

Annual Report – Calendar Year 2016
Kentucky Wetland and Stream Fee-In-Lieu-Of Mitigation Program

In Accordance with
“Modification Number One of the Agreement Concerning In-Lieu Mitigation Fees
between the U.S. Army Corp of Engineers and
the Kentucky Department of Fish and Wildlife Resources”
LRL-2010-325
LRN-2011-00709
MVN-2011-521

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Introduction

This report provides information on the Kentucky Wetland and Stream Mitigation “Fee In-Lieu of” (FILO) Program administered out of the Kentucky Department of Fish and Wildlife Resources (KDFWR) for the calendar year 2016 (CY16). This is the fifth annual report under the modified agreement (Instrument) between the U.S. Army USACE of Engineers (USACE) and KDFWR (USACE, 2011). The report includes summary information, program, credit, financial and project status, staffing, and activities performed during CY16 to fulfill the reporting requirements of the Instrument. The report includes program activities in the Louisville, Nashville, and Memphis USACE district offices. Throughout this report, the point (January 2012) at which the FILO program began operating under the Instrument is referred to as the “Transition.”

In July 2000, the Kentucky Legislature passed KRS 150.255, which established The Kentucky Wetland and Stream Mitigation Fund. The KDFWR Wetland and Stream Mitigation Program manages this fund to provide a consistent and successful approach to fulfill compensatory mitigation requirements associated with Clean Water Act Section 404 and Section 401, which are administered respectively by the USACE and the Kentucky Division of Water (KDOW). A Section 404 permit from the USACE and a Section 401 Water Quality Certification from KDOW are required for activities resulting in the permanent loss of streams or wetlands that require mitigation. The intent of the mitigation is to compensate for the permanent loss of aquatic functions within a defined watershed or regional area.

One option for 404 permit applicants to satisfy compensatory mitigation requirements is to pay a fee to an entity that is approved by the USACE to conduct the mitigation in-lieu of performing the mitigation themselves. This method of mitigation is termed “in-lieu fee mitigation.” KDFWR sponsors an in-lieu fee mitigation program that is supported by sales of mitigation credits to Section 404 permit applicants to satisfy regulatory requirements. The monies generated are used to implement stream and wetland projects that improve degraded streams and wetlands throughout the Commonwealth. Mitigation projects are implemented on private lands or on lands owned or acquired by KDFWR; therefore, the success of the program is in part dependent on cooperation with private landowners and purchase of property from landowners that wish to sell lands. The program also has the alternative of preserving high quality aquatic resources through acquisition of properties with such resources and permanently protecting those areas through legal instruments and management.

The USACE has agreements (Instruments) with two in-lieu fee programs (or sponsors) in Kentucky: Northern Kentucky University (NKU), servicing the northern Kentucky region, and KDFWR for the remainder of the Commonwealth (**Figure 1**). The Instruments between the sponsors and the USACE ensure that mitigation is completed, is sufficient to compensate for losses, provides permanent protection and long-term management, and adheres to applicable federal and state regulations and guidelines. By accepting in-lieu fee payments, the sponsor is assuming responsibility to provide compensatory mitigation pursuant to the terms of the Instrument established with the USACE.

The Instrument defines the roles of an Interagency Review Team (IRT) of resource and regulatory agencies composed of the USACE, KDOW, U.S. Fish and Wildlife Service (USFWS), pursuant to federal rules. The U.S. Environmental Protection Agency (USEPA) is not a signatory agency to the Instrument but can provide comments on individual mitigation projects. The function of the IRT is to review and comment on potential projects, monitoring reports, remedial management measures, credit releases, and instrument modification. The USACE consults with the IRT to provide oversight of mitigation programs. Although there are four USACE districts in Kentucky (Memphis, Nashville, Huntington, and Louisville), the Louisville District is the Lead District for communicating with the sponsor and coordinating with the IRT on issues related to the Instrument, and it has assumed jurisdiction for Section 404 regulatory projects in the Huntington District's region of Kentucky. The individual districts are responsible for specific issues with projects under their jurisdiction.

The Instrument requires that all KDFWR in-lieu fee projects be permanently protected through conservation easements, the purchase of lands with deed restrictions, or long-term management plans on public properties such as U.S. Forest Service National Forest lands. For private lands, this involves identifying landowners willing to cooperate with the sponsor to donate or sell a Conservation Easement or sell the property fee-simple. Conservation easement boundaries for perennial and intermittent streams are typically 50-150 feet from each bank, although older projects were often of less width. Buffers on ephemeral channels on older projects were 25 feet but now are also 50 feet. Recent projects have tended to be of greater length, usually several thousand feet, to provide greater ecological and economic benefits.

Updated Agreement and Instrument Modifications

The Instrument went into effect on January 13, 2012 by Public Notice from the USACE. Its purpose was to comply with the 2008 Final Mitigation Rule (USACE, 2008). The Instrument delineates service areas into ten units: Upper Kentucky River, Lower Kentucky River, Upper Cumberland River, Lower Cumberland River, Upper Licking River, Lower Licking River, Big Sandy River, Green River, Salt River, and Purchase Service Areas. Eastern Kentucky Stream Assessment Protocol (EKSAP) and Ecological Integrity Units (EIUs) are used in the three upper river service areas of the Eastern Kentucky Coalfield physiographic region. Kentucky Assessment Protocol (KAP) and Adjusted Mitigation Units (AMUs) are used in the remaining service areas of the Commonwealth.

During CY16 work began on modifying the Instrument to allow the FILO program to work in the counties of northern Kentucky currently covered only by NKU (see **Figure 1**). This will allow: 1) NKU to focus more on its core mission of education; and 2) the use of FILO's Licking River Service Area for mitigation of significant impacts. Instrument modification should be completed in 2017.

Eight projects have been permitted since early 2012 under the USACE Letter of Permission (LOP) process that resulted in In-Lieu Fee Instrument modifications for each district (**Table 1**). The Myers Station project on the Clay WMA in Nicholas County in the Lower Licking River Service Area was the only project permitted in CY16.

Table 1. List of Permitted Compensatory Mitigation Projects

Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Louisville LRL-2010-325							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
Elm Fork	Owen	Lower Kentucky	2	LRL-2012-263-pgj	02/12/12	AI: 114622	05/07/14
East Fork Indian Creek	Menifee	Upper Kentucky	3	LRL-2012-273-pgj	07/09/13	2013-009-1	03/07/13
Roger's Gap	Scott	Lower Kentucky	4	LRL-2012-134-pgj	11/26/13	2013-026-1	06/13/13
Eagle Creek Tributaries	Union	Green	5	LRL-2012-716-pgj	01/23/15	2014-18-1M	06/14/14
Meyer's Station	Nicholas	Lower Licking	6	LRL-2012-637-pgj	04/20/16	2016-004-1	01/15/16
Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Nashville LRN-2011-00709							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
Sinking Valley	Pulaski	Upper Cumberland	2	LRN-2012-00326	12/11/2013	n/a	n/a
Hatchery Creek	Russell	Lower Cumberland	3	LRN-2010-00444*	7/25/2014	23-041-7M(3)	8/26/2013
*Instrument mod actually references modification to LRL-2010-325; instrument mod #3 - should be on Nashville's LRN-2011-00709							
Table of Corps Approved Mitigation Projects: KDFWR Mitigation Program - Memphis MVM-2013-95							
PROJECT	COUNTY	SERVICE AREA	Instrument Mod. No.	404 PERMIT ID.NO.	404 PERMIT APPROVAL DATE	401 WQC ID. NO.	401 WQC APPROVAL DATE
Obion II	Hickman	Jackson Purchase	1	MVM-2010-074	4/29/2014	2010-027-1	3/23/2010

FILO Staff and Basin Assignments

December 2016 saw re-organization of KDFWR that created a FILO branch. Rob Lewis was appointed Branch Manager and Bethany Mulhall and Tom Van Arsdall became supervisors of the Monitoring and Project Development sections, respectively. Kevin Rexroat transferred from the Management Foreman position to a biologist position in the monitoring section, while Tom Burberry was hired as a Fish and Wildlife Technician under Mr. Rexroat and then filled the Management Foreman position when Mr. Rexroat transferred to the monitoring unit. The year also saw the arrival in December of another biologist, Jessica East, to assist in the project development phase. Staff numbered ten individuals at the end of 2016: Rob Lewis P.E. (Environmental Engineering Consultant); Jessie Boles (Engineer in Training); Clifford Scott (Internal Policy Analyst); Tom Burberry, (Management Foreman); Bethany Mulhall and Tom Van Arsdall (Environmental Biologist Supervisors); Kristy Nowak and Stephanie Petriello (Environmental Biologist Consultants); and Kevin Rexroat and Jessica East (Environmental Biologist Specialists) (**Figure 1**). The program has also partially supported positions in Real Properties and Division of Engineering Contracts in the Finance Cabinet.

Most FILO workload is allocated functionally although staff assist in any phase as needed:

Rob Lewis – branch manager; program coordination; engineering and design

Clifford Scott – financial and credit accounting

Tom Burberry – maintenance, management; invasive species removal; habitat improvement; vegetative planting

Bethany Mulhall, Kevin Rexroat – monitoring; long-term management, site protection and inspection

Jessie Boles – contracting; design review; permitting; construction oversight

Kristy Nowak, Stephanie Petriello, Jessica East - project search and early project development

Tom Van Arsdall – early project development and public lands projects

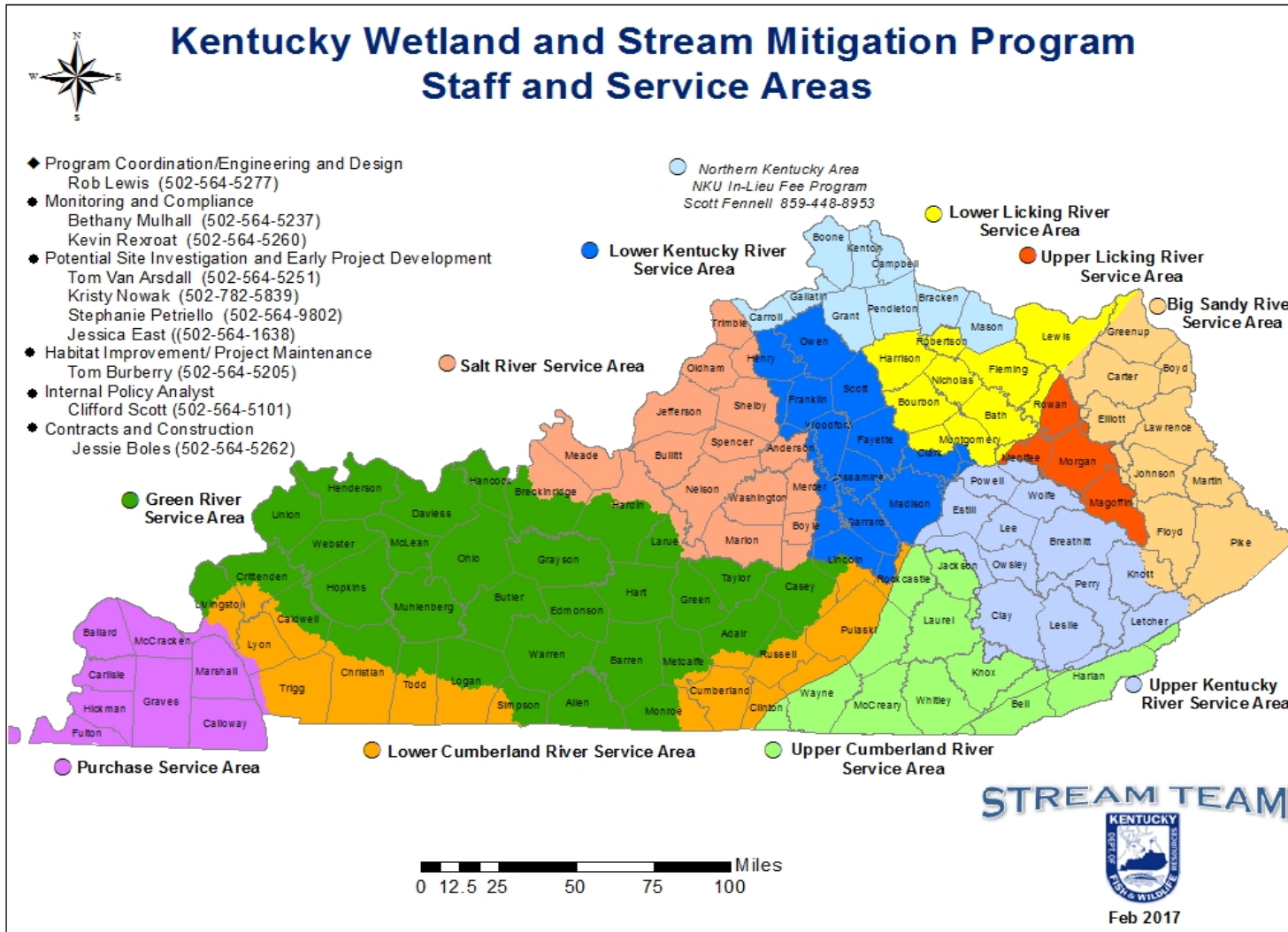
Landowner Contacts and Potential Projects

At the end of CY16, projected credits for approved projects exceeded stream credits sold in the Lower Licking, Lower Kentucky, Lower Cumberland, and Salt river service areas. Projects have been identified and IRT site visits made late in CY16 to sites in the Upper Licking, Upper Kentucky, and Upper Cumberland river service areas that if approved by the IRT will fulfill the current credit obligations in those service areas.

An extensive effort was made in CY16 to re-direct assessment and property work to the “Hitchins” site in Carter County of the Big Sandy River Service Area. A portion of this site of over 4000 acres was assessed in 2011, but the project never developed further because the worth of credits gained was not sufficient to cover the purchase and restoration. FILO staff expended considerable effort throughout CY16, at times accompanied by consultants. Title searches also were conducted to determine the status of mineral rights and other property issues. FILO submitted the Conceptual Plan in December 2016, and the IRT site visit will be conducted in March 2017. At the time of this report, the project looks promising from both a property and mitigation standpoint. If approved and the purchase successfully made, the project will deliver credits far exceeding the need in the Big Sandy River Service Area, and credit sales could resume after being shut down since late 2014.

A consultant was contracted to perform a systematic search of realtor listings, PVA data, and landowners in the Big Sandy River Service Area. This resulted in several site visits but no further project development. FILO also contracted with a consultant to do a similar search in the Upper Licking, Upper Kentucky, and Upper Cumberland River service areas. This resulted in potential projects (Conceptual Plans, IRT site visits) at Broke Leg Creek and Ratliff Creek in the Upper Licking River Service Area, Mulberry Creek in the Upper Cumberland River Service Area, and Bear Den Hollow in the Lower Cumberland River Service Area

Figure 1.



Wetland projects are needed in all service areas, with the Green (27.95 AMUs), Salt (21.46 AMUs), Upper Cumberland (17.84 AMUs), Lower Cumberland (17.51 AMUs), and Upper Licking (13.22 AMUs) river service areas having the most unallocated wetland AMU credits. Wetland credit sales have historically been made in small increments that do not generate sufficient funds to undertake a larger, consolidated wetland mitigation project that is more ecologically beneficial than smaller efforts. However, the balance in these service areas has accrued to a level sufficient to undertake larger and ecologically beneficial wetland mitigation projects. Recent efforts in the Green and Lower Cumberland river service areas appear promising and should yield results in 2017 that will allocate most wetland credits there. Wetland projects should also be approved in 2017 in the Upper Licking, Upper Cumberland, and Lower Kentucky river service areas that will reduce un-allocated wetland credits.

The CY15 Annual Report (KDFWR, 2016) described a potential FILO project to remove the dam of Green River Lock and Dam No. 6 in Edmonton County just west and downstream of Mammoth Cave National Park. Efforts ceased in late 2016 when the dam began to further deteriorate and the pool behind it was lost to flow through and under the structure. FILO will now look at the possibility of dam removal at Lock and Dam #5 about 14 miles downstream. The backwater effects of this dam extend upstream of Lock & Dam #6.

Potential project site visits made by FILO staff in CY16 are shown in **Table 2**; the table does not reflect the many landowner and realtor contacts that did not result in site visits. It also does not show the efforts of consultants to locate potential projects in the Big Sandy, Upper Licking, Upper Kentucky, and Upper Cumberland River service areas other than those that resulted in site visits by FILO.

Credit Costs and Status

The Instrument established 240,000 advance stream credits in each service area to accommodate potential geographic changes in mitigation demand, primarily associated with highway projects. Also, 100 wetland AMU credits were established in each service area other than the Green and Purchase service areas, where 200 wetland AMU credits were provided.

During 2012, the cost per EIU in the Big Sandy Service Area was increased to \$650 and the cost per stream AMU was increased to \$240. Stream credit costs were unchanged in 2013 and 2014, but increased to \$755/EIU and \$300/AMU in January 2015 (**Table 3**). Wetland AMUs increased from \$30,000 to \$45,840 in July 2014.

In November 2014, credit sales were suspended in the Big Sandy Service Area because: 1) difficulty in finding acceptable mitigation projects, i.e. sites without mineral rights, property, or water quality issues; 2) FILO was not going to meet the 3-year deadline for getting projects into construction from the time fees were received; and 3) several approved projects did not materialize because of issues with protection criteria and related property purchases. In addition, several large tracts of land involving thousands of acres with mitigation potential could not be developed further because of oil and gas interests. Credit sales had not been resumed by the end of CY16.

