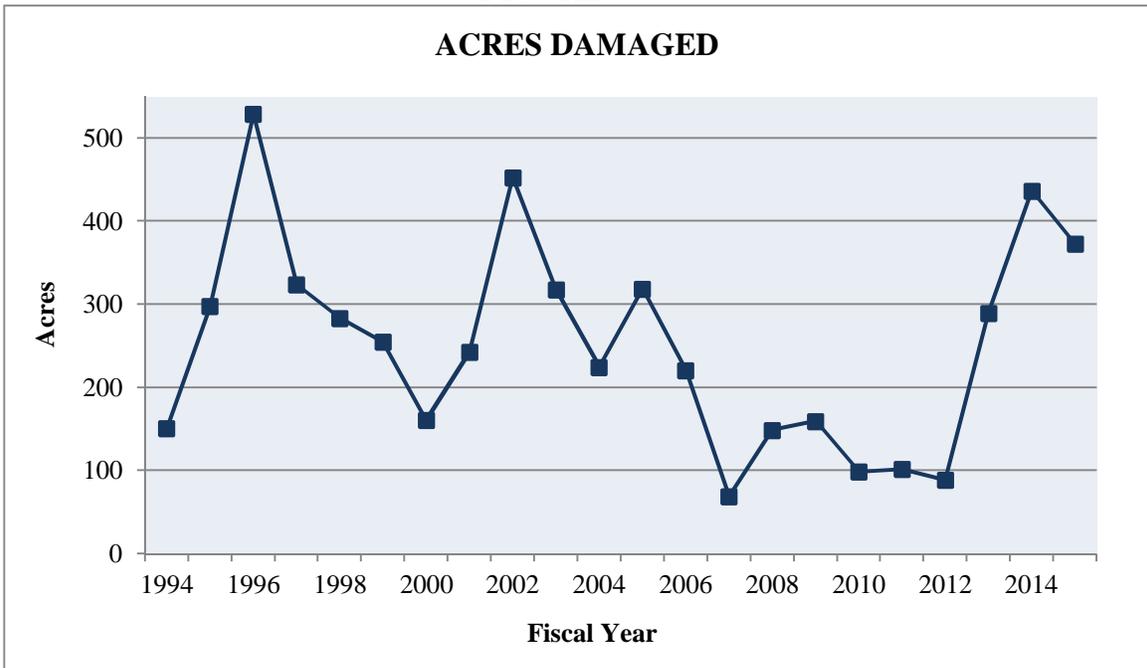
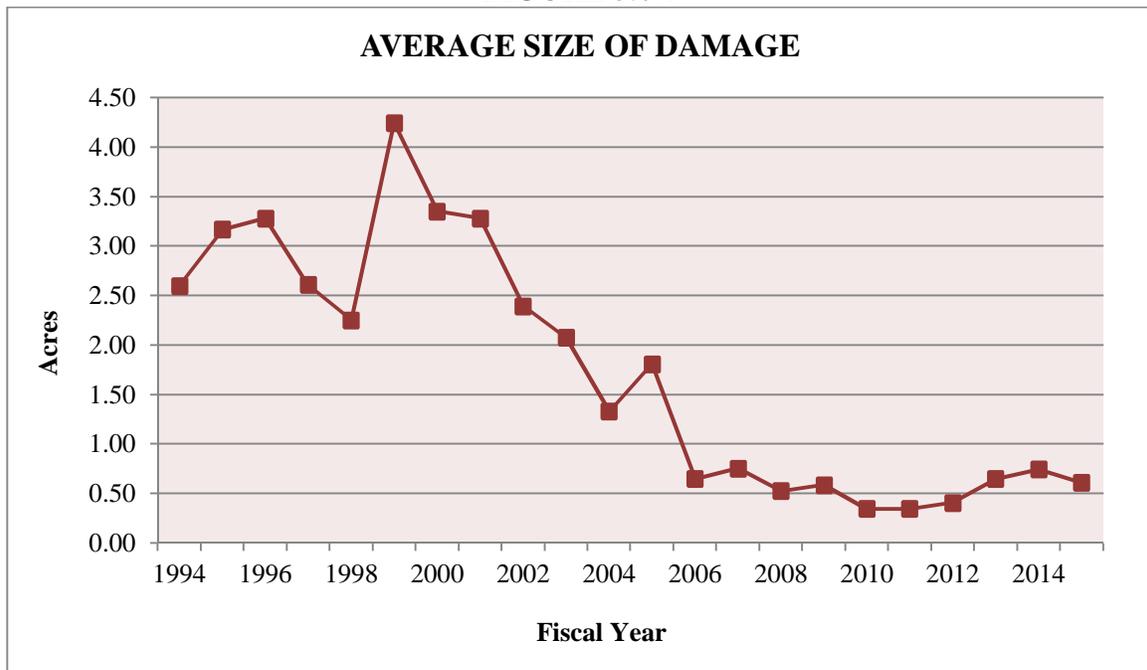


FIGURE 3.6-7



3.6.4 Maneuver Damage Program Requirements

Fort Polk representatives' conduct maneuver damage inspections following each training event and evaluates training roads and trails. Data from these inspections are maintained by the installation. The overall goal of this program is to sustain training land conditions and ensure long-term soil viability. This is accomplished by implementing land rehabilitation 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.

3.6.5 Maneuver Damage Annual Program Developments

In 2015, the number of documented maneuver damage sites slightly increased from 584 in 2014 to 684 in 2015. The increase is atypical for Force-on-Force rotations. As the rotational training mission migrated from movement to contact, to Force-on-Force rotations, the number of damaged acres along roads and trails should have decreased and the overall size of damages sites should have increased. The total numbers of damaged sites are expected to decline and the size of damaged sites is expected to increase as Force-on-Force rotations continue. Due to intensive back-to-back training rotations that included Live Fire exercises, inspectors had difficulties gaining access to complete inspections of all roads and trails during the allotted times between rotations. The difficulties accessing the training area directly impacted Metric 3 and decreased the percentage of roads and trails inspected from 100% to 90%. There were no difficulties completing streams crossing and sediment basin inspections. All 177 stream crossings and 134 sediment basins were inspected. In 2015 the installation added 5 new basins, which increased the total number of basins to 139.

3.6.6 Maneuver Damage Program Performance Indicators

The Maneuver Damage Program (MD) is mandated by Objective 1.1 of the Sustainability and Environmental Monitoring Plan: *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.* Thereby, the Maneuver Damage Program strives towards the goal of ensuring that training lands are sustained for long-term and to protect and conserve basic soil, water and land resources, solidifying forest ecosystem endurance for future generations and to 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. The following program indicators reflect the measurement of program effectiveness and application:

1. Is the maneuver damage inspection and repair program adequately identifying and repairing damages that need corrective action?
2. What percent of sediment basins and low water crossing are inspected yearly and repairs and corrective actions identified and completed?
3. Are roads and trails adequately inspected during rotational exercises and are Direct Maintenance Order developed to maintain maneuver supply routes and to enhance maneuver corridors?

3.6.7 Maneuver Damage Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Maneuver Damage Program performance indicator is evaluated based on a Red, Amber, or Green performance standard. Trend data is used to show progress of specific aspects of the Maneuver Damage Program. The following performance standards apply to the performance indicators listed above:

Maneuver Damage Program Performance	
Performance Indicators	Performance Standards
1. Is the maneuver damage inspection and repair program adequately identifying and repairing damages that need corrective action?	a) GREEN: 100% areas inspected b) AMBER: 80% - 90% areas inspected c) RED: <80% areas inspected
2. What percent of sediment basins and low water crossing are inspected yearly and repairs and corrective actions identified and completed?	a) GREEN: 100% b) AMBER: 85% - 99% c) RED: <84%
3. Are roads and trails adequately inspected after Rotational exercises and are Direct Maintenance Order developed to maintain maneuver supply routes and to enhance maneuver corridors?	a) GREEN: 100% b) AMBER: 85% - 99% c) RED: <84%
Program Overall Performance	a) GREEN: Two or more green and no red b) AMBER: One or more amber and no more than one red c) RED: Two or more red

3.6.8 Maneuver Damage Program Annual Performance Review

The Maneuver Damage Repair program’s overall performance evaluation for 2015 is Green based on two of three performance indicators being Green and one indicator was Amber. The specific results for each performance indicator are listed below:

Maneuver Damage Program Performance Metrics		
Indicators	2014 Performance	Evaluation
1. Is the maneuver damage inspection and repair program adequately identifying and repairing damages that need corrective action?	100% of all areas requiring inspection were completed.	GREEN
2. What percent of sediment basins and low water crossing are inspected yearly and repairs and corrective actions identified and completed?	100% of all known sediment basins and low water crossing inspections were completed.	GREEN
3. Are roads and trails adequately inspected after Rotational exercises and are Direct Maintenance Order developed to maintain maneuver supply routes and to enhance maneuver corridors?	90% of training roads and trails inspection were completed.	AMBER
Program Overall Performance	Two green and one amber	GREEN

**SECTION 4
NATURAL RESOURCES**

4.1 Forest Management (*Mark J. Luttrell*)

Fort Polk's Natural Resources Management Branch (NRMB) has a well-established program for managing forested ecosystems at Fort Polk, including insect and disease prevention and control, timber production, prescribed burning, wildfire suppression, and habitat enhancement for the red-cockaded woodpecker (RCW). The program is operated in accordance with the Forest Management Plan, the Integrated Natural Resources Management Plan, and AR 200-1. This process involves a regulatory inventory of forest resources to develop management activities that both improve the quality of the forest and support the mission of Fort Polk.

The primary timber harvested on Fort Polk is loblolly pine. Other species harvested in lesser quantities include longleaf pine, southern red oak, and post oak. Selective harvesting and other silvicultural practices promote habitat maintenance for a variety of wildlife species including the RCW.

There are approximately 100,000 acres of forest on Fort Polk and Peason Ridge that are managed through a compartment prescription process. This process involves an inventory of forest resources to develop management activities that both improve the quality of the forest and support the mission of Fort Polk.

Together, Fort Polk and Peason Ridge are divided into 76 compartments, 41 at Fort Polk, 19 at Peason Ridge and 16 at the Cold Springs Training Area of Peason Ridge. Compartments range in size from 1,200 to 1,600 acres. Each of these compartments is further subdivided into forest stands with similar species, size classes, and stockings. Each compartment is managed with a compartment prescription process that is drafted by NRMB. Compartments are inventoried and prescriptions are updated on a 10-year cycle. Each compartment prescription evaluates the effects that its management practices will have on erosion, wildlife, endangered species, air quality, archeological resources, recreation, aesthetics, and ecosystem management. Additionally, the compartment prescriptions include specifications for harvests, burn cycles, cultural resources requirements, endangered species requirements, soil and water protection, and wildfire control. The results are carefully examined to determine the course of action necessary to ensure sound forest management practices. Finally, all data are summarized into a compartment prescription which is reviewed and approved by a staff specialist within the ENRMD prior to implementation. Complete forest inventory data is maintained in the ENRMD's geographical information system (GIS). Timber harvest occurs in a maximum of six compartments per year.

All timber sales are administered by the U.S. Army Corps of Engineers, Fort Worth District. All timber sales are sold to the highest bidder at a public bid opening. The successful bidder receives a contract to harvest timber for a one-year period in the stands selected for harvest. The NRMB coordinates access to the timber sales through the Fort Polk Range Control. An average of 1,611 acres of timber is harvested annually on the installation. This represents about 1.6% of the total managed forest acreage on the installation.

There have been 69 timber sales on Fort Polk since 1994. The amount of pine sawtimber harvested has ranged from a high of 5,723 thousand board feet (MBF) in 2012 to a low of 1,001 MBF in 2007. The pine pulpwood harvest in cords has ranged from a low of 1,311 in 2012 to a high of 13,138 in 2004. The average pine sawtimber harvest is 2,850 MBF and 4,212 cords of pulpwood per year. Hardwood harvest is conducted to aid in habitat management for the RCW. Harvest of hardwood timber has ranged from zero to 127 MBF and zero to 1,540 cords per year.

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Revenue generated from timber sales on the installation sustains forest management operations on Fort Polk. The average annual revenue from timber harvests on the installation is \$911,053. Forest management activities on the installation are self-sufficient as a result of timber harvest revenues. Public Law 99-561 mandates that 40 percent of the net profit be returned to the Louisiana State Treasury, who in return, redistributes these dollars to local parish school boards and police juries from which the timber is harvested. These parishes include Sabine, Natchitoches, and Vernon. Returns are based on the amount of acres each parish has on the installation.

**TABLE 4.1-1
TIMBER HARVEST**

FISCAL YEAR	PINE						REVENUE	HARDWOODS	
	SAWTIMBER (MBF)	PULPWOOD (CORDS)	PULPWOOD (TONS)	POLK ACRES	PEASON ACRES	TOTAL ACRES		SAWTIMBER (MBF)	PULPWOOD (CORDS)
1992	3,517	6,627		--	--	--	\$736,568	0	0
1993	3,346	7,676		1,027	1,205	2,232	\$735,329	0	10
1994	2,852	3,929		1,078	384	1,462	\$753,511	0	901
1995	2,704	5,561		681	841	1,522	\$856,653	0	329
1996	4,294	5,548		867	662	1,529	\$1,271,558	5	73
1997	2,243	2,050		1,190	413	1,603	\$841,753	0	197
1998	2,953	4,312		203	65	268	\$1,254,726	0	122
1999	2,374	3,650		887	344	1,231	\$876,245	0	0
2000	2,430	4,376		420	504	924	\$898,956	0	195
2001	3,329	3,948		1,127	328	1,455	\$1,062,457	0	102
2002	2,756	4,201		1,648	200	1,848	\$1,121,659	0	345
2003	2,998	3,564		1,850	0	1,850	\$1,213,671	0	245
2004	4,114	13,138		251	4,267	4,518	\$1,307,104	127	1,540
2005	2,215	3,885		1,644	772	2,416	\$1,130,078	0	257
2006	2,232	3,790		1,492	439	1,931	\$773,709	0	106
2007	1,001	3,022		1,600	0	1,600	\$1,091,987	0	0
2008	3,022	1,790		1,051	0	1,051	\$1,300,000	0	0
2009	3,661	4,657		844	421	1,265	\$631,000	0	0
2010	2,268	2,224		666	365	1,031	\$699,000	0	0
2011	2,945	2,969		748	119	867	\$715,000	0	0
2012	5,723	1,311		177	612	789	\$553,535	0	0
2013	2,117	2,838		724	529	1,253	\$550,115	0	0
2014	1,444	1,987		416	157	573	\$826,882	0	0
2015	1,869	4,049	49,590	212	2,000	2,212	\$663,794	0	0

FIGURE 4.1-1

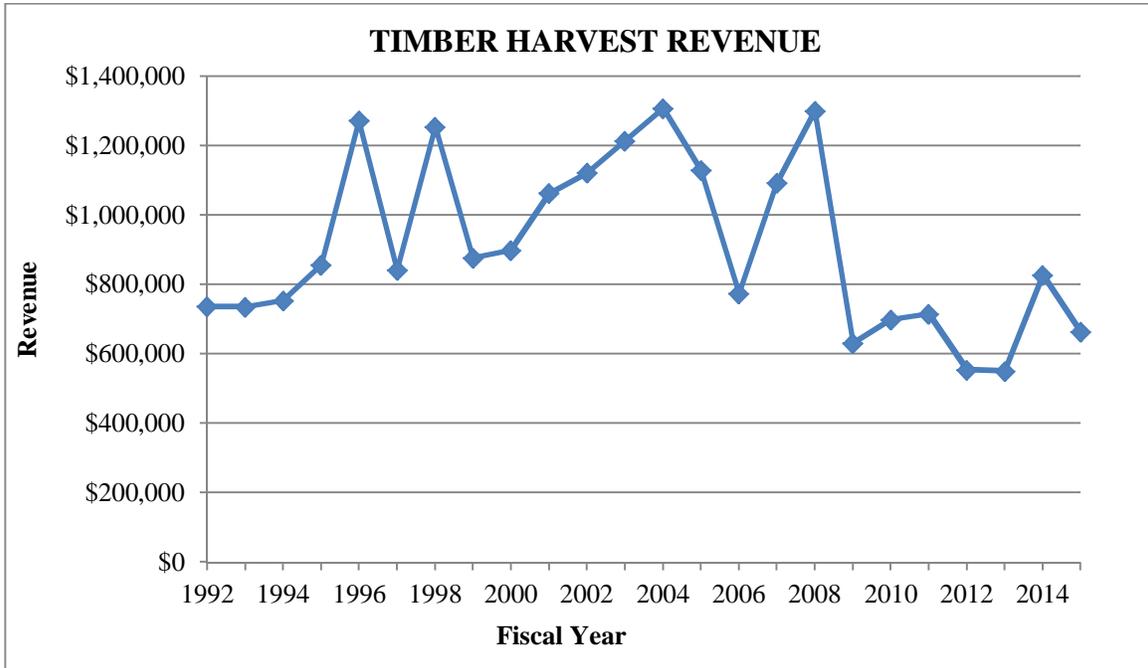
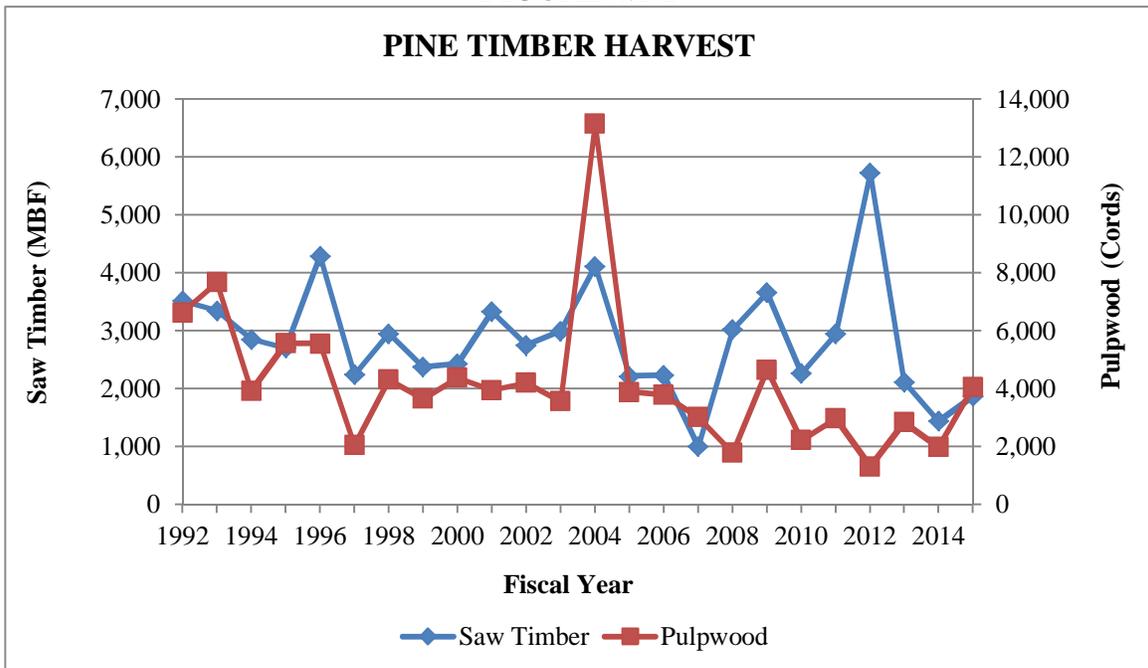


FIGURE 4.1-2



4.2 Prescribed Burning (*Bruce D. Martin*)

Fort Polk's Natural Resources Management Branch (NRMB) is responsible for forest management activities on military training land owned and used by the Army at Fort Polk. NRMB manages approximately 100,000 acres of forest on Army-owned property at Fort Polk and Peason Ridge. Much of this acreage is longleaf pine forest.

The longleaf pine (*Pinus palustris*) ecosystem is the dominant vegetation type over much of Fort Polk and Peason Ridge. The longleaf pine forest is a "fire climax" ecosystem that is dependent upon fire to maintain itself. Healthy longleaf pine habitat is critical to recovery efforts for the red-cockaded woodpecker, which is on the federal endangered species list.

Prescribed burning is the most important forest management tool used by NRMB. The Army has been conducting prescribed burning on Fort Polk since the 1950s. Records on prescribed burning have been maintained since 1995. Prescribed burning is conducted in accordance with guidelines established by the U.S. Forest Service and the Louisiana Office of Forestry (LOF). NRMB personnel have attended prescribed burning school, smoke management school, and have received instruction on forest fire tractor and plow operation training. The LOF has certified several NRMB personnel as prescribed burners.

Prescribed burning can be accomplished only under limited weather conditions. Weather criteria considered include surface winds, air temperature, smoke transport winds, relative humidity, fuel loading, number of days since last rainfall, and the amount of fuel moisture. Burns are conducted on days when no training is scheduled. Opportunities for prescribed burning are constrained by military training activities and appropriate weather conditions.

Forest compartments dominated by longleaf pine are subjected to prescribed burning on a two-year rotation (each compartment is burned every other year). Forest compartments dominated by other types of vegetation are burned on a three-year rotation.

Annual goals for prescribed burning on Fort Polk and Peason Ridge range from approximately 23,000 acres to 40,000 acres, depending on which compartments are scheduled to receive treatment in a given year. An annual average of 23,214 acres has actually been treated with prescribed burning from 1996 to 2015. Additional acreage has been burned by wildfires. Prescribed burns typically do not cover 100% of the land area inside the compartment receiving treatment. Acreages shown in Table 4.2-1 do not consider these unburned portions. NRMB currently maps the number of acres burned during each prescribed burning event using a combination of global positioning system (GPS) and geographic information system (GIS) technology.

**TABLE 4.2-1
PRESCRIBED BURNING**

FISCAL YEAR	FORT POLK GOAL (ACRES)	FORT POLK ACTUAL (ACRES)	PEASON RIDGE GOAL (ACRES)	PEASON RIDGE ACTUAL (ACRES)
1996	22,428	15,949	5,016	5,671
1997	20,284	11,148	3,935	1,421
1998	24,604	15,414	8,456	6,896
1999	19,083	7,417	11,289	3,719
2000	22,896	23,627	14,637	3,130
2001	20,643	23,516	9,734	7,835
2002	21,820	16,535	11,135	7,084
2003	19,317	2,650	12,528	3,338
2004	28,207	28,207	7,236	7,236
2005	17,854	17,854	5,491	5,491
2006	23,100	14,008	14,158	8,656
2007	17,614	12,747	13,161	7,397
2008	26,320	19,153	13,959	8,436
2009	19,061	15,146	14,390	9,778
2010	26,624	20,517	7,560	2,718
2011	27,566	14,252	18,953	10,634
2012	28,227	16,466	16,113	2,697
2013	23,115	14,795	15,031	9,432
2014	29,107	23,929	9,790	5,278
2015	36,785	24,556	14,272	9,125

FIGURE 4.2-1

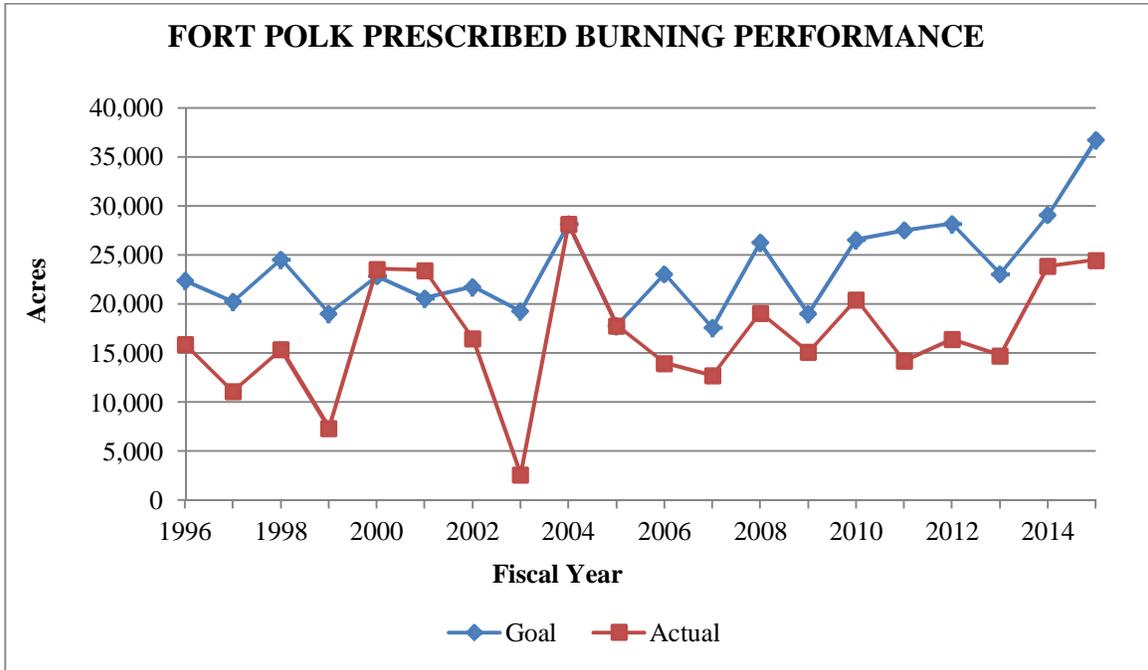
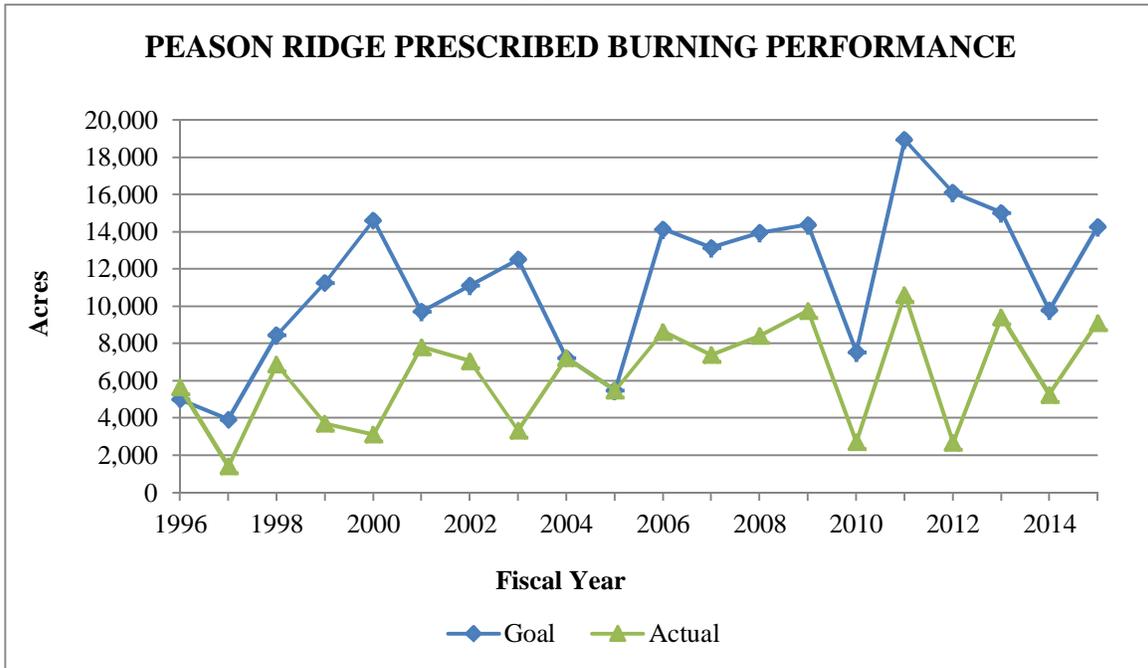


FIGURE 4.2-2



4.3 Wildfire Control (*Bruce D. Martin*)

Wildfires are a natural component of the local ecosystem at Fort Polk and play an important role in enhancing the longleaf pine forest, which serves as habitat for the red-cockaded woodpecker. Lightning is the most common natural cause of wildfires at Fort Polk. A variety of man-made sources are also responsible for wildfires at the installation, including military training activities, other types of accidental ignitions, and arson. Fort Polk's Natural Resources Management Branch (NRMB) is responsible for suppression of wildfires on the installation. With the exception of wildfires occurring in impact zones, NRMB attempts to suppress all wildfires that occur. Wildfires occurring in impact zones are allowed to burn due to the presence of unexploded ordnance that would pose an extreme safety hazard to fire suppression personnel. A firebreak system zone is maintained around impact zones to prevent the spread of wildfires that occur in impact zones.

NRMB also collects and maintains data on wildfires that occur. Data has been maintained since 1994. Until 1999, data on wildfires occurring in the U.S. Forest Service Intensive Use Area was compiled with data from wildfires occurring on Army-owned land. In 2001, NRMB began collecting data on wildfires occurring in the Limited Use Area. NRMB records data, including size and cause of each fire, on a Forest Fire Report Form.

Causes of wildfires have been divided into three categories: military training, arson, and unknown. Records of fires caused by lightning have historically not been kept. An average of 73 wildfires per year have occurred on Fort Polk since 1994. During this time period, wildfires have burned an average of 1,292 acres per year. An average of 19 wildfires per year have occurred at Peason Ridge since 1994. Wildfires at Peason Ridge have burned an average of 937 acres per year. Based on these data, individual wildfires at Fort Polk have burned an average of 17 acres each and individual wildfires at Peason Ridge have burned an average of 48 acres.

Over 83% of the wildfires on Fort Polk and Peason Ridge have been caused by military training activities. Beginning in 1997, the NRMB began to keep more detailed records on the causes of military-related wildfires including the specific ignition source (live-firing, pyrotechnics, etc.) and the type of military unit causing the fire. The number of fires started by military training activities on Fort Polk have varied from as low as 32 in 2004 to a high of 95 in 2006 and 2013. At Peason Ridge, the number of military training activity fires have ranged from zero in 1995 to 44 in 1998.

Unknown sources have accounted for 12.6% of the fires on Fort Polk and 10.5% of the fires at Peason Ridge between 1994 and 2014. The highest number of fires attributed to unknown sources occurred in 1999 at both Fort Polk (45 fires) and Peason Ridge (21 fires). During this time period, 3.6% and 1.9% of the wildfires occurring on Fort Polk and Peason Ridge, respectively, were attributed to arson. The largest arson-related fire on Fort Polk occurred in December 1993 and burned 500 acres. The largest arson-related fire on Peason Ridge burned 38 acres in January 1994. The number of arson-related fires on Fort Polk have ranged from a low of zero in 2004-2005, 2008-2010, and 2012-2014 to a high of eight in 1996. Only eight arson-related fires have occurred in the past 19 years at Peason Ridge. Since 1994, over 50% of the acreage burned on Fort Polk occurred between the months of January and April. The majority of these fires occur in the months of February and March. Fires occurring during these months typically account for about 30% of the total acreage burned on the installation.

**TABLE 4.3-1
FORT POLK WILDFIRES**

FISCAL YEAR	NUMBER OF WILDFIRES				ACRES BURNED			
	TOTAL	ARSON	UNKNOWN	TRAINING	ACREAGE BURNED	ARSON	UNKNOWN	TRAINING
1994	70	3	4	63	1,600	1	186	1,413
1995	88	7	7	74	1,190	111	19	1,060
1996	104	8	6	90	2,335	175	246	1,914
1997	41	2	4	35	1,274	12	143	1,119
1998	46	4	5	37	802	14	66	722
1999	107	7	45	55	1,786	168	547	1,071
2000	97	7	0	90	1,589	26	0	1,563
2001	95	6	2	87	1,139	101	10	1,028
2002	102	4	11	87	2,361	365	581	1,415
2003	47	1	2	44	445	1	60	384
2004	39	0	7	32	457	0	29	428
2005	65	0	6	59	672	0	38	634
2006	105	4	6	95	1,537	7	21	1,509
2007	56	3	8	45	869	10	548	311
2008	55	0	12	43	860	0	146	714
2009	44	0	6	38	362	0	5	357
2010	55	0	9	46	569	0	66	503
2011	68	1	12	55	2,195	1	102	2,090
2012	36	0	3	33	458	0	10	448
2013	118	0	23	95	1,669	0	1,107	562
2014	81	0	10	59	1,107	0	224	882
2015	85	0	15	63	3,161	0	318	2,842

FIGURE 4.3-1

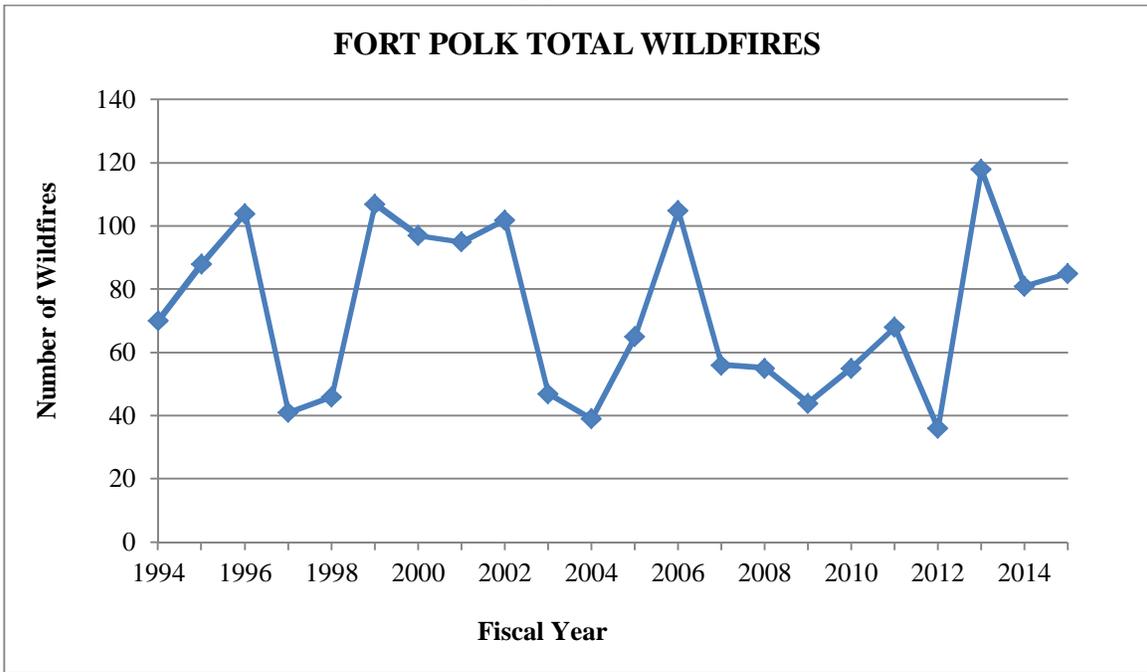
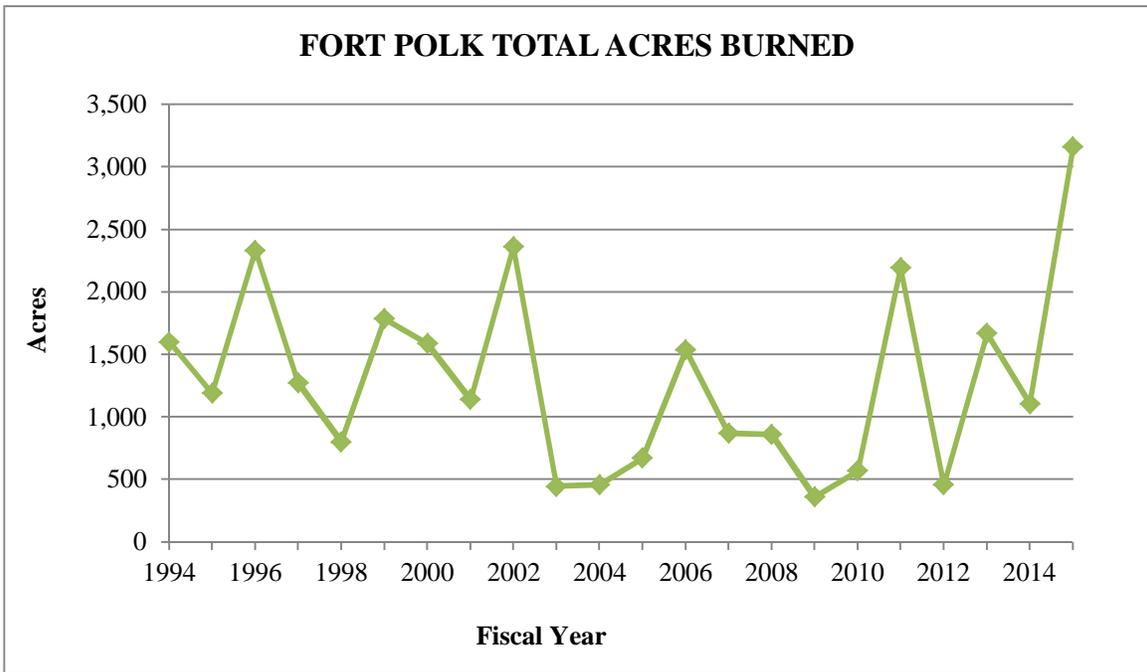