Table 2. Initial Site Visits in CY16

<u>Service Area</u>	<u>Stream/wetland Site</u>	<u>County</u>	<u>Landowner/contact</u>
Big Sandy	East Fk Little Sandy River	Lawrence	Keith Bradley
Big Sandy	Hitchins tract	Carter	RFL Kennessee Properties
Big Sandy	Jacobs Fk	Carter	Randall Porter
Big Sandy	Knob Cr	Lawrence	Fred Garter
Big Sandy	Middle Cr	Floyd	City of Prestonsburg
Big Sandy	Staggs Cr	Lewis	Edna Sumner
Big Sandy	Stan Br	Carter	Steve Glass
Big Sandy	Steele Cr	Floyd	Elkhorn Coal
Big Sandy	Turkey Br	Elliott	
Big Sandy	Tribs to Bates Br	Elliott	Rusty Friend
Salt	Trib to Chenoweth Run	Jefferson	Lisa Kline
Salt	Trib to Tick Cr	Shelby	Greg Nowak
Green	Barren River	Barren	Melanie Heyd
Green	Dry Cr	Casey	
Green	South Fk Green River	Lincoln	Joe Martin
Green	Sulfur Run	Casey	Ken McMasters
Upper Kentucky	Frozen Cr	Breathitt	Randall Alcorn
Upper Kentucky	Jennys Br	Owsley	realtor
Upper Kentucky	Leatherwood Cr	Perry	--
Upper Kentucky	Little Hardwicks Cr	Estill	Dorothy Ambrose
Upper Kentucky	Middle Fk Red R	Wolfe	Commonwealth of KY
Upper Kentucky	Muir Valley	Wolfe	Friends of Muir Valley
Upper Kentucky	Ross Cr III	Lee	McKinney
Lower Kentucky	Boling Br	Henry	Sanford; Rueff
Lower Kentucky	Horn River	Estill	realtor
Lower Kentucky	Lower Negro Br	Breathitt	--
Lower Kentucky	Twin Cr	Owen	Larry Savage
Upper Licking	Broke Leg Cr	Morgan	Arlie Gibson
Upper Licking	Ratliff Cr	Menifee	Amy Lombardi
Lower Licking	Rock Lick Cr	Fleming	Commonwealth of KY
Upper Cumberland	Mulberry Cr	Whitley	Howard Sears
Lower Cumberland	Bear Den Hollow	Pulaski	Cortez Francis
Lower Cumberland	Claylick Cr	Crittendon	Jeff Edwards
Lower Cumberland	Doan Springs Cr	Crittendon	Luke Hagan
Lower Cumberland	Long Cr/Buck Cr	Pulaski	The Nature Conservancy
Lower Cumberland	Puncheon Camp Cr	Cumberland	realtor

FILO sold 8,529 stream EIUs, 12,110 stream AMUs and 25.41 wetland AMUs in CY16 (**Table 4**). Although credit sales were suspended in the Big Sandy River Service Area late in 2014, an older mining project with pre-scheduled payments is the reason 177 AMUs show as sold in the Big Sandy River Service Area for CY16. **Table 4** shows credit balances for streams and wetlands for each service area; **Appendix A** presents individual credit sales.

Table 3. Credit Costs

<u>Service Area</u>	<u>Stream</u>				<u>Wetland</u>	
	<u>Cost/Credit</u>				<u>Cost/AMU</u>	
	Transition 2012	March 2012	Effective 01/15/15	CYCY16	Effective 07/15/14	CY16
Big Sandy (EIU)	610	650	755 ^a	755 ^a	45,840	45,840
Upper Licking (EIU)	610	610	755	755	45,840	45,840
Upper Kentucky (EIU)	610	610	755	755	45,840	45,840
Upper Cumberland (EIU)	610	610	755	755	45,840	45,840
Lower Licking (AMU)	215	240	300	300	45,840	45,840
Lower Kentucky (AMU)	215	240	300	300	45,840	45,840
Lower Cumberland (AMU)	215	240	300	300	45,840	45,840
Green (AMU)	215	240	300	300	45,840	45,840
Salt (AMU)	215	240	300	300	45,840	45,840
Jackson Purchase (AMU)	215	240	300	300	45,840	45,840

^aBig Sandy credit sales suspended November 2014

Table 4. Advance Credit Balances

<u>Stream EIU Regions</u>	<u>Big Sandy</u>	<u>Upper Kentucky</u>	<u>Upper Licking</u>	<u>Upper Cumberland</u>			<u>Stream EIU Totals</u>
Advance Credit Allocation	240,000.0	240,000.0	240,000.0	240,000.0			
Transitioned Credits	23,103.0	-	258.0	3,954.0			27,315.0
CY12 Credits Sold	2,376.3	2,349.9	838.0	3,182.2			8,746.3
CY13 Credits Sold	5,707.6	999.0	-	49.5			6,756.2
CY14 Credits Sold	3,535.6	2,037.2	-	52.3			5,625.0
CY15 Credits Sold	2,599.5	965.9	7,431.0	5,063.0			16,059.3
CY16 Credits Sold	176.6	7,398.9	931.0	22.0			8,528.5
Released Credits	-	-	-	3,502.6			
Reserve Released Credits	-	-	-	-			
Advance Stream EIU Balance	202,501.5	226,249.0	230,542.0	231,179.6			

Table 4 (con't)

<u>Stream AMU Regions</u>	<u>Lower Kentucky</u>	<u>Lower Licking</u>	<u>Lower Cumberland</u>	<u>Green</u>	<u>Salt</u>	<u>Purchase</u>	<u>Stream AMU Totals</u>
Advance Credit Allocation	240,000.0	240,000.0	240,000.0	240,000.0	240,000.0	240,000.0	
Transitioned Credits	-	11,419.0	6,977.0	14,251.0	3,883.0	19.0	36,549.0
CY12 Credits Sold	807.0	11,012.0	8,893.0	10,724.6	1,338.2	-	32,774.8
CY13 Credits Sold	14,654.2	-	1,917.7	1,621.9	4,928.0	-	23,121.8
CY14 Credits Sold	606.0	1,411.0	2,346.0	14,688.2	5,607.1	-	24,658.3
CY15 Credits Sold	3,095.0	10,935.0	2,413.2	1,405.4	7,968.8	1,209.5	27,026.9
CY16 Credits Sold	409.0	3,399.7	850.0	2,343.0	3,968.0	1,140.0	12,109.7
Released Credits	-	2,429	-	-	-	-	
Reserve Released Credits	-	-	-	-	-	-	
Advance Stream AMU Balance	220,837.8	204,019.7	217,453.1	197,308.9	216,275.0	238,771.5	

<u>WETLAND AMUs</u>	<u>Big Sandy</u>	<u>Upper Kentucky</u>	<u>Lower Kentucky</u>	<u>Upper Licking</u>	<u>Lower Licking</u>		<u>Wetland AMU Totals</u>
Advance Credit Allocation	100.00	100.00	100.00	100.00	100.00		
Transitioned Credits	3.55	-	1.80	-	0.98		6.33
CY12 Credits Sold	2.41	-	1.03	-	-		3.44
CY13 Credits Sold	0.02	1.20	3.17	-	-		4.39
CY14 Credits Sold	0.58	-	0.40	-	-		0.98
CY15 Credits Sold	-	-	2.12	14.22	-		16.34
CY16 Credits Sold	-	3.30	1.31	-	-		4.61
Released Credits	-	-	-	-	-		
Reserve Released Credits	-	-	-	-	-		
Advance Wetland AMU Balance	93.44	95.50	90.17	85.78	99.02		

<u>WETLAND AMUs (cont)</u>	<u>Upper Cumberland</u>	<u>Lower Cumberland</u>	<u>Green</u>	<u>Salt</u>	<u>Jackson Purchase</u>		<u>Wetland AMU Totals</u>
Advance Credit Allocation	100.00	100.00	200.00	100.00	200.00		
Transitioned Credits	2.25	9.98	10.28	2.54	2.30		27.35
CY12 Credits Sold	0.38	4.18	7.44	-	-		12.01
CY13 Credits Sold	3.36	-	3.81	1.90	0.82		9.89
CY14 Credits Sold	4.57	3.60	5.70	-	-		13.87
CY15 Credits Sold	7.28	0.70	11.19	0.72	-		19.89
CY16 Credits Sold	-	-	4.50	16.30	-		20.80
Released Credits	-	-	-	-	-		
Reserve Released Credits	-	-	-	-	-		
Advance Wetland AMU Balance	82.16	81.54	157.07	78.54	196.88		

Program Financial Status

About \$61.7M in project funds were collected from the Transition to the beginning of CY16. During the year, credit sales brought in nearly \$8.5M in project funds (**Table 5**). Most credits were sold in CY16 in the Upper Kentucky River Service Area and the Salt River Service Area (**Table 5**). Another \$0.14M was returned to two service areas from closed projects (**Table 6**). (As these were pre-Transition projects, they are included here as basin “receipts,” although if looking at the entire program history, those funds would have been previously accounted in receipts.) Even though the Big Sandy River Service Area has been closed for stream and wetland credit sales since November 2014, the total project funds collected there (\$18.3M) since the Transition remains twice that of any other service area. The Green River Service Area had the second most project funds collected by the end of CY16 with a total of \$9.4M. As shown later in **Table 8**, about \$48M of the \$70M project funds has been allocated to approved projects. As has been the case in recent years, the vast majority of credits purchased in CY16 were by the Kentucky Transportation Cabinet. (**Table 7**).

Table 5. CY16 Service Area Receipts and Project Funds (\$) ^a

Service Area	CY16 Total Receipts	CY16 Receipts to Reserve	CY16 Receipts to Admin	CY16 Receipts to Projects	CY16 Beginning Project Funds Collected Stream & Wetland	CY16 Ending Project Funds Collected Stream & Wetland	CY16 Service Area % of Receipts
Big Sandy	133,333	13,333	20,000	100,000	18,236,081	18,336,081	1
Upper Kentucky	5,739,301 ^a	573,930	860,895	4,304,476	3,204,551	7,509,027	51
Lower Kentucky	182,750	18,275	27,413	137,063	4,010,121	4,147,184	2
Upper Cumberland	16,609	1,661	2,491	12,457	6,756,567	6,769,024	0
Lower Cumberland	255,000	25,500	38,250	191,250	4,451,465	4,642,715	2
Upper Licking	775,985	77,599	116,398	581,989	4,795,780	5,377,769	7
Lower Licking	1,019,918 ^a	101,992	152,988	764,939	6,347,990	7,112,929	9
Salt	1,937,750	193,775	290,663	1,453,313	4,826,345	6,279,658	17
Green	909,180	90,918	136,377	681,885	8,766,396	9,448,281	8
Jackson Purchase	342,000	34,200	51,300	256,500	350,567	607,067	3
TOTALS	11,311,827	1,131,183	1,696,774	8,483,870	61,745,862	70,229,732	100

^aIncludes returned funds from closed FILO projects (see Table 5)

Table 6. CY16 FILO Project Closed/Returned Funds (\$)

Upper Kentucky		
Laurel Fork Guy Cove	2005-01004	134,265
Lower Licking		
Claysville	LRL-2012-263	6,218
Total		140,483

Table 7. FILO Receipts by Source - CY16

<u>Source</u>	<u>Receipts (\$)^a</u>	<u>% of total</u>
KY Transportation Cabinet	8,106,789	73
Municipal	0	0
Development	2,717,501	24
Mining	347,054	3
Total	11,171,344	100

^a does not include closed and returned funds (\$140,484) from FILO projects (see Table 5)

Project Fund Status

Table 8 shows: 1) project funds received in each of the ten service areas from Transition to the end of CY16 for stream and wetland; 2) funds allocated to “approved” projects during the year; and 3) funds remaining (unallocated) at the end of the year. Approximately \$47.8M is allocated to stream projects and an additional \$0.5M is allocated to wetland projects. About \$20.5M of stream project money is un-allocated, mostly in the Big Sandy but also in the Upper Kentucky, Upper Cumberland, Upper Licking, Green, and Purchase river service areas. A little over \$2M is over-allocated in four other service areas (Lower Kentucky, Lower Cumberland, Salt, Lower Licking). The latter will mostly be made up by additional fee receipts prior to construction, and if necessary by requesting authority for use of The Reserve Fund.

Over \$4M in project funds has been collected for wetland mitigation since the Transition (**Table 7**). Just over \$0.5M has been allocated in the Upper Licking, Green, and Lower Kentucky river service areas. The Salt and Green river service areas have the most unallocated wetland credits/funds.

Table 8. Allocated & Unallocated Stream and Wetland Project Funds, by Service Area (\$)

<u>Basin</u>	<u>Stream</u>			<u>Wetland</u>			<u>Unallocated Service Area Balance</u>
	<u>Project</u>	<u>Allocated</u>	<u>Unallocated</u>	<u>Project</u>	<u>Allocated</u>	<u>Unallocated</u>	
Big Sandy	18,183,940	8,368,905	9,815,035	152,141	0	152,141	9,967,176
Upper Kentucky	7,365,397	944,768	6,420,629	143,629	0	143,629	6,564,259
Lower Kentucky	3,873,318	4,135,652	(262,334) ^b	273,865	133,620	140,245	(122,088)
Upper Cumberland	6,266,891	5,713,435	553,457	502,133	0	502,133	1,055,589
Lower Cumberland	4,207,445	5,547,250	(1,339,805) ^b	435,270	0	435,270	(904,535)
Upper Licking	4,888,885	4,252,299	636,587	488,884	34,380	454,504	1,091,090
Lower Licking	7,090,870	7,584,655	(493,785) ^b	22,059	0	22,059	(471,726)
Green	8,180,334	5,632,015	2,548,319	1,267,947	337,050	930,897	3,479,216
Salt	5,591,697	5,631,538	(39,841) ^b	687,961	0	687,961	648,120
Jackson Purchase	531,638	0	531,638	75,429	0	75,429	607,067
Total	66,180,415	47,810,515	20,505,665 ^a (2,135,765) ^b	4,049,317	505,050	3,544,267	24,049,932 ^a (2,135,765) ^b

^aTotal of unallocated funds; must be used in same service area

^bOver-allocation of stream funds in 4 service areas (covered by reserve funds as necessary)

Reserve Fund

Pursuant to the Instrument, the Reserve Fund was established to fund additional mitigation projects, permanent protection activities, minor actions, long term management, and to serve as contingency. Contributions to the Reserve Fund come from 10% of credit sales and 85% of interest.

The contribution to Reserve during CY16 from credit sales and interest was \$1,797,618. The total Reserve Fund at the end of CY16 was \$14.0M, which results in an active Reserve of \$11.0M when accounting for the \$3M non-wasting Reserve required by the Instrument. **Table 9** gives a full accounting of the Reserve Fund, including those funds currently projected as needed in four service areas with an over-allocation of project funds. The over-allocation of project funds potentially generates mitigation credits with completed projects ‘on the ground’ in advance of impacts. Any additional receipts in the respective service areas will be used instead of Reserve. Additional receipts will reduce, if not remove, the need to ‘cover’ these over-allocated service areas with Reserve funding.

Each year, the program seeds a long term management and maintenance account with funds from the Reserve to pay for management and minor remedial actions (**Table 9**). This allows the program to be responsive to the USACE and IRT in taking necessary remedial or maintenance actions.

Table 9. CY16 Reserve Fund Activity and Balance (\$)

CY16 - Beginning Cash Balance	\$ 14,409,331
CY16 - % of Stream Receipts	\$ 1,014,520
CY16 - % of Wetland Receipts	\$ 116,663
CY16 - % of Interest	\$ 666,435
CY16 - Close out 2014 Maintenance Account (C6XC)	\$ 42,867
CY16 - Fund current Maintenance Account (C7TW)	\$ (100,000)
CY16 - Ending Cash Balance	\$ 16,149,816
CY16 - funds currently needed for approved Stream projects in the Lower Ky SA	\$ (262,334)
CY16 - funds currently needed for approved Stream projects in the Salt River SA	\$ (39,841)
CY16 - funds currently needed for approved Stream projects in the Lower Licking SA	\$ (493,785)
CY16 - funds currently needed for approved Stream projects in the Lower Cumberland SA	\$ (1,339,805)
CY16 -Total Reserve Ending Balance (after Service Area obligations)	\$ 14,014,052
CY16 - Non-wasting Reserve	\$ 3,000,000
CY16 - Active Reserve Ending Balance	\$ 11,014,052

Administrative Fund

The Administrative Fund is used for expenses associated with activities to operate the program and to identify new projects: including feasibility studies, consultant contracts for site searches, outreach and property work, staff salaries, equipment, and other indirect expenses such as travel and training. The Administrative Fund balance entering CY16 was \$7,062,050. Effective January 15, 2015, the administrative percentage rose from 10 to 15%. During CY16, \$1,814,380 was added to the administrative fund from credit sales and 15% of interest. **Table 10** details the use of Administrative funds during CY16, leaving a year-end balance of \$6,110,030. A major expense was a building, architect fees, and fitting for FILO offices and equipment storage. Move to the new building should occur in the latter half of 2017.

Table 10. CY16 Administrative fund Activity and Balance (\$)

CY16 - Beginning Balance	\$ 7,062,050
CY16 - % of Stream Receipts	\$ 1,521,780
CY16 - % of Wetland Receipts	\$ 174,994
CY16 - % of Interest	\$ 117,606
CY16 - Transfer to F&W fund (134R) to cover operating budget	\$ (1,000,000)
CY16 - Additional funding for FILO Preliminary Title and Survey	\$ (150,000)
CY16 - Fund FILO Office Space for purchase and fitting	\$ (1,050,000)
CY16 - Additional funding for JP, LC, Green RSA 2015-2016 (C7T3)	\$ (50,000)
CY16 - Additional funding for Big Sandy RSA 2015-2016 (C7T4)	\$ (120,000)
CY16 - Return unused funds from FILO-Louisville Rd. (C7Y0)	\$ 3,600
CY16 - Fund FILO-JP, LC, Green RSA FY17-18 (C8EY)	\$ (100,000)
CY16 - Fund FILO-LK, LL, Salt RSA FY17-18 (C8EZ)	\$ (100,000)
CY16 - Fund FILO-Big Sandy RSA FY17-18 (C8F0)	\$ (100,000)
CY16 - Fund FILO-UKY, UL, UC RSA FY17-18	\$ (100,000)
CY16 - Ending Balance	\$ 6,110,030

Mitigation of Impacts

Prior to the 2008 Mitigation Rule fully taking effect with the Instrument early in 2012, it was not possible to relate mitigation impacts caused by 404-permitted activities because in-lieu-fee payments to FILO had little documentation of impacts, especially during the first few years of the in-lieu fee program. It was assumed that impacts and mitigation occurred on similar stream flow types, resulting in similar linear feet affected. Thus, programmatic success was based on cost per linear foot as in the previous MOA. The available data could track the amount of in-lieu fees received and the timing of the allocation of those funds to mitigation projects. With implementation of the Instrument and conversion of unallocated funds to credits, it is possible to compare impacts (credits sold by FILO) to mitigation (credits realized by FILO projects) for projects begun (approved by IRT) in January 2012 and later. Most of the projects reported here were permitted prior to the Transition.

Actions Taken by Interagency Review Team

Eleven conceptual plans were submitted and nine IRT site visits were conducted in CY16, and two IRT site visits are scheduled for early 2017 (**Table 11**). Five IRT site visits took place late in 2016 and comments had not been received by the end of the year. Five projects submitted in late 2015 and 2016 were conditionally approved by the IRT, but the Straight Cr project was terminated because of ownership issues. Two other projects submitted to the IRT were terminated in 2016: Lower Buffalo Cr tributaries project because of elevated conductivity that reduced credits earned and Steele Cr because of severed mineral rights.

Table 11. Conceptual Plans Submitted and Actions of Interagency Review Team in CY16

Stream	Service Area	USACE District	County	Type	Action Taken
Hitchins tract	Big Sandy	Louisville	Carter	Wetland preservation; stream re-establishment, rehabilitation, enhancement, riparian enhancement, preservation	Conceptual Plan submitted Dec 2016. IRT site visit scheduled Mar 2017.
Steele Cr	Big Sandy	Louisville	Floyd		Conceptual Plan submitted Apr 2016; IRT site visits Jun and Oct 2016. IRT expressed concerns Nov 2016; project terminated due to mineral rights issues.
Floyds Fork tribs and wetland	Salt	Louisville	Jefferson	Wetland establishment; stream rehabilitation and re-establishment	Conceptual Plan submitted Oct 2015; IRT site visit Dec 4 2015; IRT conditionally approved Jan 2016. Unable to secure approval of landowner for Big Vista Valley wetland/stream project area; will pursue stream projects on Big Beech and Turkey Run areas
Stan Br	Big Sandy	Louisville	Carter	Re-establishment; rehabilitation; enhancement; preservation	Conceptual Plan submitted May 2016; IRT site visit Oct 2016. Conditionally approved Oct 2016.
Staggs Cr	Big Sandy	Louisville	Lewis	Re-establishment; rehabilitation	Conceptual Plan submitted Feb 2016; IRT site visit Mar 2016; conditionally approved Apr 2016; property sold later in 2016, discussing with new landowner on continuing project
Straight Cr	Upper Licking	Louisville	Morgan	Preservation; re-establishment; rehabilitation; enhancement	Conceptual Plan submitted Nov 2015; IRT site visit Dec 2015; Conditionally approved by IRT Mar 2016. Project terminated due to ownership issues.

Lower Buffalo Cr Tributaries	Upper Kentucky	Louisville	Lee	Preservation; re-establishment; rehabilitation, enhancement	Conceptual Plan submitted Sept 2015; IRT site visit Nov 2015; IRT expressed concerns Apr 2016; project terminated due to conductivity and credit issues.
Middle Fk Cane Cr	Upper Kentucky	Louisville		Re-establishment, rehabilitation, preservation	Conceptual Plan submitted Jun 2016; IRT site visit Nov 2016. Awaiting IRT comment
Muir Valley	Upper Kentucky	Louisville	Wolfe	Re-establishment; rehabilitation; preservation	Conceptual Plan submitted Nov 2016. IRT site visit Dec 2016. Awaiting IRT comment.
Broke Leg Cr	Upper Licking	Louisville	Morgan	Re-establishment, rehabilitation, enhancement, preservation	Conceptual Plan submitted May 2016; IRT site visits Jun and Oct 2016. Conditionally approved Oct 2016.
Ratliff Cr	Upper Licking	Louisville	Menifee	Wetland re-establishment, enhancement, preservation; stream re-establishment, rehabilitation, enhancement preservation	Conceptual Plan submitted Dec 2016. IRT site visit Dec 2016. Awaiting IRT comment.
Rock Lick Cr	Lower Licking	Louisville	Fleming	Re-establishment, rehabilitation, enhancement, buffer enhancement	Conceptual Plan submitted Dec 2016. IRT site visit scheduled for Feb 2017.
Mulberry Cr	Upper Cumberland	Nashville	Whitley	Wetland enhancement, re-establishment, preservation; stream rehabilitation, enhancement	Conceptual Plan submitted Sept 2016; IRT site visit Dec 2016. Awaiting IRT comment
Bear Den Hollow	Lower Cumberland	Nashville	Pulaski	Wetland re-establishment, establishment, preservation; stream rehabilitation	Conceptual Plan submitted Sept 2016; IRT site visit Dec 2016; awaiting IRT comment

Project Statistics and Status

The IRT has approved 92 projects over the FILO program's 15-year history (2002-2016). Sixty-four projects have been completed or are in some stage of development: 35 completed (including preservation), 4 in construction, 16 in design (Ross Cr I and II are considered a single project), and 11 that are approved but not yet in design (**Appendix B; Figure 2**). Of these 66 projects, 43 were originally or are now on land owned by a government, education, or conservation entity (**Appendix B**).

The IRT has approved 26 projects since program inception that have not been constructed, typically because of property issues such as mineral rights or title concerns, or because of landowner issues. These projects were approved but canceled after initial site inspection, property and title investigation, project and conceptual plan development, IRT site visit and comment, and occasionally survey and even design. Several canceled projects had considerable funds expended (**Appendix B**). The Brushy Creek project is a special case, as it was constructed but failed. Litigation by KDFWR resulted in recovery of some financial losses associated with Brushy Creek. A summary of the Brushy Creek repair status is provided below in discussions of individual projects, but the project is not included in the total active project count.

The FILO program has contributed to the purchase and protection of 15 tracts of land over the program's history (**Table 12**). Three projects (Laurel Creek Gorge, Buck Creek, Sinking Valley) are preservation only; other projects, especially Rogers Gap, had a significant preservation component. In all, 54 miles of preservation quality streams as well as additional miles of restored and enhanced streams are now within WMA's, open to the public, and are permanently protected by deed restrictions.

Table 13 provides summary statistics for total cost, length, and credits, and cost per linear foot and cost per credit; **Appendix B** provides these data for individual projects. Credit statistics (number of credits, cost/credit) are based only on post-Transition projects.

The average estimated project cost in the AMU region is now \$2.0M, is nearly 18,000 feet in length, gains about 14,000 credits, and has a cost per credit of \$180 and a cost per foot of \$115. Also, 54.96 acres of wetland are included in projects (Hatchery Cr, Eagle Cr Tributary, Forest Land Group, Cove Spring, Farmers Cr, Pond Cr) in the AMU region. Cost per wetland AMU for post-Transition projects is just over \$20,000.

In the EIU region, the average project cost is estimated at \$1.4M, is more than 12,000 feet in length, gains 4,000 credits, and has a cost per credit of \$468 and a cost per foot of \$112. It should be noted that the two large preservation projects in the EIU region significantly lower the cost per foot, and to a lesser extent the cost per credit, and therefore the average costs do not reflect the actual cost of a restoration project.

Figure 2.

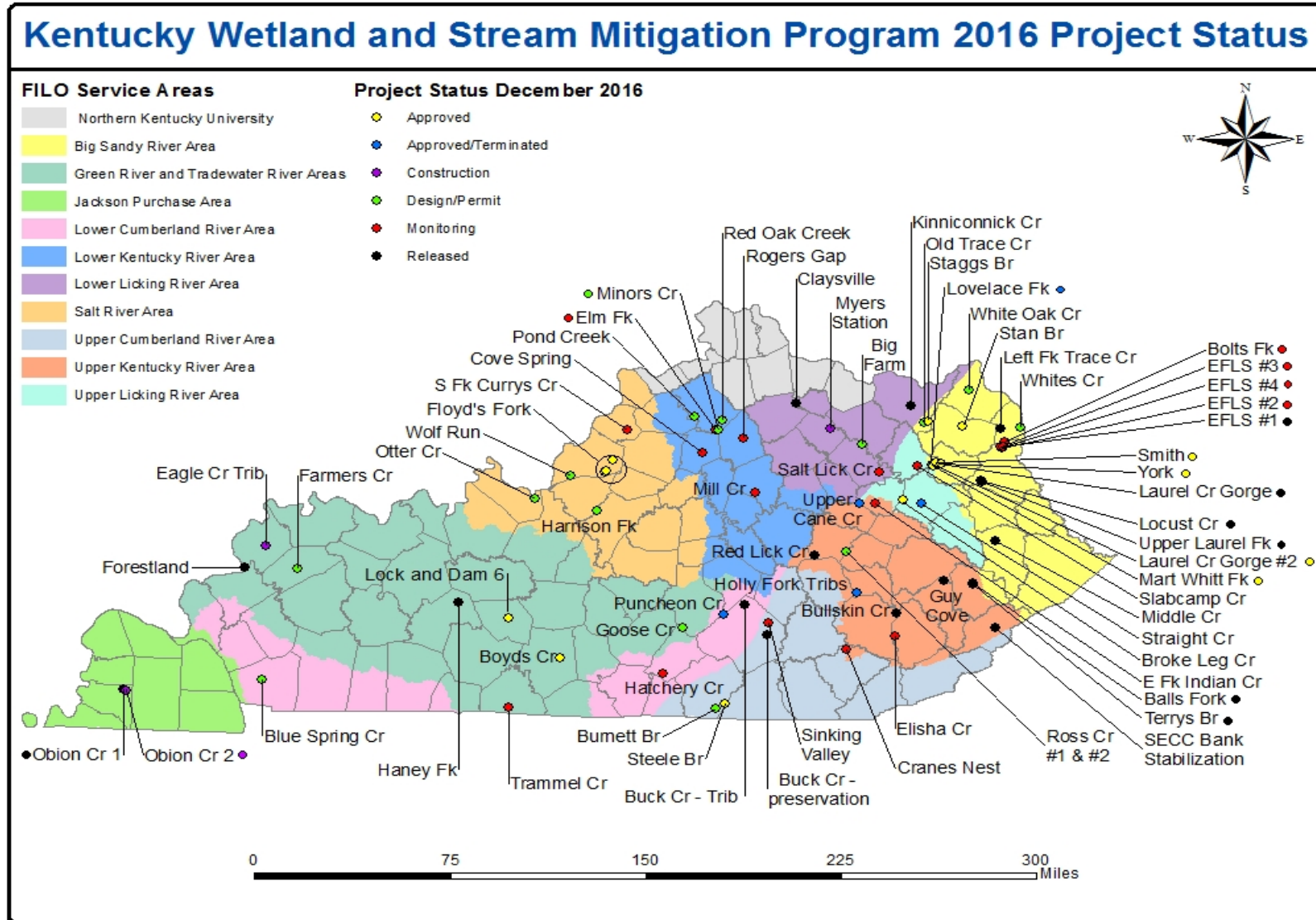


Table 12. Projects on which FILO Contributed to Property Acquisition						
<u>Project</u>	<u>Service Area</u>	<u>County</u>	<u>Acres</u>	<u>Length (ft) of stream</u>		<u>WMA</u>
				<u>Preserved</u>	<u>Restored</u>	
Laurel Cr Gorge ^a	Big Sandy	Elliott	697	83,059		Ed Mabry
Laurel Cr Gorge #2 ^a	Big Sandy	Elliott	361	5,837	5,514	Ed Mabry
Smith Tract ^a	Big Sandy	Elliott	46		4,518	Ed Mabry
Mart Whitt Fk ^a	Big Sandy	Elliott	335	13,137	5,235	Ed Mabry
Old Trace Cr ^a	Big Sandy	Lewis	323	3,841	16,097	TBA
Myers Station ^b	Lower Licking	Nicholas	462	2,735	10,860	Clay
Big Farm ^a	Lower Licking	Bath	467	5,721	21,521	Clay
Ross Cr I and II ^a	Upper Kentucky	Lee/Estill	640	9,413	21,360	TBA
Rogers Gap ^c	Lower Kentucky	Scott, Franklin	2,497	31,770	139,087	Veterans
Minors Cr ^a	Lower Kentucky	Owen	307		21,318	Kleber
Pond Cr ^a	Lower Kentucky	Owen	8		5,990	Kentucky River
Red Oak ^d	Lower Kentucky	Owen	601	4,250	30,200	Rich
Buck Cr ^a	Upper Cumberland	Pulaski	859	56,502		Buck Cr
Sinking Valley ^a	Upper Cumberland	Pulaski	805	43,131		Ping-Sinking Valley
Forestland ^e	Green	Union, Crittendon	6,732	26,320 ^e		Big Rivers

^a Purchased entirely with FILO funds

^b FILO purchased 167 acres; KDFWR purchased 295 acres

^c FILO purchased 1298 acres; KDFWR purchased 1199 acres

^d FILO project used as match for obtaining Federal funding for purchase by KDFWR

^e FILO funds used as purchase toward riparian buffer of both banks of Tradewater R, length of 26,320 ft

Table 13. Summary Data for Projects in AMU and EIU Regions of Kentucky^a

	<u>AMU Region</u>	<u>EIU Region</u>
Number of Active and Completed Projects	29	37
Total Estimated Project Cost	\$59,907,746	\$52,138,394
Total Estimated Stream Cost	\$58,924,890	\$52,133,394
Total Estimated Wetland Cost	\$982,856	\$5000
Average Estimated Stream Project Cost	\$2,031,893	\$1,409,146
Total Length (ft)	512,858	464,485
Average Length (ft)	17,685	12,554
Cost/ft	\$115	\$112
Total Stream Credits ^b	169,474	56,010
Average Stream Credits ^b	13,969	4,001
Cost/stream credit ^b	\$180	\$468
Total wetland credits (wetland AMUs) ^b	21.83	1.00
Cost/wetland credit ^b	\$20,055	\$5000

^aTotal costs include expenses incurred for terminated projects, but total length, total credits and average figures don't include the projects since there were terminated prior to construction.

^bCredit statistics based only on post-Transition projects

^cCost is for design, construction, and monitoring; administrative, contingency, remedial costs not included

Brief descriptions of activities during this reporting period are provided below. Monitoring information and compliance status are presented in **Appendix D**.

Big Sandy River Service Area

There are 21 active, completed, pending, and terminated projects in this service area (not including the Brushy Creek repair). These projects fall within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Figure 3**).

Bolts Fork, Boyd County. The first year of monitoring was 2014. Supplemental planting, covered under warrantee, was completed in early CY16 and the Year 3 monitoring report was submitted at the end of CY16.

Brushy Creek, Greenup County. The project had been abandoned following flood damage after construction and with the IRT's direction. Subsequent repairs were only marginally successful and a litigation effort found that the project was not designed correctly. Funding was awarded as a result of the litigation and it will be used, in addition to funding previously approved by the IRT, to carry out repairs that will address the landowner's concerns. A suitable resolution is still being discussed with the landowner. Upon completion, the easement will be dissolved.

East Fork Little Sandy #1, Lawrence County. The project was released from monitoring in May 2013. Now in the long-term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

East Fork Little Sandy #2, Lawrence County. The Year 5 monitoring report was submitted in 2015 and the project's release is pending a formal letter from the USACE.

East Fork Little Sandy #3, Lawrence County. The Year 5 monitoring report was submitted in 2015 and the project's release is pending a formal letter from the USACE.

East Fork Little Sandy #4, Lawrence County. The Year 5 monitoring report was submitted in 2015 and the project's release is pending a formal letter from the USACE.

Kinniconick Creek/Indian Creek, Lewis County. Repairs started in November 2013 and they were completed in 2014. The project was released from monitoring in CY16. Note: this project is now geographically located in the Lower Licking Service Area, but it was originally included in the Big Sandy Service area.

Laurel Creek Gorge Preservation, Elliott County. This site was dedicated in 2010 as the Ed Mabry-Laurel Gorge WMA. Plans for a proposed highway project near the property will avoid encroachment upon the property as a result of the protective deed restrictions. No encroachments or incompatible uses were observed in CY16.

Laurel Creek Gorge #2 (Greene-Johnson tracts), Elliott County. The property is now part of the Ed Mabry-Laurel Gorge WMA. It will be a part of a design-build with other properties (Smith Property and Mart Whitt Fork) purchased around the WMA.

Left Fork Trace Creek, Boyd County. Repairs and maintenance tasks were completed in November 2013 and the project was released from monitoring in 2014. Now in the long-term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Locust Creek, Lawrence County. The project was released from monitoring in 2014. Now in the long-term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Lovelace Fork, Elliott County. Approved in early CY16, the project was quickly terminated after the property was sold before KDFWR was able to purchase it. The new landowner is not interested in a project.

Mart Whitt Fork, Elliott County. The property is now part of the Ed Mabry-Laurel Gorge WMA. It will be a part of a design-build with other properties (Smith Property and Laurel Creek Gorge #2) purchased around the WMA.

Middle Creek, Floyd County. The original monitoring period was extended after the Year 5 monitoring report was submitted in 2012. Repair and maintenance tasks (easement boundary marking, invasive plant control, and supplemental native planning) occurred in 2014 and the project was released from monitoring in 2015. Now in the long-term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Old Trace Creek, Lewis County. Approved in 2013, the property was purchased by KDFWR using FILO funds in March 2014. The design-build contract began in 2015. In CY16, KDFWR received the 401 WQC and the Floodplain permit and submitted the 404 permit application.

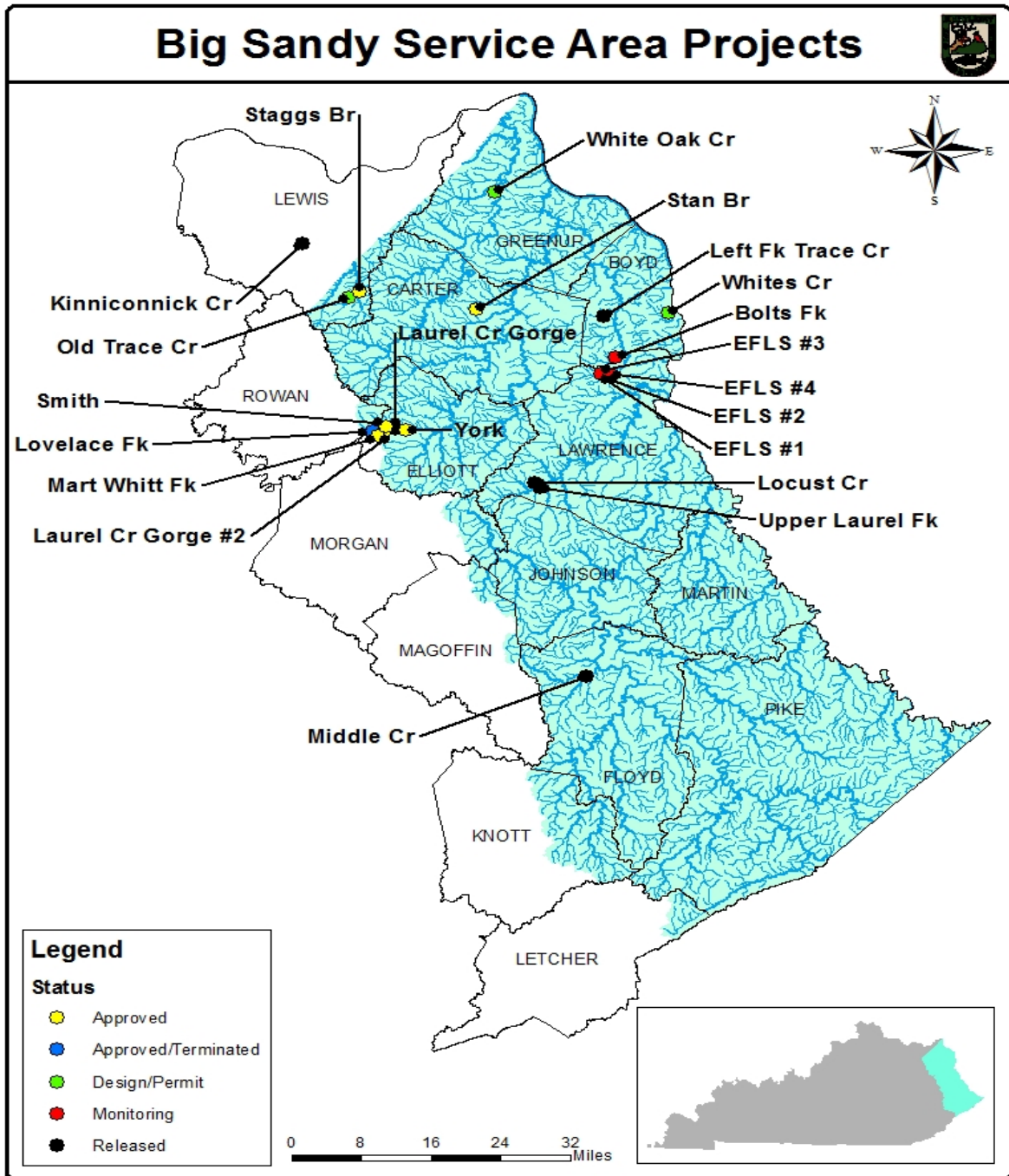
Smith Property, Elliott County. The 46-acre tract was purchased in November of 2015 and is an addition to the Ed Mabry-Laurel Gorge WMA. It will be a part of a design-build with other properties (Laurel Creek Gorge #2 and Mart Whitt Fork) purchased around the WMA.