FIGURE 4.3-2



**TABLE 4.3-2
PEASON RIDGE WILDFIRES**

FISCAL YEAR	NUMBER OF WILDFIRES				ACRES BURNED			
	TOTAL	ARSON	UNKNOWN	TRAINING	ACREAGE BURNED	ARSON	UNKNOWN	TRAINING
1994	8	2	1	5	321	38	5	278
1995	1	1	0	0	3	3	0	0
1996	18	0	3	15	1,059	0	481	578
1997	20	0	1	19	865	0	2	863
1998	47	0	3	44	4,864	0	47	4,817
1999	40	1	21	18	1,160	10	918	232
2000	33	1	0	32	1,176	1	0	1,175
2001	8	0	0	8	209	0	0	209
2002	34	2	3	29	850	1	20	829
2003	19	0	2	17	575	0	8	567
2004	25	0	0	25	712	0	0	712
2005	24	0	2	22	1,122	0	25	1,097
2006	12	0	0	12	470	0	0	470
2007	13	0	0	13	194	0	0	194
2008	4	0	0	4	77	0	0	77
2009	5	0	0	5	846	0	0	846
2010	10	0	3	7	529	0	73	456
2011	41	1	2	38	2,515	20	2	2,493
2012	23	0	0	23	724	0	0	724
2013	22	0	1	21	1,162	0	10	1,152
2014	12	0	2	10	789	0	209	580
2015	9	0	1	8	395	0	200	195

FIGURE 4.3-3

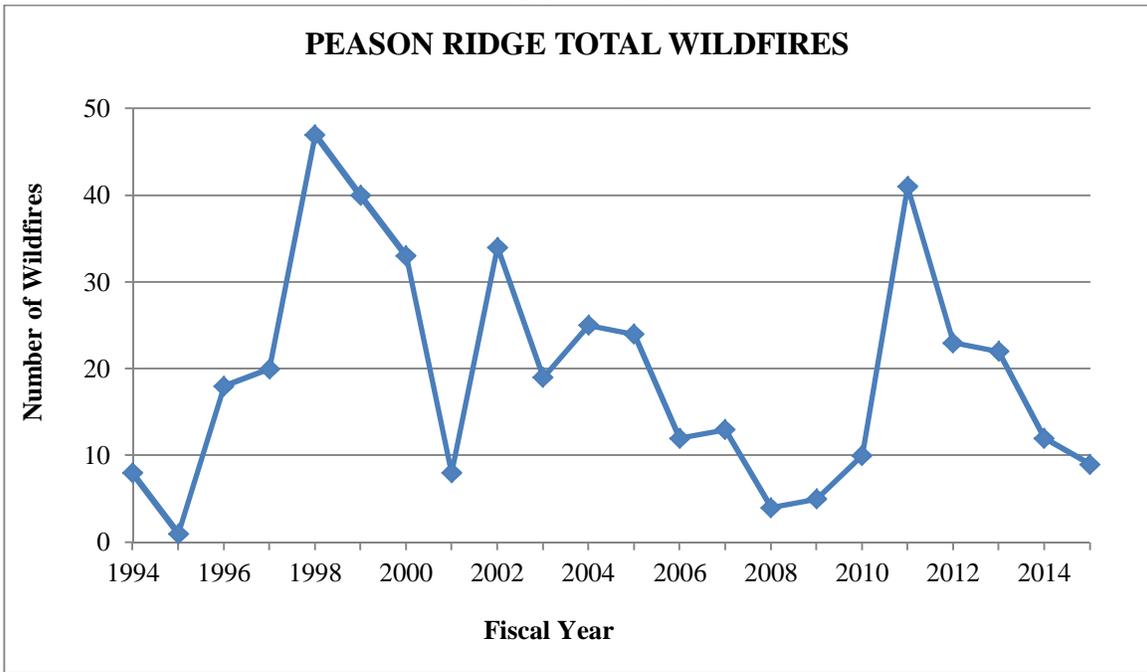
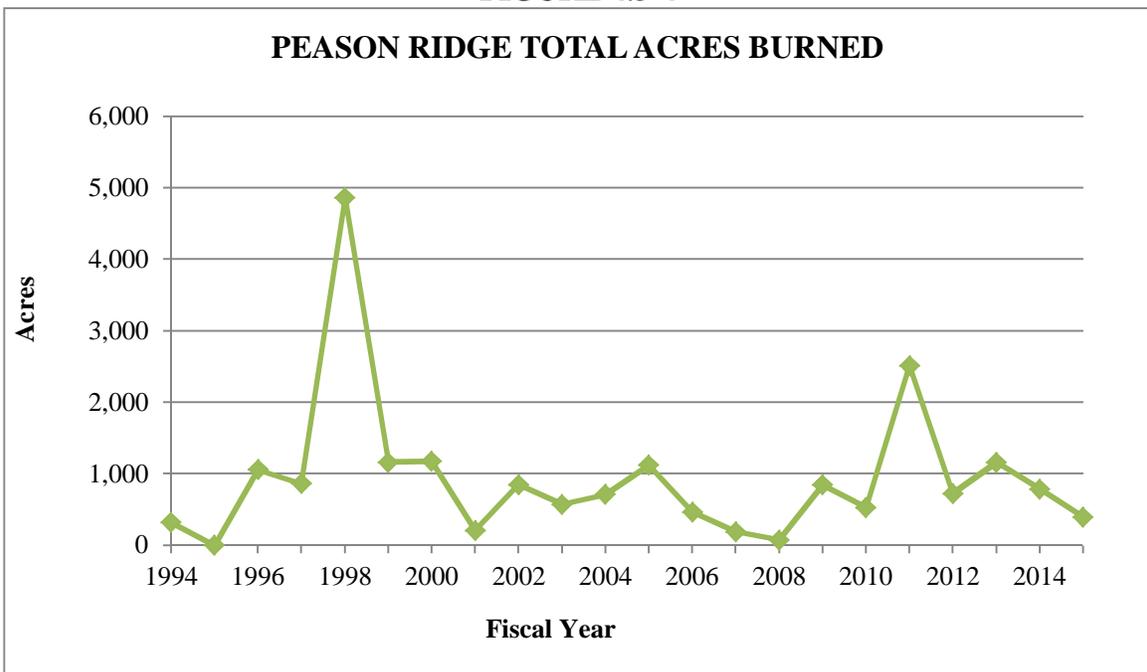


FIGURE 4.3-4



4.4 Integrated Training Area Management (*Kittie S. Stanger*)

The Integrated Training Area Management (ITAM) program is the Army's comprehensive approach to land management and is a core component of the Army's Sustainable Range Program (SRP) established in Army Regulation (AR) 350-19. The SRP is the Army's approach for improving the way in which it designs, manages, and uses its ranges to ensure long-term sustainability.

The ITAM program is responsible for maintaining the land to assist the Army to meet its training requirements. This requires understanding and balancing Army Training requirements with the capability to manage and maintain training land by integrating mission requirements with environmental requirements and sound land management practices. Components of the ITAM program are:

- Training Requirements Integration,
- Land Rehabilitation and Maintenance,
- Geographic Information Systems,
- Range and Training Land Assessment, and
- Sustainable Range Awareness.

These components combine to provide the means to understand how the Army's training requirements impact land management practices, what the impact of training is on the land, how to mitigate and repair the impact, vegetative monitoring, and communicate the ITAM message to Soldiers and the public through the issuance of Soldier cards and leader handbooks. Fort Polk training lands include a combination of Army fee-owned lands and lands owned by the United States Forest Service (USFS). The Army utilizes USFS lands via a Special Use Permit signed 24 May 2004 and under provisions of the National Environmental Policy Act documents related to Army use and training activities on these lands.

In addition to Army owned land, Fort Polk is responsible for implementation/installation of soil conserving mitigation and repair measures designed to meet the provisions of the Special Use Permit Agreement with the USFS. Provisions of land use agreements are stringent and require comprehensive, innovative, and unique approaches to mitigation and land management. These activities are essential for sustaining a training base adequate to meet mission requirements and for providing natural resources stewardship on training lands.

ITAM has been instrumental in preparing new lands for training by improving 7.75 miles of woods trails to unpaved training area road standard (CATCD 85715) and transferring to Directorate of Public Works, Real Property area of responsibility, repairing 3.5 miles of Tram Road, opened a borrow pit, cleared a total of 17 acres for multi-eschelon use, prepared Cold Springs TA 4 for less restricted training (legal survey and installation fire breaks pending), and received Installation Management Command approval for building a storage shed within Cold Springs TA 4. Additionally, the newly purchased fixed wing landing strip in the Kurthwood TA has been maintained by rotary mowing.

**SECTION 5
ENVIRONMENTAL COMPLIANCE**

5.1 Wastewater

5.1.1 Wastewater Program Description

Fort Polk's wastewater treatment is provided by American Water Operations and Maintenance Inc. which owns and operates the North Fort Wastewater Treatment Plant (NFWWTP), the South Fort Wastewater Treatment Plant (SFWWTP), Peason Ridge treatment system, and Toledo Bend Recreation Area treatment system. These systems are owned and operated by American Water Operations and Maintenance Inc. for the exclusive benefit of Fort Polk.

The NFWWTP is a conventional wastewater treatment plant with a rated capacity of 1.4 million gallons per day. The NFWWTP uses clarification, extended aeration basins, chlorination, and dechlorination to provide treatment.

The SFWWTP is a conventional wastewater treatment plant with a rated capacity of 3.8 million gallons per day. The SFWWTP underwent a major upgrade in 2012 and now uses clarification, extended aeration, chlorination, and dechlorination treatment.

The Toledo Bend Recreation Area Wastewater Treatment System is an oxidation pond system with a rated capacity of 25,000 gallons per day. This treatment system uses a two stage oxidation pond, chlorination, and dechlorination to provide treatment.

The Peason Ridge Wastewater Treatment System is an oxidation pond system with a rated capacity of 2,500 gallons per day. This system uses a three stage oxidation pond for treatment.

5.1.2 Wastewater Program Background

The Louisiana Department of Environmental Quality (LDEQ) assumed primacy over the state's National Pollutant Discharge Elimination System (NPDES) in 1996. In accordance with the Clean Water Act, Fort Polk obtained the Louisiana Pollutant Discharge Elimination System (LPDES) permits for the NFWWTP, permit #LA0032239 and SFWWTP, permit #LA0032221. In addition, two small treatment systems, Peason Ridge Cantonment Area, LPDES permit #LAG530578 and Toledo Bend, permit #LAG540754 were authorized under general permits issued by LDEQ and Environmental Protection Agency.

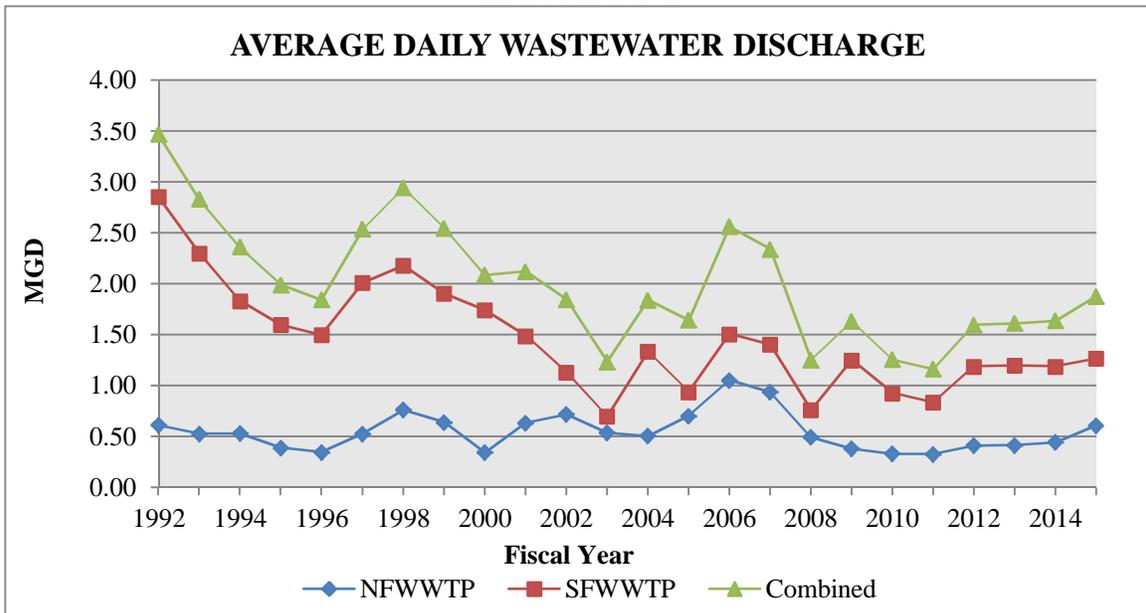
Historically, Fort Polk operated the supporting wastewater treatment plants. On 1 February 2009, American Water Operations and Maintenance Inc. assumed ownership and operational responsibility for wastewater treatment plants.

In 2014, the installation wastewater Utilities Privatization Contractor (UPC) completed upgrades to the NFWWTP and SFWWTP. The SFWWTP upgrade converted the plant from a trickling filter process to an extended aeration process. As a result of the SFWWTP upgrade, the SFWWTP overland pond system was decommissioned and removed, and now the SFWWTP discharges water directly into Bundick Creek. The plant upgrades required the UPC to obtain a new State issued wastewater permit. In 2015, Fort Polk is currently constructing new treatment plants for North Fort and South Fort, which are 60 percent complete and scheduled to become operational in 2017.

**TABLE 5.1-1
WASTEWATER**

YEAR	NFWWTP TOTAL DISCHARGE (million gallons)	NFWWTP AVERAGE DAILY DISCHARGE (MGD)	SFWWTP TOTAL DISCHARGE (million gallons)	SFWWTP AVERAGE DAILY DISCHARGE (MGD)	COMBINED TOTAL DISCHARGE (million gallons)	COMBINED AVERAGE DAILY DISCHARGE (MGD)
1992	223.742	0.613	1,042.706	2.86	1,266.448	3.470
1993	192.710	0.528	841.054	2.30	1,033.764	2.832
1994	193.129	0.529	669.473	1.83	862.602	2.363
1995	142.691	0.391	583.756	1.60	726.447	1.990
1996	125.724	0.344	547.263	1.50	672.987	1.844
1997	192.715	0.528	734.385	2.01	927.100	2.540
1998	278.109	0.762	797.033	2.18	1,075.142	2.946
1999	234.043	0.641	695.480	1.91	929.523	2.547
2000	125.558	0.344	636.560	1.74	762.118	2.088
2001	231.270	0.634	543.920	1.49	775.190	2.124
2002	262.049	0.718	412.419	1.13	674.468	1.848
2003	195.566	0.536	255.700	0.70	450.896	1.235
2004	183.962	0.504	488.473	1.34	672.435	1.842
2005	256.911	0.704	342.617	0.94	599.528	1.643
2006	384.178	1.053	551.173	1.51	935.351	2.563
2007	342.005	0.937	513.143	1.41	631.104	2.343
2008	179.538	0.492	277.581	0.76	457.119	1.252
2009	138.412	0.379	457.477	1.25	595.889	1.633
2010	119.952	0.329	338.318	0.93	458.270	1.256
2011	119.360	0.327	305.200	0.84	424.560	1.163
2012	150.323	0.411	434.656	1.19	584.979	1.598
2013	151.156	0.414	437.910	1.20	589.066	1.614
2014	161.244	0.442	436.090	1.19	597.334	1.637
2015	222.327	0.609	463.037	1.27	685.364	1.878

FIGURE 5.1-1



5.1.3 Wastewater Program Requirements

The wastewater treatment facilities were privatized 1 February 2009. Therefore, Fort Polk no longer has regulatory responsibility or liability for these facilities and does not have control over their operation.

5.2 Storm Water Protection (*Nathan G. Broussard*)

5.2.1 Storm Water Protection Program Description

According to the Environmental Protection Agency (EPA), storm water runoff is our most common cause of water pollution. Storm water becomes polluted when rainfall runs off of streets, lawns, construction and industrial activities and picks up fertilizers, dirt, pesticides, oil and grease, and many other pollutants on its way to our rivers, lakes, and coastal waters.

Fort Polk has a separate storm sewer system that receives, collects, and conveys storm water runoff to area streams and lakes without benefit of treatment. Because the storm water is discharged without treatment, it is crucial that we take a proactive approach to prevent releases of pollutants into the environment that can be potentially carried by storm water.

5.2.2 Storm Water Protection Program Background

In 1987, amendments to the Clean Water Act allowed EPA to issue permits for storm water discharges. In 1990, EPA developed the National Pollutant Discharge Elimination System (NPDES) Storm Water regulations for municipal and industrial discharges. General permits for industrial discharges and construction activities disturbing five acres or more of land were issued by the EPA in 1992-93. In 1996, the NPDES Program was delegated to authorize states to administer the program. The General Permit for Small Municipal Separate Storm Sewer Systems was issued in 1999. The Louisiana Department of Environmental Quality (LDEQ) has regulatory primacy over Fort Polk; functions of LDEQ include issuing permits, providing compliance assistance, conducting inspections and enforcement actions for Fort Polk.

5.2.3 Storm Water Protection Program Requirements

a. Industrial Storm Water Permit Compliance: Fort Polk’s Environmental Natural Resource Management Division (ENRMD) manages the installation’s Louisiana Pollutant Discharge Elimination System Multi-Sector General Permit (MSGP) for Storm Water Discharges Associated with Industrial Activities, Permit #LAR05N120, effective on 31 August 2011. This is a regulatory requirement of 40 CFR 122.26 and LAC 33:IX.2511.B.14.a-i and k. The permit is valid for five years. Fort Polk’s Agency Interest Number is 8994.

The installation is currently in year five of the re-issued five year permit. The permit was administratively reissued by LDEQ in 2011. The following table represents activity inspections, discharge monitoring and analytical testing for each of the five years covered by the current permit:

Current 5 Year Permit (2011-2015)	Quarterly/Annual Inspections Required	Visual Monitoring Required	Analytical Monitoring Required
Year 1 (2011)	ü	ü	
Year 2 (2012)	ü	ü	ü
Year 3 (2013)	ü	ü	
Year 4 (2014)	ü	ü	ü
Year 5 (2015)	ü	ü	

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The MSGP permit requires preparation and maintenance of a Storm Water Pollution Prevention Plan (SWP3). This plan documents the industrial activities on the installation and includes activity descriptions, industrial sector designations, best management practices (operational and structural controls) for storm water pollution prevention, activity inspections, and laboratory results from collected storm water discharge samples, compliance reports, discharge monitoring reports, and standard operating procedures for the program and plan.

Industrial activities identified on Fort Polk include recycling facilities, bulk fuel operations, air transportation, and non-commercial hazardous waste treatment, storage or disposal facilities. The SWP3 currently identifies the following industrial activities and sectors:

Industrial Activity Location	Industrial Sector	Activity/ Company/Unit	Sample Points (#)
DLADS	N-Scrap Recycling	Civilian	#1
QRP	N-Scrap Recycling	Innovar Environmental	#2
ASP	N-Scrap Recycling	Northrop Grumman	#4
OB/OD	K-Non-commercial Hazardous Waste, Treatment, Storage, or Disposal	705th EOD	#5
HAZMART	N-Scrap Recycling	LRC	#6
Polk Army Airfield	S-Air Transportation	LANG	#7
		TANG	
		DST	
		Kay & Associates	
		Sikorsky	
8300 Block	N-Scrap Recycling	Red River	#8
		AECOM	
South Fort Bulk Fuel Site	P-Bulk Fueling Operations	LBM/DST	#9

b. Small Municipal Separate Storm Sewer System Permit and Upcoming Compliance Requirements:

The installation is currently in year 3 of the re-issued five year permit (March 2013) and is covered under the Small Municipal Separate Storm Sewer System (MS4) Permit LAR042002 under the Louisiana Pollutant Discharge Elimination System. This permit and program has taken the place of the unpermitted IMOP program. The small MS4 permit is a five year permit which authorizes discharges from municipal storm water collection systems and requires generation and implementation of a Storm Water Management Plan (SWMP). The SWMP outlines the selection, implementation, and tracking of six (6) minimum control measures (MCMs) required under the small MS4 permit. Each MCM includes multiple subsets of storm water control measures (SCMs) that are tracked and reported to LDEQ annually. A summary of the MCMs and SCM subsets that will be implemented over the next five years include:

(1) Public Education and Outreach on Storm Water Impacts – Training, brochures, informational posters and newspaper articles will be prepared and distributed to target audiences. The initiative will be developed, implemented and tracked for the duration of the permit.

(2) Public Involvement/Participation – A public reporting hotline has been created and will be maintained for the duration of the permit. Activities will be developed for public participation projects and progress of initiatives will be briefed to the Environmental Quality Control Committee.

(3) Illicit Discharge Detection and Elimination – Illicit discharge reports and assessments will be actively tracked in the cantonment area using a storm water system map that delineates urbanized areas where there is a higher potential for polluted storm water runoff. Annual updates to the installation's Spill Prevention Countermeasures and Control Plan will be documented and the JRTC and Fort Polk 200-1 Regulation will be enforced by the core Storm Water Team.

(4) Construction Site Storm Water Runoff Control – Pre-construction activity reviews will be conducted via the NEPA process to determine impacts to storm water and surface water quality. Additionally, a comprehensive construction activity assessment program will be used to track construction storm water permit compliance.

(5) Post-Construction Storm Water Management in New Development and Redevelopment – There is currently a landscape code being developed for inclusion into the Installation Design Guide that outlines requirements for returning hydrology to pre-construction conditions. Also, construction site stabilization, as described in construction storm water permits, will be verified by the core Storm Water Team.

(6) Pollution Prevention/Good Housekeeping for Municipal Operations – ENRMD will provide training for select DPW personnel that are tasked with maintaining the installation's conveyance system. To provide further guidance, there has also been an SOP generated that addresses disposal of wastes removed from the MS4 system. In addition, an installation wide survey will be conducted to capture all municipal operations occurring within the cantonment area; this information will be used to develop operation specific SCMs for storm water pollution prevention.

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Training Topic	Organization	Date	Location	Personnel Trained
Industrial Storm Water (Permit Required)	Permitted Industrial Activities			
	DLADS	Dec 15	On-line	2
	ASP	Nov 15	On-line	2
	QRP	Dec 15	On-line	2
	OB/OD	Dec 15	On-line	1
	HAZMART	Aug 15	On-line	2
	TANG	Jan 15	On-site	18
	LANG	Jan 15	On-site	
	Airfield – Kay and Associates	Dec 15	On-line	
	Airfield - DST	Dec 15	On-line	
	Airfield - Sikorsky	Jan 15	On-site	
	8300 Block - AECOM	Dec 15	On-line	1
	8300 Block - Red River	Dec 15	On-line	1
	SF Bulk Fuel Site	Dec 15	On- site	2
	Outreach/Education/Certification			
Construction Training	USACE/AMERICAN WATER/DPW	Dec 2015	On-Site	18
MS4 Permit Awareness Training	USACE/AMERICAN WATER/DPW	Dec 2015	On-Site	18
LID Training	USACE/AMERICAN WATER/DPW	Dec 2015	On-Site	18
Total Training Attendance				49

1. **Construction.** Construction site operators/contractors are required to obtain storm water discharge permits and to prepare and implement site-specific Storm Water Pollution Prevention Plans (SWP3) in accordance with the Louisiana Pollution Discharge Elimination System (LPDES) general storm water permits for small (1-4.9 acres) and large (5 acres or more) construction activities. The contractor monitors construction activities and takes measures to prevent storm water pollution as mandated in the general construction permit(s) and records this information in their site specific SWP3. As required by MCM 4 and 5 of the MS4, the Core Storm Water Team will inspect permitted construction sites and document the results into the SWMP.

- Forty-five (45) Construction SCM assessments, SWP3 reviews, and final stabilization walk-throughs were conducted in the cantonment area of the installation.

2. **Separate Storm Sewer System (S4) Protection.** The SWMP also tracks maintenance and improvements to storm sewer systems and also establishes policy for storm water discharges at non-permitted activities such as SCMs implemented by construction activities less than one acre, discharges of super chlorinated water, and other activities that could potentially expose storm water runoff to contaminants.

Attended five (5) construction design charrettes/pre-construction meetings to serve as ENRMD's SME for:

- Construction storm water permitting
- Article 438 of the Energy Independence and Security Act concerning the retention of pre-construction site hydrology upon completion of construction activities and/or land improvements (LID)
- Illicit Discharge Detection and Elimination Initiative (MS4 MCM#3)

5.2.4 Storm Water Protection Annual Program Developments

a. **SWP3/Program Update.** The SWP3 and associated SOPs have been updated to reflect the changes outlined in the re-issued industrial MSGP permit. Significant changes in the newly issued permit include:

(1) One of the monthly storm water SCM inspections will be conducted when there is observable storm water runoff from the activity. Inspection documentation will include rainfall data and runoff coefficient calculations.

(2) Storm water benchmark values will now be dependent upon receiving water hardness values for cadmium, copper, lead, zinc, silver and nickel.

(3) An EPA developed form will be used to conduct the annual comprehensive site inspections.

(4) A .10 inch of rainfall is no longer a requirement for sampling/monitoring storm water. Sampling/monitoring will commence upon observance of storm water runoff.

b. **MS4 Update.**

Outreach and Education:

(1) Hosted the 3rd Annual Storm Water Pollution Prevention Poster Contest in conjunction with the School Age Center.

(2) Assisted Boy Scout Troop 124 with the requirements for earning the Sustainability Badge. This Merit Badge is a requirement to reach Eagle Scout status.

(3) Worked with CYSS at their annual health fair.

(4) Participated in post wide Mock Spill Training event.

(5) Submitted storm water articles to be published in the Corvias Military Living Newsletter and the Fort Polk Guardian Newspaper.

(6) *Illicit Discharge Detection and Elimination*, *Oil and Grease*, and *Citizen's Guide to Understanding Stormwater* brochures were handed out to Corvias housing residents.

(7) Prepared and facilitated a Low Impact Development (LID) Seminar.

(8) Provided project oversight for a low impact development pilot project on the Installation (ongoing).

(9) Provided construction training for construction site Quality Assurance Personnel.

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(10) Prepared and provided online storm water training to address Construction Activities, Industrial Activities, Sampling and Monitoring, MS4 Permit Awareness, Municipal Operations, and LID.

(11) Environmental/storm water information brochures provided to construction activity personnel, design charrette meeting attendees, and as handouts for the ECO training course:

- Construction brochures outlining requirements for storm water permitting were distributed at each design charrette or pre-construction meeting attended.
- Contractor environmental information brochures, which provide information and requirements concerning the Environmental Division, were distributed at each charrette or pre-construction meeting attended.
 - Low Impact Development
 - Illicit Discharge Detection and Elimination Initiative

5.2.5 Storm Water Protection Program Performance Indicators

1. Percent of permit required storm water samples collected/monitored
2. Percent of analytical parameters tested
3. Percent of permit required inspections performed
4. Industrial storm water permit currently active
5. Management Plans and required SOPs reviewed and updated
6. Percent of industrial activities that received storm water pollution prevention training

5.2.6 Storm Water Protection Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each storm water program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data or tables.

The following table outlines the performance standards as they apply to the performance indicators listed above:

Storm Water Protection Program Performance	
Performance Indicators	Performance Standards
1. Percent of permit required storm water samples collected/monitored	a) GREEN: 100% - 95% b) AMBER: 94% - 90% c) RED: 89% or less
2. Percent of analytical parameters tested	a) GREEN: 100% - 95% b) AMBER: 94% - 90% c) RED: 89% or less
3. Percent of permit required inspections performed	a) GREEN: 100% - 95% b) AMBER: 94% - 90% c) RED: 89% or less
4. Public involvement and outreach	a) GREEN: Yes b) RED: No
5. Management Plans and required SOPs reviewed and updated	a) GREEN: Management plans reviewed and updated b) AMBER: Management plans reviewed but not updated c) RED: Management plans not reviewed or updated
6. Construction Storm Water Management Components (BMP, Plan reviews and LID)	a) GREEN: 3 of 3 completed b) AMBER: 2 of 3 completed c) RED: 0 or 1 completed
7. Illicit discharge and detection operating hotline and log	a) GREEN: Yes b) RED: No
Program Overall Performance	a) GREEN: No more than 1 amber b) AMBER: No more than 1 red c) RED: More than 1 red

5.2.7 Storm Water Protection Program Performance Review

The Storm Water Protection Program evaluation for CY2015 is Green based on the program overall performance indicator. There are seven performance indicators rated GREEN, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Storm Water Protection Program Performance		
Indicators	2015 Performance	Evaluation
1. Percent of permit required storm water samples collected/monitored for quarterly qualifying storm events	32 Required / 32 Collected/Monitored 100%	GREEN
2. Percent of visual parameters tested	32 Required / 32 Tested	GREEN
3. Percent of permit required inspections performed	45 Conducted;100%	GREEN
4. Public involvement and outreach	Requirements Completed	GREEN
5. Management Plans and required SOPs reviewed and updated	3 Plans; 22 SOPs Reviewed/Updated	GREEN
6. Construction Storm Water Management Components (SCM, Plan reviews and LID)	3 of 3 Required	GREEN
7. Illicit discharge and detection operating hotline and log	29 IDDEs were reported and logged. 27 IDDEs have been cleared. Two are outstanding pending resolution.	GREEN
Program Overall Performance	All green	GREEN

5.3 Surface Water Quality (*Nathan G. Broussard*)

5.3.1 Surface Water Quality Program Description

The Fort Polk Surface Water Quality Program provides the background and guidance needed to assess and manage the quality of streams on the installation. This is required to ensure compliance and protection of the surface water resources at Fort Polk. Water quality standards are the foundation of the program and are based on the Clean Water Act and the Louisiana Administrative Code (LAC) Title 33, Chapter 11. These regulations provide water quality standards for a water body, as designated by its uses (e.g. primary contact recreation, secondary contact recreation, fish and wildlife propagation, etc.). Other regulatory drivers for the Fort Polk Surface Water Quality Program include:

1. The Unified Federal Policy for a Watershed Approach to Federal Land and Resource Management, found in 65 CFR 62565-62572 provides a framework for a watershed approach to Federal land and resource management activities.
2. AR 200-1 mandates the development and implementation of plans to ensure a level of water quality that supports “the propagation of fish, shellfish, and wildlife; recreation in and on the water; and protection of drinking water sources”.

**FIGURE 5.3-1
FORT POLK WATERSHEDS**

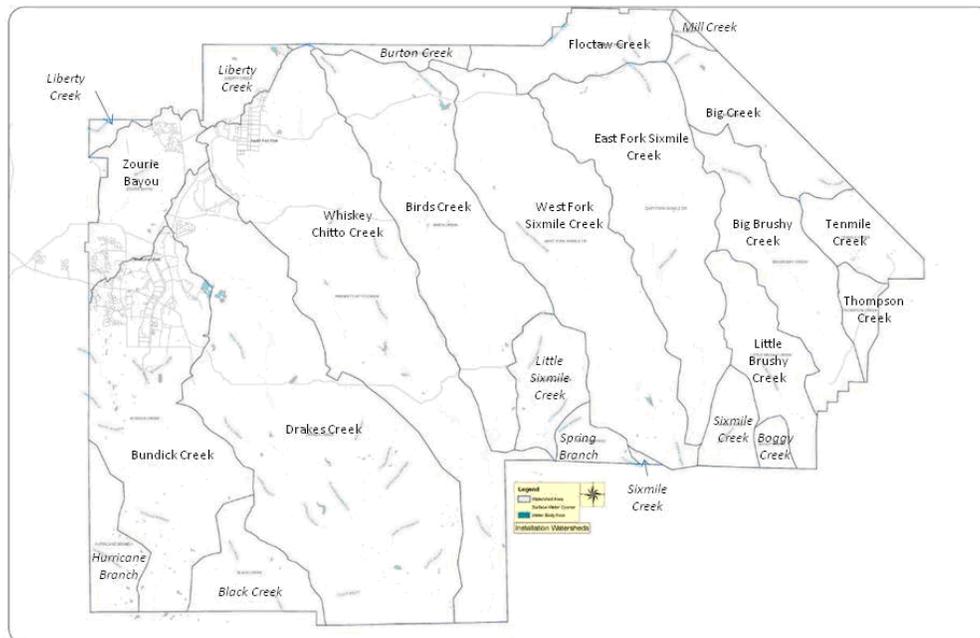
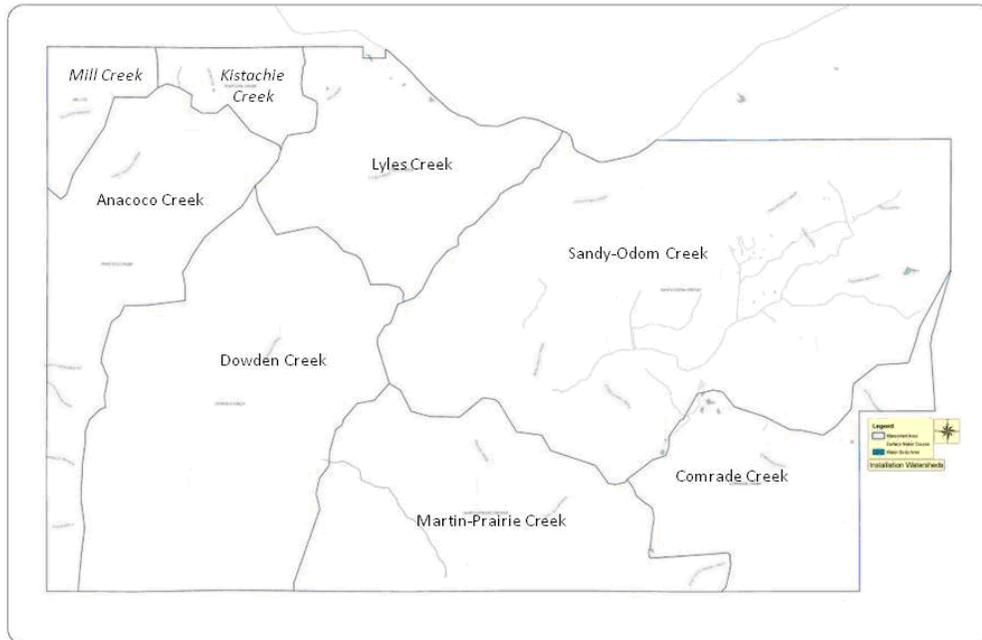


FIGURE 5.3-2
PEASON RIDGE WATERSHEDS



5.3.2 Surface Water Quality Program Background

A watershed is defined by the Environmental Protection Agency (EPA) as the area of land where all of the water that is under it or drains off of it goes into the same place. Watersheds come in all shapes and sizes. Different categories or sizes of watersheds are used when discussing Fort Polk waterways and the areas draining into them. These are named from the smallest to the largest areas as: (1) Fort Polk streams/watersheds, (2) State of Louisiana/EPA defined Sub-segments, and (3) State of Louisiana/EPA basins.

1. The smallest delineated watershed areas on Fort Polk represent perennial 1st through 4th order tributary streams. There are twenty-two (22) stream watersheds on the “main post” (Figure 5.3-1) and eight (8) significant stream watersheds at Peason Ridge (Figure 5.3-2). All streams on Fort Polk lands originate on Fort Polk.

2. The watershed areas delineated by the State of Louisiana are called “sub-segments” and are identified using a six digit number. A sub-segment may include one or more Fort Polk stream watersheds.

3. The State of Louisiana also identifies the watershed basins into which each sub-segment flows. Fort Polk “main post” waterways flow into two basins, the Sabine and Calcasieu. Peason Ridge waterways flow into three basins, the Sabine, Calcasieu and Red.

Table 5.3-1 identifies all Fort Polk stream watersheds and the associated State sub-segments. Those streams which are grayed out in Table 5.3-1 are considered insignificant because of their size, location and/or lack of any perennial water bodies. Based on the information presented in Table 5.3-1, there are twelve (12) significant streams within the Fort Polk Cantonment areas and ten (10) significant streams on Peason Ridge.

Historical water quality data for Fort Polk water bodies can be obtained from the State of Louisiana, US Geological Survey (USGS) and the Texas Regional Institute for Environmental Studies (TRIES, 1997). These studies generally show the water quality of Fort Polk sampled streams meeting or exceeding state water quality standards, with little or no negative impact from military training activities. Although minor impairments have been documented for Six-Mile Creek, LDEQ lists the creek as a reference stream which exhibits near pristine characteristics and has no man-made sources discharging into it or contributing to its runoff.

5.3.3 Surface Water Quality Program Requirements

AR 200-1 requires installations to use a watershed management approach when evaluating projects and programs which may impact the quality of water resources. Requirements defined in AR 200-1, which relate to Fort Polk’s Surface Water Quality Program include:

1. Initiate and maintain contact with Federal and State water regulators concerning the process of setting Total Maximum Daily Load (TMDL) and allocations for water bodies located on or passing through Army installations.
2. Assess installation watershed impacts as appropriate, considering upstream and downstream water quality data or other background levels, proximity to potentially designated impaired waters, and any effects on mission activities.
3. Carry out Army activities consistent with EPA/State approved plans/strategies to restore impaired or threatened water bodies to their designated use.

Table 5.3-1. For Polk Surface Water Sampling Sites

Sample Site	Watershed	Location
#1	Zourie Bayou	Proceed east on 23 rd from the office and turn left (north) onto Georgia. Continue north on Georgia to Exchange Road. Turn left (west) onto Exchange and proceed to the northbound unnamed road (right) off Exchange (camper storage area). Continue north on unnamed road approximately 2 km to the 2 nd bridge. The sample site is approximately 75 meters downstream of bridge. NOTE: Be sure to stay on road covered with crushed limestone and not merge off onto auxiliary roads. Don’t drive across 2 nd bridge – a turnaround area is on left side before bridge.
#2	Drakes Creek #1	When leaving the Whiskey Chitto site #4, proceed westward on Lookout Rd and turn left onto FS 421 off Lookout. Stay on FS 421 until reaching the Drake’s Creek Bridge with the sample site #2 sign. The sample point is upstream of the bridge approximately 50 meters near a small holly tree with a blue paint stripe on it.
#3	Bundick Creek	From the office, take Mississippi St to Bell-Richard St. Turn left onto Bell-Richard and proceed to traffic light at LA 467. Turn left onto LA 467 and proceed to LA 10. Turn left (east) onto LA 10 and proceed to SFWWTP road. Turn right (south) on treatment plant road and proceed to Bridge H2 with sample site #3 sign. The sample point is upstream of the bridge ~30 meters. NOTE: If accessing this sample site coming from Drake’s Creek, continue westward on FS 421, turn right onto LA 10 to zigzag immediately back onto FS 421 and continue on FS 421 until you reach Bundicks Creek Bridge H2 near the SFWWTP.