Staggs Branch, Lewis County. Approved in early CY16, this property is roughly 380 acres and has over 17,000 feet of stream length. It is less than 1 mile from the Old Trace Creek project. In late CY16, the property was sold to another landowner before KDFWR could proceed with the purchase. The new landowner is willing to consider a compensated conservation easement along the streams.

Stan Branch, Carter County. Approved in late CY16, this property is roughly 190 acres and has over 14,000 feet of stream length all of which are in the headwaters of Stan Branch.

Upper Laurel Creek, Lawrence County. Maintenance tasks in 2014 included invasive plant control, supplemental native planning, and repair of floodplain scour. The project was also released in 2014. Site visits in early 2015 revealed recent beaver activity and the construction of beaver dams. The beaver activity has been closely monitored for 2 years and it has been

Figure 3.



determined that no remedial actions are necessary. In CY16, KDFWR sent a memo to regulatory agencies documenting the site conditions and determined that no additional actions are needed.

White Oak Creek, Greenup County. In 2015, FILO contracted a feasibility study of construction cost and reconciling conservation easements, road right of way, and utility easements near the project area. No additional progress was made in CY16.

Whites Creek, Boyd County. Property appraisals were conducted in 2013. In 2015, a landowner contract was signed, a contract for an easement survey was initiated, and the 30% design was completed, including a geotechnical exploration survey on a recent minor slide near the project area. In CY16, the Floodplain permit was received and the 401 WQC was submitted.

York Property, Elliott County. The project was approved in 2014 and it will add to the Ed Mabry-Laurel Gorge WMA. Since then, there have been property issues and the project is currently postponed until they can be solved.

Upper Cumberland River Service Area

There are five active, completed, and pending projects in this service area. These projects are within the USACE Nashville District and the EKSAP region, which utilizes the EIU credit system (**Figure 4**).

Buck Creek, Pulaski County. The property was purchased in 2010 and the WMA was opened to the public in 2013. The project is now in the long-term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

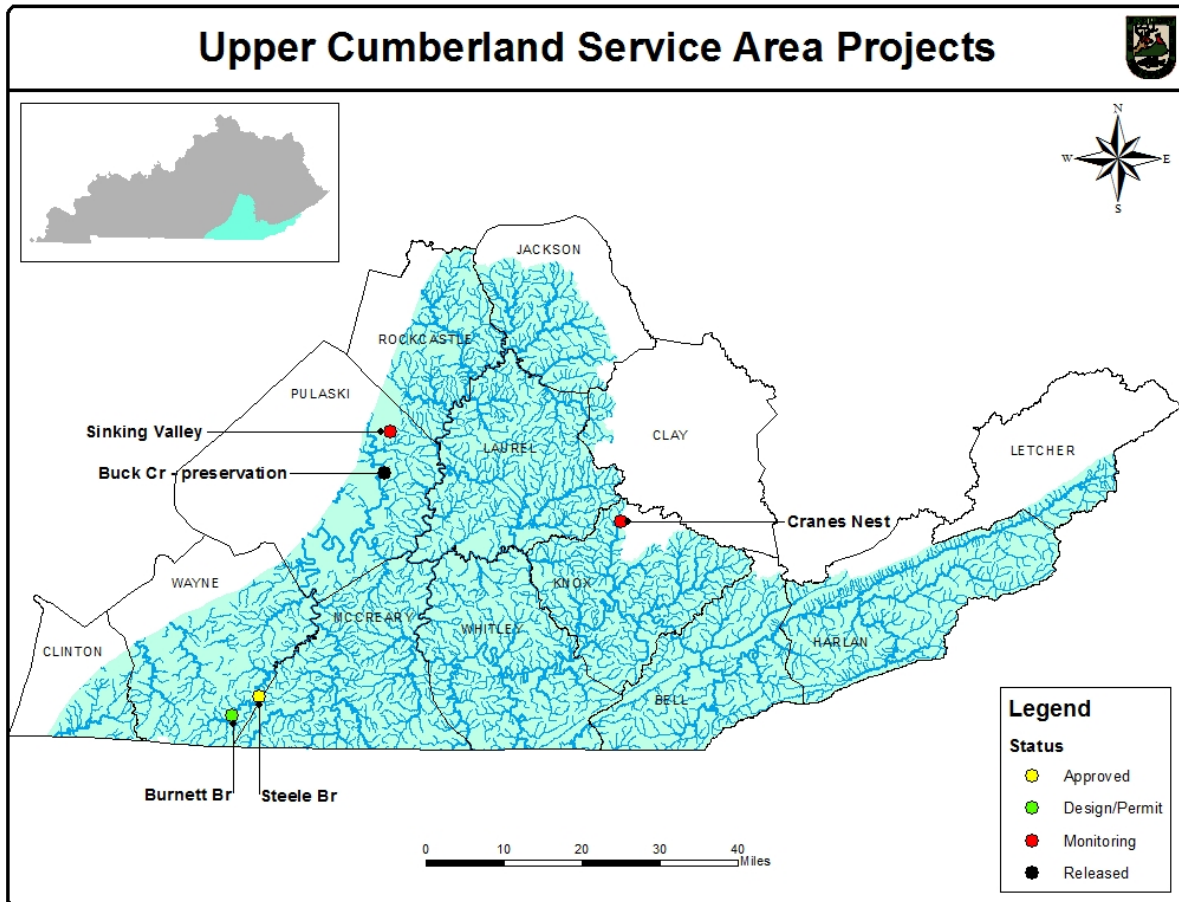
Burnett Branch, Wayne and McCreary Counties. KDFWR partnered with the KDOW Wild Rivers program to acquire the property for preservation and restoration. FILO funds were only utilized in stream riparian corridors and deed restrictions were applied at the time of purchase. In 2015, the mineral rights were acquired on an initially excepted portion of the property so that now the entire property can be pursued. In CY16, FILO reassessed the entire property according to the Nashville USACE's new stream assessment protocol. KDFWR is currently awaiting an official letter from USACE to proceed with the project.

Cranes Nest Branch, Knox County. The Year 4 monitoring report was submitted in CY16.

Sinking Valley, Pulaski County. The Mitigation Plan for all preservation was accepted in December 2013. The title required an update for the consideration of mineral severance/ownership and the mineral issue was resolved in early 2014. The purchase was completed in March 2014. This project has bi-annual monitoring reports and per the monitoring schedule, no report was submitted for CY16.

Steele Branch, Wayne and McCreary Counties. Approved in 2014, the project is another collaboration with KDOW Wild Rivers program. It is less than 5 miles north of Burnett Branch. There was no activity in 2015 or CY16.

Figure 4.



Lower Cumberland River Service Area

There are four active, completed, pending, and terminated projects in this service area. These projects are within the USACE Nashville District and the KAP region, which utilizes the AMU credit system. This service area has two distinct geographic areas in Kentucky, one in Western Kentucky and one in south-central Kentucky (**Figure 5**).

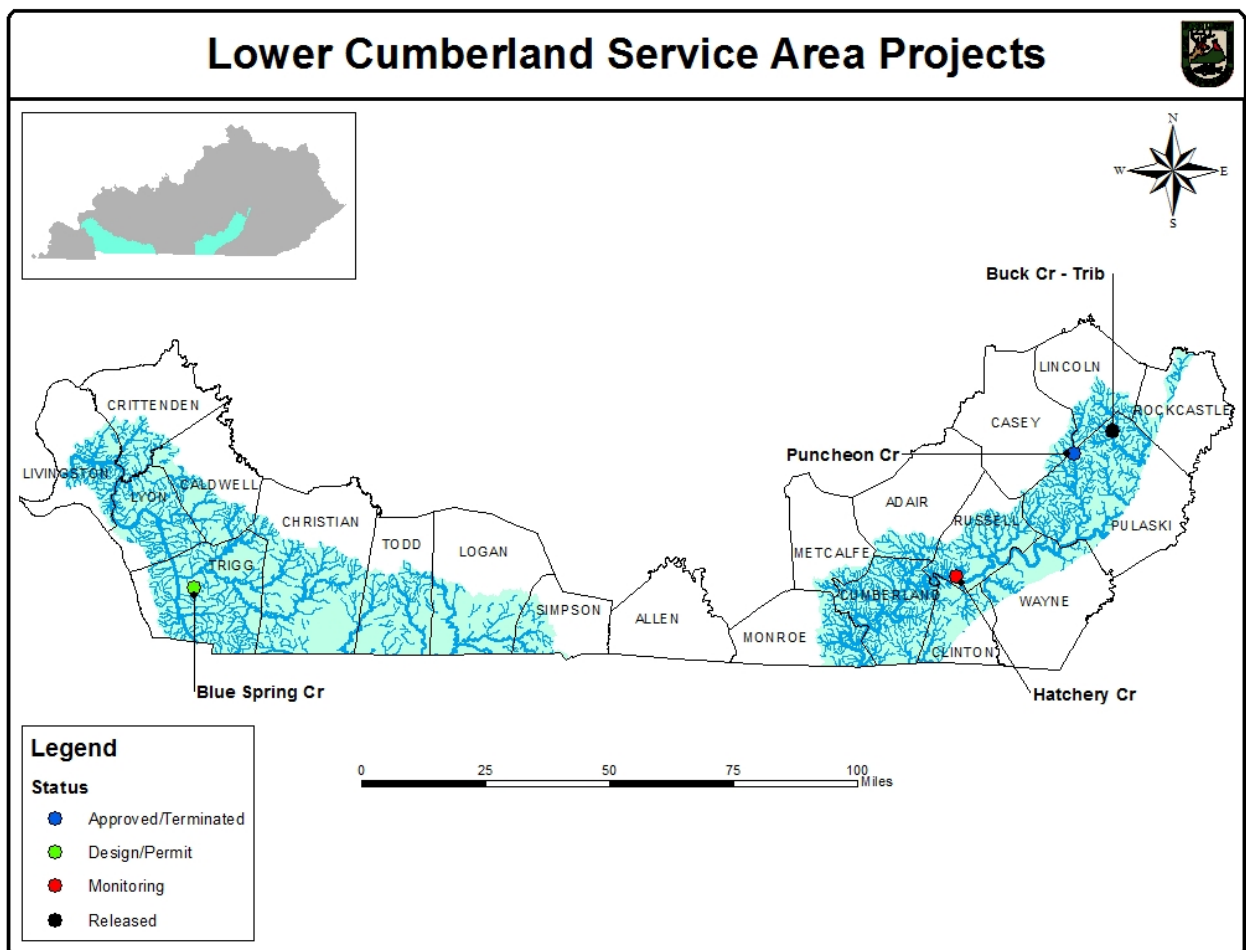
Blue Spring Creek, Trigg County. The project is entirely within Lake Barkley State Resort Park with a substantial part on the park's golf course. Approval was obtained from the KY Department of Parks officials prior to its presentation to the IRT. The project was tentatively approved in 2013 contingent on satisfactorily addressing several comments. Details on the preliminary design were thoroughly discussed with golf course managers to ensure that the channel and easement were compatible with the golf course layout. A draft Mitigation Plan and the 401 WQC application were submitted in early 2015. In CY16, KDFWR received the 401 WQC and submitted the 404 permit application. KDFWR also initiated a real estate review, as requested by the USACE, to address the State Park's high flow water easement.

Buck Creek Tributary, Pulaski County. The project was released in 2015 and is now in the long-term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Hatchery Creek, Russell County. A new contract for a design-build format was initiated in 2013. Construction began in August 2014 and the final project was completed in early CY16. An As built for the stream and wetland portions and the Year 1 monitoring report were all submitted in CY16.

Puncheon Creek, Pulaski County. After the design and permits were completed, several easement revisions were required. However, property issues arose after the original landowner passed away. The project was officially terminated in CY16.

Figure 5.



Upper Licking River Service Area

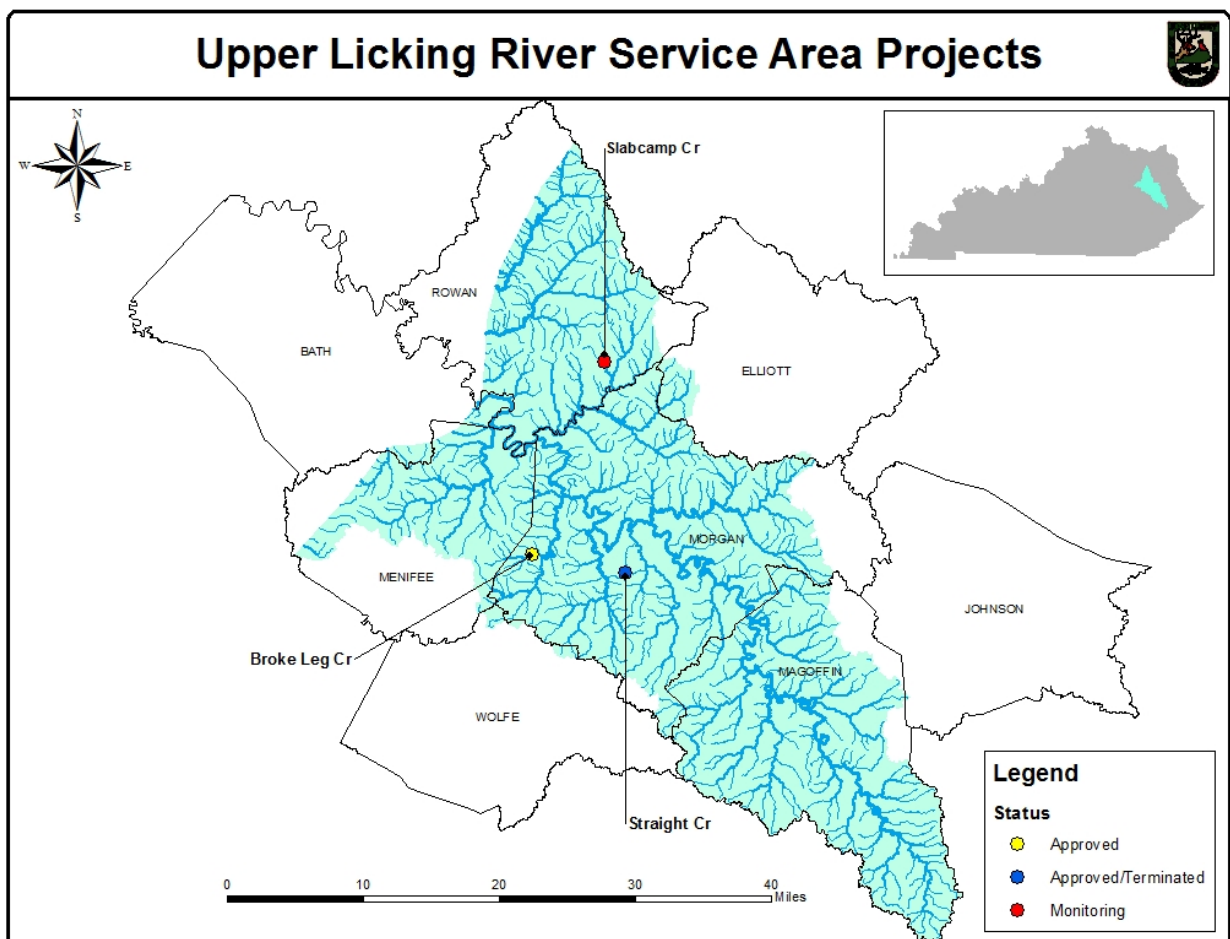
There are three active, pending, and terminated projects in this service area. These projects are within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Figure 6**).

Broke Leg Creek, Morgan County. Approved in late CY16, this property has over 35,000 feet of stream length. A conservation easement will be donated by the landowner.

Slabcamp/Stonecoal Branch, Rowan County. The year 4 monitoring report was submitted in CY16.

Straight Creek, Morgan County. Approved in early CY16, this property has over 37,000 feet of stream length. Shortly after the project was approved, it became known that the property was not for sale and the realtor who had listed it did not have permission to do so. After several failed attempts to talk to the landowner, the project has been terminated.

Figure 6.



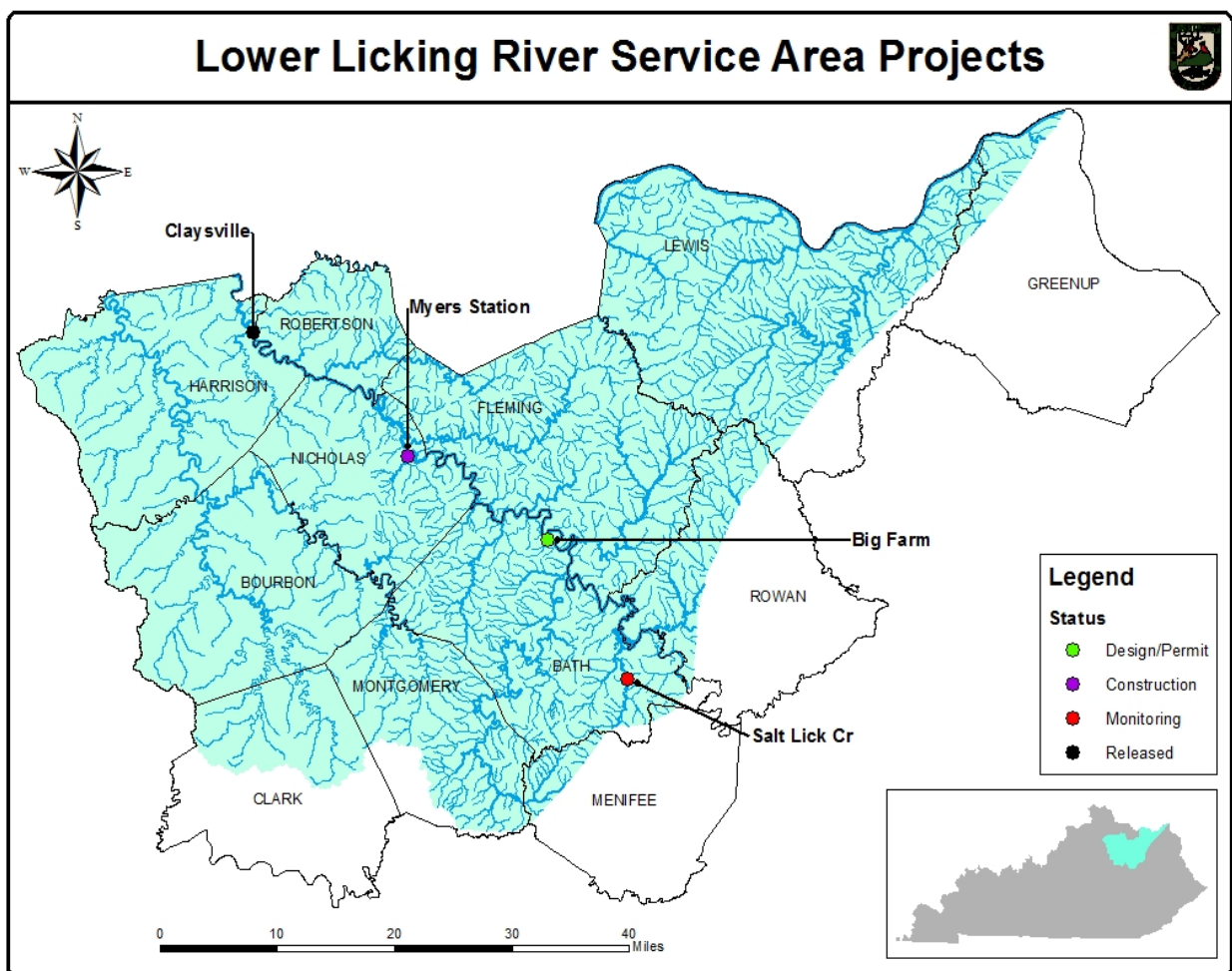
Lower Licking River Service Area

There are four active and released projects in this service area. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Figure 7**).

Big Farm, Bath County. The project was approved in 2014 and the 490-acre property was purchased in 2015. It is now part of the Clay WMA and contains over 6.2 miles of stream length, over one mile of which is preservation. The design-build contract was opened in early CY16. KDFWR also received the Floodplain permit and applied for the 401 WQC in CY16.

Claysville Recovery Land Site, Harrison County. The project was released in 2015 and is now in the long-term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Figure 7.



Myers Station, Nicholas County. The 462-acre property was purchased in 2014 and became part of the Clay WMA. The project includes over one mile of Licking River frontage as well as several intermittent and ephemeral streams. In 2014, a 30% design and draft Mitigation Plan were submitted with the 401 WQC application. The 404 permit application was submitted in late 2015. Construction began in CY16.

Salt Lick Creek, Bath County. Additional planting and minor floodplain repair occurred in early 2015. The Year 4 monitoring report was submitted in CY16.

Upper Kentucky River Service Area

There are 11 active, pending, released, and terminated projects in this service area. These projects are within the USACE Louisville District and the EKSAP region, which utilizes the EIU credit system (**Figure 8**).

Balls Fork, Knott County. This was the first project undertaken by the KDFWR in-lieu fee program. Supplemental planting occurred in early 2014 and the project was released in 2015. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

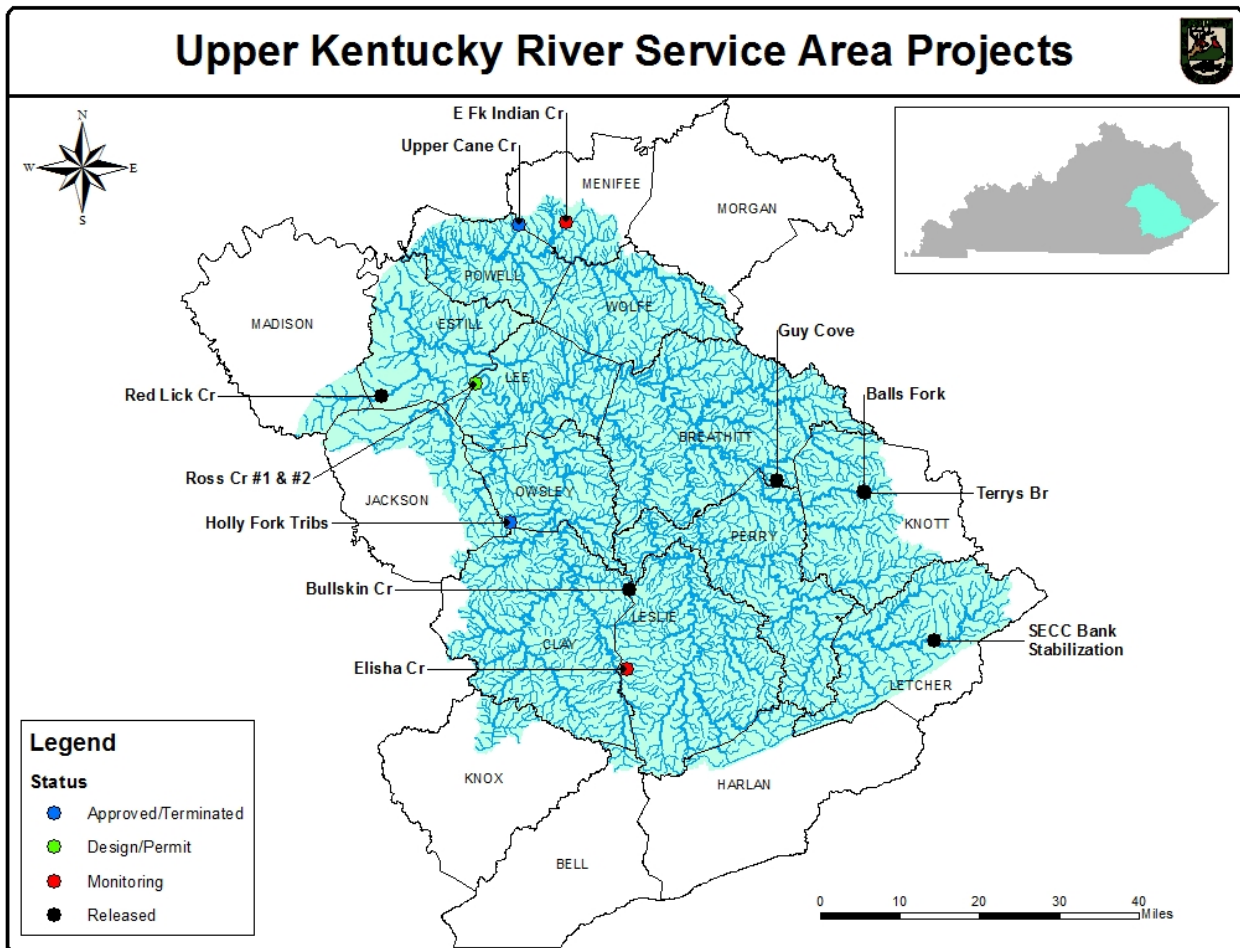
Bullskin Creek, Leslie County. Supplemental planting occurred in 2014 and the project was released in CY16. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate actions will be taken.

East Fork Indian Creek, Menifee County. The project is in the Daniel Boone National Forest. Permanent protection will be provided by the U.S. Forest Service (USFS) Management Plan. Construction was completed and the As-built was submitted in the fall of 2015 and the final planting was completed in early CY16. The Year 1 monitoring report was submitted in CY16. The project received a Regional Forester's Award from the Southern Region of the U.S. Forest Service in the category of "Restored and Resilient Landscapes."

Elisha Creek, Leslie County. The project is in the USFS Daniel Boone National Forest. Permanent protection will be provided by the USFS Management Plan. The original project scope was reduced to only include the Left Fork of Elisha Creek. Construction was completed in 2012 and the Year 4 monitoring report was received in CY16. Small, remedial repairs were also completed by KDFWR in CY16.

Laurel Fork (Guy Cove), Breathitt County. The project is in the Troublesome Creek watershed of Robinson Forest which is owned by the University of Kentucky (UK). This is a pilot project to rework the valley fill on a reclaimed mine site. The hollow fill was modified to more closely match the valley slope instead of the traditional fill required by mining regulations. The reworked material was "loose-dumped," according to a method that UK research has shown to be more successful in restoring forest and hydrologic regimes. The final monitoring report was received in 2014 after a delay to include spring 2014 wetland delineation data. The project was released in 2015 and is now in the long term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Figure 8.



Holly Fork Tribs, Owsley County. Approved in early CY16, this property has over 25,000 feet of stream length. Further review of the property’s deed and title revealed inconsistencies involving mineral ownership. The project has since been terminated.

Red Lick, Estill County. Supplemental planting occurred in 2014 and the project was later released in 2014. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Ross Creek, Lee and Estill County. The project is adjacent to the USFS Daniel Boone National Forest. The 640-acre property was purchased and the design began in 2014. The Floodplain permit and the 401 WQC were received in CY16.

SECC Bank Stabilization, Letcher County. Released in 2015, the project is now in the long term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Terrys Branch, Knott County. The project is an extension of the Balls Fork project. Two rounds of repairs on log structures and some supplemental plantings were completed in 2014. Follow-up repair efforts occurred in 2015 and the project was released later that year. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Upper Cane Creek, Menifee County. KDFWR worked with the county judge to reduce the scope of a road relocation associated with the project. Some discussions with local government in late 2014 and early 2015 appeared to resolve the county road issue; however, permits and USFWS concurrence were allowed to expire. Because of the age of the design, it may be necessary to revisit the design plans. Nearby project potential may present an opportunity to package this project with others in the Cane Creek watershed to realize a better economy of scale. There was no further activity in CY16.

Lower Kentucky River Service Area

There are seven active projects in this service area. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Figure 9**).

Cove Spring, Franklin County. The project is in in Cove Spring Park which is owned by the City of Frankfort and is accessible to the public. Construction began in 2012 and the final planting was completed in 2014. A round of supplemental planting, covered under the original project planting warrantee, occurred in early 2015. The Year 3 monitoring report was submitted in CY16.

Elm Fork, Owen County. The project is on Kleber WMA and is accessible to the public. Construction began in 2013 and it was completed in 2014. Based on early indications of stability after high flow events and significant habitat improvements over the former degraded conditions, this has been a highly successful project. A warrantee-covered remedial tree planting effort, caused by low survivability, was completed in early CY16. The Year 2 monitoring report was submitted in CY16.

Mill Creek, Fayette County. The project is on Mill Creek Elementary School property and provided stream and wetland restoration and ongoing outdoor classroom learning opportunities. The Year 5 monitoring report was submitted in 2014 but the project release is pending the finalization of easement documents. Several requests have been made to Real Properties to complete the paperwork.

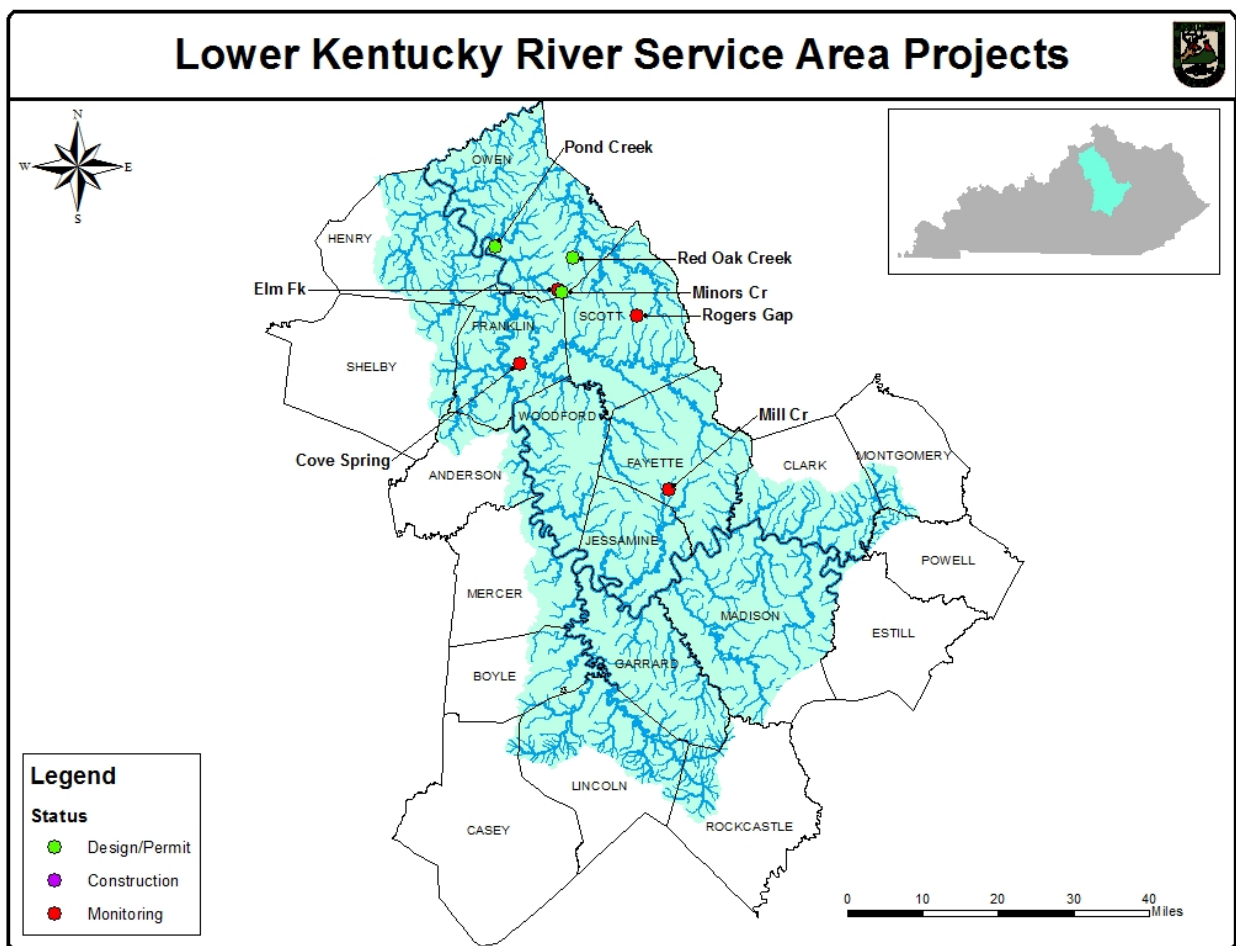
Minors Creek, Owen County. The 309-acre property was purchased in 2014 and is now a part of the Kleber WMA. The purchase will significantly improve and permanently protect Minors Creek and its watershed, which is directly upstream of the completed project on Elm Fork and Minors Creek. The WQC and floodplain applications were submitted in 2015. In CY16, the Floodplain permit and the 401 WQC were received and the 404 permit application was submitted.

Pond Creek, Owen County. The project is on the Chesney Tract of the Kentucky River WMA. It was approved in 2015 and the design started in 2015. In CY16, KDFWR asked the design consultant for some design modifications.

Red Oak Creek, Owen County. The project was approved in 2014 and was purchased in 2015. The 601-acre property was added to the Dr. James Rich WMA and design began in CY16. By the end of CY16, a draft Mitigation Plan and the 30% design were submitted.

Rogers Gap, Scott County. The project included the acquisition of 2,500 acres containing approximately 28 miles of stream channel. The property was acquired in 2011 utilizing funds from FILO and KDFWR federal grant money specifically designed for land acquisition. The property is permanently protected by deed restrictions approved by the USACE, has become a WMA, and is open to the public. The design-build started in 2013 and construction was completed in CY16. A draft As-built was submitted in CY16.

Figure 9.



Salt River Service Area

There are five active projects in this service area. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (**Figure 10**).

Floyd's Fork, Jefferson County. Approved in early CY16, this project is comprised of three separate areas: Big Vista Valley, Turkey Run, and Big Beech Woods. Altogether, there is over 19,000 feet of stream length and over 11 acres of wetland involved.

Harrison Fork, Nelson County. The University of Louisville has the project design but little progress was made in 2015. The 401 WQC application was submitted in CY16.

Otter Creek, Meade County. The project has the largest watershed of any FILO project with just over 100 square miles. Because of its size, good water quality, and significant physical degradation, the potential exists to create outstanding habitat that will support an excellent fishery and canoe recreation. Design began in 2014. In CY16, the conservation easement with the U.S. Army (Ft. Knox) was obtained. The design is at 70% and the Environmental Assessment is being drafted.