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#4	Whiskey Chitto	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Lookout Road. Turn left onto Lookout Road, and continue approximately seven miles until you reach Whiskey Chitto Bridge H7; marked with sample site #4 sign. Sample site is approximately 200 meters downstream of the H7 Bridge.
#5	Birds Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Hwy 10 east. Continue down Hwy 10 to Pitkin, turn left at HWY 463, approximately 6 miles. Turn left onto dirt road VI33F. Follow approximately ¼ mile to Lookout Road. Turn left onto Lookout Rd and follow to Birds Creek at Bridge H8. Sample site #5 is on east side of creek, approximately 30 meters up stream of the crossing. Note sign is located at sample point.
#6	West Fork Six Mile Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Hwy 10 east. Continue down Hwy 10 to Pitkin, turn left at HWY 463. Turn left onto dirt road VI33F. Follow approximately ¼ mile to Lookout Road. Turn left onto Lookout Rd and follow to low water crossing for West Fork Six Mile Creek. Sample site #6 is on NE side of creek, approximately 47 meters up stream of the crossing. Note sign is located at sample point.
#7	East Fork Six Mile Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Hwy 10 east. Continue down Hwy 10 to Pitkin, turn left at HWY 463. Turn left onto dirt road VI33F. Follow approximately ¼ mile to Lookout Road. Turn left onto Lookout Rd and follow to low water crossing for East Fork Six Mile Creek. Sample site #7 is on SE side of creek, approximately 57 meters up stream of the crossing. Note sign is located at sample point.
#8	Little Brushy Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Hwy 10 east. Continue down Hwy 10 to Pitkin, turn left at HWY 463. Turn left onto dirt road VI33F. Follow approximately ¼ mile to Lookout Road. Turn left onto Lookout Rd and follow to low water crossing for Little Brushy Creek. Sample site #8 is on east side of creek, approximately 31 meters up stream of the crossing. Note sign is located at sample point.
#9	Big Brushy Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Hwy 10 east. Continue down Hwy 10 to Pitkin, turn left at HWY 463. Turn left onto dirt road VI33F. Follow approximately ¼ mile to Lookout Road. Turn right on to Lookout Rd and follow to low water crossing for Big Brushy Creek. Sample site #9 is on south side of creek, approximately 172 meters up stream of the crossing. Note sign is located at sample point.

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#10	Drakes Creek #2	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Louisiana Ave. Turn right (east) on LA Ave and proceed to Lookout Road. Turn left onto Lookout Road and continue approximately 2 miles until you reach Drakes Creek Bridge. Sample site #10 is on west side of creek, approximately 100 meters up stream of the crossing. Note sign is located at sample point.
#11	ERDCT 1 Mill Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Entrance Rd at North Fort. Turn right and proceed to ACP 8 and exit on Artillery Rd. Follow Artillery Rd to first gravel road past Self Airfield, turn right and proceed to intersection at Mill Creek Rd (asphalt rd.). Turn left heading east on Mill Creek Rd and follow approximately 2 miles to Bridge H-17. Sample point is on east side of bridge and to north (left). Note sign is approximately 50 meters from road in woods.
#12	ERDCT 2 Mill Creek	From the office, proceed east on 23 rd to Georgia. Turn left (north) onto Georgia and proceed to Entrance Rd at North Fort. Turn right and proceed to ACP 8 and exit on Artillery Rd. Follow Artillery Rd to first gravel road past Self Airfield, turn right and proceed to intersection at Mill Creek Rd (asphalt rd.). Turn left heading east on Mill Creek Rd and follow approximately 7 miles to double gates on Mill Creek Rd at east side of Range 15A. Turn right on Range 14 Bypass Rd (Birds Creek Rd), gate is locked and must be opened by Range Control, and follow approximately 1 mile to intersection and turn right (first road to right) heading west. Follow road approximately 2 miles to Low Water Crossing 53 (large culvert). Sample point is on west side of culvert to south, approximately 100 meters from road.
#13	Comrade Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk, on Chaffee Road heading off post on too Hwy 184 turn left on Hwy. 8 west to Hwy 117 Northeast (14 Miles from post at this point) going to Peason Ridge Live fire office Bldg. M0127 (30 Miles from post) leaving Bldg. M1027 heading North bare left at the fork in the road on Perimeter Road heading west to Site # 13 (Comrade Creek) which is Low Water Crossing # 24 (LWC 24) Sample Sign on east side of creek.
#14	Martin Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk on Chaffee Road heading off post on too Hwy 184, turn left on Hwy 8 West, to Hwy 171 North travel about 8 miles to Anacoco La. Hwy 111, turn right go about 3 miles to Cold Spring Road, turn left go about 4 miles cross Martin Creek go about 50 meters too utility pole # Y4306 (left side), this pole is in reference to how far to go after crossing the creek, the sampling site is on the right side of the road, sample site sign is on the east side of the creek, south of the crossing. Enter the woods at this point go to the creek and follow the creek bank south about 100 meters
#15	Dowden Creek	Leaving site #13 head west on Perimeter Road, to Site # 15 (Dowden Creek) about 8 miles, this site is in between LWC #28 and LWC # 29, it is the next crossing after LWC #28 if you see LWC #29 sign you have gone too far. Sample site sign is about 200 meter north on west side of crossing.

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#16	West Anacoco Creek	Leaving sample site #15 head northwest, Perimeter Road going to Site #16 (West Anacoco Creek) which is Low Water Crossing # 29 (LWC 29) about 4 miles, sample site sign east side of creek.
#17	Lyles Creek	Leaving site #18 head west going to Site # 17 (Lyles Creek) about 1/2 miles straight west, Sample Site Sign on the west side. This is <u>not a low water crossing.</u>
#18	Sandy Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk, on Chaffee Road heading off post on too Hwy 184 turn left on Hwy. 8 west to Hwy 117 Northeast (14 Miles from post at this point) going to Peason Ridge Live fire office Bldg. M0127 (30 Miles from post) leaving Bldg. M1027 heading North bare left at the fork in the road on Perimeter Road heading turn to the right on road where you see sign LWC #24 Going to Site # 18 (Little Sandy) which is Low water Crossing # 37 (LWC #37) staying on the road going pass Lotha village you will past Bldg. M0321 pass tower on the right continuing there will be wrecked vehicles go left at that point pass village Spears settlement cross LWC #38 next LWC will be Little Sandy Creek. Sample Site Sign on the east side.
#19	Odom Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk, on Chaffee Road heading off post on too Hwy 184 turn left on Hwy. 8 west to Hwy 117 Northeast (14 Miles from post at this point) going to Peason Ridge Live fire office Bldg. M0127 (30 Miles from post) leaving Bldg. M1027 heading North bare left at the fork in the road on Perimeter Road turn to the right on road where you see sign LWC #24 Going to Site # 19 (Odom Creek) pass Spears Settlement on the left continue north about ¼ miles Owers Village of the left baring northeast about mile site 19 this crossing has big culverts and paver, sign east side of creek.
#20	Tiger Creek	Leaving site #19 going east less than a miles to Site # 20 (Tiger Creek) sign east side of creek <u>this is not a low water crossing</u>
#21	Indian Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk on Chaffee Road heading off post on too Hwy 184, turn left on Hwy 8 West, to Hwy 117 North, turning right proceed to Hwy 111 (approximately 20 miles at this point). From Hwy 111 proceed north on Hwy 117 approximately 5 miles to gravel road on right. Sign for Indian Creek / Melton Cemetery. Proceed down gravel road approximately 2 miles to dirt road on right (sign to cemetery here also). Proceed down dirt road approximately 0.5 mile, turn left at intersection with dirt road proceeding approximately 0.4 mile to low water crossing and sample point. (Note: From gravel road in to creek requires four wheel drive vehicle.)
#22	Prairie Creek	Leaving environmental area going north on Georgia Ave. to North Fort Polk on Chaffee Road heading off post on too Hwy 184, turn left on Hwy 8 West, to Hwy 117 North, right turn, going to Hwy 111, turn left toward Anacoco (Approximately 20 miles at this point). Proceed down Hwy 111 approximately 5 miles to Ben West Rd, turning right. Proceed down Ben West Rd approximately 2 miles to gravel road (just past 772 Ben West Rd). Make right turn on gravel road proceeding about 100 meters to unmarked logging rd. on left. Proceed down logging road approximately 100 meters till it intersects creek. Turn left going up stream approximately 25 meters to sample point.

Table 5.3-2 Fort Polk Surface Water Sampling Site Results

Accepted LDEQ Range		<10 µg/L	<0.37 µg/L	<10.58 µg/L	< 3.63 µg/L			<0.54 µg/L		<8.2 µg/L			<32.29 µg/L										
Sample Point	Sample Date	Antimony (µg/L)	Arsenic (µg/L)	Beryllium (µg/L)	Cadmium (µg/L)	Calcium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Total Hardness CaCO3 (mg/L)	Calculated Hardness (mg/L)	Iron (µg/L)	Lead (µg/L)	Magnesium (µg/L)	Manganese (mg/L)	Mercury (mg/L)	Nickel (µg/L)	Sodium (mg/L)	Selenium (µg/L)	Silver (µg/L)	Thallium (µg/L)	Zinc (µg/L)	HMX	RDX
SWS 1 Zourie Bayou	4/25/2013	0.073	0.64	<0.06	<0.37	6140	0.3	1.42		19.1	168	0.138	919			1.12		<0.60	<0.02	<0.01	3.32		
SWS 2 Drakes Creek #1	4/25/2013	0.247	0.62	0.073	0.026	3480	0.47	3.63 µg/L + 0.17 µg/L		12.6	237	0.54 µg/L + 0.33 µg/L	956			0.87		<0.60	<0.02	0.01	5.84		
2014	8/12/2014	0.066	1.82	ND	ND	4410	0.027	2.23		16.2	666	0.897	1250			0.59		ND	ND	ND	2.82		
SWS 3 Bundicks Creek	11/4/1974-11/15/1974				0.37 µg/L + 5.63 µg/L	18900	<25	3.63 µg/L + 49.37 µg/L		30	500	0.54 µg/L + 30.46 µg/L		150	1.8	<100	76500				Unknown		
	11/4/1974-11/15/1974 **				<5	10400	<25	<25		23	6000	0.54 µg/L + 12.46 µg/L		44	3.9	<100	12700				Unknown		
	2/3/1975-2/14/1975				Unknown	Unknown	Unknown	Unknown		Unknown	Unknown	Unknown		Unknown	Unknown	Unknown	Unknown				Unknown		
	2/3/1975-2/14/1975 **				Unknown	Unknown	Unknown	Unknown		Unknown	Unknown	Unknown		Unknown	Unknown	Unknown	Unknown				Unknown		
	4/25/2013	1.1	0.39	<0.06	0.033	7060	0.52	3.63 µg/L + 1.38 µg/L		22.7	359	3.61	1240			0.69		<0.60	<0.02	<0.01	10.2		
2014	8/12/2014	0.647	1.5	ND	0.062	18200	0.25	11.7		55.3	1820	2.75	2370			1.12		ND	ND	ND	18.4		
SWS 4 Whiskey Chito	11/4/1974-11/15/1974				<5	10000	<25	<25		17	7500	0.54 µg/L + 135.46 µg/L		156	1.9	<100	12300				Unknown		
	2/3/1975-2/14/1975 **				<5	28500	<25	<25		91	1200	<5		172	0.3	Unknown	15400				32.29 µg/L + 107.71 µg/L		
	2/3/1975-2/14/1975				<5	4700	<25	<25		37	1600	0.54 µg/L + 12.46 µg/L		72	0.3	<100	4200				32.29 µg/L + 469.71 µg/L		
	2/3/1975-2/14/1975 **				<5	25500	<25	<25		80	2700	0.54 µg/L + 6.46 µg/L		158	0.3	Unknown	11400				32.29 µg/L + 43.71 µg/L		
	4/25/2013	0.155	0.49	<0.06	<0.37	13300	0.31	1.77		40.1	167	0.221	1680			0.76		<0.60	<0.02	0.01	2.75		
SWS 5 Birds Creek	11/4/1974-11/15/1974				<5	200	<25	<25		7	3300	<5	142		1	<100	3800				Unknown		
	5/29/2013	0.026	0.88	0.057	0.015	4160	0.47	0.45		15.5	851	0.251	1230			0.79		0.75	0.003	0.01	12.3		
2014	8/12/2014	0.028	1.06	0.074	ND	3070	0.22	1.41		10.9	863	0.222	791			0.53		0.83	ND	ND	1.92		
SWS 6 West Fork Six Mile Creek	11/4/1974-11/15/1974				<5	1300	<25	<25		4	2700	<5	80		1.4	<100	3800				Unknown		
	5/29/2013	0.025	0.59	0.059	0.006	1320	0.33	1.04		5.92	507	0.371	635			0.57		0.92	0.005	0.01	7.83		
2014	8/12/2014	0.03	0.68	ND	ND	1230	0.27	2.63		5.58	809	0.505	611			0.39		ND	ND	ND	2.14		
SWS 7 East Fork Six Mile Creek	11/4/1974-11/15/1974				<5	<1000	<25	<25		7	500	<5		<30	3.8	<100	1600				Unknown		
	5/29/2013	0.032	0.52	0.069	0.011	1900	0.48	1.37		7.99	370	0.275	788			0.7		<0.60	0.013	0.011	19.1		
2015	6/3/2015	0.79	0.86	0.13	ND		9.71	2.23		6.97	390	2.66				15.7		0.63	ND	ND	4.51		
SWS 8 Little Brushy Creek	5/29/2013	0.013	0.25	0.037	0.007	565	0.24	0.34		3.52	181	0.166	511			0.45		0.68	0.008	0.006	10.1		
2015	6/3/2015	0.02	0.38	0.09	ND		3.82	1.17		3.05	287	0.505				7.94		ND	ND	ND	2.1		
SWS 9 Big Brushy Creek	11/4/1974-11/15/1974 **				<5	900	<25	<25		4.5	1400	<5		90	13.7	<100	4500				<15		
	5/29/2013	0.034	0.72	0.11	0.017	3650	1.03	0.44		12.3	2360	0.488	771			1.26		1.1	0.016	0.013	10.4		
2015	6/3/2015	0.04	0.91	0.09	ND		1.6	0.86		12.3	445	0.17				19		ND	ND	ND	2.51		

Analytical Results sites 1-9

** = Denotes historic data sample point is found in a different location within the same stream segment of the Surface Water site noted.

█ Denotes exceedence

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Table 5.3-3 Fort Polk Stream Watersheds and Relationship to EPA/USGS Watersheds

Water Body Location	Fort Polk Stream Watershed	Louisiana Sub-segment Watershed	Louisiana Sub-segment Watershed Number	Louisiana Defined Basin	EPA/ USGS HUC Cataloguing Unit	HUC Watershed Region
Fort Polk	1. Big Creek	Calcasieu River – LA-8 to Rapides-Allen parish line	030102	Calcasieu	8080203 (Upper Calcasieu)	Lower Mississippi
Fort Polk	2. Mill Creek					
Fort Polk	3. Floctaw Creek					
Fort Polk	4. Burton Creek					
Fort Polk	5. Whiskey Chitto	Whiskey Chitto Creek– Headwaters to southern boundary of Fort Polk	030501	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	6. Drakes Creek	Whiskey Chitto Creek – from southern boundary of Fort Polk to Calcasieu River	030502	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	7. Birds Creek					
Fort Polk	8. West Fork Six Mile Creek	East & West Forks of Six Mile Creek – headwaters to the southern boundary of Fort Polk	030503	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	9. East Fork Six Mile Creek					
Fort Polk	10.Ten Mile Creek	Ten Mile Creek	030505	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	11.Thompson Creek					
Fort Polk	12.Bundick Creek	Bundick Creek (Headwaters to Bundick Lake)	030506	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	13.Hurricane Creek					
Fort Polk	14.Black Creek					
Fort Polk	15.Big Brushy Creek	Six Mile Creek – from the southern boundary of Fort Polk to entrance into Whiskey Chitto Creek	030504	Calcasieu	8080204 (Whiskey Chitto)	Lower Mississippi
Fort Polk	16.Little Brushy Creek					
Fort Polk	17.Little Six Mile Creek					
Fort Polk	18.Spring Branch					
Fort Polk	19.Boggy Creek					
Fort Polk	20.Six Mile Creek					
Fort Polk	21.Liberty Creek	Bayou Anacoco (Anacoco Lake to Cypress Creek)	110506	Sabine	12010005 (Lower Sabine)	Texas Gulf
Fort Polk	22.Bayou Zourie					
Peason Ridge	23.Comrade Creek	Calcasieu River – LA-8 to Rapides-Allen parish line	030102	Calcasieu	8080203 (Upper Calcasieu)	Lower Mississippi
Peason Ridge	24.Kisatchie Creek	Bayou Kisatchie – Headwaters to Kisatchie National Forest	101102	Red	11140207 (Lower Red-Lake Iatt)	Arkansas-White-Red
Peason Ridge	25.Lyles Creek	Bayou Kisatchie – Kisatchie National Forest to Old River	101103	Red	11140207 (Lower Red-Lake Iatt)	Arkansas-White-Red
Peason Ridge	26.Sandy-Odom Creeks					
Peason Ridge	27.Mill Creek	Bayou Toro – Headwaters to LA HWY 473	110401	Sabine	12010005 (Lower Sabine)	Texas Gulf
Peason Ridge	28.West Anacoco Creek	West Anacoco Creek (headwaters to Vernon Lake)	110501	Sabine	12010005 (Lower Sabine)	Texas Gulf
Peason Ridge	29.Martin -Prairie Creek (split between Sub-segment 110505 & 110502)	Anacoco Lake	110505	Sabine	12010005 (Lower Sabine)	Texas Gulf
Peason Ridge	30.Martin -Prairie Creek (split between Sub-segment 110505 & 110502)	East Anacoco Creek (headwaters to Vernon Lake) & Anacoco Lake	110502	Sabine	12010005 (Lower Sabine)	Texas Gulf
	31.Dowden Creek					

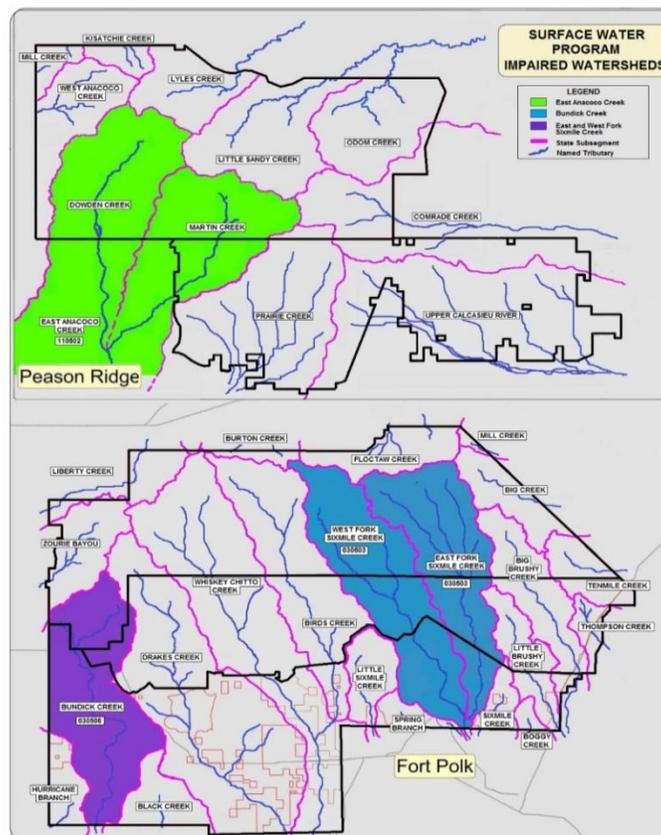
5.3.4 Surface Water Quality Annual Program Developments

LDEQ regulates water quality at Fort Polk under Louisiana Title 33, Part IX-Water Quality Regulations; Chapter 11. This regulation establishes water quality criteria as well as use designations. Non-point sources are the primary contaminant and/or pollutant sources of concern for surface water resources at Fort Polk. Contaminants/pollutants from diffuse, non-permitted sources may be transported by storm water runoff into nearby surface waters. These may include, but are not limited to: materials from erosion; byproducts from wildlife or livestock, atmospheric fallout, and training activities.

LDEQ reports the quality status of Louisiana waters via the 303(d) Integrated Report following EPA's consolidated assessment and listing methodology. The 303(d) report is submitted to EPA for their acceptance. Until the EPA accepts a 303(d) report, it is considered in draft form. At the time of this document writing, the 2010, 2012, and 2014 303(d) reports have been accepted.

State monitoring data listed in the final 2014 303(d) report shows water quality impairment for several sub-segments crossing Fort Polk lands, which include: 030102, 030501, 030503, 110506, 030506, 101103, 110501, and 110505. Only those streams in an impaired sub-segment sharing the name of the sub-segment are considered impaired. As depicted in Figure 5.3-3 and listed in Table 5.3-2, LDEQ considers two (2) of Fort Polk's streams to be impaired. Included in the table are the designated usage types for each impaired Fort Polk stream.

FIGURE 5.3-3
IMPAIRED STREAMS



**TABLE 5.3-4
IMPAIRED STREAM INFORMATION**

Water Body Location	Fort Polk Stream	Louisiana Sub segment Watershed	Louisiana Sub segment Watershed Number	2010 303(d) Report			2012 303(d) Report			2014 303(d) Report		
				Usage	Impairment	Suspected Reason	Usage	Impairment	Suspected Reason	Usage	Impairment	Suspected Reason
Fort Polk	Whiskey Chitto	Whiskey Chitto Creek – Headwaters to southern boundary of Fort Polk	030501	PCR*, SCR, FWP	Fecal Coliform	Wildlife Other than Waterfowl	PCR*, SCR, FWP	Stream removed from list for impairment	N/A	PCR*, SCR, FWP	Stream removed from list for impairment	N/A
Fort Polk	East Fork Six Mile Creek	East & West Forks of Six Mile Creek – headwaters to the southern boundary of Fort Polk	030503	PCR, SCR, FWP	(1) Low pH, (2) Fecal Coliform	(1) Naturally Occurring Organic Acids, Silviculture Plantation Management; (2) Natural Sources, On-site treatment systems, Sewage discharges in unsewered areas	PCR, SCR, FWP	(1) Low pH, (2) Fecal Coliform	(1) Naturally Occurring Organic Acids, Silviculture Plantation Management; (2) Natural Sources, On-site treatment systems, Sewage discharges in unsewered areas	PCR, SCR, FWP	(1) Low pH, (2) Fecal Coliform	(1) Naturally Occurring Organic Acids, Silviculture Plantation Management; (2) Natural Sources, On-site treatment systems (Septic systems and similar decentralized systems), Sewage discharges in unsewered areas
Fort Polk	Bundick Creek	Bundick Creek (Headwaters to Bundick Lake)	030506	PCR, SCR, FWP	Dissolved Oxygen	Natural Sources, Rangeland Grazing, Silviculture Plantation Management	PCR, SCR, FWP	Dissolved Oxygen	Natural Sources, Rangeland Grazing, Silviculture Plantation Management	PCR, SCR, FWP	Dissolved Oxygen	Natural Sources, Rangeland Grazing, Silviculture Plantation Management
Peason Ridge	West Anacoco Creek	West Anacoco Creek (headwaters to Vernon Lake)	110501	PCR*, SCR, FWP	Dissolved Oxygen	Managed Pasture Grazing, Natural Sources	PCR, SCR, FWP	Stream removed from list for impairment	N/A	PCR, SCR, FWP	Stream removed from list for impairment	N/A

(*) Impairment designation based on use support classification

PCR=Primary Contact Recreation; SCR=Secondary Contact Recreation; FWP=Fish & Wildlife Propagation; ONR=Outstanding Natural Resource; AGR=Agriculture

Under Section 303(d) of the Clean Water Act, states must establish priority rankings for all impaired waters. The law requires states to define Total Maximum Daily Loads (TMDLs) for these waters. A TMDL represents the maximum amount of a pollutant that can be released into a waterbody without causing the waterbody to become impaired and/or violate state water quality standards. Table 5.3-3 lists the current finalized TMDLs impacting waterbodies on Fort Polk lands.

**TABLE 5.3-5
TMDLs for Sub-segments on Fort Polk Lands**

Sub-segment #	TMDL	Impairment	Date TMDL Finalized
030506	<u>Bundick Creek</u>	Dissolved Lead	12/19/2003
030102	<u>Calcasieu River</u>	Dissolved Lead	5/31/2002
030503, 030504	<u>Six Mile Creek (including East/West Forks)</u>	Dissolved Lead	12/19/2003
110501	<u>West Anacoco Creek Watershed TMDL</u>	Biochemical Oxygen-Demanding Substances and Nutrients	1/15/2008
030501	<u>Draft Whiskey Chitto Creek TMDL</u>	Fecal Coliform Bacteria	3/7/2011

5.3.5 Surface Water Quality Program Performance Indicators

Performance indicators were developed for the installation Surface Water Quality Program based on known HQDA, IMCOM, and installation data requirements. Metrics and requirements from HQDA Common Levels of Support (CLS), Installation Status Report (ISR), Environmental Quality Reporting (EQR), and IMCOM Key Garrison Measures were used to develop the program indicators and standards. The installation evaluates the performance of the Fort Polk Surface Water Quality Program based the performance indicators and standards listed in the following sections.

5.3.6 Surface Water Quality Program Performance Standards

The installation has developed a performance standard for each performance indicator. Evaluation of these indicators is based on a RED, AMBER, or GREEN performance standard. Trend data is used to show progress of specific aspects of the Surface Water Quality program. The following performance standards apply to the performance indicators listed above:

**JRTC & Fort Polk
Environmental Management Performance Review**

Surface Water Quality Program Performance	
Performance Indicators	Performance Standards
1. Number of Fort Polk Streams declared impaired in LDEQ's 303(d) list (no. /yr.)	Trend Data
2. Number of impairments listed against Fort Polk streams in LDEQ's 303(d) list (no. /yr.)	Trend Data
3. Number of Louisiana sub-segments on Fort Polk declared impaired in LDEQ's 303(d) list (no. /yr.)	Trend Data
4. Number of impairments listed against Louisiana sub-segments on Fort Polk in LDEQ's 303(d) list (no. /yr.)	Trend Data
5. Percent of Louisiana sub-segments on Fort Polk fully supporting its designated uses by use	Trend Data
6. Percent of Fort Polk streams fully supporting all designated uses by type (# Fort Polk streams declared impaired/total number of Fort Polk streams)	a) GREEN: >75% attainment of designated uses
	b) AMBER: >50% and <75% attainment of designated uses
	c) RED: <50% attainment of designated uses
7. Percent of management plans and SOPs reviewed and updated annually (# plans and SOPs updated/total # of plans and SOPs required)	a) GREEN: >95% of management plans and SOPs up-to-date
	b) AMBER: >75% of management plans and SOPs up-to-date
	c) RED: <50% of management plans and SOPs up-to-date
Program Overall Performance	a) GREEN: No amber or red
	b) AMBER: One or more amber; no red
	c) RED: One or more red

5.3.7 Surface Water Quality Program Annual Performance Review

The Surface Water Quality program evaluation for 2015 is AMBER based on the program performance standards. There is one performance indicator rated GREEN; one performance indicator rated AMBER; and no performance indicators rated RED, resulting in overall program rating of AMBER. To improve the overall Water Quality program rating, the installation will focus on improving water quality through increased monitoring, outreach to tenant organizations, and improved engineering controls, as necessary. Specific results for each performance indicator are presented below:

JRTC & Fort Polk
Environmental Management Performance Review

Surface Water Quality Program Performance		
Indicators	2015 Performance	Evaluation
1. Number of Fort Polk Streams declared impaired in LDEQ's 303(d) list (no. /yr.)	Number of Fort Polk impaired streams reported in the last three 303(d) reports are as follows: 2006 4 2008 4 2010 4 2012 4 2014 4	The number of impaired streams on Fort Polk property is stable.
2. Number of impairments listed against Fort Polk streams in LDEQ's 303(d) list (no. /yr.)	Number of impairments listed against Fort Polk streams in the last three 303(d) reports are as follows: 2006 6 2008 5 2010 5 2012 5 2014 5	The number of impairments listed against Fort Polk streams is stable over the past two years.
3. Number of Louisiana sub-segments on Fort Polk declared impaired in LDEQ's 303(d) list (no. /yr.)	Number of Louisiana sub-segments on Ft. Polk reported as impaired is as follows: 2006 7 2008 8 2010 8 2012 8 2014 8	The number of Louisiana sub-segments on Fort Polk reported as impaired is stable over the past two years.
4. Number of impairments listed against Louisiana sub-segments on Fort Polk in LDEQ's 303(d) list (no. /yr.)	Data collected during the 2010, 2012, and 2014 IR 2-year cycles shows eleven of the 14 assessed watersheds are now in attainment status for one or more parameters.	The number of impairments listed against Louisiana sub-segments on Fort Polk is decreasing.
5. Percent of Louisiana sub-segments on Fort Polk fully supporting its designated uses by use	--	Trend Data - See Figure 5.3-4
6. Percent of Fort Polk streams fully supporting all designated uses by type (# Fort Polk streams declared impaired/total number of Fort Polk streams)	16/20 = 80% (14 streams on Fort Polk Proper; 6 streams on Peason Ridge; 2 impaired streams)	GREEN
7. Percent of management plans and SOPs reviewed and updated annually (# plans and SOPs updated/total # of plans and SOPs required)	9/10 = 90% Surface Water Management Plan was released Nov 2010	AMBER
Program Overall Performance	One green and one amber	AMBER

FIGURE 5.3-4

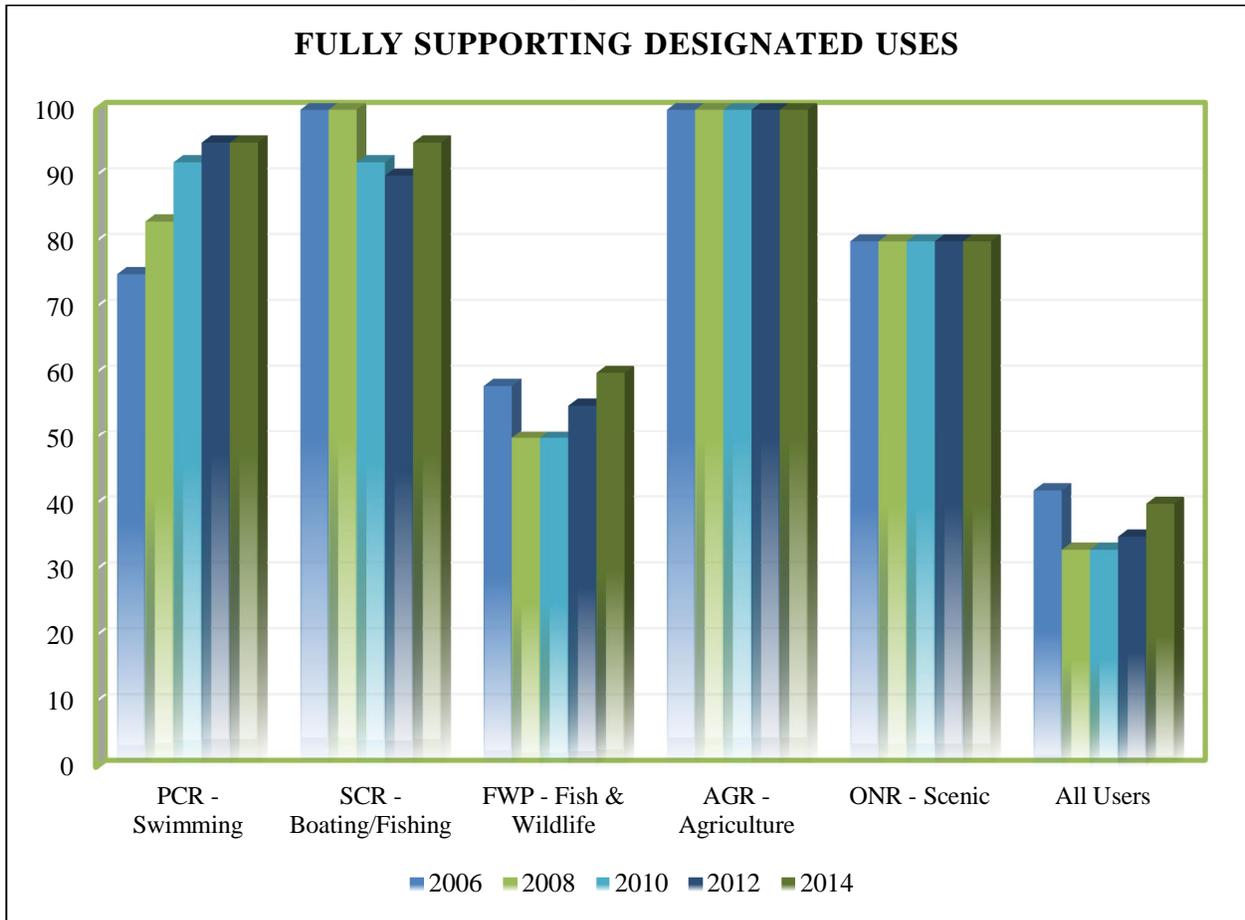


Figure 5.3-4 Comparison of the percentage of water body sub-segments on Fort Polk fully supporting the designated uses of Primary Contact Recreation (PCR), Secondary Contact Recreation (SCR), Fish and Wildlife Propagation (FWP), agriculture, outstanding Natural Resources, and all designated uses. *2014 Louisiana Integrated Report.*

5.4 Hazardous Waste Generation (*Alan W. Moltsau*)

5.4.1 Hazardous Waste Program Description

Hazardous waste is a specific category of solid waste as defined by the Resource Conservation and Recovery Act (RCRA). Under RCRA, a hazardous waste is defined as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial threat or potential hazard to human health or the environment when improperly treated, stored, transported, disposed, or otherwise managed.”

The Environmental and Natural Resources Management Division has developed and implemented a hazardous waste management and minimization (HAZMIN) program on the installation. The HAZMIN program at Fort Polk is documented in the annual report entitled Waste Minimization Program for Hazardous Wastes. The Fort Polk HAZMIN document serves four principal purposes. First, this document supports the EMS and serves as the consolidation point for all activities relating to minimizing wastes generated at Fort Polk. Second, and related to the first point, this document is the “working document.” The Third purpose is to document waste minimization goal attainment status. The Fourth purpose is to address the requirements of RCRA regulations applicable to open burning and detonation of waste explosives and pyrotechnics at Fort Polk. Fort Polk’s Subpart X hazardous waste permit for the Explosive Ordnance Disposal (EOD) Range requires Fort Polk to have a certified waste minimization plan.

5.4.2 Hazardous Waste Program Background

The long-term goal of Fort Polk is to eliminate the use of hazardous materials, the generation of wastes, and emissions of pollutants to the environment (zero discharge). Executive Order 12856 required the installation to reduce by 1999 the quantity of hazardous waste disposed by 50% from the 1992 baseline. A total of 184 tons of hazardous waste was generated on the installation in 1992. Hazardous waste generation on Fort Polk dropped below the reduction goal of 92 tons in 1997, two years ahead of schedule. Fort Polk also met their CY00 goal of reducing the disposal of hazardous waste by 10% from the 1999 baseline.

On 21 April 2000, Executive Order 13148, Greening the Government through Leadership in Environmental Management, revoked Executive Orders 12843, 12856, and 12969. Executive Order 13148 required Fort Polk to reduce its use of selected toxic chemicals, hazardous substances, and pollutants, or its generation of hazardous and radioactive waste types at its facilities by 50% by 31 December 2006. From CY01 through CY03, Fort Polk fell short of its annual 10% reduction goal as a result of increased training at JRTC in support of Operation Iraqi Freedom. Slight increases were also experienced in CY05 and CY06, when compared to CY04 totals.

On 24 January 2007, Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, revoked Executive Orders 13101, 13123, 13134, 13148, and 13149. Executive Order 13423 requires Fort Polk to develop written goals and support actions to identify and reduce the release and use of toxic and hazardous chemicals and materials, including toxic chemicals, hazardous substances, ozone-depleting substances, and

other pollutants that may result in significant harm to human health or the environment. Fort Polk exceeded the established waste reduction goals in CY07 through CY09.