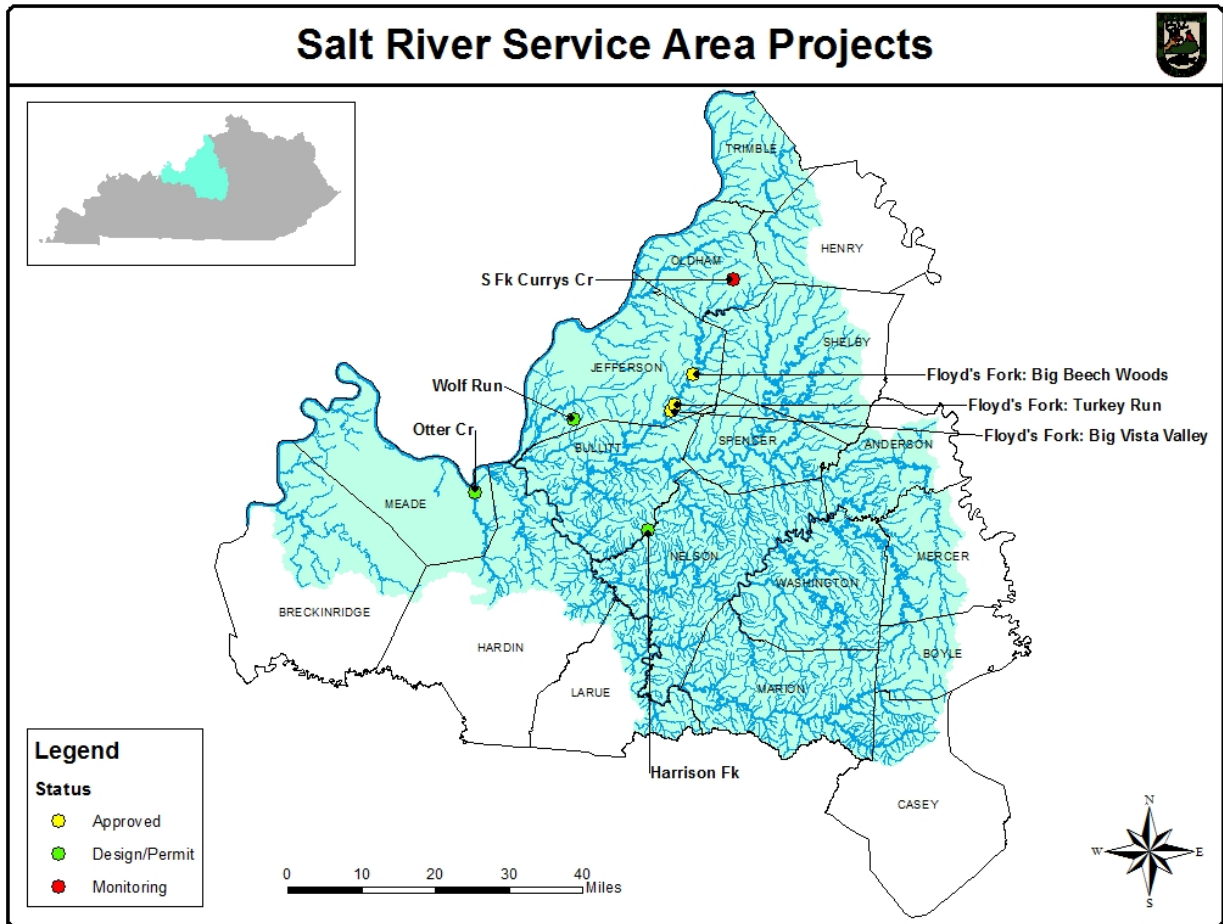
South Fork Currys Fork, Oldham County. The project was constructed in 2012 and the Year 4 monitoring report was received in CY16. In CY16, it was noticed that the project easement had been encroached upon when the county made some drainage improvements on the adjacent road. To resolve any damages, it was agreed upon that remedial native planting would suffice and that is scheduled to take place in early 2017.

Wolf Run, Jefferson County. The project is almost entirely on the Jefferson Memorial Forest. It will be developed in coordination with the Louisville-Jefferson County Metro Parks. Design began in late 2015. In CY16, KDFWR received a joint conservation easement with the Kentucky Heritage Land Conservation Fund on several of the tracts within the project area.

South Fork Currys Fork, Oldham County. The project was constructed in 2012. Year 3 monitoring report was received in 2015.

Wolf Run, Jefferson County. This project is almost entirely on the Jefferson Memorial Forest. It will be developed in coordination with the Louisville-Jefferson County Metro Parks. Design began in late 2015.

Figure 10.



Green River Service Area

There are eight active, pending, and completed projects in this service area. These projects are within the USACE Louisville District and the KAP region, which utilizes the AMU credit system (Figure 11).

Boys Creek, Barren County. Approved in 2014, the project is on private land and involves over 3,000 feet of stream length. In CY16, the land was appraised for a conservation easement.

Eagle Creek Tributary, Union County. The project is entirely within the Higginson-Henry WMA. In 2012, an agreement was signed to permanently protect the site from mineral extraction within the oil/gas lease easement area. In 2014, the revised design and Mitigation Plan were submitted and the WQC was approved. In 2015, the 404 permit was approved and construction began and was mostly complete by the end of the year. In early CY16, the site was planted and an issue with the surveyed elevation on the upper project reach was repaired. Issues arose with several plugs in the abandoned main channel and the responsibility for fixing those plugs has yet to be resolved between the design consultant and the contractor.

Farmers Creek, Webster County. The wetland and stream project was approved in 2014 and it involves three private landowners and the Lee K. Nelson WMA. Land contracts for conservation easements were obtained from the private landowners in 2015. In early CY16, KDFWR met with the three private landowners and WMA staff for a project kick-off meeting. The design progressed to 30% completion.

Forestland Group Tract, Union County. The first tract (2,488 acres in Union County) was purchased in 2012 and the second tract (4,241 acres in Crittenden County) was purchased in 2013. FILO contributed funds associated with preservation of the Tradewater River corridor, which were applied with the second phase. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

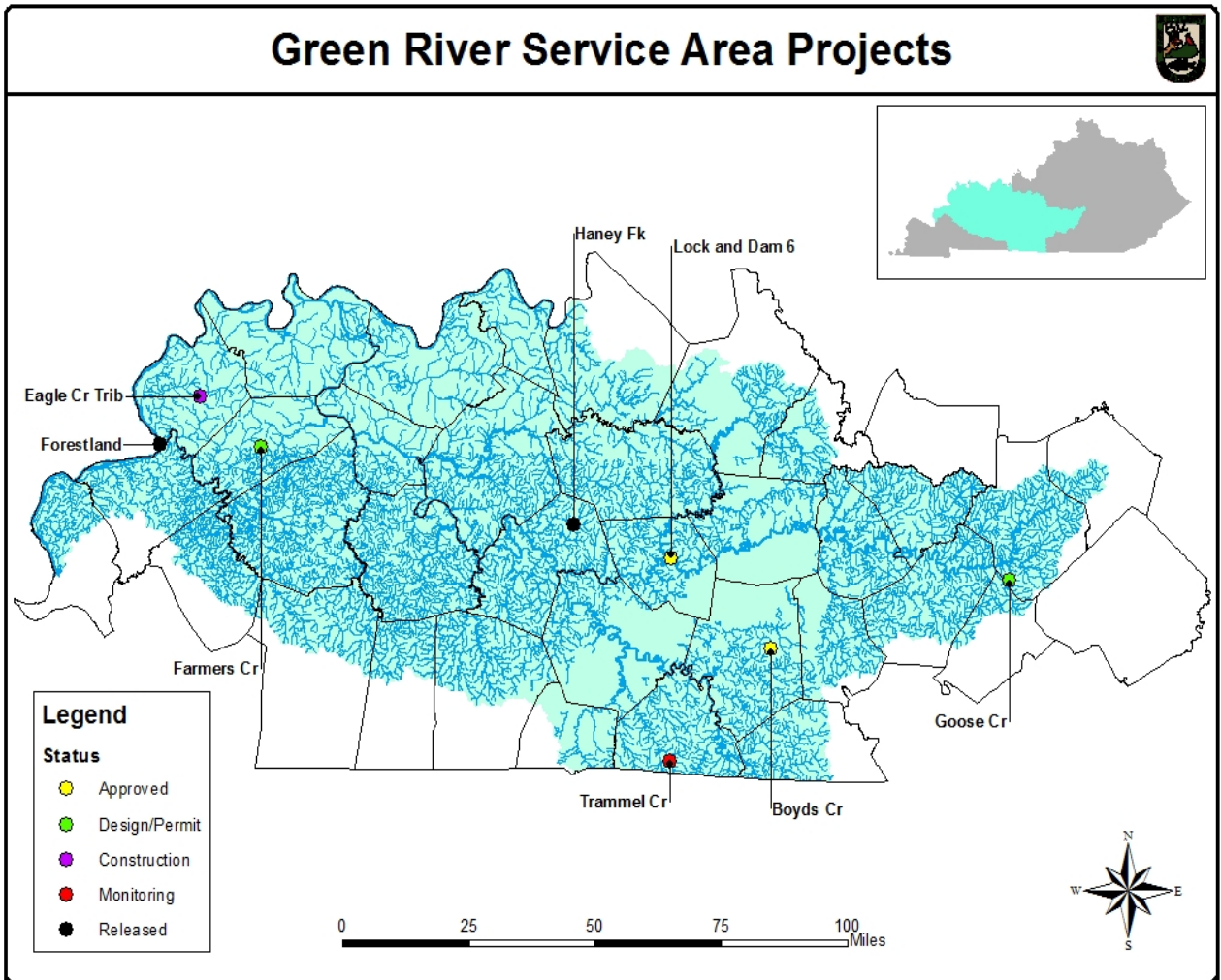
Goose Creek, Casey County. The project is on a 200-acre cattle farm, which includes nearly a mile of Goose Creek and several tributaries. In late 2015, wetlands were added to the project for the submittal of the 401 WQC application. In CY16, KDFWR received the 401 WQC and submitted for the 404 permit.

Haney Fork, Butler County. The project was released from monitoring in 2012. Now in the long term management phase, the project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Lock and Dam 6, Edmonton County. The project was approved in early CY16 and it involved the removal of Lock and Dam 6 on the Green River. However, in late CY16, the dam failed on its own and the viability of the project is now uncertain.

Trammel Creek, Allen County. The project has experienced some minor bank scour and loss of vegetation. Additional tree planting occurred in 2014. The Year 5 monitoring report was received in 2014; however, the monitoring period was extended due to additional repairs that took place in CY16. The Year 7 monitoring report was submitted in CY16 and the project has not yet been formally released. KDFWR has plans for another round of native planting in early 2017.

Figure 11.



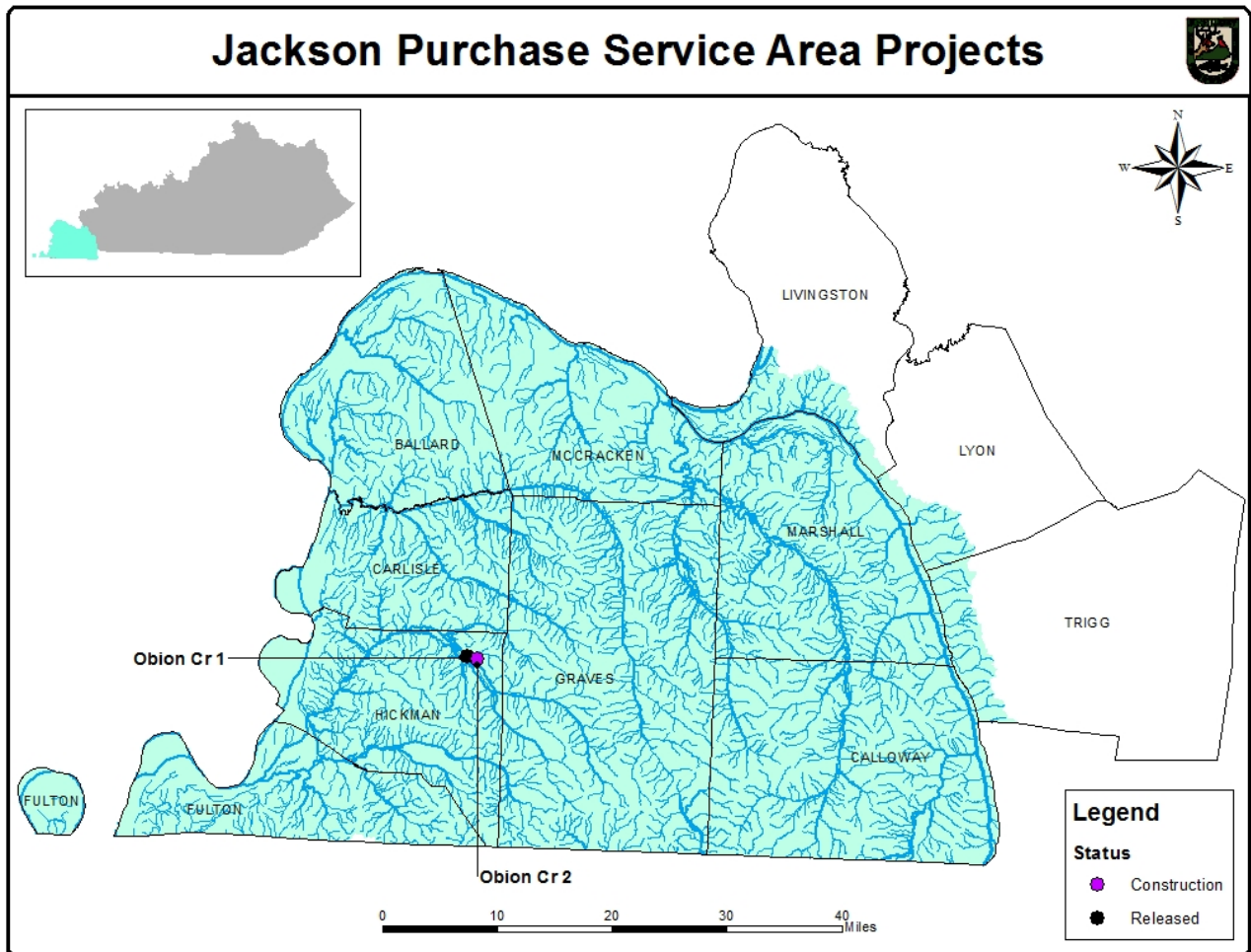
Purchase Service Area (Tennessee, Mississippi River, and Lower Ohio River Basins)

There are two active and completed projects in this service area. These projects are within the USACE Memphis District and the KAP region, which utilizes the AMU credit system (**Figure 12**).

Obion Creek #1, Hickman County. The project is now in the long term management phase. The project will be periodically monitored for easement encroachments and, if needed, appropriate measures will be taken.

Obion Creek #2, Hickman County. The project is in its second phase of construction. The construction of the bypass channel upstream of the debris jam began in 2014 but no progress was made in 2015. Construction was still ongoing in CY16.

Figure 12.



Long Term Management Activities

The following sites are in the “Long Term Management (LTM)” phase. These sites are released from monitoring and visited annually (at a minimum) by KDFWR staff. Prior to the site visit, a letter mailed to the project landowner(s) notify them of an upcoming visit and provides contact information for KDFWR FILO Staff. This information, along with site photographs summarized in **Appendix D** - Compliance Information.

BM - Bethany Mulhall
KR – Kevin Rexroat
TB – Tom Burberry

Big Sandy Service Area-LTM Site Visits

Kinniconick and Indian Creek (3-4-2016 and 11-29-2016)

On 3-4-2016, KDFWR and members of the IRT conducted a compliance inspection. The site looked stable, yet the visit occurred prior to plant emergence and a recent snowfall had occurred, making it difficult to see the vegetation on the site. The amount of herbaceous thatch on the ground and woody stems indicated no easement encroachments occurred. A return visit to the site on November 29, 2016 by KR and TB (KDFWR) also indicated no easement encroachments and vegetation was maturing and intact. The stream and surrounding areas were very dry due to being in a prolonged drought period. Easement marking signs installed at the site on this date, not due to potential threats of encroachments, but as a goal to install and/or update easement marker signs at all FILO long-term management sites. Letters mailed to project landowner(s) in May CY16. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Middle Creek (6-30-2016)

Project site visited by BM and TB (KDFWR) at approximately 10:30am. The site inspection noted that the conservation easement riparian zone was not recently mowed and well overgrown. No easement encroachments noted and easement marker signs were still intact. Approximately 15 of the large planted B&B trees survived and growing well. Mostly tulip poplar and river birch noted with fewer oaks. Some were standing but appeared dead with no leave present at the crown. Stream banks remain high and a lot of sandy material is exposed. There was also evidence of sandy deposition up on the floodplain terrace. There was a large amount of invasive species present including Johnson grass, multiflora rose, and knotweed. However, a decent amount of native vegetation was present too. The vegetation was very thick and difficult to traverse. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Upper Laurel Creek (7-18-2016)

Site visited by BM, KR, and TB (KDFWR). No easement encroachments noted. Area with large beaver dam that had breached revisited and photographed. The area had recovered well with dense native vegetation. This visit determined that no remedial action needed. The entire site was dense with native vegetation. During the visit, the area previously regraded and repaired with coir logs and native seed was recovering well. The area was not as lush as the remainder of the site, but there were no bare areas and the location appears to be on a positive trajectory toward maturation. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Locust Creek (7-18-2016)

Site visited by BM, KR, and TB (KDFWR). Easement is narrow on this project, but no encroachments from landowners observed. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Left Fork Trace Creek (7-18-2016)

Site visited by BM, KR, and TB (KDFWR). Easement intact with dense native vegetation and no encroachments noted. Previously repaired areas are holding up well. Site appears to be on a successful project trajectory. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Upper Kentucky Service Area-LTM Site Visits**Balls Fork and Terry's Branch (5-24-2016)**

Project sites visited by BM, KR, and TB (KDFWR). Entire site walked and all repair areas observed. The easement was intact with native vegetation and no easement encroachments noted. All repaired areas functioning properly and stable. Noted that native vegetation is maturing and no areas of bare ground observed. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

SECC-North Fork KY River Bank Stabilization (6-30-2016)

Project site visited by BM and TB (KDFWR). The project banks were very stable. No evidence of any cutting or erosion. Project looked good overall. College staff appears to be maintaining the grounds, but mowing the area adjacent to the stream less frequently than the remaining lawn area. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Bullskin Creek (6-30-16)

Project site visited by BM and TB (KDFWR). No easement encroachments noted. The landowner was present and currently mowing their lawn area, avoiding the easement. The project appeared to be stable and there were some larger trees present in the riparian area including black willow and some oak trees. There were some native herbaceous species in the riparian zone, but Japanese Knotweed still made up a large component of the zone. A large beaver dam constructed on the upper third of the project and had created an impoundment, but not thought to be negative to the project. Overall, the project appeared stable and trending toward a mature riparian zone. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Red Lick Creek (6-30-16)

Project site visited by BM and TB (KDFWR). A wire fence running along the easement was still intact. The designated stream crossing did not have evidence of recent use and was overgrown. The landowner currently did not have livestock on the property, and the field adjacent to the easement planted in soybeans. Noted several trees presumed to be from the original planting and were very tall, including cottonwood and black willow. Most of the riparian zone was thick and consisted of a lot of native vegetation. Project stable and no encroachments noted. Letters mailed to landowner(s) on project in May 2016. The purpose of the letter included notifying landowner(s) of upcoming site visits and providing KDFWR staff contact information.

Green Service Area-LTM Site Visits

Haney Fork (7-15-2016)

Site visited by KR and TB (KDFWR). Upon approaching the site, signs were present indicating protection by “Southern Conservation Corp”. Site observations showed no disturbances or encroachments on the property. Early successional growth proved so thick making it difficult to navigate on foot. Trees appeared dense, diverse and native. Many oak species, persimmon, and early successional sycamore volunteers observed. The landscape also included meadow characteristics that appeared undisturbed and heavily used by wildlife. All drainages appeared undisturbed and heavily vegetated.

Lower Licking Service Area-LTM Site Visits

Claysville Land Acquisition Site (10-3-2016)

Site visited by BM, KR, and TB (KDFWR). No easement encroachments noted. The site appeared to be under the same ownership as land use and management practices did not differ from previous visits or accounts from previous monitoring reports. The Licking River tributaries investigated and no evidence of headcut migration observed. All

locations were dense with vegetation and stability from roots noted. Overall, the site covered in dense, scrubby, vegetation as expected from old-field to forest succession. The tributaries were dry during the time of the visit, and the Licking River was low, further indicating dry conditions due to prolonged drought in this part of the state.

References

Kentucky Department of Fish and Wildlife Resources. 2015. Annual Report – Calendar Year 2014. Kentucky Wetland and Stream Mitigation Program.

U.S. Army Corps of Engineers. 2011. Modification – Number One of the Agreement Concerning In-Lieu Mitigation Fees between U.S. Army Corps of Engineers and Kentucky Department of Fish and Wildlife Resources. LRL-2010-325.

U.S. Army Corps of Engineers. 2008. 33 CFR Chapter II Part 332. Compensatory Mitigation for Losses of Aquatic Resources. Federal Register Vol. 73, No. 70, April 10, 2008.

Appendix A

CY15 Credit Sales, Costs, and Balances

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
Big Sandy Stream (EIU)	07/01/16	LRL-2007-1026, LRL-2007-1206, 200400336	176.60	\$755	CY2016 Beginning Balance	202,678.09
					CY2016 Credit Sales	176.60
					CY2016 Credit Releases	-
					CY2016 Ending Balance	202,501.49
CY2016 TOTAL CREDITS SOLD			176.60			

Upper Kentucky Stream (EIU)	02/02/16	WQC 2015-004-7 (LRL-2014-586)	155.30	\$755	CY2016 Beginning Balance	233,647.98
	03/22/16	LRL-2015-20	2,163.76	\$755	CY2016 Credit Sales	7,398.89
	04/27/16	LRL-2007-615	177.83	\$755	CY2016 Credit Releases	-
	05/17/16	LRL-2015-332	1,527.00	\$755	CY2016 Ending Balance	226,249.09
	06/17/16	LRL-2013-1043	71.00	\$755		
	12/20/16	LRL-2012-423	3,304.00	\$755		
CY2016 TOTAL CREDITS SOLD			7,398.89			

Upper Licking Stream (EIU)	06/24/16	LRL-2014-905-jlb	1,435.00	\$755	CY2016 Beginning Balance	231,473.00
	08/26/16	LRL-2014-311 (refunded)	(504.00)	\$610	CY2016 Credit Sales	931.00
					CY2016 Credit Releases	-
					CY2016 Ending Balance	230,542.00
CY2016 TOTAL CREDITS SOLD			931.00			

Upper Cumberland Stream (EIU)	01/07/16	LRN-2008-01177	10.99	\$755	CY2016 Beginning Balance	231,890.07
	02/02/16	LRN-2008-01177	11.04	\$753	CY2016 Credit Sales	22.03
					CY2016 Credit Releases	3502.60*
					CY2016 Ending Balance	231,179.64
CY2016 TOTAL CREDITS SOLD			22.03			

*corrected credit release - Sinking Valley originally released 4,191 credits (2014), adjusted to 3,502.60 April 2016

Lower Kentucky Stream (AMU)	07/07/16	LRL-2013-1125 (2 of 2)	409.00	\$300	CY2016 Beginning Balance	220,837.80
					CY2016 Credit Sales	409.00
					CY2016 Credit Releases	-
					CY2016 Ending Balance	220,428.80
CY2016 TOTAL CREDITS SOLD			409.00			

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
Lower Licking Stream (AMU)	04/22/16	Claysville Land Acq (LRL-2008-644)	20.72	\$300	CY2016 Beginning Balance	205,223.00
	05/01/16	LRL-2014-221	3,379.00	\$300	CY2016 Credit Sales	3,399.72
					CY2016 Credit Releases	2,196.45
					CY2016 Ending Balance	204,019.73
			CY2016 TOTAL CREDITS SOLD	3,399.72		
Lower Cumberland Stream (AMU)	10/05/16	LRN-2015-01110	300.00	\$300	CY2016 Beginning Balance	217,453.09
	10/18/16	LRN-2016-00016	550.00	\$300	CY2016 Credit Sales	850.00
					CY2016 Credit Releases	-
					CY2016 Ending Balance	216,603.09
			CY2016 TOTAL CREDITS SOLD	850.00	\$300	
Salt Stream (AMU)	03/01/16	LRL-2015-846	702.00	\$300	CY2016 Beginning Balance	216,274.96
	03/02/16	LRL-2012-737	1,992.00	\$300	CY2016 Credit Sales	3,968.00
	03/02/16	LRL-2015-312	50.00	\$300	CY2016 Credit Releases	-
	06/21/16	LRL-2015-282	1,224.00	\$300	CY2016 Ending Balance	212,306.96
			CY2016 TOTAL CREDITS SOLD	3,968.00		
Green River Stream (AMU)	06/24/16	LRL-2011-930-jea	2,343.00	\$300	CY2016 Beginning Balance	197,308.94
					CY2016 Credit Sales	2,343.00
					CY2016 Credit Releases	-
					CY2016 Ending Balance	194,965.94
			CY2016 TOTAL CREDITS SOLD	2,343.00		
Jackson Purchase Stream (AMU)	11/22/16	LRL-2014-299	1,140.00	\$300	CY2016 Beginning Balance	238,771.51
					CY2016 Credit Sales	1,140.00
					CY2016 Credit Releases	-
					CY2016 Ending Balance	237,634.51
			CY2016 TOTAL CREDITS SOLD	1,140.00		

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance	
Lower Kentucky Wetland (AMU)	04/06/16	LRL-2014-375	0.500	\$45,840	CY2016 Beginning Balance	91.478	
	07/05/16	LRL-2005-516	0.410	\$45,840	CY2016 Credit Sales	1.310	
	07/07/16	LRL-2013-1125	0.400	\$45,840	CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			1.310			CY2016 Ending Balance
Upper Licking Wetland (AMU)					CY2016 Beginning Balance	85.780	
					CY2016 Credit Sales	-	
					CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			-			CY2016 Ending Balance
Upper Cumberland Wetland (AMU)					CY2016 Beginning Balance	82.159	
					CY2016 Credit Sales	-	
					CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			-			CY2016 Ending Balance
Lower Cumberland Wetland (AMU)					CY2016 Beginning Balance	81.540	
					CY2016 Credit Sales	-	
					CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			-			CY2016 Ending Balance
Salt River Wetland (AMU)	03/01/16	LRL-2015-846	0.040	\$45,840	CY2016 Beginning Balance	94.837	
	06/21/16	LRL-2015-282	16.260	\$45,840	CY2016 Credit Sales	16.300	
					CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			16.300			CY2016 Ending Balance
Green River Wetland (AMU)	03/01/16	LRL-2014-432	4.300	\$45,840	CY2016 Beginning Balance	161.572	
	06/24/16	LRL-2011-930-jea	0.200	\$45,840	CY2016 Credit Sales	4.500	
					CY2016 Credit Releases	-	
	CY2016 TOTAL CREDITS SOLD			4.500			CY2016 Ending Balance

Service Area	Date of Payment	Corps 404 Id. No.	Credits Sold	\$/Credit	Advanced Credits	Balance
Jackson Purchase Wetland (AMU)			-		CY2016 Beginning Balance	196.880
					CY2016 Credit Sales	-
					CY2016 Credit Releases	-
					CY2016 Ending Balance	196.880
			CY2016 TOTAL CREDITS SOLD	-		
Lower Licking Wetland (AMU)			-		CY2016 Beginning Balance	99.020
					CY2016 Credit Sales	-
					CY2016 Credit Releases	-
					CY2016 Ending Balance	99.020
			CY2016 TOTAL CREDITS SOLD	-		
Big Sandy Wetland (AMU)			-		CY2016 Beginning Balance	93.439
					CY2016 Credit Sales	-
					CY2016 Credit Releases	-
					CY2016 Ending Balance	93.439
			CY2016 TOTAL CREDITS SOLD	-		
Upper Kentucky Wetland (AMU)	03/22/16	LRL-2015-20	0.960	\$47,750	CY2016 Beginning Balance	98.800
	05/17/16	LRL-2015-332	2.340	\$45,840	CY2016 Credit Sales	3.300
					CY2016 Credit Releases	-
					CY2016 Ending Balance	95.500
			CY2015 TOTAL CREDITS SOLD	3.300		

Appendix B
Project Data

AMU Area									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits ^c	Cost/ft	Cost/credit^c
Big Sandy River									
Long-Term Management Phase ^a									
Kinniconnick/Indian Creek	Rehabilitation Enhancement	Lewis	Louisville	LRL-2007-409-pgj	\$2,061,600	6,782		\$304	
Lower Cumberland River									
Design Phase									
Blue Spring Creek (Lake Barkley State Park)	Rehabilitation Enhancement	Trigg	Nashville	LRN-2013-00776	\$5,547,250	30,137	33,867	\$184	\$164
Puncheon Creek	Rehabilitation Enhancement	Pulaski	Nashville		\$3,000,000	11,760		\$255	
Monitoring Phase									
Hatchery Creek (Stream) (U.S. Army Corps Engineers)	Re-establishment	Russell	Nashville	LRN-2010-00444	\$2,175,171	6,000		\$363	
Hatchery Creek (Wetland) (U.S. Army Corps Engineers)		Russell	Nashville	LRN-2010-00444	\$24,829		1.170		\$21,221
Long-Term Management Phase ^a									
Buck Creek Tributary (The Nature Conservancy)	Rehabilitation Enhancement	Pulaski	Nashville		\$236,750	1,221		\$194	
Green River									
Approved Phase									
Boyd's Creek	Rehabilitation Re-establishment	Barren	Louisville	LRL-2013-545-pgj	\$461,825	3,235	2,538	\$143	\$182
Design Phase									
Farmer's Creek (Stream) (part on L.K. Nelson WMA)	Rehabilitation Re-establishment Enhancement	Webster	Louisville	LRL-2014-58-pgj	\$1,925,486	13,610	11,941	\$141	\$161
Farmer's Creek (Wetland) (part on L.K. Nelson WMA)	Enhancement	Webster	Louisville	LRL-2014-58-pgj	\$105,750	5.9 ac	4.70		\$22,500
Goose Creek	Preservation Enhancement Rehabilitation Re-establishment	Casey	Louisville	LRL-2012-646-pgj	\$3,290,154	18,600	18,000	\$177	\$183

AMU Area (cont)									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits^c	Cost/ft	Cost/credit^c
Construction Phase									
Eagle Cr Tributary (Stream) (Higginson-Henry WMA)	Rehabilitation Enhancement	Union	Louisville	LRL-2012-716 pgj	\$1,042,550	12,200	1848 ^c	\$85	
Eagle Cr Tributary (Wetland) (Higginson-Henry WMA)	Establishment	Union	Louisville	LRL-2012-716 pgj	\$431,300	25.54 ac	10.28 ^c		
Monitoring Phase									
Trammel Creek	Rehabilitation Enhancement	Allen	Louisville	LRL-2008-936-pgj	\$862,500	3,800		\$227	
Long-Term Management Phase ^a									
Haney Fork Watershed No. 2 (Southern Conservation Corp.)	Rehabilitation Enhancement	Butler	Louisville	LRL-2004-01363	\$242,381	4,330		\$56	
Preservation Project									
Forestland Gr Tract (Stream) (Big Rivers WMA)	Preservation Enhancement	Union	Louisville		\$620,100	26,320		\$24	
Forestland Gr Tract (Wetland) (Big Rivers WMA)	Restoration Enhancement	Union	Louisville		\$29,900	5.6 ac			
Terminated Project									
Green River Lock and Dam 6		Edmonson	Louisville		\$125,000				
Jackson Purchase									
Construction Phase									
Obion Creek II (KY State Nature Preserves Comm)	Rehabilitation Enhancement	Hickman	Memphis	MVM-2010-074	\$781,000	23,000		\$34	
Long-Term Management Phase ^a									
Obion Creek (Obion Cr WMA)	Rehabilitation Enhancement	Hickman	Memphis	200300263	\$64,853	5,684		\$11	
Terminated Project									
East Fork Clark's River		Calloway			\$38,528				
Lower Kentucky River									
Design Phase									

AMU Area (con't)									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits^c	Cost/ft	Cost/credit^c
Red Oak Creek (Rich WMA)	Preservation Enhancement Rehabilitation Re-establishment	Owen	Louisville	LRL-2014-500-pgj	\$1,000,000	12,627	7,513	\$79	\$133
Minors Creek (Kleber WMA)	Preservation Enhancement Rehabilitation Re-establishment	Owen	Louisville	LRL-2013-91-pgj	\$3,507,000	24,215	20,346	\$145	\$172
Pond Creek (Stream) (KYR WMA)	Re-establishment	Owen	Louisville	LRL-2014-191-pgj	\$128,652	4,220	852	\$30	\$151
Pond Creek (Wetland) (KYR WMA)	Enhancement	Owen	Louisville	LRL-2014-191-pgj	\$133,620	11.36 ac	5.68		\$23,525
Construction Phase									
Rogers Gap (Veterans WMA)	Preservation Enhancement Rehabilitation Re-establishment	Scott	Louisville	LRL-2013-134-pgj	\$10,100,000	170,856		\$59	
Monitoring Phase									
Cove Spring (Stream) (Cove Spring Park)	Rehabilitation Enhancement	Franklin	Louisville	LRL 2009 614 pgj	\$1,237,543	7,001		\$177	
Cove Spring (Wetland) (Cove Spring Park)	Establishment	Franklin	Louisville	LRL 2009 614 pgj	\$257,457	20.64 ac			
Elm Fork (Kleber WMA)	Rehabilitation Enhancement	Owen	Louisville	LRL 2012-263-pgj	\$1,468,000	8,562		\$171	
Mill Creek (Mill Cr Elem School)	Rehabilitation	Fayette	Louisville	LRL-2009-611-pgj	\$187,050	750		\$249	
Terminated Project									
Pond Creek (former stream project) (KY River WMA)		Owen	Louisville		\$17,284				
Lower Licking River									
Design Phase									
Big Farm (WMA TBA)	Rehabilitation Re-establishment Enhancement Preservation	Bath	Louisville	LRL-2014-209-pgj	\$4,289,980	32,792	24,124	\$131	\$178

AMU Area (con't)									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits^c	Cost/ft	Cost/credit^c
Construction Phase									
Myers Station (Clay WMA)	Rehabilitation Re-establishment Buffer Enhance Preservation	Nicholas	Louisville	LRL-2012-637-pgj	\$2,914,732	25,694	14,643	\$113	\$199
Monitoring Phase									
Salt Lick	Rehabilitation Enhancement	Bath	Louisville	LRL-2011-891-pgj	\$1,647,800	5,661		\$291	
Long-Term Management Phase ^a									
Claysville Recovery Land Aq Site	Enhancement	Harrison	Louisville	LRL-2008-644-pgj	\$281,500	2,600		\$108	
Salt River									
Approved Phase									
Floyds Fork -Turkey Run and Big Beech Woods	Rehabilitation Re-establishment	Jefferson	Louisville	LRL-2015-216-pgj	\$1,540,575	8,718	6,848	\$177	\$225
Design Phase									
Harrison Fork (Bernheim Forest)	Rehabilitation Enhancement	Nelson	Louisville	LRL-2012-274-pgj	\$1,700,000	8,900		\$191	
Otter Creek (Otter Cr Outdoor Recreation Area)	Rehabilitation	Meade	Louisville	LRL-2013-425-pg	\$3,374,400	12,530	17,575	\$269	\$192
Wolf Run (Jefferson Memorial Forest)	Restoration Preservation	Jefferson	Louisville	LRL-2014-60-pgj	\$2,257,138	16,300	14,670	\$138	\$154
Monitoring Phase									
South Fork of Curry's Fork (Oldham County Schools)	Rehabilitation Enhancement	Oldham	Louisville	LRL-2009-98-pgj	\$978,900	4,753		\$206	
Total Stream Projects ^b	29				\$58,924,890	512,858	169,474^c		
Total Wetland Projects^b	6				\$982,856		21.83 ^c		
Average Stream					\$2,031,893	17,685	13,969 ^c	\$115	180 ^c
Average Wetland					\$163,809				20055 ^c

EIU Area									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits^c	Cost/ft	Cost/credit^c
Big Sandy River									
Approved Phase									
Laurel Creek Gorge #2 (Ed Mabry-Laurel Gorge WMA)	Rehabilitation Enhancement	Elliott	Louisville	LRL-2012-478-pgj	\$978,593	9,255	2,139	\$106	\$458
Mart Whitt Fork (Ed Mabry-Laurel Gorge WMA)	Enhancement Preservation	Elliott	Louisville	LRL-2013-598-pgj	\$1,223,950	17,641	2,675	\$69	\$458
Smith Tract - Laurel Cr Gorge (Ed Mabry-Laurel Gorge WMA)	Rehabilitation Re-establishment	Elliott	Louisville	LRL-2013-1013-pgj	\$806,115	4,386	1,762	\$184	\$458
Staggs Br	Rehabilitation Re-establishment	Lewis	Louisville	LRL-2016-00153-pgj	\$3,637,679	17,276	6,749	\$211	\$539
Stan Br	Rehabilitation Re-establishment Enhancement Preservation	Carter	Louisville	LRL-2016-374-pgu	\$2,696,720	11,870	5,186	\$227	\$520
York Tract (Ed Mabry-Laurel Gorge WMA)	Rehabilitation	Elliott	Louisville	LRL-2013-1012-pgj	\$119,408	700	261	\$171	\$458
Design Phase									
Old Trace Creek (WMA TBA)	Rehabilitation Re-establishment Enhancement Preservation	Lewis	Louisville	LRL-2013-336-pgj	\$2,689,643	13,816	7,277	\$195	\$370
Whites Creek	Rehabilitation Re-establishment	Boyd	Louisville	LRL-2012-634-pgj	\$1,482,120	8,355	3,312	\$177	\$448
White Oak Creek	Rehabilitation	Greenup	Louisville	LRL-2010-787-pgj	\$1,069,078	6,134	2,389	\$174	\$448
Brushy Creek Repair 3		Greenup	Louisville		\$550,000				
Monitoring Phase									
Bolts Fork	Rehabilitation Enhancement	Boyd	Louisville	LRL-2010-00698	\$1,212,900	5,640		\$215	
East Fork Little Sandy #2	Rehabilitation Enhancement	Lawrence	Louisville	LRL-2009-332-pgj	\$2,177,600	12,598		\$173	
East Fork Little Sandy #3	Rehabilitation Enhancement	Lawrence	Louisville	LRL-2008-1082-pgj	\$1,676,400	9,778		\$171	
East Fork Little Sandy #4	Rehabilitation Enhancement	Lawrence	Louisville	LRL-2009-123-pgj	\$817,700	3,159		\$259	
Long-Term Management Phase ^a									