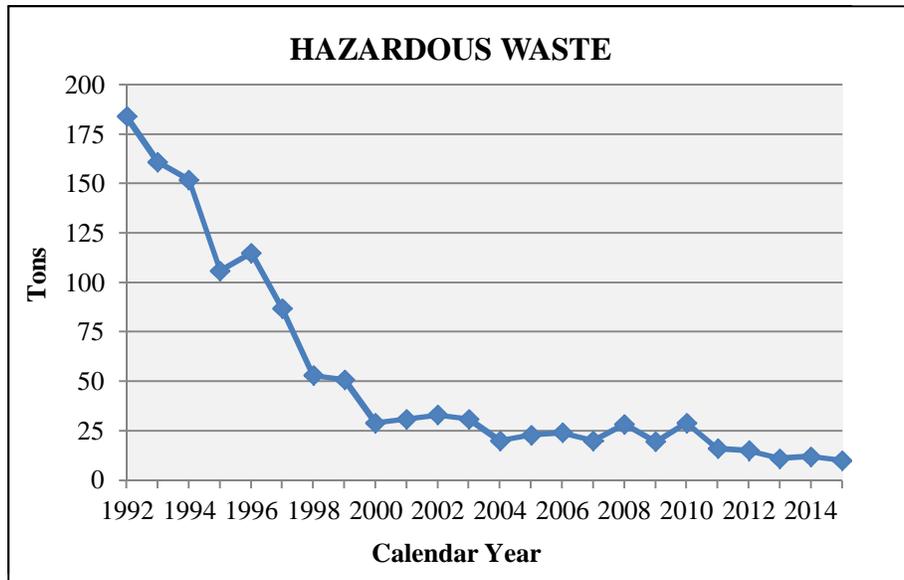
On 5 October 2009, the President of the United States issued Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, which strengthens requirements established in Executive Order 13423 and reinforces the U.S. commitment to the sustainable and climate friendly operation of federal agencies. In CY10, Fort Polk generated 29 tons of hazardous waste, representing an increase of nine tons over the CY09 totals. The CY10 increase can be attributed to changes in the OPTEMPO of training at Fort Polk. In CY11, Fort Polk generated 16 tons of hazardous waste; this is a 13 ton reduction from FY10. In CY13, this amount was reduced by another five tons and in CY15 it was further reduced making it the lowest amount generated in the history of Fort Polk (10 tons).

In compliance with these directives, Fort Polk continues to look for pollution prevention opportunities to further reduce hazardous waste generation on the installation. One of the main methods of reduction has been the creation of a centralized hazardous material procurement operation, called the HAZMART. This centralized distribution system limits the amount of new materials used on the installation to the amount actually needed for facility operations. This program reduces the amount of hazardous waste generated due to expired or unused products.

**TABLE 5.4-1
HAZARDOUS WASTE
GENERATION**

CALENDAR YEAR	TONS
1992	184
1993	161
1994	152
1995	106
1996	115
1997	87
1998	53
1999	51
2000	29
2001	31
2002	33
2003	31
2004	20
2005	23
2006	24
2007	20
2008	28
2009	20
2010	29
2011	16
2012	15
2013	11
2014	12
2015	10

**FIGURE 5.4-1
HAZARDOUS WASTE GENERATION**



5.4.3 Hazardous Waste Program Requirements

Fort Polk produces more than 1,000 kg (2,205 lbs.) of hazardous waste during one month and is therefore classified as a large quantity generator of hazardous waste. Fort Polk's Environmental Protection Agency (EPA) and Louisiana Department of Environmental Quality (LDEQ) generator identification number is LA0214022725. A RCRA Part B, Subpart X Permit was jointly issued in June 1995 to Fort Polk by EPA and the LDEQ for operation of its open burn/open detonation unit. A Subpart X permit renewal application was submitted to LDEQ in November 2004 for review. LDEQ issued the Subpart X Renewal Operating Permit to Fort Polk in October 2010.

Generators of hazardous waste are allowed to store wastes on site for less than 90 days without a RCRA permit. Most hazardous wastes generated on Fort Polk are accumulated in satellite accumulation points (SAPs) in vehicle maintenance shops. Once the storage limit has been reached at a SAP, the container is dated and transferred to one of two less than 90-day accumulation points: one located at DLADS and one located at the HAZMART, both are managed by the Environmental Office. No hazardous wastes are stored at the accumulation points longer than 90 days.

5.4.4 Hazardous Waste Annual Program Developments

- In March of CY15, the LDEQ conducted an unannounced hazardous waste inspection; no deficiencies were noted.
- In October of CY15, the Installation conducted their internal Annual Environmental Performance Assessment; no deficiencies were noted, that weren't corrected on the spot.
- The lowest annual generation of Hazardous waste was reached in 2015 with a total of 10 tons generated during the year.

5.4.5 Hazardous Waste Program Performance Indicators

1. Annual quantity of hazardous waste generated per calendar year (tons/year)
2. Annual percent of scheduled manifested hazardous waste disposal pick-ups completed within the required timeline as required by Fort Polk's generator status (%/yr.)
3. Annual number of hazardous waste regulatory violations (no./yr.)
4. Annual number of hazardous reports by type submitted by suspense date (no./yr.)
5. Annual number of management plans and SOPs reviewed and updated (no./yr.)

5.4.6 Hazardous Waste Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Hazardous Waste program performance indicators are evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Hazardous Waste program. The following performance standards apply to the performance indicators listed above:

JRTC & Fort Polk
Environmental Management Performance Review

Hazardous Waste Program Performance	
Performance Indicators	Performance Standards
1. Annual quantity of Hazardous Waste generated per calendar year (tons/year)	Trend Data - See Table 5.4-1 and Figure 5.4-1
2. Annual percent of scheduled manifested Hazardous Waste disposal pick-ups completed within the required timeline as required by Fort Polk's generator status	a) GREEN: 100% b) AMBER: 99% - 95% c) RED: 94% or less
3. Annual number of Federal and State Hazardous Waste regulatory Class I findings during a Federal or State Agency audit (no./yr.)	a) GREEN: 2 or less violations b) AMBER: 2 - 5 violations c) RED: 6 or more violations
4. Annual number of Federal and State Hazardous Waste regulatory Class I findings during an internal/external EPAS audit (no./yr.)	a) GREEN: 5 or less findings b) AMBER: 6 - 10 more findings c) RED: 11 or more findings
5. Annual number of Hazardous Waste reports by type submitted on or before suspense date (no./yr.)	a) GREEN: All reports on time b) AMBER: One report late c) RED: Two or more reports late
6. Annual number of management plans and SOPs reviewed and updated (no./yr.)	a) GREEN: All management plans and SOPs reviewed and updated b) AMBER: One management plan or one SOP not reviewed and updated c) RED: Two management plans and one SOP not reviewed and updated
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No more than one red c) RED: More than one red

5.4.7 Hazardous Waste Program Annual Performance Review

The Hazardous Waste program evaluation for CY15 is GREEN based on meeting all performance indicators. There are five performance indicators rated as GREEN, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Hazardous Waste Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual quantity of Hazardous Waste generated per calendar year (12/2015)	--	Trend Data - See Table 5.4-1 and Figure 5.4-1
2. Annual percent of scheduled manifested Hazardous Waste disposal pick-ups completed within the required timeline as required by Fort Polk's generator status	All hazardous waste was properly processed for disposal within the required timeline as required by Fort Polk's generator status.	GREEN
3. Annual number of Hazardous Waste regulatory violations (0/2015)	No hazardous waste violations were identified during regulatory (LDEQ) Hazardous Waste unannounced inspection conducted during FY15.	GREEN
4. Annual number of Federal and State Hazardous Waste regulatory Class I findings during an internal / external AEPA/EPAS audit (0/2015)	There were no Class one findings during the AEPA.	GREEN
5. Annual number of Hazardous Waste reports by type submitted on or before suspense date (3/1/2015)	All Hazardous Waste reports were processed on or before the suspense dates.	GREEN
6. Annual number of management plans and SOPs reviewed and updated (9/2015)	Updated and reviewed all plans required to support the Hazardous Waste Management Program in FY15.	GREEN
Program Overall Performance	All green	GREEN

The Hazardous Waste Management program will continue evaluating ways to reduce Fort Polk's waste generation in the years to come through effective management and new and innovative technologies.

5.5 Hazardous Materials (*Jeffrey P. Ross*)

5.5.1 Hazardous Materials Program Description

The JRTC and Fort Polk's hazardous materials pharmacy (HAZMART) provides the mechanism for 100% tracking of hazardous materials entering and leaving the installation. The HAZMART is a Logistics Readiness Center (LRC) function with a cohesive partnership of various organizations through the installation. These include Environmental and Natural Resources Management Division (ENRMD), Preventive Medicine (MEDDAC), Post Safety, DLA Disposition Service Polk, and several other supply organizations on the installation.

The mission of the HAZMART is twofold. First, to ensure Army and civilian organizations have the materials needed to support their training mission, contingency requirements and maintenance activities in any garrison or real world situation. Second, is to ensure environmental regulatory compliance by providing labor to process requisitions, receipt, distribution, and storage of hazardous materials. HAZMART personnel also conduct follow-up actions on hazardous materials requests, monitor shelf life expiration dates, collect unused hazardous materials and ensure the proper disposition of these materials.

5.5.2 Hazardous Materials Program Background

On 23 June 1997, the HAZMART became operational. Prior to operation, a team was selected to oversee the implementation. The team consisted of representatives from Directorate of Logistics, Directorate of Public Works, ENRMD, Industrial Hygiene and others. They focused on three elements when developing the program:

- A single point of authorization for requisition/request of hazardous materials,
- The distribution, collection, and storage of hazardous material, and
- The tracking of the hazardous material on the installation.

In addition to stocking high end-use items purchased through typical supply channels, much of the HAZMART stock is made up of products that were initially destined for disposal. Through an aggressive shelf life extension program and cross-leveling of excess materials recovered from the motor pools, the HAZMART has been successful in reducing the installation's hazardous materials procurement and disposal costs.

5.5.3 Hazardous Materials Program Requirements

On 11 August 1994, the Secretary of Defense issued a directive requiring all Department of Defense (DoD) agencies to improve environmental performance by actively implementing policies that embrace pollution prevention in all phases of the acquisition process, in procurement of goods and services, and in life cycle management at installations. The HAZMART program provides the installation the means to comply with this directive and ensure the installation is in compliance with Federal, State, and local environmental laws and regulations, as well as DoD, Army, and installation compliance and performance requirements.

5.5.4 Hazardous Materials Annual Program Developments

1994 - 1996: Fort Polk develops automated hazardous materials tracking system known as the Material Inventory Control and Tracking System (MICATS).

1997: Limited HAZMART operations begin with two people, a small work area, and shelving (a free-issue program only).

1998: Warehouse built in Fort Polk's supply warehouse area, *inductions* begin, and a 90-day Hazardous Waste Storage Site established.

1999 - 2000: HAZMART complex, staff, and operations expand into other services that include onsite antifreeze recycling and solvent distillation. MICATS program updated.

2002: Individual Spill Kit Supply items issued by HAZMART, reduce cost to units and installation.

2004: Rechargeable Battery/Lead Acid Battery turn-in “for recycling” operation established.

2005: DOL assumes control of hazardous material operation.

2006: Additional 90-day storage facility added; MICATS II program installed; additional cement pad completed and drum yard moved to HAZMART.

2009: The HAZMART purchased a KFM Cool'r Clean'r Coolant Purification System (CCCPS) and a Finish Thompson BE055C Coolant Recycling System. Both systems will allow the installation to improve the management of the antifreeze program.

2010: Reconditioned two solvent distillation units which will extend the life of the solvent used in the parts washers located throughout the installation.

2011: The HAZMART purchased an additional CCCPS and a “SW55 Solvent Washer/Recovery Machine” for improved solvent waste management.

2012: The HAZMART was recognized by the U.S. EPA Region 6 as an example of what the Resource Conservation and Recovery Act is intended to foster and a model for other federal facilities.

2013: The Environmental office bought a new Finish Thompson BE055C Coolant Recycling System using end of year funds to replace the current one.

2014: The HAZMART was directed by IMCOM to switch tracking systems from MICATS to the Army's established program, Hazardous Material Management System (HMMS). Eleven months later, IMCOM directed all installations to convert from HMMS to the Air Forces tracking system, Enterprise Environmental Safety, and Occupational Health Management Information System (EESOH-MIS).

2015: During the first year of using the new EESOH-MIS, several challenges surfaced with the real time tracking of hazardous materials. EESOH-MIS data management has been found to be inferior to both MICATS and HMMS. Other installations are reporting the same problem. Additionally, cost avoidance calculations cannot be performed with EESOH-MIS; therefore, 5.5.5 performance indicators 2 and 3 will not be reported starting in 2016.

5.5.5 Hazardous Materials Program Performance Indicators

1. Annual estimate of hazardous materials requisitioned by the command (#/yr.)
2. Annual number of cost avoidance items issued/processed by HAZMART (#/yr.)
3. Annual HAZMART cost avoidance (\$/yr.)
4. Annual EPCRA Tier II reports submitted on time
5. Annual percent of hazardous material inventories received on time (%/yr.)
6. Annual number of standard operating procedures (SOPs) reviewed and updated (no./yr.)

5.5.6 Hazardous Materials Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the HAZMART program. The following performance standards apply to the performance indicators listed above:

Hazardous Materials Program Performance	
Performance Indicators	Performance Standards
1. Annual estimated quantity of hazardous materials requisitioned and issued by the command (#/yr.)	Trend Data
2. Annual number of Cost Avoidance items issued/processed by the HAZMART (#/yr.)	Trend Data
3. Annual HAZMART cost avoidance (\$/yr.)	Trend Data
4. Annual EPCRA Tier II reports submitted on time	a) GREEN: 27 reports on time b) AMBER: 1 of 27 reports 30 days or less late c) RED: 1 of 27 reports more than 30 days late or more than 2 reports 30 days or more late
5. Annual percent of hazardous material inventories received on time (%/yr.)	a) GREEN: 100% - 95% b) AMBER: 94% - 90% c) RED: 89% or less
6. Annual number of SOPs reviewed and updated (no./yr.)	a) GREEN: SOP reviewed and updated b) AMBER: 20 of 23 SOPs reviewed and updated c) RED: Not green or amber
Program Overall Performance	a) GREEN: All green b) AMBER: One or more amber c) RED: Any red

5.5.7 Hazardous Materials Program Annual Performance Review

The HAZMART program evaluation for 2015 is GREEN. All performance indicator are rated GREEN, resulting in an overall program rating of GREEN. The specific results for each performance indicator are listed below:

Hazardous Materials Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual estimated quantity of hazardous materials requisitioned and issued by the command (36,491 / 2014)	45651	Trend Data
2. Annual number of Cost Avoidance items issued/processed by the HAZMART (10,790 / 2014)	7496	Trend Data
3. Annual HAZMART cost avoidance (\$228,322 / 2014)	\$184,928	Trend Data
4. Annual EPCRA Tier II reports submitted on time	Completed and submitted all reports on time.	GREEN
5. Annual percent of hazardous material inventories received on time (%/yr.)	Received 353 of 370 on time (95.40/2015)	GREEN
6. Annual number of SOPs reviewed and updated (23/2015yr.)	Completed 100% of SOP on time.	GREEN
Program Overall Performance	All green	GREEN

FIGURE 5.5-1

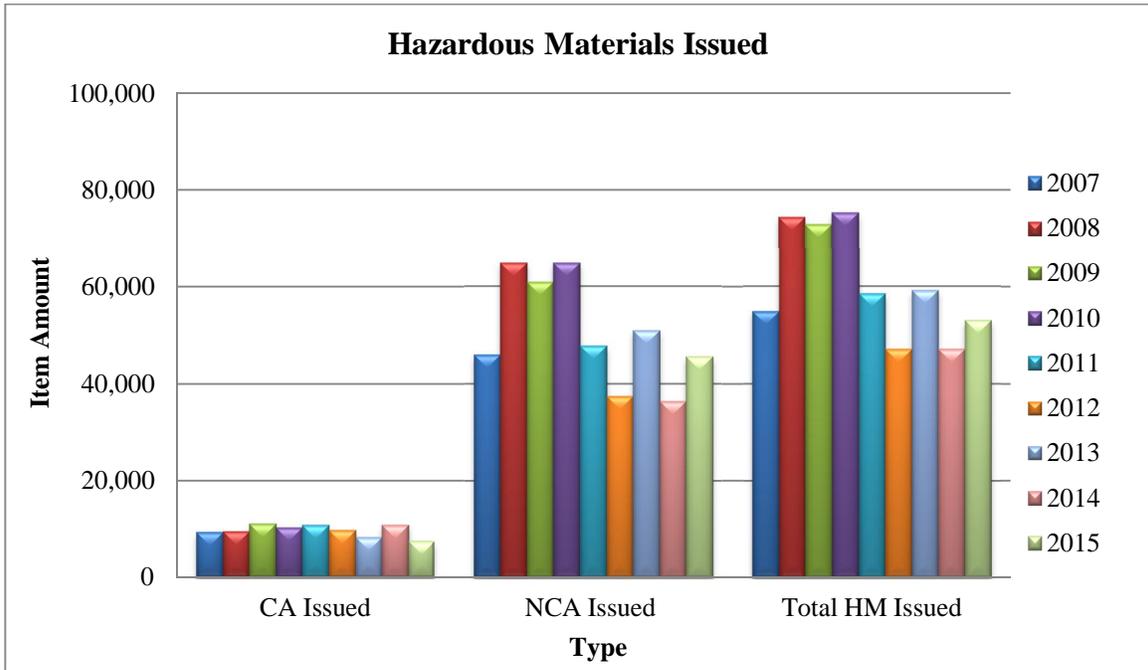
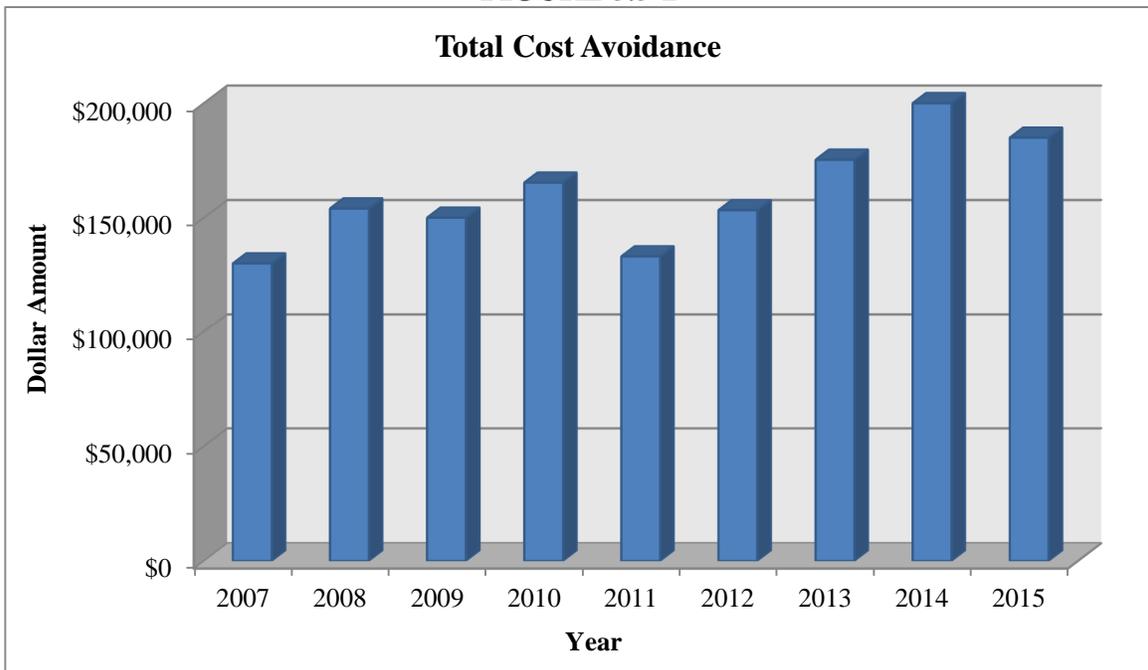


FIGURE 5.5-2



* Since 1997 over \$6,715,375 in cost avoidance

5.6 Installation Restoration (*Jonathan A. West*)

5.6.1 Installation Restoration Program Description

The Defense Environmental Restoration Program (DERP), established by Congress in 1986, provides for the cleanup of contaminated Department of Defense (DoD) sites. The JRTC and Fort Polk is an active Army installation with two distinct restoration programs under DERP, the Installation Restoration Program (IRP) and the Military Munitions Response Program (MMRP). Both programs use a phased approach to identify, evaluate, and cleanup contamination caused by past military and industrial operations. The IRP focuses on investigations and remediation of chemical contamination of soil and water. The MMRP focuses on evaluation and cleanup of explosives hazards on former training range lands. To be eligible for inclusion in the MMRP, range lands must be either closed or transferred and munitions debris, munitions constituents, unexploded ordnance, or discarded military munitions components must be known or suspected to exist at the site. Both the IRP and MMRP enable the DoD to maintain compliance with applicable federal and state environmental regulations. Compliance allows the Army to continue its mission in support of national defense.

Fort Polk's IRP continues to progress and evolve. Potentially impacted areas are assessed for negative environmental impacts. Site investigations are conducted to identify the nature and extent of contamination. Areas where contaminants are detected above permissible Louisiana Department of Environmental Quality (LDEQ) concentrations are scheduled for in-depth remedial investigations, a feasibility study, and the design of an approved remedy. Remedial actions and cleanup measures are planned to maximize the protection of human health and the environment. Public safety and potential impacts to military communities are primary considerations in choosing appropriate remedial actions and cleanup measures at each site. The most feasible and cost-effective approach is sought to restore each site. Approval and input from State environmental regulators must be obtained before any action is taken at an IRP site. Remedial investigations have been conducted at several impacted sites and hazardous substances have been remediated in some areas.

5.6.2 Installation Restoration Program Background

Various military units have trained at Fort Polk since the 1940's. Brief periods of inactivity occurred in 1947, 1954, 1955, 1959, and 1960. Typical military and industrial activities and practices resulted in the contamination of some areas of the installation. The storage and use of petroleum products has been the main source of subsurface contamination. Contamination assessments, site investigations, remedial designs, and corrective actions have been ongoing at Fort Polk since 1983.

In 1983, the US Army Toxic and Hazardous Materials Agency conducted an Installation Assessment of Fort Polk and Peason Ridge, LA. The purpose of the assessment was to determine whether toxic or hazardous materials and related contamination existed which had the potential to endanger humans or the environment. The study identified areas where substances were present, but concluded there was no evidence of contaminant migration via surface or groundwater to areas outside the boundaries of the installation. In 1992, Fort Polk applied for a Resource Conservation and Recovery Act (RCRA) Subpart X Permit at its Explosive Ordnance Disposal (EOD) Range. In response to the permit application, the Environmental Protection Agency (EPA) commissioned a RCRA Facility Assessment (RFA) in 1993 to identify areas of

potential releases from on-site Solid Waste Management Units (SWMUs) and to evaluate the need for further action under Section 3004(u) of RCRA, as amended by the 1984 Hazardous and Solid Waste Amendments.

The RFA report identified 57 SWMUs and five Areas of Concern (AOCs). The RCRA Subpart X permit regulates the SWMUs identified in the RFA. The 1993 RFA report recommended further investigations at 39 SWMUs and two AOCs. An installation-wide Phase I RCRA Facility Investigation (RFI) was begun in 1995. Soil and groundwater samples were collected from each of the identified sites and analyzed. The results led to further investigation in the form of a Phase II RFI, conducted between 1997 and 1999. The findings of the Phase II report led to a Phase III RFI investigation in 2000. The Phase III report included a Risk Evaluation/Corrective Action Program (RECAP) assessment of each site.

Today, Fort Polk's IRP Program continues to manage and execute remedial actions and monitoring activities at SWMUs and AOCs in accordance with applicable laws and regulations. Some sites, such as former fuel dispensing sites, are regulated under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements. LDEQ has provided regulatory oversight for all IRP investigations, assessments and corrective actions. IRP work at Fort Polk is categorized by the following classifications:

- **Landfills** – There are four closed landfill sites and one closed land farm on the installation. Three of the sites, Mill Creek landfill, Chaffee Road landfill and the Construction and Debris landfill, requires long-term management (in the form of maintenance, groundwater monitoring and report submittals). The Bayou Zourie landfill is in the closure process, with the goal of achieving a determination from the LDEQ that No Further Interest (NFI) is required, which was submitted in April 2013. The land farm permit (P-0070) has been terminated and approved by LDEQ in March 2012. In April 2013, a request for NFA was submitted to LDEQ for review and approval.
- **Proposed sites** – No sites were proposed in CY15.
- **Preliminary Assessments** – No sites are in the preliminary assessment phase.
- **Site Investigations** – All IRP sites have surpassed the Site Investigation phase.
- **Remedial Investigation / Feasibility Studies** – Five sites have advanced to this phase. This phase is used to delineate the extent of contamination both vertically and horizontally and determine the hydrological characteristics of the site. The potential for impacts to human health and the environment are determined.
- **Corrective Action Plan / Remedial Design** – In this phase, enough data has been collected about the site to plan and engineer a final remedy. Presently, there are five sites in this phase.
- **Remedial Action (construction)** – In this phase, field work progresses to clean up the site and perform other actions stipulated by the LDEQ. If all contamination is successfully removed, the site will be considered to have its remedy in place (RIP). Presently, there is one site in this phase.

- **Remedial Action (operation)** – This phase involves the operation of equipment put in place to either remove contaminants or to measure and monitor progress toward the remedial goals at the site. Upon completion, these sites will be considered to have RIP. Some sites require periodic analysis of soil and groundwater samples. Presently, there is one site at this stage of the remediation process.
- **Response Complete (RC)** – After the cleanup goals at a site have been achieved, the site is considered to be in the RC phase. This year, there are 19 sites listed in the AEDB-R database as RC.
- **Site Closure** – A site is considered closed when a determination of NFA is received from the LDEQ. This occurs after documentation justifying the NFA request is submitted to the LDEQ. Presently, ten sites have been submitted to LDEQ for review and approval.

MMRP program status:

The Army Environmental Command (AEC) created an inventory of closed, transferred and transferring training ranges in 2001. Initial site investigations (SI) were conducted at seven former training ranges which had been identified as potential MMRP sites. Munitions debris and munitions constituents were found at three of the sites during the SI. These items were not found at the other four MMRP sites. The majority of ranges on Fort Polk and Peason Ridge are used for active training; therefore, these ranges are not eligible for the MMRP.

A performance based contract (PBA) was awarded for Remedial Investigation / Feasibility Studies at the three MMRP sites. Field investigations of these three MMRP sites have been completed. Upon completion of the Remedial Investigation, limited military munition contamination was found at these sites. A Feasibility Study was developed and recommended surface clearance of two sites due to the presence of MEC and No Further Action for one site. This Feasibility Study has been approved by LDEQ. Proposed Plans were developed and public comment was solicited for public comment as required by CERCLA. No comments were received and therefore, the Decision Documents are being developed.

5.6.3 Installation Restoration Program Requirements

Oversight for DERP actions is provided by the Army Installation Management Command (IMCOM) and the AEC. Both of these organizations develop, lead, and execute the Army environmental cleanup strategy. The AEC provides environmental expertise, program management and oversight of the Army wide IR program. Program goals are set and progress made toward achievement monitored by AEC staff. The AEC also provides centralized data collection and reporting resources through its Army Environmental Reporting Database websites. IMCOM has established the goal of a RIP or RC at all IRP sites before October 2020. The purpose of the deadline is to enable IMCOM to shift its resources from IRP sites to MMRP sites.

On an annual basis, Fort Polk updates a document titled ‘Installation Action Plan’ (IAP). The IAP presents the restoration approach and strategies for the overall cleanup program to achieve RIP/RC. The IAP is a comprehensive planning tool which outlines the path forward for the IR program. It contains site-specific approaches and schedules for accomplishing remedial

action goals. Narratives on each site's history, location, activities conducted, and findings are presented.

Two limiting factors in the restoration of sites are the availability of funds and the achievement of LDEQ approval. Remediation projects and schedules are dependent upon funds budgeted by the AEC. All contracts for remediation work are advertised and awarded by the US Army Corps of Engineers (USACE) or AEC's MICC.

It is required that Fort Polk plan and develop a scope of work to detail specific steps a contractor must take in order to move a project forward. The contracting agency issues a Request for Proposal (RFP) to potential bidders, soliciting cost estimates for the project. After bids are received and evaluated, a firm fixed price is negotiated. The required funds are requested from the AEC. Upon receipt of the funds at USACE, the contract is awarded. Administration of the contract is serviced by USACE or AEC's MICC. Multiple work plans, remedial designs and remedial action plans are created and submitted for regulatory review and approval. Each work plan is submitted for LDEQ approval. Delays in gaining approval from regulatory agencies may cause phase schedules to be altered. This dependency on regulatory approval and funds availability sometimes causes projected phase schedule and milestones to be modified.

5.6.4 Installation Restoration Annual Program Developments

Several notable events occurred in the Restoration program during 2015:

- The Feasibility Study for Building 7199 was approved by LDEQ.
- The Construction/Debris Landfill report for 2014 was approved by LDEQ.
- The Mill Creek Landfill report for 2014 was submitted to LDEQ for approval.
- Site Investigation Reports were approved by LDEQ for six sites that were former WWII fuel distribution systems.
- A Feasibility Study was approved by LDEQ for Building 3401.
- A Feasibility Study was completed for three MMRP sites and approved by LDEQ.

5.6.5 Installation Restoration Program Performance Indicators

Performance indicators (PI) for the Installation Restoration program are based on DERP guidance relating to Fort Polk's IRP and MMRP sites. Metrics and requirements from AEC and IMCOM FY10 Program Management guidance were taken into consideration in developing the PI and related performance standards. The installation evaluates IRP performance based on the following PI:

1. Annual percent of proposed cleanup sites approved by AEC,
2. Annual percent of active cleanup site phases completed on schedule, and
3. Annual updates of required Army data calls and IAP completion.

5.6.6 Installation Restoration Program Performance Standards

The installation has developed a performance standard (PS) for each PI. Each IRP PI is evaluated based on a Red, Amber, or Green PS. Trend data is used to show progress of an aspect of the Installation Restoration program. The following PS applies to the PI listed above:

Installation Restoration Program Performance Indicators and Standards	
Performance Indicators	Performance Standards
1. Annual percent of active cleanup site phases on schedule (%/yr.)	a) GREEN: 100% - 75% b) AMBER: 74% - 50% c) RED: 49% or less
2. Army data calls updated annually	a) GREEN: Yes b) RED: No
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No red c) RED: One or more red

5.6.7 Installation Restoration Program Annual Performance Review

The Installation Restoration program evaluation for 2015 is GREEN. Two performance indicators are rated GREEN, resulting in an overall rating of GREEN.

Installation Restoration Program Performance Results		
Indicators	2015 Performance	Evaluation
1. Annual percent of active cleanup site phases on schedule (%/yr.)	100%	GREEN
2. Army data calls updated annually	100%	GREEN
Program Overall Performance	All green	GREEN

Note: 1. Fort Polk is currently on schedule on 24 of 24 projects (16 active and 8 No Further Action Requests) resulting in a 100% rating.

**TABLE 5.6-1
SITES REQUIRING INVESTIGATION, ACTION OR RESPONSE to Include No Further
Action Requests**

FISCAL YEAR	NUMBER OF SITES
1993	62
1997	33
2003	26
2006	29
2009	18
2010	23
2011	10
2012	24
2013	24
2014	24
2015	24

FIGURE 5.6-1

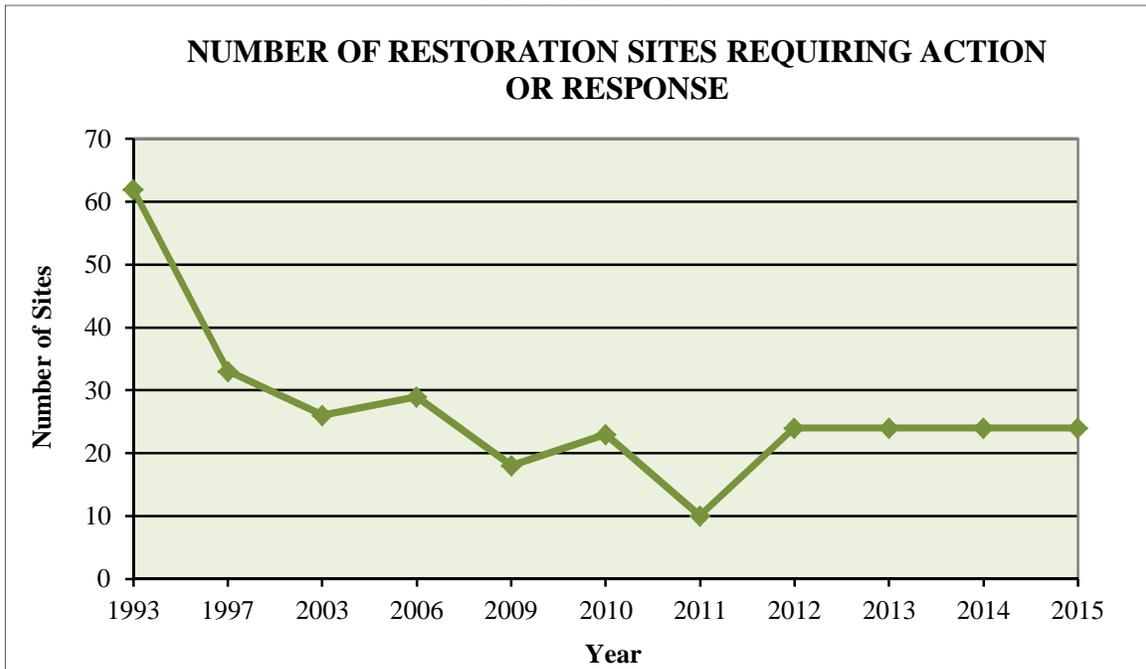
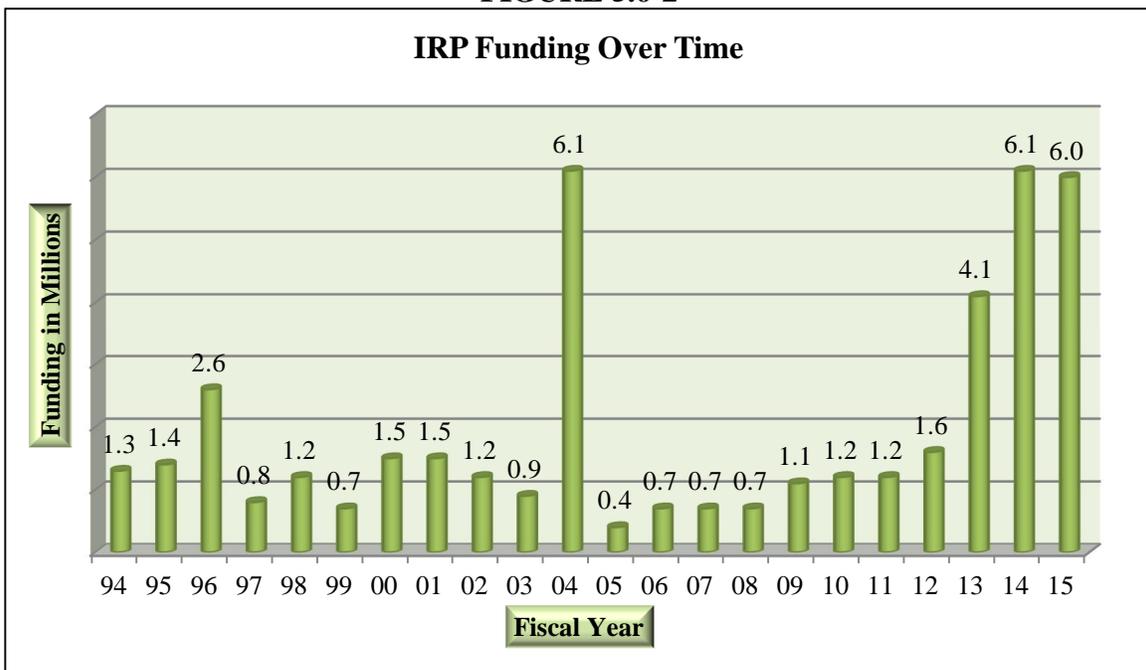


FIGURE 5.6-2



5.7 Solid Waste (*Nathan G. Broussard*)

5.7.1 Solid Waste Program Description

As a United States Army Facility, Fort Polk's solid waste program is guided by several overlapping layers of federal, Department of Defense (DoD), U.S. Army, and State of Louisiana laws, regulations, and guidelines. Through these programs and a commitment to enhance the management of integrated waste streams, Fort Polk continues to find ways to sustain the mission through waste minimization, source reduction, and recycling of waste streams.

5.7.2 Solid Waste Program Background

In the Pollution Prevention Act of 1990, the Environmental Protection Agency (EPA) designated source reduction as the highest priority for effectively managing solid waste streams. Benefits are derived from reducing solid waste in the form of natural resource conservation, reduction in treatment/disposal costs, and removal of risks and liabilities associated with disposal. Source reduction differs from recycling in that it focuses on reducing waste streams at the source, to include procurement policies (environmentally preferable purchasing) and the way products are used (and reused). Source reduction, according to the EPA definition, also includes reuse of materials with little or no "processing" involved. Planning and implementing source reduction measures play a vital role in meeting waste reduction goals.

Fort Polk has practiced various forms of solid waste reduction through reutilization (reissue and reuse), donation, and/or sale of certain excess materials since the end of WWII. Solid waste minimization was formally addressed in 1995 through the Hazardous Waste Minimization Program and the Pollution Prevention (P2) Plan. In 1998, DoD instituted a 40% Non-Hazardous Solid Waste Diversion Rate, as a Pollution Prevention Measure of Merit (MoM).

The Army Integrated (Non-Hazardous) Solid Waste Management Policy was established in 2008 and set a diversion goal for non-hazardous solid waste, excluding construction and demolition (C&D) debris, of 40% by 2010. In 2009, Executive Order 13514 increased the diversion rate goal by requiring federal agencies to "*Achieve a 50 percent solid waste diversion rate by FY 2015.*" Fort Polk's solid waste goals include greater than 50% diversion rates for non-hazardous solid waste and greater than 60% diversion for C&D debris each year.

Fort Polk housing was privatized through the Residential Communities Initiative (RCI) in September 2004. In accordance with DA reporting guidance, disposal and recycle data from RCI housing is not captured and reported as a part of the installation's annual performance.

In FY09, the Qualified Recycling Program (QRP) was established. The QRP has greatly enhanced the capability of the installation to meet future Department of the Army recycling goals. In April of 2012, the DoD strategic Sustainability Performance Plan (SSPP), dated 26 August 2010 increased the FY15 diversion goals to 50% for Municipal Solid Waste (MSW) and 60% for Construction and Demolition (C&D) waste. Through the course of the next eight years, an annual increase of 2% is expected in the above listed waste streams.

5.7.3 Solid Waste Program Requirements

Fort Polk's Integrated Solid Waste Management Plan (ISWMP) provides a framework for the coordination, planning, and management of solid waste issues. The ISWMP provides the methodology used to define and document the installation's current waste management program

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and measure goal attainment status. Fort Polk uses a solid waste annual reporting web-based system (SWARWeb) to track information pertaining to the collection, disposal, and recycling of solid waste.

Fort Polk's primary solid waste streams may be grouped into three broad waste categories, including: municipal solid waste (MSW), C&D debris, and hazardous waste. Residential solid waste collected from family housing units corresponds to household solid waste generated in civilian communities. Residential waste generated at Fort Polk consists of durable goods, nondurable goods, containers and packaging, and food wastes. The residential waste is managed separately from the waste generated in the cantonment area. A solid waste contractor for the RCI partner, Corvias Military Housing, collects all wastes and recyclables, including yard waste, and disposes/recycles the materials off site.

MSW includes all other types of waste generated at the installation. In addition to normal waste and recyclables generated in the cantonment area, MSW include items such as scrap metal and non-hazardous solvents, greases, and oils. This waste group also includes equipment and machinery. MSW generation sources include installation office buildings, motor pools, paint shops, service stations, maintenance shops, the Commissary, PX, and banks. Training and other day-to-day mission related activities performed by troops stationed at Fort Polk generate waste, which falls under MSW classification as well.

Wet waste, which includes cooking oil and grease, meat by-products, and food waste, is also part of the MSW stream. Cooking oil and grease from cafeteria and dining facilities is collected by the Qualified Recycle Program (QRP) and sold to the highest bidding local vendor. Meat by-products, which consist of fat and bones, are generated at the Commissary and are managed under a separate contract through the Defense Commissary Agency (DeCA). Food waste is managed as MSW. Wet waste cannot be sorted or recycled and therefore must be taken directly to a landfill.

MSW includes waste generated by both home-based and rotational units. The JRTC conducts training that integrates Air Force, host-nation, and civilian personnel into scenarios to simulate the type of joint-service teamwork that will occur during actual deployments. JRTC conducts two types of rotations, normal rotations and mission readiness exercises (MREs). Whether a traditional rotation or an MRE, approximately 6,500 Soldiers will be at JRTC for three to four weeks to prepare for and clear after the training exercise. The MSW generated by JRTC troops is similar to routine MSW, but tends to have more restricted items due to the pace of the training exercises. Contractors sort 100% of this waste stream to remove restricted items, such as batteries and Class V munitions, prior to landfill disposal. The aggressive training mission of JRTC presents extraordinary challenges to protecting the environment without mission impacts.

Construction and demolition debris (C&D) is solid waste generated from the demolition of structures on Fort Polk with emphasis on the disposal of WWII era buildings. C&D debris is also generated, to a lesser degree, in new construction projects. This type of waste corresponds to civilian construction debris. Wastes associated with this waste group include scrap wood, roofing materials, and paving materials such as concrete and asphalt. Concrete is crushed by a contractor on an as needed basis and used to repair road erosion in the intensive use areas of the maneuver box. Petroleum contaminated soil that has been determined as non-hazardous material

is transported to a local landfill and used as daily cover. The installation receives recycle credit for this type of soil which is generated in large quantities from restoration projects.

Fort Polk has two closed landfills located on the installation. Since the closure of the landfills, solid waste has been disposed at privately owned landfills. Presently, solid waste generated on Fort Polk is not sent to an incinerator or waste-to-energy facility.

5.7.4 Solid Waste Annual Program Developments

In FY15, the installation reduced the tonnage of solid waste generated and met the DoD/Army diversion goal. The installation diverted 50% of municipal solid waste from landfill disposal which represented an 8% increase in diversion over the previous FY. For C&D waste, the installation diverted 68.5%, which represented a 4% decrease in diversion over the previous FY.

5.7.5 Solid Waste Program Performance Indicators

Performance indicators were developed for the solid waste program and are based on Department of Army (DoD) standards that require the installation to meet diversion goals. These include goals for diversion of municipal solid waste (non-hazardous construction and demolition debris) and construction and demolition debris.

5.7.6 Solid Waste Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Solid Waste program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Solid Waste program. The following performance standards apply to the performance indicators listed above:

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Solid Waste Program Performance	
Performance Indicators	Performance Standards
1. Annual quantity of non-hazardous solid waste (excluding C&D waste) generated (ton/yr.)	Trend Data - See Table 5.7-1 and Figure 5.7-1
2. Annual quantity of non-hazardous solid waste (excluding C&D waste) diverted (ton/yr.)	Trend Data - See Table 5.7-1 and Figure 5.7-1
3. Annual percent of non-hazardous solid waste (excluding C&D waste) diverted (ton/yr.)	a) GREEN: 51% or more b) AMBER: 40% - 50% c) RED: Less than 40%
4. Annual quantity of C&D waste generated (ton/yr.)	Trend Data - See Table 5.7-1 and Figure 5.7-1
5. Annual quantity of C&D waste diverted (ton/yr.)	Trend Data
6. Annual percent of C&D waste diverted (%/yr.)	a) GREEN: 51% or more b) AMBER: 40% - 50% c) RED: Less than 40%
7. Annual quantity of non-hazardous solid waste generated (tons/yr.)	Trend Data
8. Annual quantity of non-hazardous solid waste diverted (tons/yr.)	Trend Data
9. Annual percent non-hazardous solid waste diverted (%/yr.)	Trend Data
10. Monthly solid waste data submitted on time	a) GREEN: At least 9 reports submitted on time b) AMBER: At least 6 reports submitted on time c) RED: Less than 6 reports submitted on time
11. Solid waste permit renewal by expiration date	a) GREEN: On time b) AMBER: 30 days or less c) RED: 31 or more days late
12. Annual number of regulatory violations (no./yr.)	a) GREEN: 0 violations b) AMBER: 1 - 5 violations c) RED: 6 or more violations
13. Management plan and SOP reviewed and updated annually	a) GREEN: Management plan and SOP reviewed and updated b) AMBER: Either the management plan or SOP has been reviewed and updated, but not both c) RED: Neither the management plan or SOP has been reviewed and updated
Program Overall Performance	a) GREEN: No more than one amber and no red b) AMBER: No more than one red c) RED: Two or more red

5.7.7 Solid Waste Program Annual Performance Review

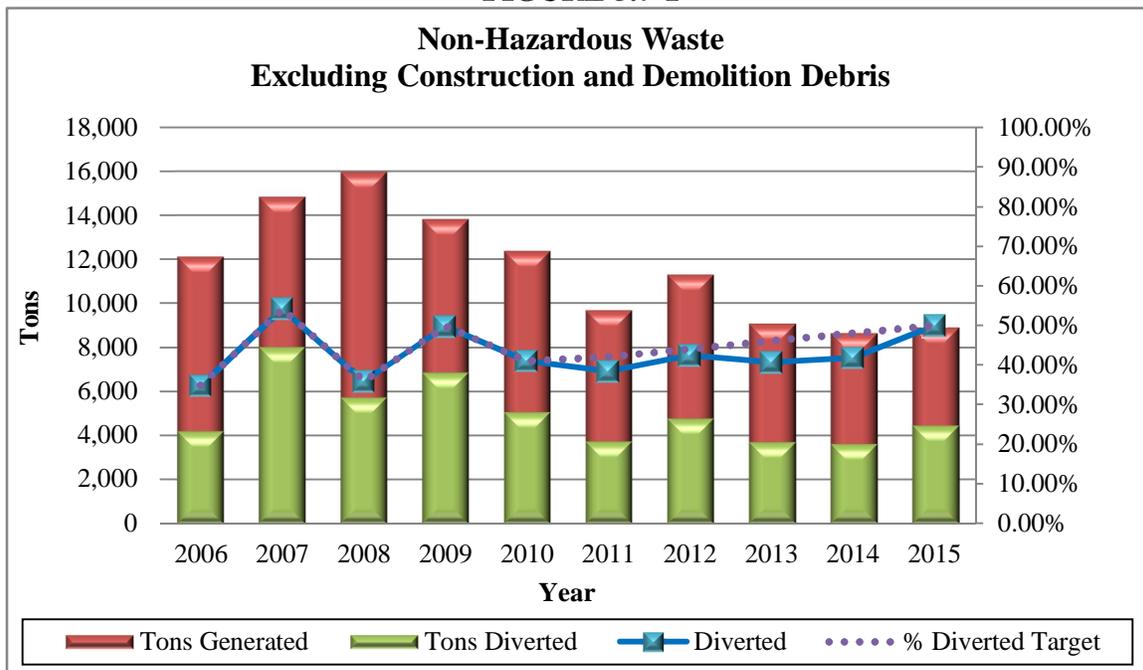
The Solid Waste program evaluation for 2015 is GREEN based on the performance indicators. There are five performance indicators rated GREEN and one performance indicator rated AMBER, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Solid Waste Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual quantity of non-hazardous solid waste (excluding C&D waste) generated (ton/yr.)	Trend Data: 8,940 Tons generated	See Table 5.7-1 & Figure 5.7-1
2. Annual quantity of non-hazardous solid waste (excluding C&D waste) diverted (ton/yr.)	Trend Data: 4,471 diverted	See Table 5.7-1 & Figure 5.7-1
3. Annual percent of non-hazardous solid waste (excluding C&D waste) diverted (ton/yr.)	50%	AMBER
4. Annual quantity of C&D waste generated (ton/yr.)	Trend Data: 8,204 Tons generated	See Table 5.7-2 & Figure 5.7-2
5. Annual quantity of C&D waste diverted (ton/yr.)	Trend Data: 5,598 Tons diverted	See Table 5.7-2 & Figure 5.7-2
6. Annual percent of C&D waste diverted (%/yr.)	68.24%	GREEN
7. Annual combined quantity of non-hazardous solid waste generated (tons/yr.)	Trend Data: 17,145 Tons generated	See Table 5.7-3 & Figure 5.7-3
8. Annual combined quantity of non-hazardous solid waste diverted (tons/yr.)	Trend Data: 10,068 diverted	See Table 5.7-3 & Figure 5.7-3
9. Annual percent of combined non-hazardous solid waste diverted (%/yr.)	58.7%	See Figure 5.7-3
10. Monthly solid waste data submitted on time	12 of 12 reports submitted on time	GREEN
11. Solid waste permit renewal by expiration date	Completed on time	GREEN
12. Annual number of regulatory violations (no./yr.)	0 Violations	GREEN
13. Management plan and SOP reviewed and updated annually	Completed in 2014	GREEN
Program Overall Performance	Five green, one amber	GREEN

**TABLE 5.7-1
Non-Hazardous Solid Waste
Excluding Construction and Demolition Debris**

FISCAL YEAR	SOLID WASTE GENERATED (TONS)	SOLID WASTE DIVERTED (TONS)	% DIVERTED
2006	12,140	4,219	34.75%
2007	14,853	8,040	54.13%
2008	16,005	5,749	35.92%
2009	13,842	6,883	49.73%
2010	12,405	5,084	40.98%
2011	9,717	3,738	38.47%
2012	11,320	4,801	42.41%
2013	9,114	3,707	40.67%
2014	8,660	3,621	41.81%
2015	8,941	4,471	50.00%

FIGURE 5.7-1



**TABLE 5.7-2
Construction and Demolition (C&D) Debris**

FISCAL YEAR	C&D DEBRIS GENERATED (TONS)	C&D DEBRIS DIVERTED (TONS)	% C&D DIVERTED
2006	17,224	16,175	93.91%
2007	15,129	14,427	95.36%
2008	10,979	10,020	91.27%
2009	27,056	25,808	95.39%
2010	25,393	24,308	95.73%
2011	57,462	55,164	96.00%
2012	73,325	69,331	94.55%
2013	41,517	37,085	89.32%
2014	16,027	11,607	72.42%
2015	8,204	5,598	68.24%

FIGURE 5.7-2

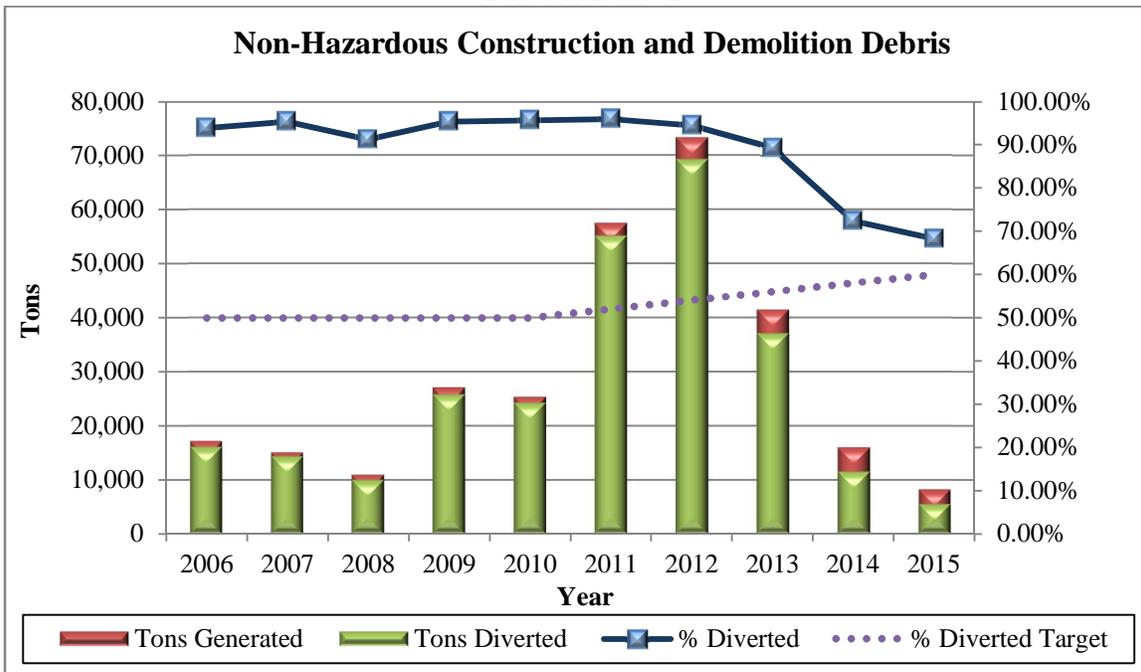
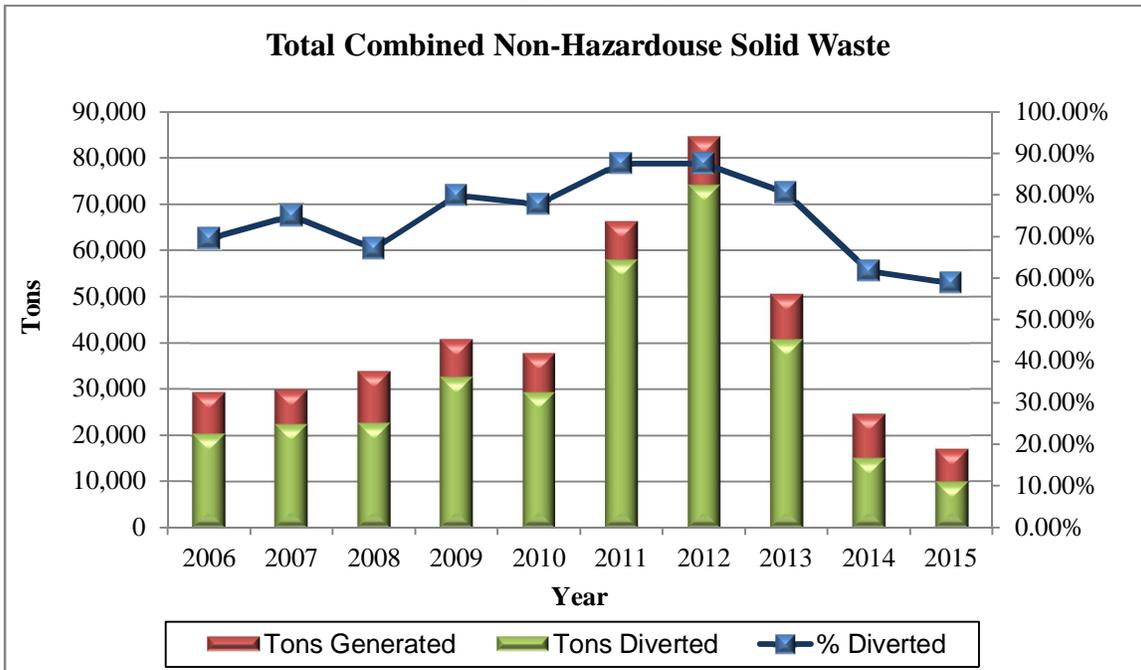


TABLE 5.7-3
Total Combined Solid Waste

FISCAL YEAR	TOTAL SOLID WASTE GENERATED (TONS)	TOTAL SOLID WASTE DIVERTED (TONS)	TOTAL % DIVERTED
2006	29,365	20,395	69.45%
2007	29,978	22,462	74.93%
2008	34,000	22,786	67.02%
2009	40,899	32,691	79.93%
2010	37,798	29,392	77.76%
2011	66,322	58,045	87.52%
2012	84,645	74,132	87.58%
2013	50,632	40,793	80.57%
2014	24,687	15,228	61.69%
2015	17,145	10,068	58.72%

FIGURE 5.7-3



5.8 Petroleum Storage Tanks (*Harvey D. Skinner*)

5.8.1 Petroleum Storage Tank Program Description

The JRTC and Fort Polk storage tank program is required to meet two similar regulatory requirements. The Environmental Protection Agency (EPA) requires facilities using aboveground storage tanks holding oil products to prepare and implement a Spill Prevention Control and Countermeasure (SPCC) Plan. The specific requirements of this rule are listed under 40 CFR Part 112. The Louisiana Department of Environmental Quality (LDEQ) has a similar regulation listed under LAC 33:IX.Chapter 9. Both regulations have as the primary goal the prevention of leaks and spills from storage tanks.

5.8.2 Petroleum Storage Tank Program Background

Underground storage tank (UST) regulations were first enacted in 1984 when Subtitle I was added to the Resource Conservation and Recovery Act (RCRA). Subtitle I required the U.S. EPA to develop a comprehensive regulatory program to manage USTs storing petroleum products or certain other hazardous substances. In 1996, EPA authorized the LDEQ to administer the UST program in Louisiana. LDEQ regulations set standards for construction of new UST systems, upgrade requirements for existing tanks, requirements for reporting spills and leaks, remediation procedures for leaking USTs, and closure procedures. All existing UST systems were required to be upgraded by December 1998.

Fort Polk complied with the December 1998 deadline by performing interim upgrades of leak detection and piping systems and by removing all but a few UST systems. The majority of military and civilian fueling facilities on the installation now use aboveground storage tank (ASTs) systems. Fort Polk has removed 239 fuel and waste oil USTs from the installation.

There are currently nine registered UST systems on the installation. In 1999, the Army transferred ownership of two USTs to the Louisiana National Guard. In 2004, four USTs became part of an airport hydrant fuel distribution system and are therefore “deferred” from specific UST regulations. These deferred tanks meet the requirements of LAC 33:IX.305 and are exempt from specific chapters and sections of the regulations including LAC 33:IX.Chapters 3, 5, 7, and 9 and Sections 701-713. In FY05, two USTs were installed at the Army and Air Force Exchange System (AAFES) Shopette #2, Building 5890. An additional four USTs were constructed in FY06, two USTs at the AAFES 24-Hour Shopette (Building 5498) and two USTs at the AAFES Mini Mall (Building 3310). The three USTs at the AAFES Shopette #1 (Building 4919) went off-line upon construction of the USTs at the AAFES 24-Hour Shopette and were removed January 2008. The three USTs at the AAFES Service Station (Building 1725) went off-line in November 2007 and were removed February 2008. All of the USTs located at AAFES facilities meet LDEQ construction requirements including double-walled fiberglass construction, interstitial monitoring, and automatic tank gauging systems for leak detection.

**TABLE 5.8-1
UNDERGROUND STORAGE TANKS (USTs)
AND ABOVE GROUND STORAGE TANKS (ASTs)**

YEAR	REGISTERED USTs	TANKS REMOVED	ASTs
1992	242	0	-
1993	217	25	-
1994	179	38	-
1995	139	40	-
1996	87	52	-
1997	29	58	-
1998	15	14	-
1999	13 ^a	0	-
2000	9 ^b	0	-
2001	9	0	-
2002	9	0	-
2003	9	0	-
2004	11 ^c	0	-
2005	11	0	-
2006	15 ^d	0	-
2007	15	0	-
2008	9	6	-
2009	9	0	-
2010	9	0	-
2011	9	0	173
2012	9	0	173
2013	9	0	173
2014	9	0	173
2015	9	0	173

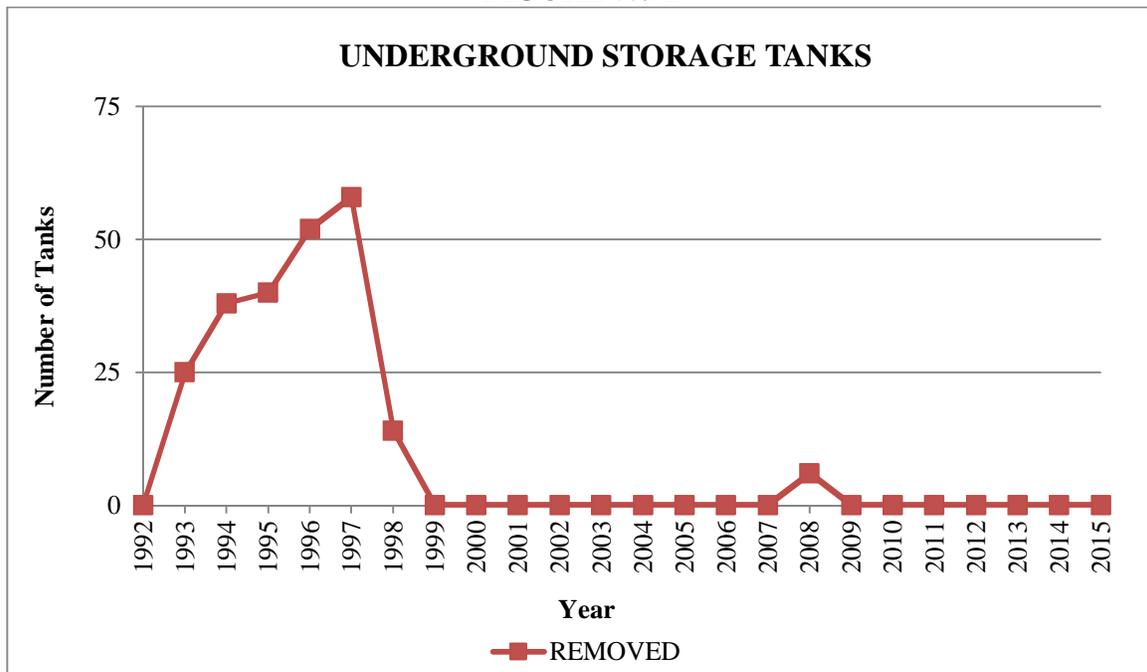
^a In 1999, the Army transferred ownership of 2 USTs to the National Guard.

^b In 2000, 4 USTs became part of an airport hydrant fuel distribution system and are therefore "deferred" tanks.

^c AAFES upgrade, 2 new tanks were installed prior to removal of old tanks.

^d AAFES upgrade, 4 new tanks were installed prior to removal of old tanks.

FIGURE 5.8-1



5.8.3 Petroleum Storage Tank Program Requirements

There are currently nine registered UST systems and approximately 173 regulated AST systems on the installation. The active and regulated USTs are located at AAFES convenience store/gas station facilities that supply fuel to privately-owned vehicles owned by military personnel and their dependents. Monthly tank tightness tests are performed by the automated systems at all Fort Polk AAFES fueling facilities. Additional testing is performed on the tanks and their piping systems on an annual basis.

5.8.4 Petroleum Storage Tank Annual Program Developments

For reporting year 2008, Fort Polk was required to provide initial notification of its USTs to EPA in compliance with 40 CFR Part 63 Subpart CCCCCC. The regulations concern air emissions associated with gasoline dispensing operations. The SPCC regulations were amended and an update to the SPCC plan was completed to meet the new requirements. A new Contractor Owned Contractor Operated (COCO) bulk fuel facility is expected to begin operations in 2016. Once the site becomes operational the existing bulk fuel facilities will be demolished and removed from the installation.

5.8.5 Petroleum Storage Tank Program Performance Indicators

1. Annual quantity of fuel used by type (gal./yr.)
2. Annual number of USTs and ASTs on the installation by use (no./yr.)
3. Annual number of regulatory violations (no./yr.)
4. Number of management plans and SOPs reviewed and updated annually (no./yr.)
5. Annual percent of required tank inspections completed (%/yr.)
6. Annual number of tanks out of compliance with state requirements (no./yr.)

5.8.6 Petroleum Storage Tank Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Petroleum Storage Tank program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Petroleum Storage Tank program. The following performance standards apply to the performance indicators listed above:

Petroleum Storage Tank Program Performance	
Performance Indicators	Performance Standards
1. Annual quantity of fuel used by type (gal/yr.)	Trend Data
2. Annual number of USTs and ASTs on the installation by use (no./yr.)	Trend Data
3. Annual number of Federal and State regulatory violations (no./yr.)	a) GREEN: 0 violations b) AMBER: 1 - 2 violations c) RED: 3 or more violations
4. Number of management plans and SOPs reviewed and updated annually (no./yr.)	a) GREEN: Management plans approved and all SOPs reviewed and updated as required b) AMBER: Management plans approved and 2 of 3 SOPs reviewed and updated c) RED: Management plans neither approved, reviewed nor updated
5. Annual percent of required tank inspections completed (%/yr.)	Trend Data
6. Annual number of tanks out of compliance with state requirements (%/yr.)	a) GREEN: 0 USTs b) AMBER: 0 USTs c) RED: One or more USTs
Program Overall Performance	a) GREEN: All green b) AMBER: One or more amber with no red c) RED: One or more red

5.8.7 Petroleum Storage Tank Program Annual Performance Review

The Petroleum Storage Tank program evaluation for 2015 is GREEN. There are three performance indicators rated GREEN, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Petroleum Storage Tank Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual quantity of fuel used by type (gal/yr.)	--	Trend Data - See Table 5.8-1 and Figure 5.8-1
2. Annual number of USTs and ASTs on the installation by use (no./yr.)	--	Trend Data – See Table 5.8-1
3. Annual number of Federal and State regulatory violations (no./yr.)	No violations were received during 2015	GREEN
4. Number of management plans and SOPs reviewed and updated annually (no./yr.)	Management plan under development; 2 SOPs reviewed	GREEN
5. Annual percent of required tank inspections completed (%/yr.)	100%	Trend Data
6. Annual number of tanks out of compliance with state requirements	No tanks were noted as being out of compliance	GREEN
Program Overall Performance	All green	GREEN

5.9 Asbestos (*Tammy G. Veillon*)

5.9.1 Asbestos Program Description

Asbestos is a name given to a group of naturally occurring fibrous minerals including chrysotile, amosite, crocidolite, anthophyllite, actinolite and tremolite. Asbestos has been used in a variety of products for purposes of reinforcement, heat and cold insulation, friction, fire protection, sound dampening, decoration, texturing, chemical resistance, and other applications. Federal, State, and Army criteria regulate activities involving asbestos containing materials. To ensure compliance with these regulations and to minimize the potential exposure of the military, employees and the public, Fort Polk has implemented an Asbestos Management Program.

5.9.2 Asbestos Program Background

Many buildings and structures at Fort Polk were constructed and later renovated when asbestos containing building materials (ACBM) were commonly being utilized. These materials include: floor tile and accompanying mastics, sealants, pipe insulation, roofing materials, transite boards, ceiling tiles, and other miscellaneous building materials. Asbestos containing materials (ACM) do not pose a health hazard unless it is disturbed such that asbestos fibers become airborne. ACM must not be repaired, removed or disturbed by untrained personnel. Asbestos regulations allow for the management of ACM in-place as long as the ACM is in an acceptable condition. An installation-wide asbestos survey and hazard assessment was completed in June 2007.

5.9.3 Asbestos Program Requirements

Asbestos removal, assessment, and management are accomplished with an installation approved Asbestos Management Plan (AMP). An Installation Asbestos Management Team has been developed and meets quarterly. The team consists of representatives from DPW Engineering Division (ED), Operations and Maintenance (O&M), Housing Division Manager, Directorate of Contracting (DOC), Preventive Medicine, Safety, Directorate of Human Resources, US Army Corps of Engineers (ACE), Staff Judge Advocate (SJA), Public Affairs Office (PAO), Directorate of Resource Management (DRM), and Directorate of Family, Morale, Welfare, and Recreation (DFMWR). Each representative has specific duties and responsibilities for ensuring installation compliance requirements for implementation of the AMP. The AMP provides guidance in identifying hazards, prioritizing abatement activities, and managing ACM in-place to minimize potential exposures.

Asbestos inspections are conducted prior to any demolition or renovation activity. The results of pre-demolition and pre-renovation inspections are communicated and procedures developed as detailed in the AMP to assure ACM is not disturbed by unqualified persons. The Compliance Management Branch maintains certified Asbestos Inspectors to support renovation, demolition, and the DPW, as required. A database is used to catalog, maintain, and track the results of asbestos removal and management activities.

Asbestos labels/signs and the intranet site are used to communicate to occupants, employees, and maintenance personnel the location and type of asbestos containing building materials present in their work and living spaces. These labels/signs are affixed on or in areas adjacent to the building materials containing friable asbestos. A sign which lists all known ACM

in the building is posted on the bulletin board or area most visible by occupants. Placement of labels will be an ongoing process occurring at the conclusion of building inspections. The intranet site http://polkdpwa4v15000/asbestos_hm_plans/ may be accessed by Fort Polk occupants, employees, and maintenance personnel.

5.9.4 Asbestos Annual Program Developments

Updates are made to the asbestos database as abatement and demolition activity occurs. The program continues to support the installation for renovation, demolition, equipment turn-in, and O&M activities.

5.9.5 Asbestos Program Performance Indicators

1. Annual percent of requested inspections completed (%/yr.)
2. Annual number of regulatory violations (no./yr.)
3. Management plan updated annually (no./yr.)

5.9.6 Asbestos Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each asbestos program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the asbestos program. The following performance standards apply to the performance indicators listed above:

Asbestos Program Performance	
Performance Indicators	Performance Standards
1. Annual percent of requested inspections completed (%/yr.)	a) GREEN: 100% b) AMBER: 99% - 95% c) RED: 94% or less
2. Annual number of regulatory violations (no./yr.)	a) GREEN: 0 violations b) AMBER: 1 violation c) RED: 2 or more violations
3. Management plan updated annually (no./yr.)	a) GREEN: Management plan reviewed and updated b) AMBER: Management plan reviewed but not updated c) RED: Management plan not reviewed or updated
Program Overall Performance	a) GREEN: All green b) AMBER: One or more amber with no red c) RED: One or more red

5.9.7 Asbestos Program Annual Performance Review

The overall asbestos program evaluation for 2015 is GREEN. The specific results for each performance indicator are listed below:

Asbestos Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual percent of requested inspection completed (%/yr.)	Inspections: 159 Inspections requested 159 Inspections conducted	GREEN
2. Annual number of regulatory violations (no./yr.)	Regulatory Inspections: 1 Regulatory inspections 0 Violations	GREEN
3. Management plan updated annually (no./yr.)	Management plan reviewed and updated.	GREEN
Program Overall Performance	All green	GREEN

**TABLE 5.9-1
ASBESTOS INSPECTIONS**

FISCAL YEAR	ASBESTOS INSPECTIONS CONDUCTED
2002	201
2003	328
2004	398
2005	361
2006	459
2007	468
2008	332
2009	173
2010	231
2011	265
2012	232
2013	151
2014	177
2015	159

FIGURE 5.9-1



5.10 Lead Based Paint (*Tammy G. Veillon*)

5.10.1 Lead Based Paint Program Description

Fort Polk has many temporary wooden buildings and structures built during the 1940s, in preparation for World War II. Some of these buildings, as well as surfaces on newer buildings, are painted or coated with Lead Based Paint (LBP). Painted surfaces contain LBP when the surface coating contains greater than 1.0 mg/cm² or 0.6% by weight lead. Lead is particularly hazardous to children and the Fort Polk lead management program prioritizes the protection of children. In high enough exposures, lead can be hazardous to adult occupants and those performing maintenance on buildings with LBP. The primary hazard for adults from LBP is airborne particulates that contain lead. In response to the hazards associated with LBP, there are numerous Federal, State, and Army regulations concerned with LBP. Regulatory requirements include for example: qualifications for individuals conducting LBP inspections; numbers and locations of LBP samples required to characterize the area being inspected; types of samples appropriate for the inspection; analytical techniques approved for analyzing the lead content of paint/coatings; procedures for rendering lead surfaces safe or removing LBP; determination of whether or not lead debris is Resource Conservation and Recovery Act hazardous; evaluating soils for lead; evaluating water for lead; safety requirements for workers who may be exposed to LBP; Permissible Exposure Levels (PEL) for lead particulates in air; and personal protective equipment procedures for working with lead.

5.10.2 Lead Based Paint Program Background

In September 1999, Fort Polk implemented a program to manage LBP in the family housing areas. All pre-1978 family housing units were inspected for LBP. LBP was found on 112 housing units. The installation conducted Risk Assessments of the units found to contain lead above the Department of Housing and Urban Development (HUD) prescribed levels. A lead Risk Assessment is a specific assessment designed to describe any risk that may exist from the presence of LBP. Results of the Risk Assessment indicated there was no risk at the time of the survey. LBP surveys and Risk Assessments were conducted consistent with guidelines developed by HUD. Fort Polk housing was privatized through the Residential Communities Initiative (RCI) in September 2004. Management and tracking of LBP was transferred to the RCI partner, Picerne Military Family Housing, at that time and is no longer tracked by the installation.

5.10.3 Lead Based Paint Program Requirements

Lead inspections of painted surfaces of cantonment buildings are performed as part of the installation-wide asbestos/lead survey program. The lead inspection identifies the painted surfaces that contain lead. The lead content of the painted surfaces is communicated to and used by occupants, contractors, and Operations & Maintenance personnel to determine the required procedures to minimize lead exposure risk to personnel who may disturb or be present during the disturbance of LBP coated surfaces. The LBP Management Plan delineates the procedures described and is applicable to all work performed on Fort Polk property.

5.10.4 Lead Based Paint Annual Program Developments

EPA regulations pertaining to “child occupied facilities” were promulgated and full compliance required by April 2010. The LBP Management Plan has been updated to reflect the new renovation, repair and painting requirements in child occupied facilities.

5.10.5 Lead Based Paint Program Performance Indicators

1. Annual percent of requested inspections completed (%/yr.)
2. Annual number of regulatory violations (no./yr.)
3. Management plan updated annually (no./yr.)

5.10.6 Lead Based Paint Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each LBP program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the LBP program. The following performance standards apply to the performance indicators listed above:

Lead Based Paint Program Performance	
Performance Indicators	Performance Standards
1. Annual percent of requested inspections completed (%/yr.)	a) GREEN: 100% b) AMBER: 99% - 95% c) RED: 94% or less
2. Annual number of regulatory violations (no./yr.)	a) GREEN: 0 violations b) AMBER: 1 violation c) RED: 2 or more violations
3. Management plan updated annually (no./yr.)	a) GREEN: Management plan reviewed and updated b) AMBER: Management plan reviewed but not updated c) RED: Management plan not reviewed or updated
Program Overall Performance	a) GREEN: All green b) AMBER: One or more amber with no red c) RED: One or more red

5.10.7 Lead Based Paint Program Annual Performance Review

The LBP program evaluation for 2015 is GREEN based on overall performance. The specific results for each performance indicator are listed below:

Lead Based Paint Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual percent of requested inspection completed (%/yr.)	Inspections: 139 Inspections requested 139 Inspections conducted	GREEN
2. Annual number of regulatory violations (no./yr.)	Regulatory Inspections: 0 Regulatory inspections 0 Violations	GREEN
3. Management plan updated annually (no./yr.)	Management plan reviewed and updated.	GREEN
Program Overall Performance	All green	GREEN

**TABLE 5.10-1
LBP INSPECTIONS**

FISCAL YEAR	LEAD BASED PAINT INSPECTIONS
2002	201
2003	282
2004	345
2005	318
2006	400
2007	374
2008	251
2009	149
2010	204
2011	210
2012	210
2013	146
2014	171
2015	139

FIGURE 5.10-1



5.11 EPCRA (*Harvey D. Skinner*)

5.11.1 EPCRA Program Description

Fort Polk has reporting requirements under six sections of the Emergency Planning and Community Right-to-Know Act (EPCRA). Section 302 Emergency Planning Notification, Section 303 Emergency Coordinator Designation, Section 304 Release/Spill Notification, Section 311 MSDS Notification, Section 312 Inventory Reporting and Section 313 Toxic Release Inventory (TRI).