EIU Area (con't)

<u>Basin/Stream</u>	<u>Type</u>	<u>County</u>	<u>USACE District</u>	<u>404 Permit #</u>	<u>Project Cost</u>	<u>Length (ft)</u>	<u>Credits ^c</u>	<u>Cost/ft</u>	<u>Cost/credit ^c</u>
East Fork Little Sandy #1	Rehabilitation Enhancement	Lawrence	Louisville	200401120	\$336,238	1,650		\$204	
Left Fork of Trace Creek	Rehabilitation Enhancement	Boyd	Louisville	2006-00160	\$266,372	1,300		\$205	
Locust Creek	Rehabilitation Enhancement	Lawrence	Louisville	LRL-2008-1249-pgj	\$698,402	3,550		\$197	
Middle Creek (Middle Cr Natl Battlefield)	Rehabilitation Enhancement	Floyd	Louisville	LRL-2006-1256-pgj	\$876,665	9,180		\$95	
Upper Laurel Creek	Enhancement	Lawrence	Louisville	200500901	\$699,480	3,000		\$233	
Preservation Project									
Laurel Creek Gorge (Ed Mabry-Laurel Gorge WMA)	Preservation	Elliott	Louisville	-	\$1,353,625	83,059		\$16	
Terminated Project									
Brushy Creek	Rehabilitation Enhancement	Greenup	Louisville	200400931	\$799,187	4,755		\$168	
Brushy Creek Repair		Greenup	Louisville	LRL-2008-902-jct	\$154,635	1,027		\$151	
Brushy Creek Repair 2		Greenup	Louisville	LRL-2009-1074-pgj	\$118,787	830		\$143	
East Fork Little Sandy #5	Rehabilitation Enhancement	Lawrence	Louisville		\$100,599	2,955			
Ison Creek		Elliott	Louisville		\$1,100	16,823			
Laurel Creek Tributary (Ed Mabry-Laurel Gorge WMA)		Elliott	Louisville		\$155,858				
Laurel Tribs-Rowe Flats (Ed Mabry-Laurel Gorge WMA)		Elliott	Louisville	LRL-2013-770-pgj	\$1,750	2,575			
Schultz Creek	Rehabilitation Enhancement	Greenup	Louisville	2009-806	\$73,672	2,900			
Upper Cumberland River									
Re-assessments of previously approved projects									
Burnett Branch (KY Div Water-Wild Rivers Program)	Re-establishment Enhancement Preservation	Wayne McCreary	Nashville	LRN-2013-00116	\$3,983,435	31,366	8,515	\$127	\$468
Steele Branch (KY Div Water-Wild Rivers Program)	Re-establishment	Wayne McCreary	Nashville	LRN-2012-01244	\$579,744	6,877	1,188	\$84	\$488
Monitoring Phase									

EIU Area (con't)									
Basin/Stream	Type	County	USACE District	404 Permit #	Project Cost	Length (ft)	Credits^c	Cost/ft	Cost/credit^c
Crane's Nest Branch	Rehabilitation Enhancement	Knox	Nashville	2009-01424	\$527,853	2,275		\$232	
Preservation Project									
Buck Creek (Buck Cr WMA)	Preservation	Pulaski	Nashville		\$1,667,413	56,502		\$30	
Sinking Valley (Ping-Sinking Valley WMA)	Preservation	Pulaski	Nashville	LRN-2012-00326	\$1,730,000	43,131	4,191	\$40	\$413
Upper Kentucky River									
Design Phase									
Ross Creek (WMA TBA)	Preservation Re-establishment Rehabilitation	Lee	Louisville	LRL-2013-143	\$3,538,760	20,165		\$175	
Ross Creek II (WMA TBA)	Preservation Re-establishment Rehabilitation	Lee	Louisville	LRL-2013-143	\$944,768	6,672	1,936	\$142	\$488
Upper Cane Creek	Rehabilitation Enhancement	Menifee	Louisville	LRL-2009-433-pgj	\$1,055,475	5,902		\$179	
Monitoring Phase									
East Fork Indian Creek (U.S. Forest Service)	Rehabilitation	Menifee	Louisville	LRL-2012-273	\$1,192,910	4,299		\$277	
Elisha Creek (U.S. Forest Service)	Rehabilitation Enhancement	Leslie	Louisville	LRL-2011-404-pgj	\$788,700	4,067		\$194	
Long-Term Management Phase ^a									
Balls Fork	Rehabilitation	Knott	Louisville	2002-01447	\$85,000	803		\$106	
Bullskin Creek	Rehabilitation	Leslie	Louisville	200500205-pgj	\$208,700	1,823		\$114	
Laurel Fork of Troublesome Cr (Univ. Kentucky)	Rehabilitation	Breathitt	Louisville	LRL-2007-615	\$1,806,300	5,515		\$328	
Red Lick Creek	Rehabilitation Enhancement	Estill	Louisville	LRL-2005-131-lad	\$101,500	1,860		\$55	
SECC Bank Stabilization (Southeast Community College)	Rehabilitation Enhancement	Letcher	Louisville	LRL-2005-1004-the	\$59,377	821		\$72	
Terrys Branch (partly Univ. Kentucky)	Rehabilitation Enhancement	Knott	Louisville	200500205	\$738,500	2,992		\$247	

EIU Area (con't)

<u>Basin/Stream</u>	<u>Type</u>	<u>County</u>	<u>USACE District</u>	<u>404 Permit #</u>	<u>Project Cost</u>	<u>Length (ft)</u>	<u>Credits^c</u>	<u>Cost/ft</u>	<u>Cost/credit^c</u>
Terminated Project									
Frozen Creek		Breathitt	Louisville		\$150,220				
Hinton Branch		Estill	Louisville		\$22,395				
North Fork Kentucky River (Perry County)	Enhancement	Perry	Louisville	NA	\$25,022	3,538		\$7	
Red Lick #2		Estill	Louisville		\$750				
Upper Licking River									
Approved Phase									
Broke Leg Creek	Rehabilitation Re-establishment Enhancement Preservation	Morgan	Louisville	LRL-2016-00371-pgj	\$4,247,299	32,888	8,430	\$129	\$504
Broke Leg Creek	Wetland	Morgan	Louisville	LRL-2016-00371-pgj	\$5,000		1.06		\$5,000
Monitoring Phase									
Slabcamp Creek-Stonocoal Branch (U.S. Forest Service)	Re-establishment	Rowan	Louisville	LRL-2009-762-pgj	\$1,905,000	14,180		\$134	
Total Stream Projects ^b	37				\$52,133,394	464,485	56,010^c		
Total Wetland Projects ^b	1				\$5,000		1.00^c		5000^c
Average stream ^b					\$1,409,011	12,554	4001^c	\$112	468^c
^a Out of long-term monitoring although may still have issues to resolve									
^b Total projects, length, and credits and average figures do not include projects terminated prior to construction; total expenses include capital costs incurred by terminated projects									
^c Only for post-Transition projects									
^d Credits needed only on limited project areas, not entire project									

APPENDIX C

COMPLIANCE INFORMATION and PHOTOS

Table C-1. Summary of Projects in Monitoring

<u>Project</u>	<u>404 Permit Number/Date Authorized</u>	<u>401PM/ KDFWR PM</u>	<u>Date Concept Plan/Pre-Application Site Visit</u>	<u>Approval Date of Design Funds/Const Funds</u>	<u>Project Completion Date (FY)</u>	<u>First/Final Monitoring Year (FY)</u>	<u>Most Recent Monitoring Report Rec'd</u>	<u>Mitigation Status</u>	<u>Comments/Issues</u>
BIG SANDY RIVER									
Bolts Fork	LRL-2010-00698 5/13/11	Fry/ Mulhall	Jun 2008	8/20/08 12/8/10	Jan 2014	2014/2018	2016	Open	In Monitoring (Year 3:2016), Warranty tree planting occurred in early 2016.
Brushy Creek	LRH-2004-00931 7/22/04	Atherton/ Lewis	Apr 2004	5/4/04 2/2/05	2006	2007	--	Open	Project failure; Approved for bank stabilization. monitoring suspended; repair ongoing
Brushy Creek Stabilization 2	LRL-2009-1074 10/29/09	Atherton/ Lewis	NA	5/13/09 5/13/09	Jan 2010	-	-	-	No monitoring required
East Fork Little Sandy #1	LRH-2004-01120 4/11/04	Fry/ Mulhall	Feb 2003	2/11/03 11/12/05	Jan 2007	2007/2011	-	Released	No monitoring reports required. Project released from monitoring in letter dated 5-28-13. Project annually monitored for easement encroachments and appropriate measures taken if needed.
East Fork Little Sandy #2	LRL-2009-332-pgj 10/29/09	Fry/ Mulhall	Jan 2007	2/21/07 9/16/09	Feb 2011	2011/2015	Year 5 (2015)	Released	Need to coordinate with USACE and KDOW for final release documents. Project will be annually monitored for easement encroachments and appropriate measures taken if needed
East Fork Little Sandy #3	LRL-2008-1082-pg 5/7/09	Fry/ Mulhall	Apr 2007	6/25/07 2/18/09	2011	2011/2015	Year 5 (2015)	Released	Need to coordinate with USACE and KDOW for final release documents. Project will be annually monitored for easement encroachments and appropriate measures taken if needed
East Fork Little Sandy #4	LRL-2009-123-pgj 6/12/09	Fry/ Mulhall	Sept 2007	10/17/07 3/11/09	2010	2011/2015	Year 5 (2015)	Released	Need to coordinate with USACE and KDOW for final release documents. Project will be annually monitored for easement encroachments and appropriate measures taken if needed
Laurel Creek Gorge	NA	Atherton/ Lewis	Jul 2007	8/15/07 NA	2010	NA	NA	NA	Preservation only, no monitoring required
CUMBERLAND RIVER									
Buck Creek	NA	Fry/ Mulhall	Apr 2009	5/13/2009	2010	NA	NA	NA	Preservation only, no monitoring required
Buck Creek Tributary	NRL-2007-0115-1 12/29/07	Fry/ Mulhall	July 2006	6/1/07 6/25/07	Jan 2010	2011/2015	Year 5 (2014)	Released	Long-term management/maintenance. Project will be annually monitored for easement encroachments and appropriate measures taken if needed
Crane's Nest Branch	2009-01424 3/1/2010	Fry/ Mulhall	Feb 2008	4/16/08 11/16/09	2012	2013/2017	Year 4 (2016)	Open	In Monitoring (Year 4:2016)

Table C-2. Summary of Project in Long-Term Management (LTM)

Hatchery Creek	LRL-2010-00325 & LRN-2010-00444	Fry/ Rexroat	July 2009	8/17/2010	2016 (est)	2016/2020	Year 1 (2016)	Open	As-built survey and Year 1 Stream and Wetland Monitoring Reports completed and submitted in 2016.
LICKING RIVER									
Salt Lick Creek	LRL-2011-00891 --	Fry/ Mulhall	Jun 2008	8/20/08 8/20/08	2013	2013/2017	Year 4 (2016)	Open	In Monitoring (Year 4: 2016).
Slabcamp Cr -Stonecoal Br	LRL-2009-762-pgj 10/30/09;8/12/10	Atherton/ Mulhall	Aug 2005	10/5/05 5/13/09	2013	2013/2017	Year 4 (2016)	Open	In Monitoring (Year 4:2015)
KENTUCKY RIVER									
Rogers Gap	LRL-2013-134.pgj	Fry/ Mulhall	Mar 2011	April 2011	2016 (est)	2016/2020	-	-	In Design/Construction (Design-Build Project). Should be completed/planted in early 2017 and enter monitoring
Cove Spring	LRL-2009-614-pgj 1/7/11	Fry/ Mulhall	June 2007	10/17/07 5/13/09	Feb 2014	2014/2018	Year 4 (2016)	Open	In Monitoring (Year3:2016).
East Fork Indian Creek	LRL-2012-273-pgj	Fry/ Mulhall	Dec 2007	4/16/08	2016	2016/2020	Year 1 (2016)	Open	Construction completed in Fall 2015. Final planting occurred in early 2016. Year 1 monitoring in 2016. Warranty tree planting to occur in early 2017.
Elisha Creek	LRL-2011-00404	Fry/ Mulhall		6/1/06 2/18/09	2013	2013/2017	Year 4 (2016)	Open	In Monitoring (Year 4:2016)
Elm Fork	LRL-2012-263	Fry/ Mulhall	Mar 2009	3/17/10 --	2014	2015/2019	Year 2 (2016)	Open	In Monitoring (Year 2: 2016) Warranty tree planting occurred in early 2016.
Guy Cove	LRL-2007-00615 9/17/07	NA/ Mulhall	--	1/12/06 8/15/07	Mar 2009	2009 2013	Year 5+ (2014)	Released	Released. Project annually monitored for easement encroachments and appropriate measures taken if needed.
Mill Creek	LRL-2009-611-pgj 7/20/09	Fry/ Mulhall	Feb 2008	4/16/08 5/13/09	Oct 2009	2010/2014	Year 5 (2014)	Open	Project criteria are met. Release is pending finalization of easement documents
SALT RIVER									
South Fork of Curry's Fork	LRL-2009-98-pgj 9/29/09	Fry/ Mulhall	April 2006	7/18/06 5/13/09	2013	2013/2017	Year 4 (2016)	Open	In Monitoring (Year 4:2016). Site needs remedial vegetation efforts including planting and invasive removal. Will complete in 2017. Also monitoring easement encroachment from road culvert installation along Moody Lane
GREEN RIVER									
Eagle Cr Tributary (Stream)	LRL-2012-716-pgj January 2015	Fry/ VanArsdall	Mar 2010 --	3/17/10 --	2016 (est)	2016/2020	-	-	In Construction. Final planting to occur in early 2016. Contracting issues are being resolved. Year 1 monitoring to begin in 2017
Eagle Cr Tributary (Wetland)	LRL-2012-716-pgj January 2015	Fry/ VanArsdall	Mar 2010 --	3/17/10 --	2016 (est)	2016/2020	-	-	In Construction. Final planting to occur in early 2016. Contracting issues are being resolved. Year 1 monitoring to begin in 2017
Trammel Creek	LRL-2008-936-pgj 4/24/09	Fry/ Mulhall	Apr 2006	6/7/06 2/18/09	2010	2010/2017	Year 5+ (2016)	Open	In Extended Monitoring (Year5+:2016). Repairs occurred in early 2016. Replanting and potential easement expansion to occur in 2017. Monitoring will be extended through 2017 and include photos and vegetation surveys.
JACKSON PURCHASE									
Obion Creek	200300263	Fry/ Mulhall		6/4/03 6/4/03	2006	2007/2011	2011	Open	In Monitoring
Obion Creek II	MVM-2010-074	Fry/ Mulhall	Feb 2008	4/16/08 5/13/09	-	-	-	Open	In Construction-Multiple requests send to UL Stream Institute for Project Status update.

<u>Project</u>	<u>404 Permit Number/Date Authorized</u>	<u>401PM/KDFWR PM</u>	<u>Date Letter Mailed to Landowner(s)</u>	<u>Date of KDFWR Staff Site Visit</u>	<u>Project Completion Date (FY)</u>	<u>First/Final Monitoring Year (FY)</u>	<u>Most Recent Monitoring Report Rec'd</u>	<u>Mitigation Status</u>	<u>Comments/Issues</u>	<u>Site In Compliance with terms of Conservation Easement or Deed Restrictions (Y/N)?</u>
BIG SANDY RIVER										
Kinniconnick and Indian Creek	LRL-2007-409-pgj 3/27/08	Fry/ Mulhall	May 2016	3/4/2016 11/29/2016	2009	2009/2013	Year 5+ (2015)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted. Easement marker signs were installed during November 2016 visit	Y
Left Fork of Trace Creek	2006-00160 7/10/06	Fry/ Mulhall	May 2016	7/18/2016	2007	2007/2011	Year 5 (2011)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
Locust Creek	LRL-2008-1249-pgj	Fry/ Mulhall	May 2016	7/18/2016	Dec 2010	2010/2014	Year 5-(2014)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
Middle Creek	LRL-2006-1256-pgj 10/31/07	Fry/ Mulhall	May 2016	6/30/2016	2008	2008/2012	Year 5+ (2014)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted. Invasive species present but mingled with native species so treatment with herbicide not deemed a viable option	Y
Upper Laurel Creek	20050090 1 3/2/06	Fry/ Mulhall	May 2016	7/18/2016	2008	2009/2013	Year 5+ (2014)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
LICKING RIVER										
Claysville Recovery Land	LRL-2008-644-pgj 6/3/09	Fry/ Mulhall	N/A-No contact information available for SCC	10/3/2016	2010	2010/2014	Year 5 (2014)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
KENTUCKY RIVER										
Balls Fork	LRL-2002-01447 9/26/06	Fry/ Mulhall	May 2016	5/24/2016	Dec 2005	2007/2012	Year 5+ (2014)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y

Bullskin Creek	LRL-2005-0205-pgj 2/22/04	Fry/ Mulhall	May 2016	6/30/2016	Sept 2005	-	-	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
Red Lick Creek	LRL-2005-1331	Fry/ Mulhall	May 2016	6/30/2016	Dec 07	2008/2012	Year 5 (2012)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
SECC Bank Stabilization	NA	Fry/ Mulhall	May 2016	6/30/2016	Apr 2007	2008-2012	None required	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
Terrys Branch	LRL-2005-00205 6/27/06	Fry/ Mulhall	May 2016	5/24/2016	Dec 2007	2008-2012	Year 5 (2012)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y
GREEN RIVER										
Haney Fork Watershed No. 2	LRL 2004-01363 5/26/05	Fry/ Mulhall	N/A-No contact information available for SCC	7/15/2016	2006	2007/2011	Year 5 (2011)	Long Term Management	Long-term management/maintenance. Project annually visited for easement encroachments and no encroachments noted	Y

2016 FILO Long Term Management Project Site Photos



2016 FILO Long Term Management Project Site Photos



N. Fork KY River (SECC) 6-30-2016



Bullskin Creek 6-30-2016



Red Lick Creek 6-30-2016



Haney Fork 7-15-2016



Claysville 10-3-2016