5.11.2 EPCRA Program Background

On 3 August 1993, President Clinton signed Executive Order (EO) 12856. This mandated federal facilities to comply with the EPCRA of 1986. Although industry had been complying with EPCRA since its inception, it was unclear upon whether the government agencies had to comply or not. The signing of this EO demonstrated the government's commitment to comply with EPCRA and become a leader in environmental stewardship, when possible.

However, a general provision in EO 12856 that states "nothing in this order shall create any right or benefit, substantive or procedural, enforceable by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person". This provision took away Section 325 enforcement.

5.11.3 EPCRA Program Reporting Requirements

Section 302 emergency planning notification is done on a one time basis. This identifies facilities with at least one Extremely Hazardous Substance in excess of the Threshold Planning Quantity (TPQ). The reporting requirement is two parts; identify the substance or substances exceeding the TPQ limit and establish the facility's permanent address.

Section 303 emergency coordinator designation establishes a line of communication between the facility and the Local Emergency Planning Committee (LEPC). Section 303 consists of three parts; a letter must be sent to the LEPC naming the emergency coordinator and his contact information, report relevant changes as they occur and provide information to the LEPC, as required.

Section 304 pertains to release/spill notification, there are several determining factors in whether a release/spill is reportable or not. There are primarily three things which would trigger the reporting requirements; if the Reportable Quantity (RQ) value is exceeded, if the product spilled enters navigable waters or if the release/spill leaves the facility's boundaries.

Section 311 MSDS submission allows the public as well as the planners to know the types of substances located at the facility and their health effects. The substances requiring public and planner knowledge are; Occupational Safety and Health Administration hazardous substances present on site at any one time in excess of 10,000 pounds or substances exceeding the RQ value at any time.

Section 312 inventory reporting requirements uses the same criteria as Section 311 for reporting purposes. The Section 312 reporting requirement is completed on the TIER II form. The TIER II form requires the name of the substance to include the CAS number, physical and

health hazards, the daily/maximum amount on site, the type of storage container to include pressure/temperature and the exact location of the substance.

The Section 313 Toxics Release Inventory (TRI) is a regulatory database containing information on toxic chemical releases and waste management activities. EPCRA allows public access to the toxic release data. These data may also be used by State and Federal agencies to identify problem areas, and to determine whether an area is classified as an attainment area or a nonattainment area. TRI requires facilities to report the annual quantity of toxic chemical releases or waste management activities above specified thresholds. Facilities must report under Section 313 if they manufacture or process 25,000 pounds of a toxic chemical, otherwise use 10,000 pounds of a toxic chemical or have a chemical listed in 40 CFR, appendix A or B in excess of the RQ or TPQ. The reader should note that, due to the reporting time frame (June), the annual reporting period for section 3.13 lags one calendar year.

5.11.4 EPCRA Annual Program Developments

Since reporting year 2008, Department of Defense (DoD) policy has required JRTC and Fort Polk to report all TRI emissions on one single Form R report. In prior reporting cycles, the installation reported TRI emissions attributed to Cantonment activities separately from Range activity emissions. TRI report submittals are sent to EPA in an electronic format using EPA provided software as required by DoD policy, allowing a paperless submittal.

5.11.5 EPCRA Program Performance Indicators

1. Annual quantity of reportable chemicals released into the Air
2. Annual quantity of reportable chemicals released into the Water
3. Annual quantity of reportable chemicals released into the Soil
4. Annual percent of EPCRA required reporting received on time
5. EPCRA submitted reports by suspense date

5.11.6 EPCRA Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each EPCRA program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. The following performance standards apply to the performance indicators listed above:

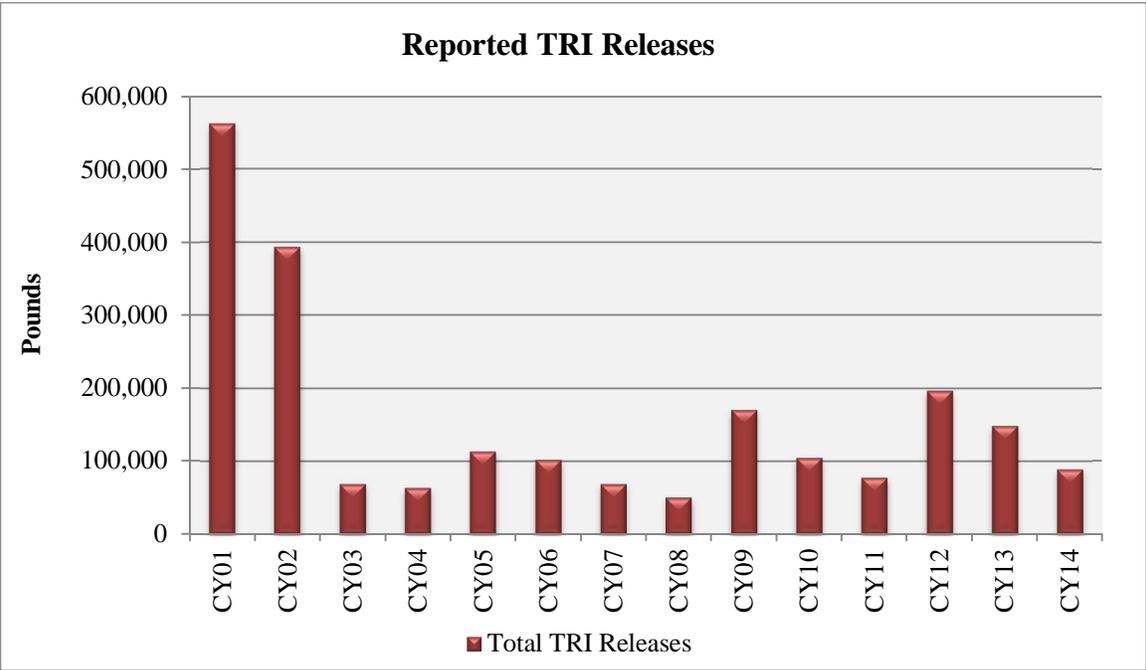
EPCRA Program Performance	
Performance Indicators	Performance Standards
1. Annual quantity of reportable chemicals released into the Air (lb/yr.)	Trend Data
2. Annual quantity of reportable chemicals released into the Water (lb/yr.)	Trend Data
3. Annual quantity of reportable chemicals released into the Soil (lb/yr.)	Trend Data
4. Annual percent of EPCRA required reporting received on time (%/yr.)	a) GREEN: 100% - 95% b) AMBER: 94% - 90% c) RED: 89% or less
5. EPCRA submitted reports by suspense date.	a) GREEN: On time b) AMBER: 30 days or less c) RED: 31 or more days
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No more than one red c) RED: More than one red

5.11.7 EPCRA Program Annual Performance Review

The EPCRA program performance evaluation for CY 2014 is GREEN, based on overall program performance. The specific results for each performance indicator are listed below:

EPCRA Program Performance		
Indicators	2014 Performance	Evaluation
1. Annual quantity of reportable chemicals released into the Air (lb/yr.)	201 lbs. Lead Compounds	Trend Data
2. Annual quantity of reportable chemicals released into the Water (lb/yr.)	None reported	Trend Data
3. Annual quantity of reportable chemicals released into the Soil (lb/yr.)	56,129 lbs. Copper 33,180 lbs. Lead Compounds	Trend Data
4. Annual percent of EPCRA required reporting received on time (%/yr.)	100%	GREEN
5. EPCRA submitted reports by suspense date	Yes	GREEN
Program Overall Performance	All green	GREEN

FIGURE 5.11-1



5.12 Indoor Air Quality (*Jolie Hebert*)

5.12.1 IAQ Program Description

Indoor Air Quality (IAQ) is a concern to building occupants, building workers, facility managers, and organizations responsible for the health, morale, and mission of a particular space. Several federal regulations are applicable to the regulation of IAQ. The Occupational Safety and Health Act with its General Duty Clause requires that each employer provide a safe and healthful working environment for employees. In late 2003, Occupational Safety and Health Administration (OSHA) issued a non-regulatory document described as an Information Bulletin on mold-related issues in the indoor environment. This Information Bulletin has no regulatory precedence but reflects the direction of OSHA on IAQ. The Environmental Protection Agency's Clean Air Act General Duty Clause requires the operators of stationary sources identify, prevent, and minimize the effects of releases of extremely hazardous substances. The OSHA Z Tables located in 29 CFR 1910 list limits for exposure to specific substances which may be found in the indoor environment. IAQ complaints filed with OSHA in 2009 concerned hazardous working conditions in Fort Polk facilities and referenced 29 CFR 1960 and OSHA Act 5(a)(1). Many states have passed legislation to regulate certain aspects of Indoor Air Quality. Louisiana regulates the qualifications and licensing of mold remediation contractors.

5.12.2 IAQ Program Background

Energy conservation measures instituted during the early 1970s have minimized the infiltration of outside air and contributed to the buildup of indoor air contaminants. In addition, the uses of building materials and construction techniques that allow moisture to enter the building envelope have resulted in microbiological growth occurring in building spaces. Public concerns about IAQ have increased over the past 20 years. The terms "indoor air quality" and "sick building syndrome" have become directly linked. Occupant complaints of symptoms associated with sick building syndrome have increased the focus on indoor air quality issues. Workers with complaints typically implicate the workplace environment as symptoms are alleviated when they leave the office/building.

IAQ assessments are conducted in response to demand maintenance orders generated by facility managers. Reports are generated and forwarded to the Directorate of Public Works (DPW), facility managers, and the Department of Preventive Medicine (PREVMED). Three general types of IAQ assessments are conducted: a preliminary assessment consisting of qualitative review of select IAQ ranking criteria, a detailed assessment consisting of quantitatively describing the building systems, and a post-remediation assessment completed following correction of IAQ concerns outlined in the detailed assessment. The primary product of the assessments consists of a report describing corrective actions necessary to rectify the IAQ issues addressed in the assessment. Any additional demand maintenance orders generated during the assessment are included in the formal report submitted to DPW. IAQ issues are addressed and documented at design and construction review meetings.

Requests for IAQ assessments may also be generated as the result of a routine barracks preliminary assessment. These pre-assessments are not complaint driven. They are identified by the Fort Polk IAQ team, prioritized according to the same IAQ ranking criteria and referred to the assessment team. The routine barracks pre-assessment program is instrumental in detecting rooms which may have underlying IAQ concerns. Particular attention is given to rooms with no

occupants and rooms which remain vacant for extended periods, such as during block leave or deployment. Coordination efforts with the DPW and the Engineering Division provide valuable information on the occupancy status of facilities and renovation schedules to ensure priority is given to those facilities currently occupied, facilities coming out of renovation and are being turned over to the unit and also those facilities which are about to become occupied after a deployment. This initiative is just one facet of the Army's three prong approach to improving and maintaining IAQ in barracks world-wide. This includes short-term mold inhibition techniques, heating, ventilation and air conditioning (HVAC) system improvements in the near future and a long-term goal of upgrading the central energy plants.

IAQ concerns are prioritized through a ranking system for each assessed building, using a grading matrix. The IAQ grading matrix is composed of an X-axis and a Y-axis. The X-axis represents Potential Exposure, consisting of an occupancy profile and the microbial condition of the building. The Y-axis represents Building Condition, consisting of HVAC and building envelope. Each of the four categories is assigned a "C" value based on the data collected during the IAQ assessment. The "C" value between HVAC and Building Envelope is averaged for a "C" value representing Building Condition. The "C" value between Occupancy Profile and Microbial is averaged for a "C" value representing Potential Exposure. Once the "C" values are determined for each axis, then the building can be assigned a composite "C" classification.

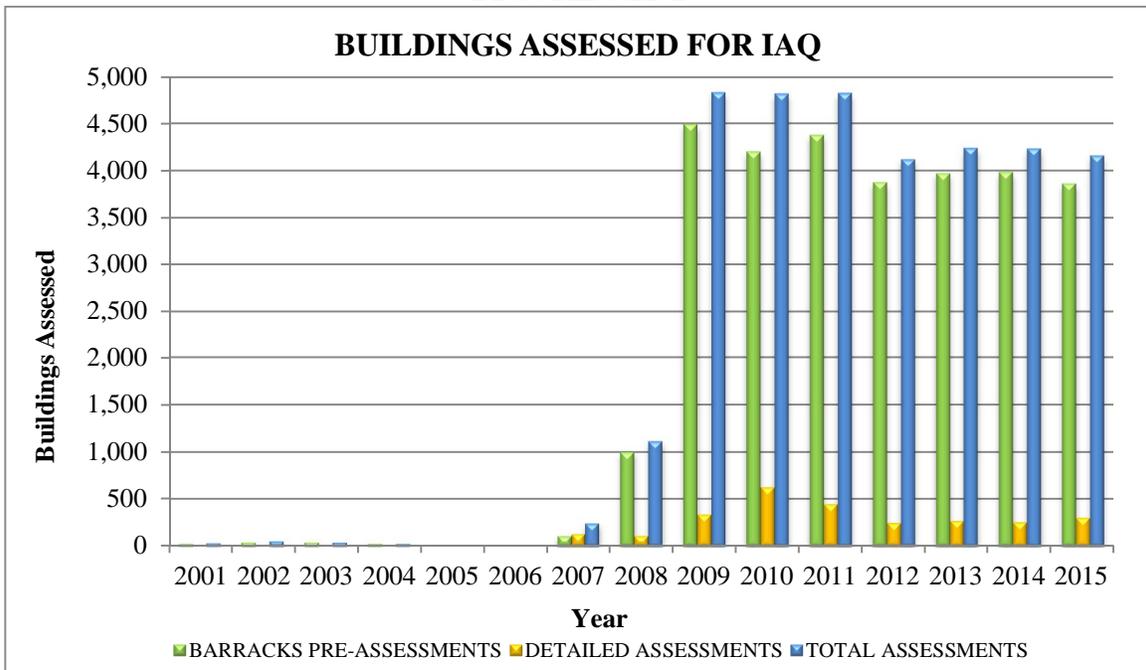
Category grades are ranked from C1 through C4, with C1 being the most desirable and C4 being the least desirable condition.

- C1 - IAQ issues associated with this building classification do not significantly interfere with the mission or intended uses of the building at the time the classification was assigned. Building IAQ conditions neither limit the flexibility for the building use nor increase vulnerability to interrupted building uses.
- C2 - IAQ issues associated with this building classification may limit the flexibility of some building uses, but for most envisioned uses of the building, IAQ issues will not interfere with using the building to accomplish the mission.
- C3 - IAQ issues associated with this building classification will limit the flexibility of the use of the building. Expected uses of the building will be limited. These limitations will increase the vulnerability of the building to accomplish its mission.
- C4 - IAQ issues associated with this building classification will seriously impair the use of the building to accomplish the uses and mission of the building.

**TABLE 5.12-1
BUILDINGS ASSESSED FOR IAQ**

YEAR	BARRACKS PRE-ASSESSMENTS	DETAILED ASSESSMENTS	TOTAL ASSESSMENTS	CUMULATIVE ASSESSMENTS	BUILDINGS ASSESSED
2001	31	4	35	35	31
2002	47	9	56	91	50
2003	41	2	43	134	40
2004	31	0	31	165	31
2005	0	0	0	165	0
2006	0	1	1	166	1
2007	112	135	247	413	1
2008	1,004	114	1,118	1,531	21
2009	4,491	339	4,830	6,270	62
2010	4,199	618	4,817	11,087	76
2011	4,378	447	4,825	15,912	72
2012	3,873	247	4,120	20,032	65
2013	3,970	268	4,238	24,270	107
2014	3,980	254	4,234	28,504	153
2015	3,858	302	4,160	32,664	151

FIGURE 5.12-1



**TABLE 5.12-2
EXTENT OF VISIBLE MOLD GROWTH IN BARRACKS ROOMS**

DATE COMPLETED	TOTAL PRE-ASSESSMENTS COMPLETED	ROOMS WITH NO VISIBLE MOLD	ROOMS WITH VISIBLE MOLD 1 - 10 sq ft	ROOMS WITH VISIBLE MOLD >10 - 100 sq ft	ROOMS WITH VISIBLE MOLD >100 sq ft
10/2008 - 03/2009	2219	1444	632	110	40
04/2009 - 09/2009	2226	1600	544	73	2
10/2009 - 03/2009	2143	1370	677	95	1
04/2009 - 09/2010	2056	1493	510	53	0
10/2010 - 03/2011	2226	1784	406	36	0
04/2011 - 09/2011	2152	1356	696	100	0
10/2011 - 03/2012	2008	1801	205	2	0
04/2012 - 09/2012	1865	1493	364	8	0
10/2012 - 03/2013	2464	1510	913	10	0
04/2013 - 09/2013	1506	652	843	9	0
09/2013 - 09/2014	3980	2710	1238	32	0
09/2014 - 09/2015	3858	3259	586	13	0

**TABLE 5.12-3
EXTENT OF VISIBLE MOLD GROWTH IN HIGH RISK FACILITIES**

DATE COMPLETED	TOTAL PRE-ASSESSMENTS COMPLETED	ROOMS WITH NO VISIBLE MOLD	ROOMS WITH VISIBLE MOLD 1 - 10 sq ft	ROOMS WITH VISIBLE MOLD >10 - 100 sq ft	ROOMS WITH VISIBLE MOLD >100 sq ft
10/2010 - 03/2011	617	578	32	7	0
04/2011 - 09/2011	608	581	25	2	0
10/2011 - 09/2012	608	608	0	0	0
10/2012 - 09/2013	394	387	7	0	0
10/2013 - 09/2014	583	562	21	0	0
10/2014 - 09/2015	398	358	40	0	0

**TABLE 5.12-4
REQUESTS FOR IAQ ASSESSMENTS BY OCCUPANTS**

DATE COMPLETED	TOTAL PRE-ASSESSMENTS COMPLETED	ROOMS WITH NO VISIBLE MOLD	ROOMS WITH VISIBLE MOLD 1 - 10 sq ft	ROOMS WITH VISIBLE MOLD >10 - 100 sq ft	ROOMS WITH VISIBLE MOLD >100 sq ft
10/2008 - 09/2009	46	0	24	17	5
10/2009 - 09/2010	558	241	210	100	7
10/2010 - 09/2011	722	493	162	65	2
10/2011 - 09/2012	680	482	155	41	2
10/2012 - 09/2013	588	346	204	38	0
10/2013 - 09/2014	254	117	99	36	2
10/2014 - 09/2015	619	439	167	12	1

5.12.3 IAQ Program Requirements

The focus of the Fort Polk IAQ Program is to protect the health of building occupants and preserve the mission of the occupied spaces at Fort Polk. The purpose of the program is to develop building IAQ profiles which reflect the status of IAQ issues in buildings, develop a management plan to be utilized by the installation to manage IAQ issues, and recommend actions to minimize IAQ issues in existing buildings and future renovation/construction.

The IAQ team performs a preliminary assessment of each barracks room not under major renovation every six (6) months. Since FY10, the IAQ team has dramatically increased the number of preliminary assessments conducted each year. This increased frequency allows the IAQ team to identify IAQ concerns in rooms which would be unoccupied due to deployment. The mold prevention program has increased outreach efforts through training courses, briefings and direct interaction with the units. Briefing the IAQ program during formal classroom training provides Commanders and First Sergeants with knowledge of the resources available to units on JRTC and Fort Polk to prevent poor indoor air quality. The IAQ team also developed the JRTC and Fort Polk video: *Operation Mold*. This video has been incorporated into the 40-hour Environmental Compliance Officer course. Increased coordination with units has also resulted in a decreased number of barracks rooms the IAQ team was unable to assess due to lack of access.

The IAQ team provided assessment data and supporting documentation to the Department of Preventive Medicine, DPW Engineering and Operations and Maintenance, Garrison Safety and members of the Garrison Leadership to address workplace safety complaints and health and welfare of Soldiers. Within the installation, the IAQ team also provided assessment reports to the DPW to support renovation projects. In response to IAQ concerns related to high risk occupants, particularly wounded Soldiers, the IAQ team incorporated procedures for facilities/rooms containing high risk occupants into the remediation protocol. To aid in deployment/re-deployment efforts, the IAQ team developed a protocol for the assessment of barracks and support facilities to minimize impacts to the facilities and risk to Soldiers during re-deployment.

5.12.4 IAQ Program Performance Indicators

As stated above, the installation IAQ program contains three major categories, preliminary assessment, assessment and remediation. The following performance indicators have been developed to capture data to perform trend analysis of these major program functions: annual number of pre-assessments and assessments completed. The number of assessments completed is also a measure of the number of remediations completed, since a remediation is performed on each room/facility requiring an assessment. Since the goal of the IAQ program focuses on source correction rather than remediation, trend data is also collected regarding the major source of the poor IAQ present in the room/facility: HVAC system, facility management and occupant contributions. An evaluation of the overall IAQ present in facilities on JRTC and Fort Polk is provided to the Garrison Leadership by collecting trend data on facilities that exceed the recommended microbial threshold and require remediation. Updates to the IAQ management plan and standard operating procedures (SOPs) are evaluated to ensure that the management plan and corresponding SOPs are reviewed and updated annually. Finally, since the IAQ team has increased its efforts in the areas of mold prevention and stewardship, trend data is also collected

to evaluate the number of demand maintenance orders submitted by building occupants requesting IAQ assessments.

5.12.5 IAQ Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each IAQ program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of specific aspects of the IAQ program. The following performance standards apply to the performance indicators listed above:

Indoor Air Quality Program Performance	
Performance Indicators	Performance Standards
1. Annual number of requested pre-assessments completed (no./yr.)	Trend Data
2. Annual number of required assessments completed (no./yr.)	Trend Data
3. Annual number of assessments exceeding the recommended microbial threshold (no./yr.)	Trend Data
4. Annual number of assessments referred from the IAQ pre-assessor (no./yr.)	Trend Data
5. Annual number of pre-assessments requested by occupant (no./yr.)	Trend Data
6. Annual number of management plans and SOPs reviewed and updated (no./yr.)	a) GREEN: All management plans and 24 of 30 SOPs reviewed and updated b) AMBER: All management plans and at least 18 of 30 SOPs reviewed and updated c) RED: Management plans not reviewed and updated 17 or fewer SOPs reviewed and updated
Program Overall Performance	a) GREEN: All green b) AMBER: One or more amber c) RED: One or more red

5.12.6 IAQ Program Annual Performance Review

The IAQ program evaluation for 2015 is GREEN based on the annual number of management plans and SOPs reviewed and updated. No performance indicators are rated AMBER or RED, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Indoor Air Quality Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual number of requested pre-assessments completed (no./yr.)	4,160 rooms pre-assessed	Trend Data See Table 5.12-1
2. Annual number of required assessments completed (no./yr.)	302 rooms assessed 1233 corrective demand maintenance orders submitted	Trend Data See Table 5.12-1
3. Annual number of assessments exceeding the recommended microbial threshold (no./yr.)	26 rooms exceeded the recommended microbial threshold for total spore counts	Trend Data See Table 5.12.2, 5.12-3 and 5.12-4
4. Annual number of assessments referred from the IAQ pre-assessor (no./yr.)	220 assessments referred by IAQ pre-assessor	Trend Data See Table 5.12-2 and 5.12-3
5. Annual number of pre-assessments requested by occupant (no./yr.)	130 pre-assessments requested by the occupant 42 assessments referred by the occupant	Trend Data See Table 5.12-4
6. Annual number of management plans and SOPs reviewed and updated (no./yr.)	IAQ management plan and 39 of 39 SOPs were reviewed and updated in 2015.	GREEN
Program Overall Performance	All green	GREEN

The GREEN rating for the IAQ program management performance indicator “Annual number of management plans and SOPs reviewed and updated” resulted in an overall program rating of GREEN. Improvements to the IAQ program evaluation in the future may include metrics on response time to requests for IAQ assessments and completion of mold remediation.

5.13 Air Quality (*Harvey D. Skinner*)

5.13.1 Air Quality Program Description

Emissions of criteria and hazardous air pollutants at Fort Polk are regulated by the Louisiana Department of Environmental Quality (LDEQ) and the U.S. Environmental Protection Agency (EPA). Fort Polk has implemented efforts to reduce emissions of air pollutants and comply with applicable air quality regulations. Fort Polk is located in an “attainment” area, as defined by the EPA and LDEQ.

A Title V permit is required for installations with the potential to emit more than 10 tons per year of a single Hazardous Air Pollutant (HAP), 25 tons per year of any combination of HAPs, or more than 100 tons per year of any regulated air pollutant. Fort Polk’s potential to emit (PTE) air pollutants exceeds 100 tons. In 1998, the installation obtained its initial Title V permit from the LDEQ. Fort Polk’s current Title V permit was issued on 23 June 2009, and is modified on a routine basis to account for the addition or removal of emission sources. On 19 December 2013, a Title V permit renewal application was submitted to the LDEQ. Title V air quality permit number 2960-00010-V5 was approved and issued by the LDEQ on 10 August 2015.

5.13.2 Air Quality Program Background

Title V criteria pollutant emissions were first estimated in 1993; however, standards for data collection were not available until 1998. Data collected prior to this date may not have been collected by methods consistent with those used since 1998. Reporting emissions of PM 2.5, ammonia, and emissions from insignificant activities became a requirement in 2002. From 2002 to 2014, criteria pollutant emissions have decreased 63%.

Standards for estimating emissions of toxic volatile organic compounds (VOCs) were also not available until 1998. Available data shows total VOC emissions have generally decreased from 1998 to 2013. Toxic VOC emissions remained relatively constant from 1998 through 2006, but decreased by more than 50% from 2006 to 2014. The largest sources of toxic VOC emissions are fuel dispensing operations, surface coating operations, and fuel storage facilities.

Fort Polk began eliminating Class I chlorofluorocarbons (CFC) sources in 1990. The only known sources of Class I CFC still active on the installation are a small number of older GSA vehicles and refrigeration units in food service. These refrigeration units, which are hermetically sealed, are converted to use alternative refrigerants as system maintenance is required. Multiple Class II HCFC (hydrochlorofluorocarbon) sources are still present on the installation. These sources are scheduled to begin phasing out in 2020.

5.13.3 Air Quality Program Requirements

JRTC and Fort Polk air quality requirements are contained in the installation’s Title V permit. This permit includes all regulated emission sources and details recordkeeping, reporting, and emission control requirements for each affected source. The permit requires deviation reports be submitted to the appropriate environmental agencies should any requirements not be met. If all conditions are met, the installation submits a compliance certification noting no deviations during the period.

**TABLE 5.13-1
FORT POLK AIR QUALITY**

CRITERIA POLLUTANT EMISSIONS (TONS)								TOXIC VOC DATA			
YEAR	NO _x	CO	SO ₂	VOC	PM ₁₀	PM _{2.5}	Ammonia	YEAR	TONS/YR	TOTAL VOC	% TOTAL VOC
2009	38	29	<1	30	7	7	<1	2009	4.5	30	15
2010	37	27	<1	37	3	3	<1	2010	2.2	37	6
2011	21	11	<1	34	4	4	<1	2011	2	34	6
2012	24	12	<1	30	3	3	<1	2012	2	30	7
2013	17	10	<1	45	2	2	<1	2013	2.5	44	6
2014	14	10	<1	38	1	1	<1	2014	1	38	3

FIGURE 5.13-1

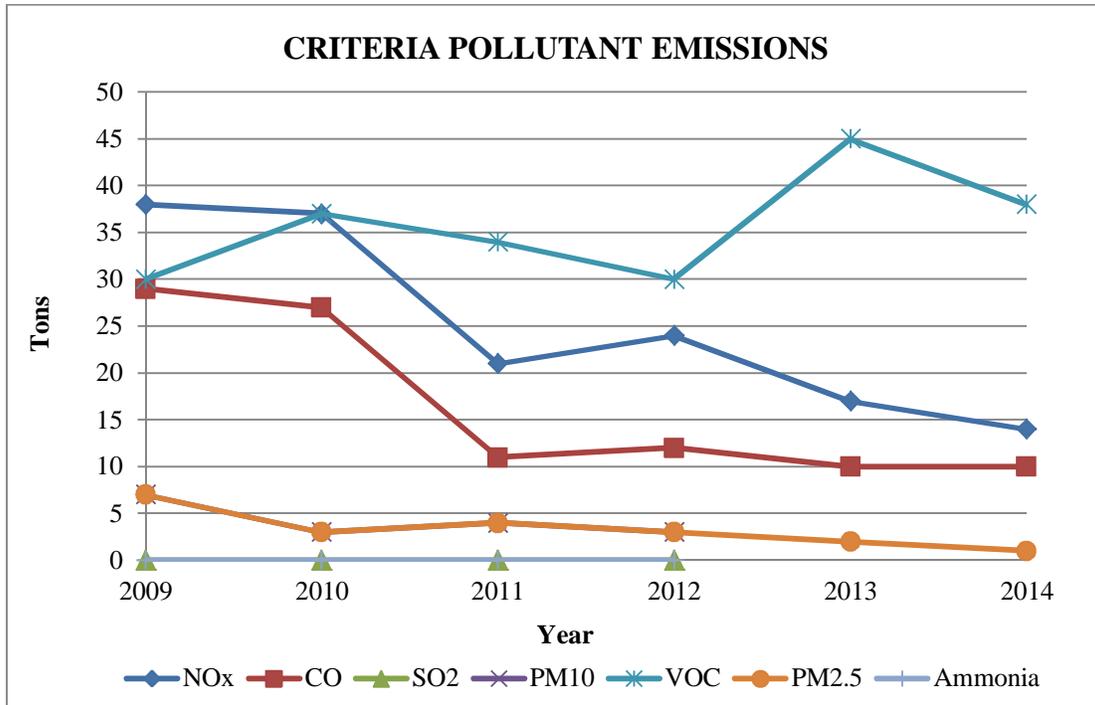
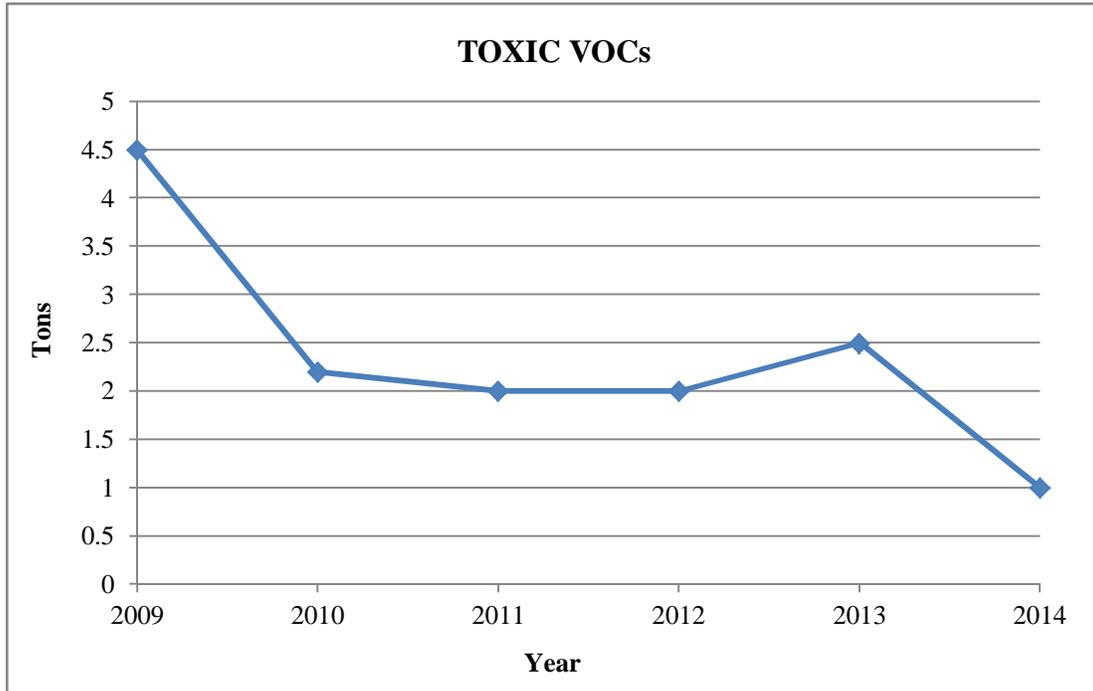


FIGURE 5.13-2



5.13.4 Air Quality Annual Program Developments

The installation received a renewed Title V permit on 10 August 2015. The new permit included minor changes to the installation's air emission sources and noted new regulatory requirements affecting various air emission sources. Key changes include requirements associated with 40 CFR Part 63 Subpart CCCCCC, which affect fuel dispensing operations across the installation.

5.13.5 Air Quality Program Performance Indicators

1. Criteria air pollutants emitted (tons/yr.)
2. Toxic air pollutants emitted (lbs/yr.)
3. Volatile organic compounds emitted (tons/yr.)
4. Hazardous air pollutants emitted (lbs/yr.)
5. Annual number of permit violations (no./yr.)
6. Title V permit renewals submitted to LDEQ by suspense date
7. Emission inventory summary report submitted by LDEQ suspense date
8. Annual percent of required management plans and SOPs reviewed

5.13.6 Air Quality Program Performance Standards

Each Air Quality program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Air Quality program. The following performance standards apply to the performance indicators listed above:

Air Quality Program Performance	
Performance Indicators	Performance Standards
1. Criteria Pollutants Emitted (tons/yr.)	Trend Data Figure 5.13-1
2. Toxic Air Pollutants Emitted (tons/yr.)	Trend Data Figure 5.13-2
3. Volatile Organic Compounds Air Pollutants Emitted (tons/yr.)	Trend Data Figure 5.13-1
4. Hazardous Air Pollutants Emitted (tons/yr.)	Trend Data Figure 5.13-1
5. Annual Number of Permit Violations (no./yr.)	a) GREEN: 0 violations b) AMBER: 1 - 2 violations c) RED: 3 or more violations
6. Title V permit renewal submitted to LDEQ prior to expiration date	a) GREEN: On time b) AMBER: 30 days or less c) RED: 31 or more days late
7. Emission Inventory Summary report submitted by LDEQ suspense date	a) GREEN: On time b) AMBER: 10 days or less c) RED: 11 or more days late
8. Annual percent of required management plans and SOPs reviewed and updated (%/yr.)	a) GREEN: 100% - 95% management plan/SOPS reviewed and updated b) AMBER: 94% - 80% management plan/SOPS reviewed but not updated c) RED: 79% or less management plan/SOPS reviewed or updated
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No more than one red c) RED: More than one red

5.13.7 Air Quality Program Annual Performance Review

The Air Quality program evaluation for 2014 is GREEN. Three performance indicators are rated GREEN and one is rated AMBER, resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Air Quality Program Performance		
Indicators	2014 Performance	Evaluation
1. Criteria Pollutants Emitted (tons/yr.)	--	Trend Data
2. Toxic Air Pollutants Emitted (tons/yr.)	--	Trend Data
3. Volatile Organic Compounds Air Pollutants Emitted (tons/yr.)	--	Trend Data
4. Hazardous Air Pollutants Emitted (tons/yr.)	--	Trend Data
5. Annual cumulative Number of Permitted Sources by Type (no./yr.)	No new sources added that required permitting	Trend Data
6. Annual Number of Permit Violations (no./yr.)	No Notice of Violation received from LDEQ	GREEN
7. Title V permit renewal submitted to LDEQ prior to expiration date.	Title V permit renewal submitted	GREEN
8. Emission Inventory Summary report submitted by LDEQ suspense date.	Emission Inventory submitted as required by the LDEQ	GREEN
9. Annual percent of required management plans and SOPs reviewed and updated (%/yr.)	80% of required Management Plans and SOPs were reviewed and/or updated	AMBER
Program Overall Performance	Three green and one amber	GREEN

5.14 Petroleum and Hazardous Material Spills (*Jeffrey P. Ross*)

5.14.1 Petroleum and Hazardous Material Spills Program Description

Due to the nature of military training activities, spills of petroleum, oils, and lubricants (POL) and other hazardous substances are relatively common on military installations. POL spills over 10 gallons, spills that reach water, and spills of any quantity of hazardous materials must be reported to the Fort Polk Fire Department. The Fire Department acts as the first responders on all spills and notifies the Environmental and Natural Resources Management Division (ENRMD) for technical assistance with directing any cleanup activities. Fire Department personnel complete a spill report for each spill event and provide a copy to ENRMD for their records. ENRMD notifies the appropriate agencies of any reportable spills depending on the materials and quantities that have been spilled. Fort Polk began keeping records on spills in 1997.

5.14.2 Petroleum and Hazardous Material Spills Program Background

Fuel products (JP-8, diesel, MOGAS) have been involved in approximately 70% of all spills occurring since 1997 and account for 90% of the volume of spilled materials during the same time period. The quantity of fuel products involved annually in spills has varied from a low of approximately 123 gallons in 2015 to a high of 3,690 gallons in 2008, due in part to a vehicle accident. The amount and the type of spills generally correlate to Fort Polk's OPTEMPO.

The causes of spills have been divided into four categories: broken/faulty equipment, human error, motor vehicle accidents (MVAs), and illegal/unknown causes. Examples of human error include parking full tankers on uneven ground, failing to replace drain plugs, driver negligence, reckless driving, and overfilling with fuel. Human error accounted for 28.5% of the total number of spills and 22.7% of the total volume of spills occurring in 2015. The largest single spill due to human error since 1997 involved a 400-gallon spill of diesel.

Examples of broken/faulty equipment include broken nozzles, broken fuel or hydraulic lines, broken pumps, malfunctioning valves, leaking tanks, and worn out seals. Broken/faulty equipment accounted for 57% of the total number of spills and 52% of the total volume of spills occurring in 2015. The two largest spills from broken/faulty equipment were 500 gallons of JP-8 in October 2002 and October 2004, both resulting from faulty valves on a POL vehicle.

Spills associated with MVA's are attributed to ruptured fuel tanks, oil reservoirs and punctured radiators. MVA's accounted for 14.2% of the total number of spills and 24.3% of the total volume of spills occurring in 2015.

Spills relating to illegal/unknown are spills that cannot be determined whether they were caused by either human error or faulty equipment due to the time of the spill or other factors. Illegal or intentional dumping is also placed within this category. There were no spills relating to illegal/unknown in 2015.

**TABLE 5.14-1
SPILLS BY CAUSE TYPE**

YEAR	NUMBER OF SPILLS					QUANTITY OF SPILLS (Gallons)				
	TOTAL NUMBER	BROKEN/ FAULTY EQUIPMENT	HUMAN ERROR	VEHICLE ACCIDENTS	UNKNOWN	TOTAL VOLUME	BROKEN/ FAULTY EQUIPMENT	HUMAN ERROR	VEHICLE ACCIDENTS	UNKNOWN
1997	13	4	6	1	2	420	295	100	0	25
1998	21	7	7	3	4	1,008	536	347	0	125
1999	25	10	6	4	5	827	351	410	40	27
2000	29	12	3	4	10	638	475	106	54	3
2001	49	22	16	7	4	1,016	351	500	130	35
2002	53	19	18	6	8	1,215	679	329	144	63
2003	17	8	6	0	3	330	168	150	0	12
2004	53	28	19	1	5	1,508	991	470	3	44
2005	34	11	17	4	2	768	378	297	57	37
2006	13	8	4	1	0	704	474	156	75	0
2007	9	5	4	0	0	233	188	45	0	0
2008	10	4	4	1	1	3,738	58	370	3,300	10
2009	9	4	4	1	0	1,823	161	212	1,450	0
2010	13	10	3	0	0	494	404	90	0	0
2011	8	4	3	0	1	325	130	185	0	10
2012	7	6	0	1	0	272	267	0	5	0
2013	9	3	4	1	1	405	73	100	7	225
2014	11	5	4	2	0	322	110	130	82	0
2015	7	4	2	1	0	123	65	28	30	0
TOTALS	383	170	128	37	46	16,046	6,087	3,996	5,347	616

FIGURE 5.14-1

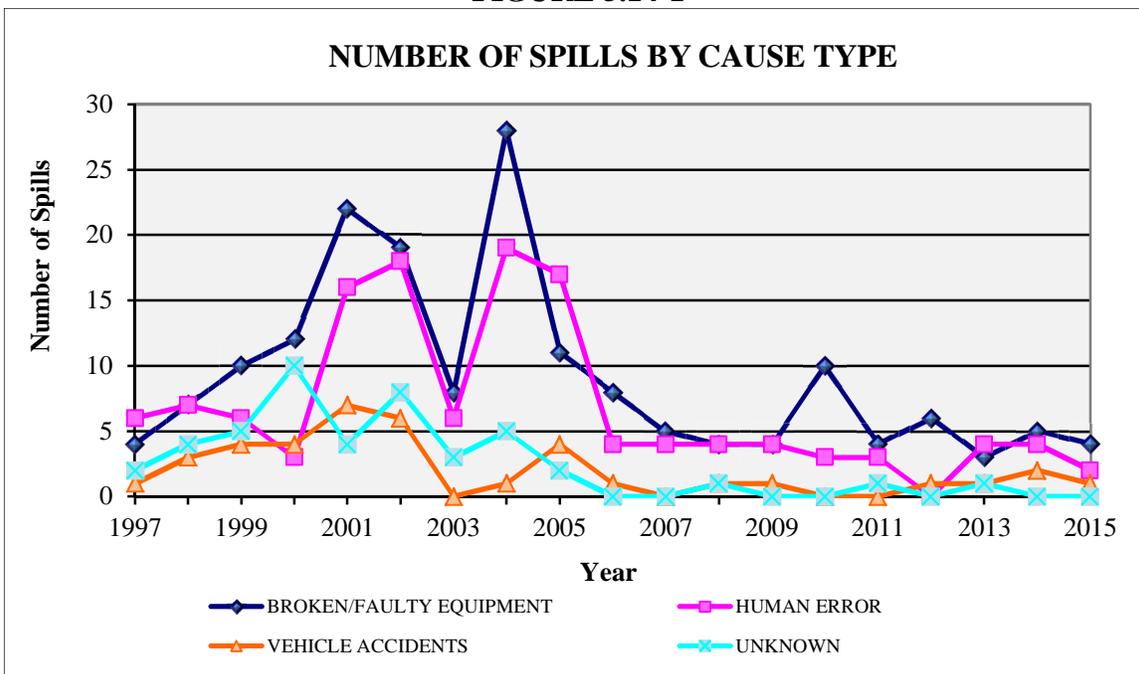
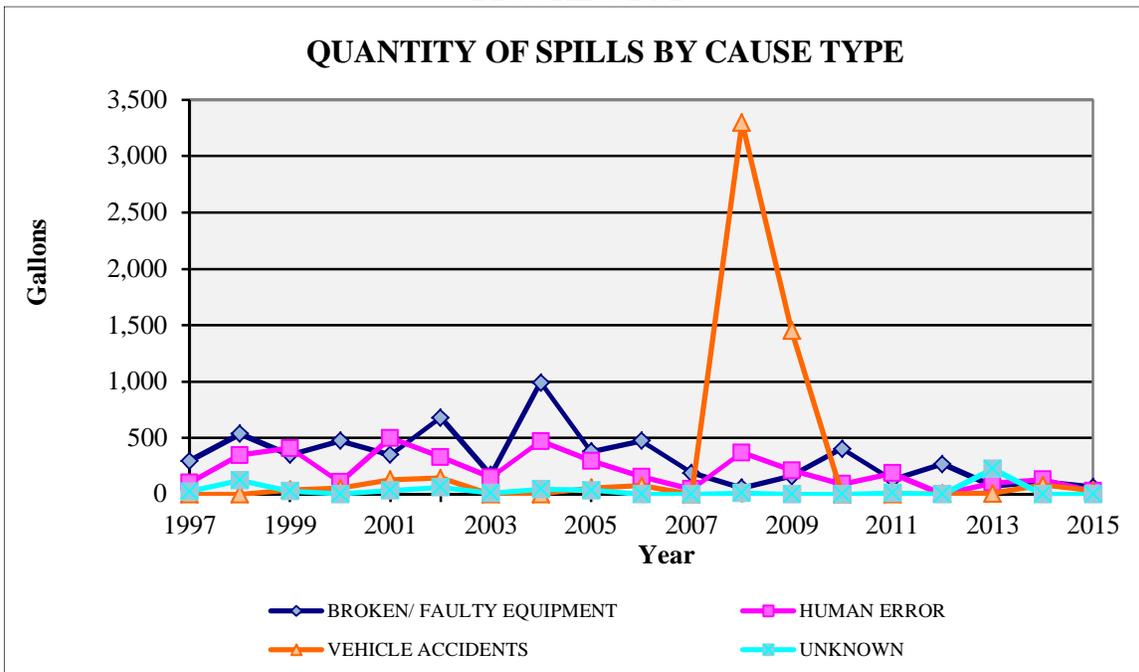


FIGURE 5.14-2



**TABLE 5.14-2
SPILLS BY MATERIAL TYPE**

YEAR	NUMBER OF SPILLS*					QUANTITY OF SPILLS (Gallons)				
	TOTAL NUMBER	JP-8	DIESEL	MOGAS	OTHER	TOTAL VOLUME	JP-8	DIESEL	MOGAS	OTHER
1997	13	4	6	1	2	420	179	225	15	1
1998	21	7	7	3	4	1,008	115	530	168	195
1999	25	10	6	4	5	827	619	83	83	43
2000	29	12	3	4	10	638	380	78	6	174
2001	49	17	4	5	23	1,016	259	476	22	259
2002	53	22	6	5	20	1,215	990	90	23	112
2003	17	6	3	1	7	330	229	57	1	43
2004	53	28	6	7	12	1,508	1,166	250	16	76
2005	34	15	9	4	6	768	236	372	128	32
2006	13	5	0	1	7	704	485	0	15	204
2007	9	4	1	1	3	233	147	30	0.25	56
2008	10	4	1	1	4	3,738	3,665	10	15	48
2009	9	4	2	1	2	1,823	1,660	120	1	42
2010	13	8	2	0	3	494	254	180	0	60
2011	8	7	1	0	0	325	305	20	0	0
2012	7	4	2	0	1	272	240	30	0	2
2013	9	4	0	1	4	405	155	0	5	245
2014	11	8	2	0	1	322	247	55	0	20
2015	7	4	0	1	2	123	58	0	5	60
TOTALS	383	169	61	39	114	16,046	11,331	2,606	498	1,611

NOTE: The quantity of some spills are unknown

*Spill incidents may include more than one material type

FIGURE 5.14-3

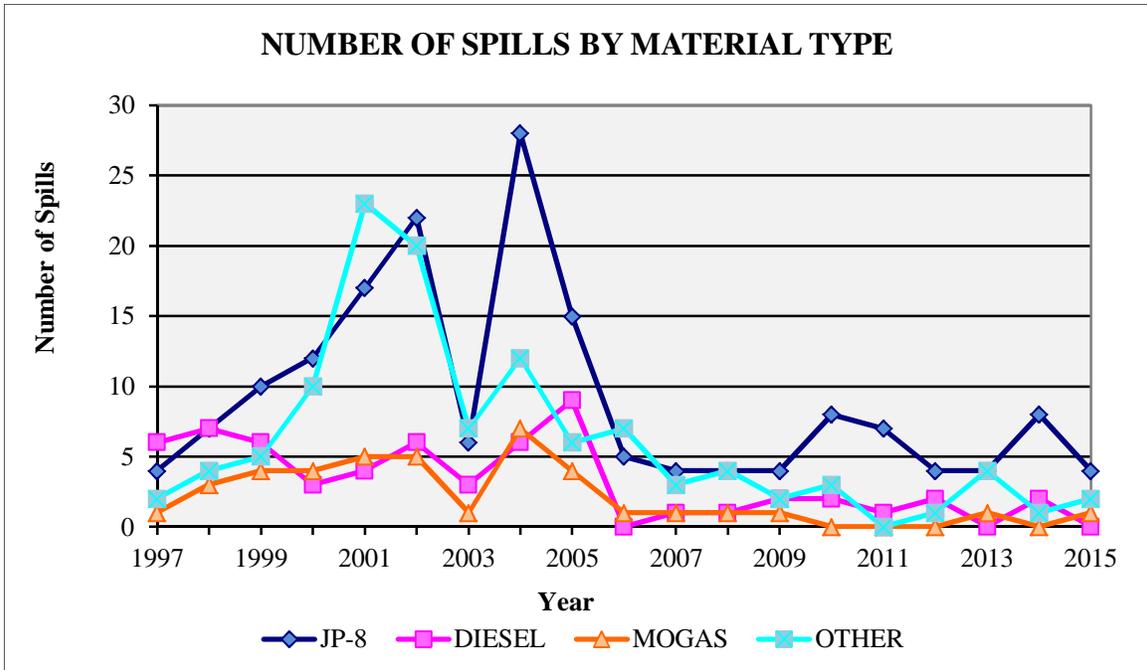
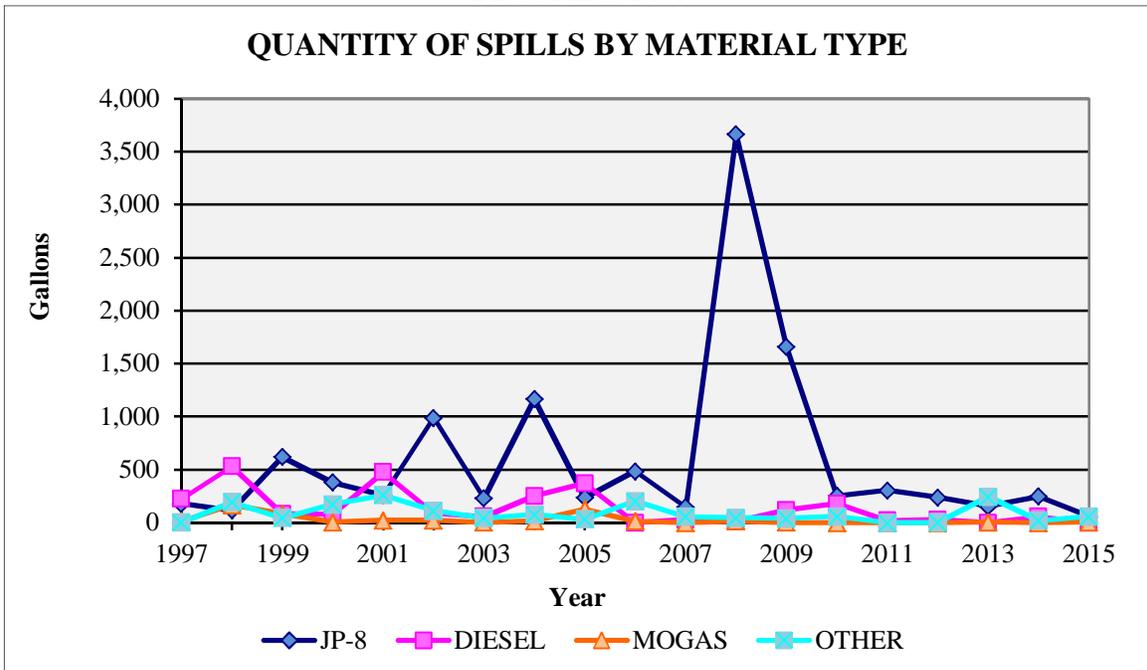


FIGURE 5.14-4



5.14.3 Petroleum and Hazardous Material Spills Program Requirements

Fuel spills (diesel, JP-8, and MOGAS) account for the majority of spilled materials on Fort Polk, although spills of other materials such as hydraulic fluid, oil, antifreeze, and paint do occur. All spills, regardless of the amount, must be cleaned up as to where there are no pollutant residues remaining. POL spills that are 10 gallons or less and have not entered a waterway are not reportable and are cleaned up by the party that spills it. POL spills greater than 10 gallons must be immediately reported to the Fort Polk Fire Department who will in turn notify ENRMD. In some cases, other agencies (State Police, Local Emergency Planning Committee, Louisiana Department of Environmental Quality, National Response Center), may require notification. This is determined by the ENRMD representative on site.

5.14.4 Petroleum and Hazardous Material Spills Annual Program Developments

The goal of this program is to maintain and sustain the environment in order to have resources available for the training of our Soldiers well into the future. Because human error is our number one cause of spills, training individuals in spill prevention is a priority. Last year, over 2,226 individuals received environmental training.

The incorporation of Clean Water Act regulations into our Spill Prevention Control and Countermeasures Plan (SPCCP), concerning secondary containment, has also been a factor in reducing the number of spills.

5.14.5 Petroleum and Hazardous Material Spills Program Performance Indicators

The Petroleum and Hazardous Materials Spill Response program has developed three performance indicators to measure the performance of the program. These indicators include:

- Annual percent of reportable spills submitted within regulatory timelines (%/yr.)
- Annual percent of spills completely cleaned up with no pollutant residue (%/yr.)
- Required management plans and standard operating procedures (SOPs) reviewed and updated

5.14.6 Petroleum and Hazardous Material Spills Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Spill Response program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of Spill Response. The following performance standards apply to the performance indicators listed above:

**JRTC & Fort Polk
Environmental Management Performance Review**

Petroleum and Hazardous Material Spill Response Program Performance	
Performance Indicators	Performance Standards
1. Annual number of spill incidents by material type (no./yr.)	Trend Data
2. Annual number of spill incidents by cause (no./yr.)	Trend Data
3. Annual volume of material spilled by material type (gal/yr.)	Trend Data
4. Annual volume of material spilled by cause (gal/yr.)	Trend Data - See Table 5.14-1 and Figure 5.14-1
5. Annual number of reportable spills by material type, volume and cause (no./yr.)	Trend Data
6. Annual percent of reportable spills submitted within regulatory timelines (%/yr.)	a) GREEN: 100% b) AMBER: 99% - 95% c) RED: 94% or less
7. Annual percent of spills completed cleaned up with no pollutant residue (%/yr.)	a) GREEN: 100% - 98% b) AMBER: 97% - 95% c) RED: 94% or less
8. Required management plans and SOPs reviewed and updated	a) GREEN: Spill response plan and 1 SOP reviewed and updated b) AMBER: Spill response plan and 1 SOP reviewed but not updated c) RED: No review or update
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No more than one red c) RED: More than one red

5.14.7 Spills Program Annual Performance Review

The Petroleum and Hazardous Materials Spill Response program evaluation for 2015 is GREEN based on the performance indicators. The specific results for each performance indicator are listed below:

Petroleum and Hazardous Material Spill Response Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual number of spill incidents by material type (no./yr.)	--	Trend Data - See Table 5.14-2 and Figure 5.14-3
2. Annual number of spill incidents by cause (no./yr.)	--	Trend Data - See Table 5.14-1 and Figure 5.14-1
3. Annual volume of material spilled by material type (gal/yr.)	--	Trend Data - See Table 5.14-2 and Figure 5.14-4
4. Annual volume of material spilled by cause (gal/yr.)	--	Trend Data - See Table 5.14-1 and Figure 5.14-2
5. Annual number of reportable spills by material type, volume and cause (no./yr.)	--	Trend Data - See Table 5.14-1 and Table 5.14-2
6. Annual percent of reportable spills submitted within regulatory timelines (%/yr.)	100%	GREEN
7. Annual percent of spills completed cleaned up with no pollutant residue (%/yr.)	100%	GREEN
8. Required management plans and SOPs reviewed and updated	100%	GREEN
Program Overall Performance	All green	GREEN

5.15 Pollution Prevention (*Timothy B. Fitzgerald*)

5.15.1 Pollution Prevention Program Description

Preventing pollution is an environmental priority for Fort Polk. The emphasis on pollution prevention (P2) focuses on the following criteria:

- Meeting national, state, and military pollution prevention goals,
- Reducing long-term liabilities of waste disposal,
- Saving money by reducing Fort Polk's raw material purchases and waste treatment and disposal costs, and
- Protecting human health and the environment locally at the installation and regionally within Vernon Parish.

According to Environmental Protection Agency (EPA), P2 refers to the use of materials, processes, or practices that eliminates or reduces the quantity and toxicity of wastes at the source of generation. P2 includes practices to eliminate the discharge of hazardous or toxic chemicals to the environment and protect natural resources through conservation and improved efficiency. This also reduces the use of hazardous materials, energy, and water. The P2 program seeks to avoid waste generation, environmental releases and facilitate the management of all environmental media (i.e. air, land, and water). P2 aims to eliminate or reduce waste released to land, air, and water without simply transferring or distributing pollutants among these media.

P2 can be achieved through a hierarchy of waste management options. These options range from preventing or reducing pollution at the source (the most desirable option) to disposal (least desirable). Recycling and treatment are the other options available within the hierarchy. The Qualified Recycling Program (QRP), home of the Recycling Center, has been the workhorse in helping the P2 program achieve its recycling goals as well as inching the installation closer to its goal of Net Zero Waste by the year 2020.

P2 is a cost-effective means of meeting environmental objectives in an era when Army installations are simultaneously subject to stricter standards for pollution control, public criticism of their environmental records and declining environmental budgets. The financial costs associated with not preventing pollution not only include the obvious direct costs (i.e., waste handling, transportation, treatment, disposal, etc.) but also the not-so-obvious costs, such as training, overhead, permit fees, fines for non-compliance and long-term environmental cleanup cost.

5.15.2 Pollution Prevention Program Background

P2 and waste minimization practices reflect a commitment to continually improve the efficient utilization of resources such as materials, human resources, time and money. As stated, the critical theme of Fort Polk's P2 plan is to continually improve management practices and associated activities. The P2 plan is based on the Model Pollution Prevention Plan (February 1995), and is structured according to protocols outlined in EPA guidance manuals, *Waste Minimization Opportunity Assessment Manual* (EPA/625/7-88-003, July 1988), and *Facility Pollution Prevention Guide* (EPA/600/R-92/088). The plan was prepared in accordance with

Guidance to Hazardous Waste Generators on the Elements of a Pollution Prevention Program (Federal Register, May 28, 1993).

The P2 plan is a **living document** which is continually reviewed and updated, as needed. Reasons for P2 plan review include: attainment of set P2 goals, changes in the P2 program requirements (at different Army levels), changes in State and Federal regulations, and finally, to ensure the plan is consistent with the installation's environmental vision.

The JRTC and Fort Polk mission includes the following elements:

- Provide an advanced level of training for U.S. contingency forces under tough, realistic, combat-like forces;
- Provide trained and ready home station forces;
- Mobilize, validate, and deploy units worldwide; and
- Provide a modern installation that cares for our Soldiers, civilians, retirees and families.

It is the vision of Fort Polk to be the Army's combat training center for contingency forces by providing exceptionally realistic and relevant training to prepare units for the challenges of future operations. Fort Polk is committed to providing trained, ready, and modern units, rapidly deployable from a quality power projection platform. Additionally, Fort Polk continually works to provide a first-class, modern installation, which gives Army families a great place to work, live, and play, in partnership with local communities.

5.15.3 Program Requirements

Fort Polk's P2 plan is based on current Army guidance and complies with requirements of the Federal Pollution Prevention Act of 1990 (PPA). In addition, several regulations, executive orders, policy statements and directives dictate the scope of the P2 plan, including:

- Executive Order (EO) 12856 *Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements*,
- EO 13423 *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition*,
- *EO 13514 Federal Leadership in Environmental, Energy and Economic Performance*,
- Army Regulation 200-1 Chapter 7, *Pollution Prevention*,
- Department of Army Pamphlet 200-1 Chapter 10, *Pollution Prevention*,
- Department of Defense (DoD) Instruction 4715.4 *Pollution Prevention*,
- Louisiana Department of Environmental Quality Regulations,
- Memorandum from the Office of the Under Secretary of Defense *Subject: New DoD Pollution Prevention Measure of Merit*,
- Environmental Performance Assessment System guidelines, and
- International Standards Organization 14000.

*JRTC & Fort Polk
Environmental Management Performance Review*

Fort Polk's P2 goals are summarized in the following:

- Meet Army, Federal, State, and local pollution prevention policy goals;
- Improve the Fort Polk compliance position with respect to Federal, State and local environmental laws;
- Actively participate in and contribute to the identification, implementation, and evaluation of innovative new ideas to reduce material use and waste generation;
- Promote P2 as an integral part of the mission;
- Maintain a positive posture and leadership role in interacting with the community on common P2 issues;
- Promote recycling activities and the use of recycled materials on the installation;
- Utilize the QRP to the maximum extent possible in helping the installation realize its waste diversion and Net Zero Waste goals;
- Develop, evaluate and implement P2 practices and to characterize installation waste streams to all media;
- Provide P2 training to all military and civilian personnel;
- Systematically reduce the generation and ultimate disposal of waste to the air, ground, surface water, and groundwater; and
- Provide full support and ensure the functionality of the QRP.

In addition, an effective P2 plan accomplishes the following:

- Communicates shared P2 visions and goals;
- Communicates Fort Polk's P2 program to IMCOM, Army Staff offices, and, where appropriate, to environmental regulatory staff and the local community;
- Identifies specific P2 responsibilities among Fort Polk activities, including military, civilian, and tenant organizations;
- Serves as a reference document for environmental information related to P2;
- Delineates P2 project priorities;
- Acts as a benchmark to measure P2 progress;
- Provides P2 program consistency as personnel change; and
- Leads the way for installation recycling activities; works closely with solid waste manager to maximize diversion tonnages.

5.15.4 Pollution Prevention Significant Accomplishment (Lithium Ion Battery ReUse)

The realistic training conducted by JRTC and Fort Polk creates many unique environmental challenges that the Environmental and Natural Resources Management Division (ENRMD) staff are required to address on a daily basis. One such challenge is the management of military batteries. Military batteries consist of lithium sulfur dioxide, magnesium, mercury, nickel metal hydride, nickel cadmium, and lead-acid battery chemistries. Most of these batteries are used in the Multiple Integrated Laser Engagement Simulator, communication equipment, and Simulated Area Weapon Effect II equipment used during the JRTC rotations.

Upon exercise termination, lithium batteries can be turned in to ENRMD technicians located at the 8300 Block where they are tested for reuse or disposal. In 1997, the installation initiated a management program to test and re-issue these batteries. Batteries that pass testing are issued, free of charge, to home-based units and incoming rotational units.

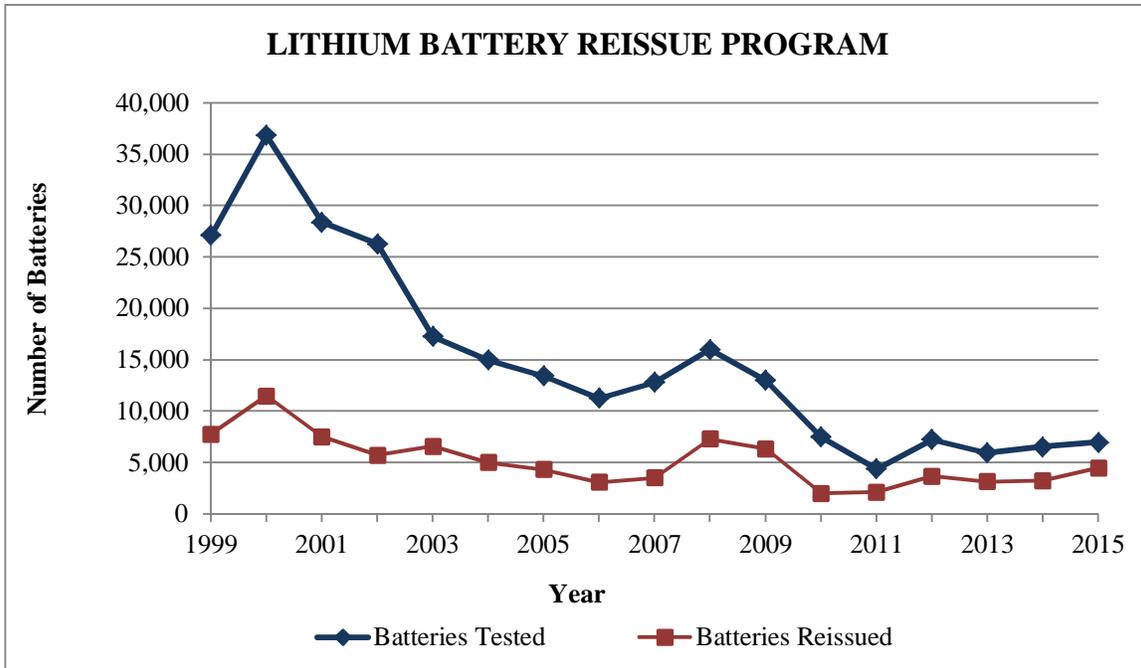
Cost avoidance in this program is realized from not having to purchase new batteries and saving the potential disposal fees associated with waste processing. The cost of new military batteries can range from \$20.97 to \$200 each, depending on the model.

The battery program has received much praise for the management of the BA-5590, a lithium sulfur dioxide battery. With the use of a State-of-Charge (SOC) tester, all BA-5590s with greater than 70% of its charge remaining are processed for re-issue. If batteries have less than 70% SOC, they are disposed of as Universal Waste in accordance with US Army Environmental Center (USAEC) and Installation Management Command (IMCOM) guidance. In 2015, ENRMD tested 6,966 batteries and re-issued 4,506 back to training units, resulting in a cost avoidance of \$573,034.06 In 2004, Fort Polk began participating in the free Rechargeable Battery Recycling Coalition (RBRC) a recycling program established to recycle small, rechargeable batteries at no cost to the government. The RBRC is a non-profit public service organization created by the rechargeable power industry and dedicated to the recycling of rechargeable batteries. RBRC provides boxes for shipping the batteries and pays the shipping costs to their recycling facility. During FY15, the HAZMART returned only 1,801 pounds of rechargeable batteries.

**TABLE 5.15-1
LITHIUM BATTERY REISSUE PROGRAM**

CALENDAR YEAR	TOTAL NUMBER TESTED	NUMBER REISSUED	% REISSUED
1999	27,123	7,777	29
2000	36,849	11,478	31
2001	28,401	7,513	26
2002	26,279	5,738	22
2003	17,292	6,606	38
2004	15,003	5,011	33
2005	13,445	4,334	32
2006	11,269	3,093	27
2007	12,824	3,544	28
2008	16,016	7,325	46
2009	13,015	6,358	48
2010	7,492	2,012	27
2011	4,399	2,131	48
2012	7,251	3,691	50
2013	5,949	3,160	53
2014	6,527	3,269	50
2015	6,966	4,506	64

FIGURE 5.15-1



5.15.5 Pollution Prevention Annual Program Developments

Environmental Management System principals and metrics were adopted into the P2 program in an effort to standardize recording and reporting procedures.

5.15.6 Pollution Prevention Program Performance Indicators

Performance indicators were developed for the P2 program in conjunction with Executive Orders, Department of Defense, and Department of Army goals and objectives.

5.15.7 Pollution Prevention Program Performance Standards

Each program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the program. The following performance standards apply to the performance indicators listed above:

Pollution Prevention Program Performance	
Performance Indicators	Performance Standards
1. Annual number of processes/waste streams assessed (no./yr.)	a) GREEN: 2 or more assessments b) AMBER: 1 assessment c) RED: Zero assessments
2. Annual number of new P2 products/technologies evaluated (no./yr.)	a) GREEN: 2 or more evaluated b) AMBER: 1 evaluated c) RED: 0 evaluated
3. Annual number of recommended P2 initiatives/process changes approved for implementation (%/yr.)	a) GREEN: 2 or more approved b) AMBER: 1 approved c) RED: Zero approved
4. Management Plan reviewed and updated annually	a) GREEN: 75% of management plan reviewed and updated b) AMBER: 50% or less reviewed/updated c) RED: Less than 25% reviewed/updated
Program Overall Performance	a) GREEN: No more than one amber b) AMBER: No more than one red c) RED: More than one red

5.15.8 Pollution Prevention Program Annual Performance Review

Four performance indicators are rated GREEN resulting in overall program rating of GREEN. The specific results for each performance indicator are listed below:

Pollution Prevention Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual number of processes/waste streams assessed (no./yr.)	3	GREEN
2. Annual number of new P2 products/technologies evaluated (no./yr.)	2	GREEN
3. Annual number of recommended P2 initiatives/process changes approved for implementation	2	GREEN
4. Percentage of management plan reviewed and updated	100%	GREEN
Program Overall Performance	All green	GREEN

5.16 Recycling (*Timothy B. Fitzgerald*)

5.16.1 Recycling Program Description

The installation recycling program is currently a joint effort by the HAZMART, the Qualified Recycling Program (QRP), and installation solid waste contractors. Military Family Housing's recycling program is carried out by its own private solid waste contractor. There are ongoing efforts by the QRP to partner with housing and obtain their recyclables. The installation solid waste contractor currently recycles cardboard throughout the installation. Presently, recyclables are collected throughout the Garrison and maneuver training areas. This year culminated with a very successful effort by the QRP to collect and recycle cardboard from within the maneuver box.

The HAZMART contributes to Fort Polk's recycling and pollution prevention program by the distillation of parts cleaning solvent and used antifreeze. Once used cleaning solvent and antifreeze are processed to meet original specifications, they are distributed back to the units for reuse. The HAZMART also collects and packages used fluorescent bulbs and lithium ion batteries which are picked up by a regional recycler. Recyclable materials not collected by the HAZMART, QRP or the solid waste contractor, are taken to the Defense Logistics Agency (DLA) for processing and resale. Currently, the DLA handles the sale of used tires and motor oil.

5.16.2 Fort Polk Qualified Recycling Program (QRP)

QRPs have been authorized by the Department of Defense (DoD) for more than ten years. In 2008, the Environmental Quality Control Committee approved the implementation of Fort Polk's QRP and initial startup funds were requested through the DoD.

The DoD authorizes the QRP to enter into sales agreements and to sell recyclables directly to local vendors and retain profits from such sales for use by the installation. A QRP allows the installation to aggressively pursue recycling opportunities in the local market and maximize revenue to the installation. A QRP must be self-sufficient and sustainable. The QRP is overseen by a committee, chaired by the Garrison Commander (or his representative). The committee determines budget expenditures and the way ahead for a profitable program.

Initial startup funding was utilized to procure equipment which would allow the QRP to process, De-Mil, and sell small arms caliber brass shell casings. An Ordnance Deformer and Safety Certification Unit were purchased and delivered in December of 2008. The Safety Certification unit heats spent casings to over 800 degrees Fahrenheit expending any remaining propellant or residue. The deformer then mutilates casings to the point where they can no longer be utilized for their intended purpose. Brass processing operations commenced in June 2009 and since inception has processed over 447 tons of casings returning over \$1,778,000 to the JRTC and Fort Polk.

The QRP continues to function as the workhorse for the installation and its realization of Net Zero Waste. The QRP work force is contract operated and consists of four employees and self-procured equipment. The program currently accepts, processes, and sells ten commodities to various vendors throughout the United States.

List of processed recyclables includes the following:

White Office Paper
Mixed Paper
Cardboard
Used Motor Oil / Used Cooking Oil
Lead Acid Batteries
Scrap Metal
Spent Brass Casings
#1 PETE Clear Plastic Bottles
Aluminum Cans
Ink / Toner Cartridges

In an attempt to expand the recycling possibilities for everyone, the QRP operates a one of a kind drive-through recycling bay. The drive-through bay is open to anyone on the installation, including military family housing. This convenient drop off allows participants to pull into a bay where their recyclables will be removed from their vehicle and processed by the QRP technicians. In FY14, a 24-Hour drop point was initiated and installed to offer convenient recycling opportunities after the QRP's regular business hours.

All profits obtained from direct sales are returned back to the installation QRP account. Operational expenses are first covered and the committee approves or disapproves additional projects in accordance with 10 U.S.C 2577 and DoDI 4715.4

In FY13, an incentive program known as "Riche\$ from Recycling" was established by the QRP committee. \$11,500 was divided among the top five Major Subordinate Commands, IAW their level of participation in the paper recycling program. The awards program continues to be funded at \$11,500 per year.

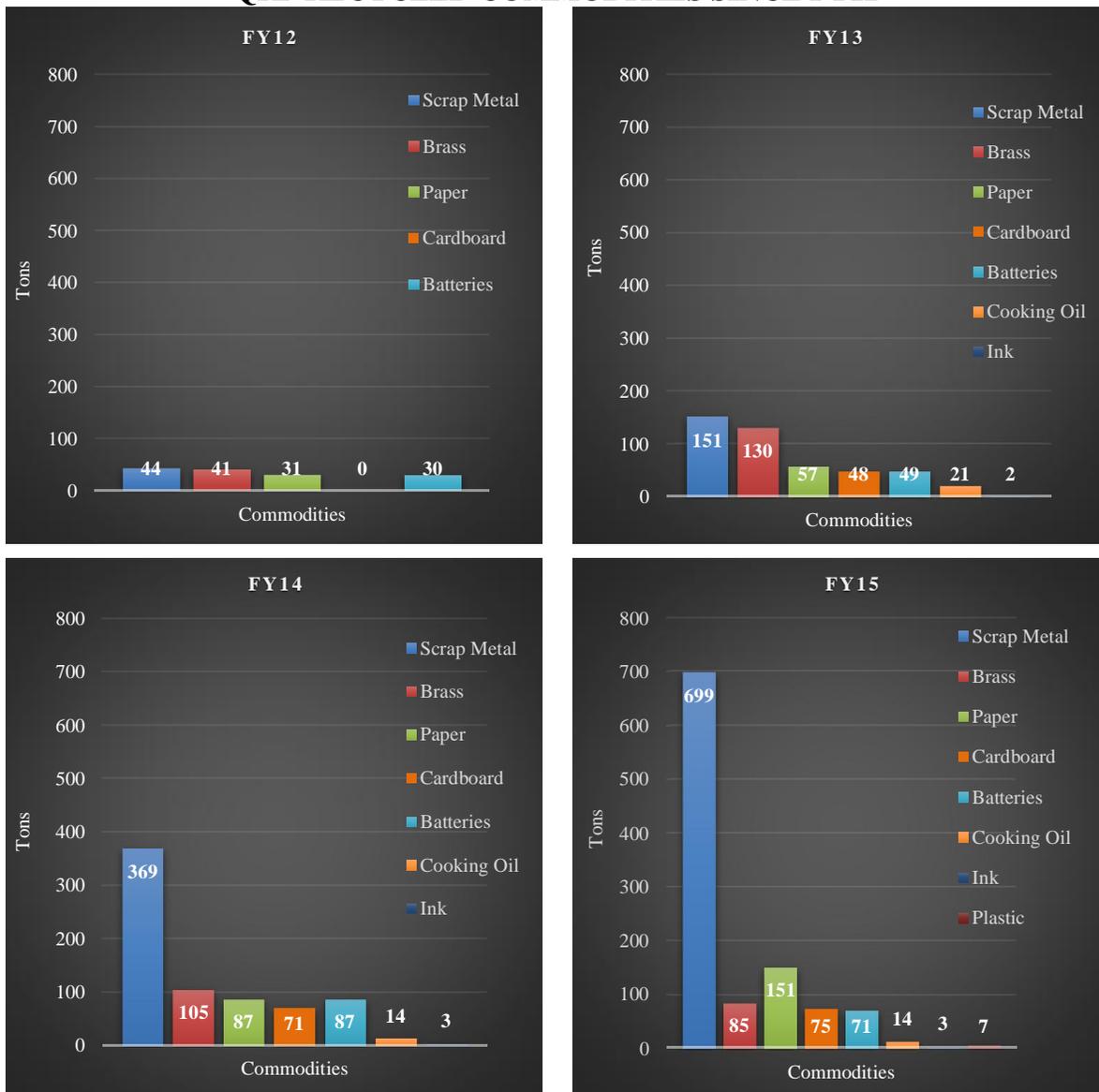
5.16.3 Recycling Program Requirements

Paper, Cardboard, and Metals Recycling

Currently, the QRP accepts and processes all types of paper products, primarily those which would normally be generated within an office environment. These include: copy paper (both white and colored), newspaper, periodicals, flyers, advertisements, military manuals and magazines. The DPW has continued to fund a contractor to travel throughout the installation and pick up paper products at established collection points and transport to the QRP for processing. This greatly reduced the amount of paper products entering our waste stream for landfill disposal. In addition, an aggressive campaign to remove and process cardboard from the waste stream of rotational training units has become a priority and has been very successful, averaging four tons of cardboard recycling per rotation. The QRP has purchased six cardboard collection containers to be distributed throughout the maneuver box in an effort to enhance collection opportunities. Since inception, more than eight tons of cardboard has been processed.

The recycling of scrap metal has grown exponentially in the past two years. Scrap metal is turned in to the QRP from military and civilian entities throughout the installation. The scrap metal is then sold to a vendor at current market prices.

FIGURE 5.16-1
QRP RECYCLED COMMODITIES SINCE FY12



Used Oil Recycling (Robin C. Peek)

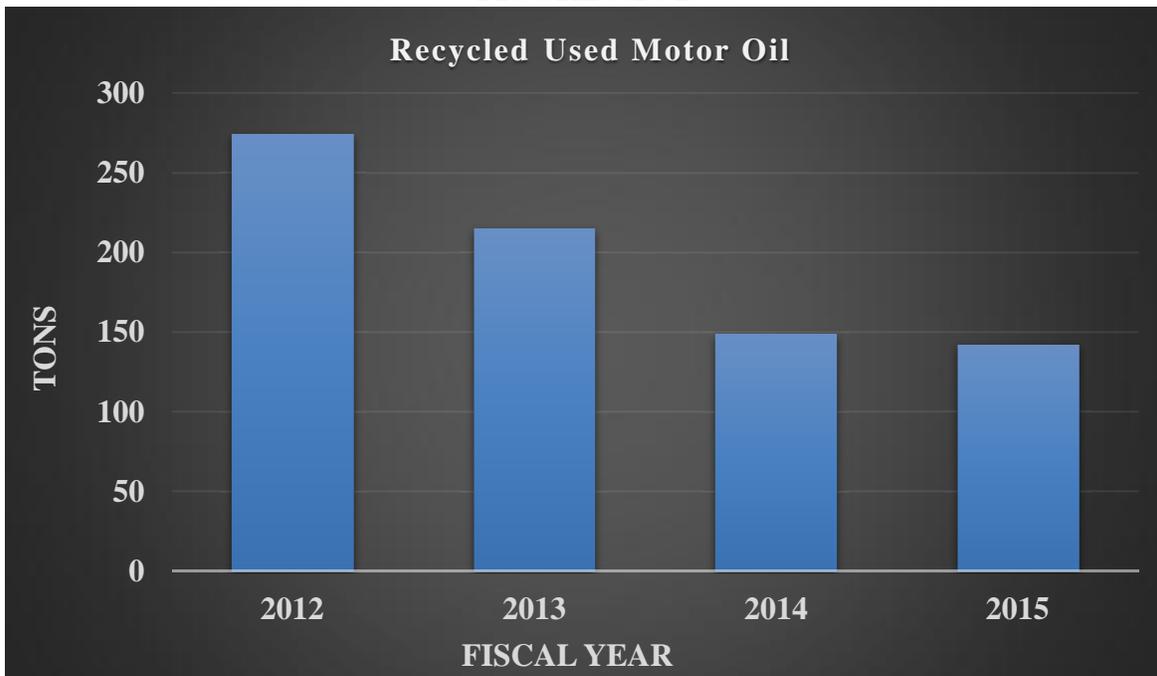
Used oil is considered a non-hazardous solid waste unless it has concentrations of toxic constituents that make it a hazardous waste. Fort Polk has numerous motor pools, maintenance facilities, and other industrial operations on the installation that generate used oil. Most of these facilities have receptacles for used oil collection.

When containers are full, ENRMD will pick up and transfers the oil to large storage tanks for storage. When the storage tanks are nearing full capacity, samples are collected and tested for water content, polychlorinated biphenyls, heavy metals, halogenated organic compounds, and flash point. If the oil meets applicable standards, DRMO assists the Army by contracting a buyer that will recycle the oil.

Due to the training center mission and the addition of 4,000 - 8,000 troops monthly, the installation generates far more used oil than new oil procured, eliminating the advantage of a closed-loop contract. Using the sales services of DLA, the installation successfully marketed 142 tons of used oil in FY15.

Used oil generation and recycling on the installation fluctuates slightly from year to year due to rotational units and unit OPTEMPO.

FIGURE 5.16-2



5.16.4 Annual Recycling Program Developments

The QRP continues to grow and fine tune its processes every year. Waste stream analysis coupled with market research enable the program to operate at peak efficiency. The QRP serves as an instrumental tool for the Command to realize recycling mandates imposed by both Executive Order as well as DoDI. The QRP has grown exponentially since 2009 when it only

processed three commodities and earned \$35,000. Today, there are 11 commodities processed with an average annual income of \$450,000.

5.16.5 Recycling Program Performance Indicators

Performance indicators were developed to track monitor recycling efforts. These indicators align with and fall under the realm of Solid Waste and are set forth by Executive Orders as well as the Department of (DoD). A goal of 50% of the total non-hazardous waste generated should be recycled to receive a green rating.

5.16.6 Recycling Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the program. The following performance standards apply to the performance indicators listed above:

Recycling Program Performance	
Performance Indicators	Performance Standards
1. Total quantity of non-hazardous solid waste generated (tons/yr.)	Trend Data
2. Annual quantity of non-hazardous solid waste recycled by material type (tons/yr.)	Trend Data
3. Annual percent of non-hazardous solid waste recycled (%/yr.)	a) GREEN: 50% or more b) AMBER: 49% - 45% c) RED: 44% or less
Program Overall Performance	a) GREEN: All green b) AMBER: Any amber but no red c) RED: Any red

5.16.7 Recycling Program Annual Performance Review

The program evaluation for 2015 is GREEN.

Recycling Program Performance		
Indicators	2015 Performance	Evaluation
1. Total quantity of non-hazardous solid waste generated (tons/yr.)	17,145 tons	Trend Data - See Table 5.16-1 and Figure 5.16-1
2. Annual quantity of non-hazardous solid waste recycled by material type (tons/yr.)	10,068 tons	Trend Data - See Table 5.16-1 and Figure 5.16-1
3. Annual percent of non-hazardous solid waste recycled (%/yr.)	59%	GREEN
Program Overall Performance	All green	GREEN

5.17 Noise (*Thomas G. Duck*)

5.17.1 Noise Program Description

One of the goals of the Department of the Army (DA) is to plan, initiate, and carry out actions and programs designed to minimize adverse impacts upon the quality of the human environment without impairing the Army's mission. Primary strategies for protecting the mission of military installations from the problems of noise incompatibility are long-range land use planning and being a responsible neighbor to surrounding communities. Fort Polk has developed and implemented an Installation Operational Noise Management Plan to address these issues in a proactive manner.

Military installations are, by nature, sources of noise and the Army can receive complaints from the general public regarding military noise. Fort Polk is sensitive to the general public's concerns regarding noise. Fort Polk's Noise Program includes a network of noise monitors located in the Limited Use Area (LUA) and along the northern and eastern boundary of Peason Ridge. In 2013, a new monitor was added to a local residence near the north entrance of Peason Ridge as a result of a 2013 noise complaint. The noise program generally consists of the following:

- Management of archived and current noise data – Historical and current data are maintained and reported.
- Management of training noise – Training data and noise data specifically monitored at the Digital Multipurpose Battle Area Course (DMPBAC) through data at Monitor 13.
- Management of Peak Noise Data – Ongoing objective of the program to analyze peak noises and determine the source of these noises.
- Conceptual Noise Modeling with Range Fire Data – Noise data is obtained from Fort Polk Range Control and reported with data obtained from the monitoring network.

5.17.2 Noise Program Background

The general public has historically filed complaints for excessive noise from military activities conducted on both Fort Polk and Peason Ridge. Activities generating noise complaints include small unit training activities, small arms ranges, large ordnance (i.e. armor and artillery), and aviation activities. The likelihood of a particular activity generating a complaint due to noise depends on a variety of characteristics of the noise including its sound level, frequency of occurrence, time pattern, abruptness of onset or cessation, and the presence of background noise.

In September 1993, the Fort Polk Public Affairs Office (PAO) began handling noise complaints for the installation. The PAO is available to receive complaints by telephone, in person at their office, or by e-mail. Complaints can be received 24 hours a day by answering machine or e-mail. Upon receipt of a complaint, a Civilian Complaint Report is completed. A representative of the PAO follows up each complaint by attempting to make personal contact with the person reporting a complaint to reach a resolution within 24 hours of receipt. In instances where physical damage from noise has occurred to property, the Army has compensated the individual for these specific damages.

***JRTC & Fort Polk
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The greatest number of public complaints regarding noise occurred in 1994, the first full year after the JRTC moved to Fort Polk, when there were 43 helicopter complaints and 17 aircraft complaints. From FY94 through FY08, helicopters have contributed to 50% of the total noise complaints and other types of aircraft have contributed to 35%. The most common complaints involving helicopters and aircraft are attributed to low flying and hovering. In addition to disturbing people, historic complaints have been filed claiming disturbance of livestock and the shaking of pictures off of walls. Various types of ordnance are other common sources of noise complaints and only account for 15% of all complaints.

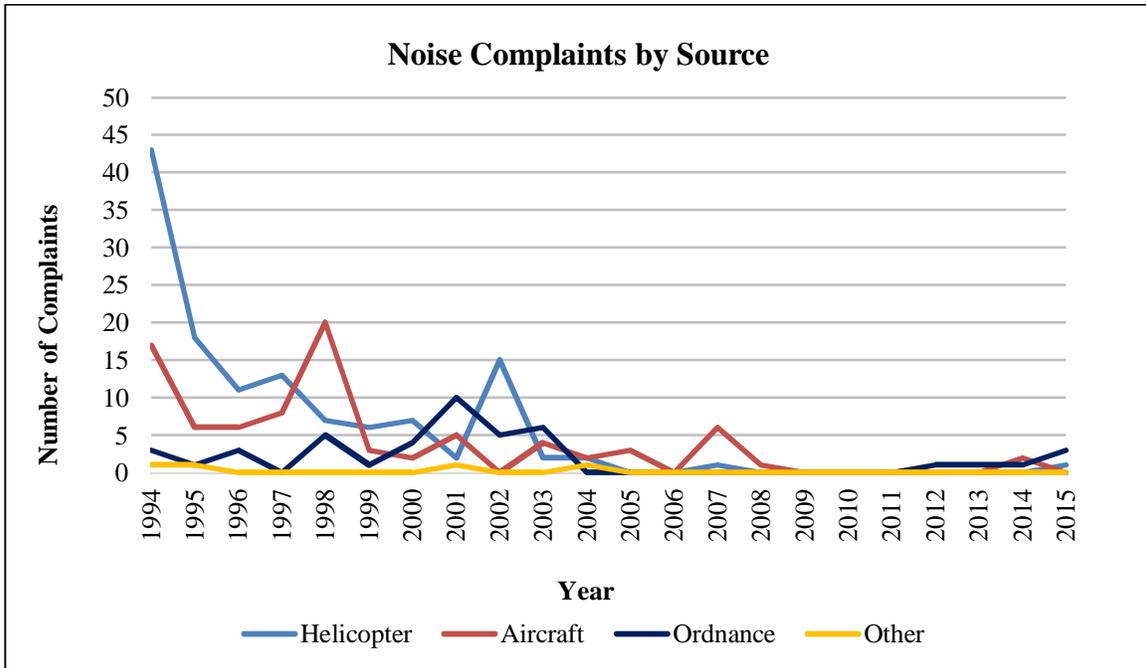
Since 1994, the number of noise complaints has drastically declined due to management of sensitive activities and a change in JRTC training. In 1998, however, fourteen noise complaints were filed within an hour when Air Force jets created “sonic booms” near the town of DeRidder; and in 2001, there were 10 noise complaints for ordnance when 200 pound charge weights were used. To minimize noise complaints, Fort Polk has responded by making adjustments in the flight paths of both helicopters and fixed-wing aircraft and reducing detonation charge weights to reduce noise.

Historically, a significant portion of Fort Polk’s noise complaints have been associated with military aircraft operations. In a proactive effort to identify expected aircraft noise levels in the area near the DMPBAC range, Fort Polk conducted a series of field monitoring and noise data collection events in mid-2006. Portable noise monitors were positioned at five locations along the eastern side Louisiana Highway 117 in a linear arrangement and synchronized for real time data collection. The equipment was aligned perpendicular to the predominant flight path of aircraft entering the DMPBAC range. Results of the field data collection indicated an average equivalent sound level (LEQ) of 70 dB for 15 seconds for the OH-58 Kiowa and UH-60 Black Hawk helicopters, and 80 dB for 25 seconds for the F-16 Falcon. Although not conclusive, these data represent a snapshot in time of aircraft noise levels based field conditions during the monitoring event.

**TABLE 5.17-1
ANNUAL NOISE COMPLAINT DATA**

FISCAL YEAR	TOTAL COMPLAINTS	HELICOPTER	AIRCRAFT	ORDNANCE	OTHER
1994	64	43	17	3	1
1995	26	18	6	1	1
1996	20	11	6	3	0
1997	21	13	8	0	0
1998	32	7	20	5	0
1999	10	6	3	1	0
2000	13	7	2	4	0
2001	18	2	5	10	1
2002	20	15	0	5	0
2003	12	2	4	6	0
2004	5	2	2	0	1
2005	3	0	3	0	0
2006	0	0	0	0	0
2007	7	1	6	0	0
2008	1	0	1	0	0
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	1	0	0	1	0
2013	1	0	0	1	0
2014	3	0	2	1	0
2015	4	1	0	3	0

FIGURE 5.17-1



5.17.3 Noise Program Requirements

Information is continuously being collected through the use of seven noise monitors located south and east of the LUA impact area and six monitors located around the Peason Ridge area. Prior to the noise monitors being upgraded to new state of art monitors in 2012, it was a problem to identify the source of noise events caused by training activities. There was no good way to tell what actually caused high noise levels at the noise monitors. A hunter firing a shotgun, a vehicle backfiring, or lightning would all trigger noise events on the noise monitors. The noise level could be readily identified. But, the source of the noise could not be definitively identified. The new noise monitors installed in 2012 have the capability to record a sound clip of the noise that caused the noise event. The noise manager can play back the sound clips of the noise events and identify the cause of the noise event.

5.17.4 Noise Annual Program Developments

The range noise monitoring stations have been updated with new state of the art noise meters with increased capabilities in 2012. The new meters have automatic GPS time correction that ensures the accuracy of the meter's internal clock. The new noise meters also have the capability of making audio recordings of noise events. The recordings include four seconds of sound prior to the noise event and up to ten seconds of noise after the onset of the noise exceedance. These sound clips can be played back to determine the source of the noise. The old meters were calibrated manually once per month. The new meters have built in daily automatic calibration.

The old meters have a history of losing as much as twenty percent of the noise data each month due to loss of telephone service and/or electric service and limited internal memory. The remote locations of the meters have poor telephone and power service with frequent power failures and loss of phone service during times of rain. It would take over a week to have service restored. The old meters internal memory stored less than one day of data. Therefore, any loss of telephone service or power of more than a few hours resulted in loss of data. The new meters have internal memory that can store several weeks of sound data without loss of data. External memory modules have been purchased that allow over a month of data storage without loss of data. The noise monitoring stations have been upgraded with the addition of solar panels and battery backup to minimize data loss due to power interruptions. The noise monitor uptime has been increased to over 90 percent with the new monitors and solar panels. There were three noise monitors that lost data in 2015 due to memory chip failure in the noise monitors. This is being monitored to determine if internal meter memory chips need to be replaced on a set schedule to prevent excessive loss of data.

There were no noise complaints in FY06. In FY07, seven noise complaints registered at Fort Polk were associated with one training event which occurred in June 2007. There was only one noise complaint filed in FY08 and it was associated with fixed wing aircraft northeast of Fort Polk. Fort Polk's PAO investigated and addressed all complaints regarding noise for each of these events in FY07 and FY08. There were no noise complaints in FY09, FY10 or F11.

There was one noise complaint in January 2012. The noise event that generated this complaint was caused by the dropping of a 500 pound MK-82 bomb at Peason Ridge during an atmospheric inversion. Atmospheric inversions tend to amplify noise levels at ground level by reflecting the noise back to the ground. This event occurred 18 January 2012.

There was one noise complaint in January 2013. The noise event that generated this complaint was caused by the dropping of a 500 pound MK-82 bomb at Peason Ridge during an atmospheric inversion. Atmospheric inversions tend to amplify noise levels at ground level by reflecting the noise back to the ground. This event occurred 17 January 2013. July 2013, two noise monitor stations in the LUA were struck by lightning. Several months of data were lost due to funding issues delaying repairs of these monitors.

2014 was a busy year for the noise program repairs. Noise monitor #2, located in the LUA, was hit by lightning two times this year. This noise monitoring station was moved to a new location in an effort to reduce the likelihood of future lightning strikes. There have been no lightning strikes of this monitor since the move. There were a total of three noise complaints in 2014. All three noise complaints were related to United States Air Force training activities. Two complaints were caused by low flying jets flying close to nearby communities. The third complaint was due to the dropping of 500 pound MK-82 bombs. The United States Army Installation Command conducted an environmental audit of Fort Polk's environmental activities, including the noise program, in 2014. The Fort Polk noise program is the first Noise Program ever to receive a "Positive Audit Comment" from an environmental audit. The positive audit comment was received because of the proactive actions taken to minimize training noise impacts, positive relationship with local citizens, and efficient noise program operations.

Over the last several years, the training scenarios for the training rotations have been changing away from assaulting villages to a more conventional force-on-force (one Army attacking another Army) scenario. The force-on-force scenarios typically have a greater amount of air support, strafing, and bomb drops. This increase in air support is generating an increased number of noise complaints. There were four noise complaints in 2015. January 15, 2015 there was one complaint about excessive artillery activity. January 26, 2015 a citizen located in Woodworth, LA called to complain about low flying helicopters flying over his house. May 19, 2015 there were two complaints related to excessive noise generated from dropping of 500 pound MK-82 bombs at the Peason Ridge training area.

5.17.5 Noise Program Performance Indicators

Program performance indicators deal primarily with the number of noise complaints and the noise meter operational status. The noise program has the following two performance indicators:

1. Annual number of noise complaints by cause (no./yr.),
2. Annual average percent of time the noise meters were operational by area (Peason and LUA).

5.17.6 Noise Program Performance Standards

The installation has developed a performance standard for each of the performance indicators. Each Noise Program performance indicator is evaluated based on a Red, Amber, or Green performance standard, or the performance indicator provides program trend data. Trend data is used to show progress of a specific aspect of the Noise:

Noise Program Performance	
Performance Indicators	Performance Standards
1. Annual number of noise complaints by cause (no./yr.)	a) GREEN: 0 - 1 complaints b) AMBER: 2 - 4 complaints c) RED: 5 or more complaints
2. Annual average percent of time the noise meters were operational by area (Peason and LUA)	a) GREEN: Both LUA and Peason averaged 80% or more time for noise meter operation b) AMBER: Either LUA or Peason averaged less than 80% time of noise meter operating time c) RED: Both LUA and Peason noise meters averaged less than 80% operating time
Program Overall Performance determined by combining 1 and 2 above	a) GREEN: All green b) AMBER: One green and one amber, or all amber c) RED: Any red

5.17.7 Noise Program Annual Performance Review

The Noise Program evaluation for 2015 is AMBER. The performance indicator for complaints is amber and the performance indicator for uptime is green. This results in an overall program performance rating of AMBER. The specific results for each performance indicator are listed below:

Noise Program Performance		
Indicators	2015 Performance	Evaluation
1. Annual number of noise complaints by cause (no./yr.)	1 helicopter complaint 1 artillery complaint 2 bomb complaints	AMBER
2. Annual percent of time the noise meters were operational	The noise meter operational uptime percentage for the meters in the LUA and Peason were greater than 90%	GREEN
Program Overall Performance	One green and one amber	AMBER

5.18 Grey Water (Robin C. Peek)

Wastewater generated from field kitchens, field laundry operations and showers during military training exercises is known as grey water. JRTC Rotational Training Units (RTU's) and home station units both conduct field operations which generate grey water.

Presently, there are ten underground grey water holding tanks ranging from 1,000 gallons to 10,000 gallons located at various Forward Observation Bases (FOB's). In addition to these grey water holding tanks, RTU's often request additional storage capacity. When additional storage capacity is requested, blivits ranging 1,000 gallons to 3,000 gallons in size are temporarily placed in the FOB or other field sites designated by the RTU's.

Grey water support (collection) is the responsibility of the DPW/Environmental office and is accomplished using 4,000 gallon vacuum trucks running 24/7 operations. The duration and type of home station unit training varies depending on unit needs. Regular JRTC rotations last approximately 28 days, with an average grey water pickup of 10,000 to 25,000 gallons per day.

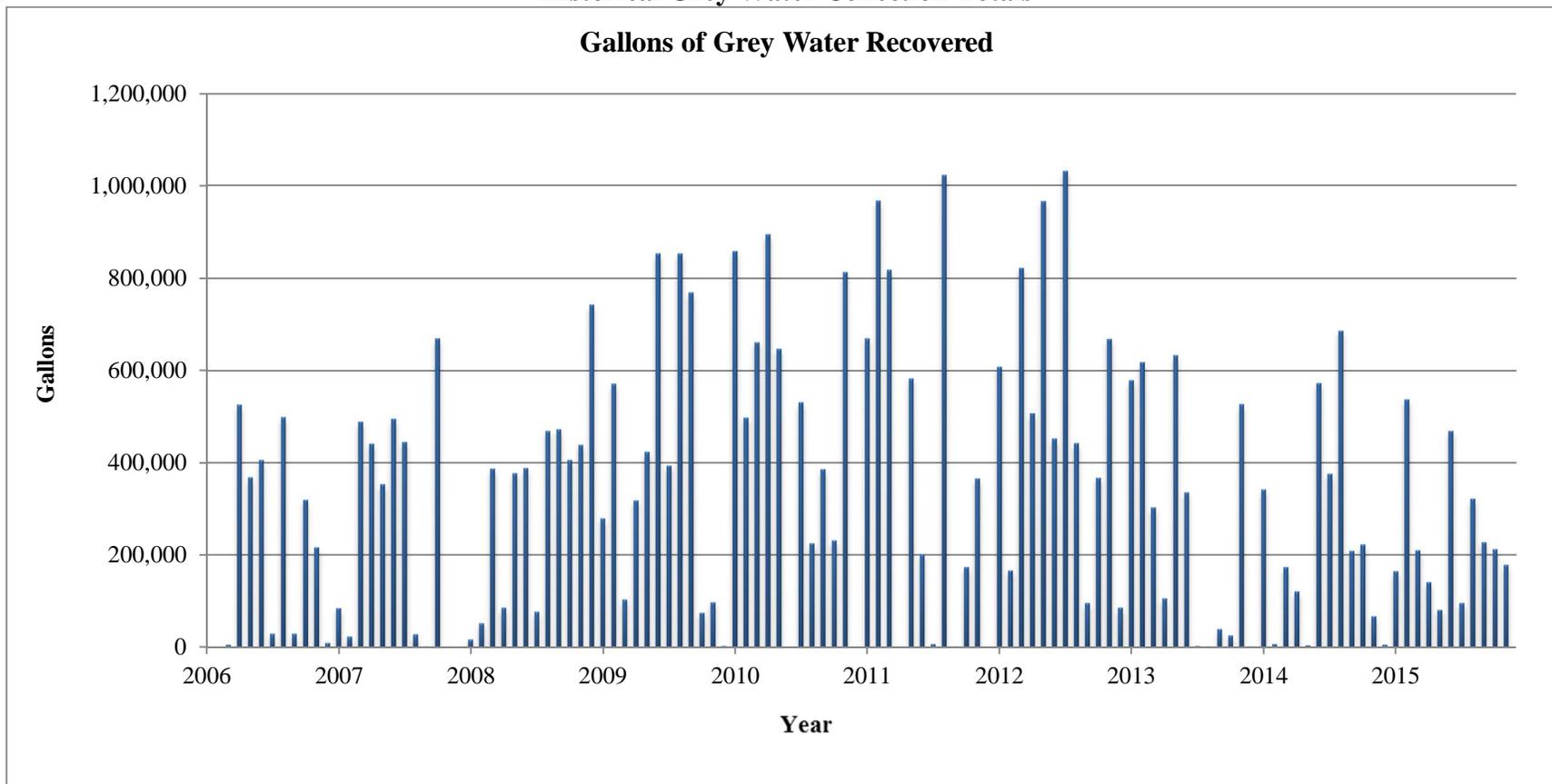
If a unit wishes to construct their own grey water pits for training purposes, they must first coordinate with G3/Range Control and the pits must be constructed IAW dimensions outlined in FM 21-10. In addition, grey water pits cannot be located within 50 meters of water, wetlands, or within the buffer area of a Red Cockaded Woodpecker colony.

Table 5.18-1 documents the monthly quantities of grey water collected in CY 2015. Figure 5.18-1 summarizes the grey water collection quantities from CY 2006 - 2015.

**TABLE 5.18-1
2015 Grey Water Collection**

2015	Gallons of Grey Water Collected
January	164,150
February	538,200
March	209,450
April	140,700
May	81,150
June	468,650
July	96,300
August	321,300
September	227,800
October	212,215
November	178,100
December	0

**FIGURE 5.18-1
Historical Grey Water Collection Totals**



SUMMARY

Fort Polk embraces sustainability as the guiding principle for conducting its mission operations. A sustainable Fort Polk simultaneously meets current and future mission requirements, safeguards human health, improves quality of life, and enhances the natural environment. Sustainability takes a holistic “systems view” of issues to develop solutions.

This publication presents a compilation of data which documents the installation’s environmental programs’ performance and provides a single environmental reference resource. In some cases, these data verify the success of various installation programs, and in others identify potential areas for improvement. Listed below are the significant events which, viewed in conjunction with data from this publication, provide an overview of Fort Polk’s environmental posture.

Compliance Management Branch

- During 2015, the sustainability program at Fort Polk primarily focused on the elimination of waste. This included finding ways to support purchasing of sustainable products and services, reuse of materials that are still serviceable, and recycling of materials that have reached the end of their life cycle. A vigorous outreach campaign was implemented to educate everyone on the installation in the value of recycling and the procedures for recycling on the installation.
- The hazardous waste program at the JRTC and Fort Polk is a model program for the Army due to the combined efforts of the environmental training program, the environmental customer service program, the ties to the HAZMART, exceptional performance by unit ECOs, and the excellent program management of the staff. This statement is based on the results of an onsite, detailed, unannounced, three day hazardous waste inspection conducted in March of 2012 by representatives from the Environmental Protection Agency (EPA). No deficiencies in any area were noted. Based on the excellent results of the inspection, Mr. Tidmore, Chief Compliance Enforcement Section EPA Region 6, wrote the following to the environmental office in August 2012; "The hazardous waste program at Fort Polk, including the recycling, universal waste and waste minimization programs, is an example of what the Resource Conservation and Recovery Act (RCRA) is intended to foster. My staff has shared your program as a model for other federal facilities during our conference this year and hope that they will follow the fine example set by Fort Polk."
- The Installation Restoration Program (IRP) is a program used to identify, investigate, and clean up land contaminated by hazardous substances. The IRP also includes the Military Munitions Response Program (MMRP), which addresses munitions response activities at former training ranges on Fort Polk. The program’s focus is on the assessment of sites which may endanger either human health or the environment. The IRP conducts site investigations to determine the degree of risk at each site. It then determines the proper response action to be taken, procures funding for the cleanup and manages the actual remediation at those sites that pose unacceptable risks. Fort Polk currently has two old AAFES fueling sites and three landfills which require Cap maintenance and ground water/soil monitoring. The Restoration Program also has three

MMRP sites that are in the process of clean up and closure. Two sites have been recommended for a surface clearance and one site requires no further action due to no risk to human health or the environment. A feasibility study was completed for three MMRP sites and approved by LDEQ. Fort Polk has seven 1941 fuel storage sites which were investigated. The site investigation for five sites was completed in CY14, and approved by Louisiana Department of Environmental Quality (LDEQ). Five of these sites are currently in the Remedial Investigation phase to delineate the extent of contamination. The remaining two sites are currently in the Remedial Action phase, as they were identified in a previous study, are in the implementation phase of the selected technologies which will reduce the extent of contamination to acceptable risk levels. Site Investigation Reports were approved by LDEQ for six sites that were former WWII fuel distribution systems. In 2014, Fort Polk demolished a 1941 digester located at the North Fort Waste Water Treatment Plant. This site closure was approved by LDEQ. In 2015, a feasibility study for building 3401 was approved by LDEQ.

- In FY15, the installation was required to divert 50% of its Municipal Solid Waste (MSW) and 60% of its Construction and Debris (C&D) waste from all landfills. This goal was met, with 50% of MSW being diverted and 68.2% of C&D diverted, for an overall diversion rate of 58.7%.
- Fort Polk's Indoor Air Quality team is an integral part of the total solution for better quality of life for Soldiers and civilians on the installation. The program encompasses all aspects of mold management such as repetitive inspections of high risk facilities, detailed sampling and analysis of suspect areas, and remediation of mold-impacted facilities. Overall, the program provides a needed link between the facility managers and the people who live, work and play here on the installation.
- In 2013, one new noise monitoring station was installed in response to a noise complaint generated due to the dropping of a MK-82 bomb at Peason Ridge on 17 January 2013 during an atmospheric inversion. A repeat of this exceedance occurred on 18 January 2014 and again on 19 May 2015. The U.S. Air Force has begun to monitor daily meteorological conditions for the presence of atmospheric inversions before proceeding with bomb drops. These changes by the Army and Air Force demonstrate commitment to minimize noise impacts due to training activities. The new monitors have internal memory that can store several weeks of sound data without loss of data. External memory modules have been purchased for each noise monitor that allow over a month of data storage without loss of data. However, there has been some failure with the internal memory of the noise meters. This is being monitored to determine if remedial action is needed. The noise monitoring stations have also been upgraded with the addition of solar panels and battery backup to eliminate data loss due to power interruptions.

Conservation Branch

- The Fort Polk Army Compatible Use Buffer (ACUB) proposal was approved by the Assistant Chief of Staff for Installation Management in June 2006. The installation's ACUB proposal directly protects training capabilities at Fort Polk by protecting lands with high densities of Louisiana Pine Snake (LPS) and securing perpetual easements or fee title for management of Red-Cockaded Woodpecker (RCW) habitat on lands in or

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adjacent to the Polk/Vernon recovery population for that species. Fort Polk partnered with The Nature Conservancy (TNC) to implement the proposal. In 2015, 233 acres, in one tract, were secured by TNC bringing the total from 2011 – 2015 to 1,554.6 acres in five tracts. All of this property is embedded in the Limited Use Area of the Kistachie National Forest.

- The LPS is a candidate species of concern. The United States Fish and Wildlife Service (USFWS) will be reviewing the species to determine if listing is warranted under the Endangered Species Act during FY16. A Candidate Conservation Agreement (CCA) for the species was signed in 2003 with Fort Polk as one of the signatory agencies. Revisions to this CCA were completed in 2013 with Fort Polk signing the revised agreement. This agreement sets forth management activities within designated habitats on Fort Polk. This CCA is included in the Integrated Natural Resources Management Plan (INRMP). The CCA combined with the ACUB initiatives for the LPS provide the ground work for management of this species and conservation of the species regardless of its listing status. In 2015, the installation initiated formal conferencing on the species. The intent, should the species be listed, is to have the natural resource management activities and training requirements covered by authorized “take” prior to the listing. The Biological Evaluation (BE) was completed and consultation started during 2015. The USFWS rendering of the Conference Opinion (CO) is expected in Early 2016. If the species is listed, the CO can be quickly converted to a Biological Opinion so that training and management activities are not hampered by the listing.
- The Fort Polk Land Purchase Program was initiated after the completion of an Environmental Impact Statement (EIS) and issuance of a Record of Decision (ROD) in 2010. In 2011, the Fort Worth District Corps of Engineers (COE) began working with landowners who owned substantial acreage of commercial forest land adjacent to Peason Ridge. In 2015, the last of these large land owners sold their property and the Corps also closed a number of small inholdings. The available funding will result in the acquisition of approximately 45,000 acers of the 100,000 acres that were authorized. With the exception of the training infrastructure, the proposal includes the conversion of these new training lands back to the natural ecosystems that were present before the landscape was developed. These 45,000 acers will result in 50 percent increase in the fee owned land managed under the Fort Polk INRMP. Training and Timber management activities have begun on the approximately 20,000 acres of land west of state highway 117 due to the completion phase one cultural resources surveys and marking of the potentially eligible sites discovered during the surveys. The phase one surveys on the east side of highway 117 were begun. From a training perspective the first JRTC rotational usage of the new property instated during several rotations. From a natural resource perspective, in February the first long leaf pine were planted back onto this new land and later in the year, the first prescribed fire in over two decades was administered.
- On 12-13 May 2011, representatives from the Department of Defense, Office of the Secretary of Defense; Department of the Army; Installation Management Command, Southeast Region; JRTC and Fort Polk; USDA Forest Service; Kisatchie National Forest; Natural Resources Conservation Service; USFWS; The Nature Conservancy; and

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Texas-Louisiana Longleaf Taskforce (collectively hereafter Cooperating Agencies) met in Leesville, Louisiana to:

- Identify mutual conservation and ecosystem management interests in the vicinity of Fort Polk and Peason Ridge Army-owned lands as well as adjacent and other nearby Kisatchie National Forest lands where current federally managed properties could be used as a “reserve” from which to expand ecosystem conservation;
- Develop goals to expand ecosystem management beyond federally managed lands in the vicinity of Fort Polk training lands;
- Identify potential strategies and tools available to each Cooperating Agency for achieving ecosystem management goals identified in two above; and
- Develop a preliminary action plan to achieve those goals.

In 2012, the efforts from this initial push resulted in the formation of the West-Central Louisiana Ecosystem Partnership with Fort Polk signing as a partner. The Partnership was successful in competing for \$350,000 of grant money for Longleaf Pine restoration efforts in the six parish project area. Some of these funds have been utilized by The Nature Conservancy (TNC) to initiate land management activities on ACUB properties. In 2014, the partnership competed for another grant for over \$300,000 with the grant holder being the National Wild Turkey Federation (NWTF) rather than TNC. Subsequently NWTF ordered the longleaf pine seedlings that will be planted in early 2016 for the installation. These plantings will occur on the originally owned DOD properties as well as the new newly acquired properties mentioned above.

Natural Resources Management Branch

- There are currently 172 trees on the Fort Polk Big Tree Registry with six national champions (Large Gallberry, Bluejack Oak, Littlehip Hawthorne, Roughleaf Dogwood, Dwarf Pawpaw, and Baygall Waxmyrtle) and sixty state champions.
- Coordination has continued with staff specialists from Conservation and Compliance Branches to analyze management recommendations and to capture diversity within the compartment forest prescriptions. Management recommendations are discussed and resolutions made during the initial prescription meeting. G3 training also has an opportunity to review and make recommendations to benefit training. In the end, the compartment forest prescription is a truly integrated natural resources management plan giving direction to ecosystem management and biodiversity principles while supporting military training.

INFORMATION, DATA SOURCES, AND REFERENCES

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 - Utility Details, 1989 - 2015, on file at Directorate of Public Works, Business Operations and Integration Division, Fort Polk, LA.
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14. Timber Harvest
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15. Fire Management
- Fort Polk Forestry Data Manager Database at Directorate of Public Works, ENRMD, Natural Resources Management Branch, Fort Polk, LA.

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- Wildfire Reports, 1993 - 2015, on file at Directorate of Public Works, ENRMD, Natural Resources Management Branch, Fort Polk, LA.

17. Wastewater

- Fort Polk Water and Wastewater Utility Monthly Operations Summary Report October 2013 - September 2015, on file at Directorate of Public Works, Fort Polk, LA.

18. Storm Water

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