

US ARMY CORPS OF ENGINEERS St. Louis District Gateway to Excellence Reply To: U.S. Army Corps of Engineers Attn: CEMVS-OD-F 1222 Spruce Street

Public Notice No.

Public Notice

MVS-2019-110 Public Notice Date

September 25, 2019 Expiration Date

October 15, 2019

Postmaster Please Post Conspicuously Until:

File Number: MVS-2019-110

Interested parties are hereby notified that the Land Learning Foundation (Sponsor) has requested under their In-Lieu-Fee (ILF) Program Instrument and corresponding amendment; approval for an ILF mitigation project pursuant to 33 CFR 332 and 40 CFR 230 Compensatory Mitigation for Losses of Aquatic Resource; Final Rule (Federal Register / Vol. 73, No. 70 Pages 19594-19705, April 10, 2008).

<u>COMMENTS AND ADDITIONAL INFORMATION</u>: All comments related to this ILF mitigation project and/or requests for public hearing must reach this office no later than the expiration date of the Public Notice to become part of the record and be considered in the decision. Comments should be mailed to the following address:

U.S. Army Corps of Engineers Regulatory Branch 1222 Spruce Street St. Louis, Missouri 63103-2833 ATTN: Mr. David Meyer

IN-LIEU FEE SPONSOR: Land Learning Foundation P.O.C. Mr. Larry Pollard P.O. Box 55 Keytesville, MO 65261

LOCATION: The Sponsor proposes this ILF mitigation project (Cuivre River Site) within the Central Plains, Cuivre/Salt Ecological Drainage Unit (EDU). The subject site consists of approximately 80+/-acres and contains the Cuivre River. The site is located just north of Troy, Missouri, the geographic coordinates of the approximate upstream end of the project on the Cuivre River are 39.009707° North, -90.977090° West and downstream end of the project are 39.017882° North, -90.950586° West.

PROJECT DESCRIPTION: The Sponsor seeks approval from the U.S. Army Corps of Engineers (the Corps) and the Interagency Review Team (IRT); which is composed of representatives from the U.S. Environmental Protection Agency, U.S. Fish & Wildlife Service, Missouri Department of Natural Resources, and Missouri Department of Conservation; to establish the Cuivre River project as an authorized source of stream & wetland mitigation credit. The Sponsor would make the stream & wetland mitigation credit available to Department of the Army permittees seeking to fulfill

requirements to purchase compensatory mitigation credit, to offset losses of aquatic functions and services. The mitigation project includes the preservation and restoration of forested riparian corridor and an emergent wetland area, as well as the stabilization of highly eroded and incised channel bank.

The Sponsor proposes to restore, protect, and maintain 11,082 linear feet of perennial stream channel with wooded corridor, one acre of emergent wetland and grass buffer along the Cuivre River. The restored and preserved corridor will generally extend 175 feet perpendicular from the channel banks. This consists of tree plantings and the removal of any invasive species.

The project consists of bank stabilization and riparian restoration and preservation. There are 6,100 feet of actively eroding bank within the project limits. Bank stabilization will use a combination of rock vanes, longitudinal peak stone toe protection, rock jetties, live vegetative staking, and brush layering. The project will also incorporate engineered rock riffles and hardened grade control structures. These will protect the entire length of the site from incision and head-cutting, help protect the bank stabilization efforts, and restore historic channel features. A full technical description can be found in the attached stabilization plan. The project also includes the restoration of 0.635 acres of emergent wetland and 0.404 acres of grass wetland buffer.

The property owners will record a perpetual conservation easement on the mitigation site. The conservation easement will protect this reach of the Cuivre River and its forested corridors from future clearing and other disturbances. The Sponsor will assume responsibility for long-term monitoring of the requirements of the conservation easement.

If approved by the Corps, the Cuivre River project will create a total potential credit release of 73,406.1 stream credits and 3.43 wetland credits. Mitigation credits generated by this project will be released for debiting on an incremental basis, determined by the project's successful achievement of performance criteria as set forth in the ILF Program Instrument.

This ILF mitigation program does not preclude the requirement for any Section 404 permit applicant, who intends or is required to use stream credits generated by this mitigation project, to comply with Clean Water Act Section 404(b)(1) Guidelines; the National Environmental Policy Act; and our evaluation of probable impacts on public interest.

LOCATION MAPS AND DRAWINGS: See attached.

ADDITIONAL INFORMATION: Additional information may be obtained by contacting Mr. David Meyer, Project Manager, U.S. Army Corps of Engineers, at (314) 331-8810. Your inquiries may also be sent by electronic facsimile to (314) 331-8741 or by e-mail to david.p.meyer@usace.army.mil.

<u>AUTHORITY</u>: This permit will be processed under Section 404 of the Clean Water Act (33 U.S.C. 1344).

ENDANGERED SPECIES: The proposed project is within the range of the federally endangered Indiana bat (**Myotis sodalis**) and the northern long-eared bat (**Myotis septentrionalis**) that currently is a threatened species and is a proposed candidate for endangered status. A preliminary determination, in compliance with the Endangered Species Act, as amended, has been made that the work that is proposed would not affect species designated as threatened or endangered, or adversely affect critical habitat. The Corps is coordinating with the U.S. Fish and Wildlife Service and the applicant is taking measures to minimize potential effects of the project during construction. In order to further complete our evaluation, written comments are solicited by this public notice from the U.S. Fish and Wildlife Service and other interested agencies and individuals.

<u>**CULTURAL RESOURCES:**</u> The ILF mitigation project will be evaluated for compliance with the National Historic Preservation Act of 1966 and 36 CFR 800. The St. Louis District will consider information provided by the State Historic Preservation Office, Federally-recognized tribes, and the public in response to the proposed mitigation project. The applicant has completed a Phase 1 archaeological reconnaissance survey of the project area. This report will be provided to the MDNR-SHPO office for review and concurrence.

PUBLIC INTEREST REVIEW: The purpose of this public notice is to advise all interested parties of the proposed ILF project and to solicit comments. The decision to allow or deny the Sponsor to proceed with the mitigation project will be based on an evaluation of all comments received, and all relevant factors to the proposal, including the cumulative effects thereof. These factors include: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, and the general needs and welfare of the people. The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Native American tribes; and other interested parties in order to consider and evaluate the proposed mitigation project.

<u>PUBLIC HEARING</u>: Any person may request, in writing, prior to the expiration date of this public notice, that a public hearing be held to consider this ILF mitigation proposal. Any request for a public hearing shall state, with particularity, the reason for the hearing, and must be based on issues that would warrant additional public review.

Robert S. Gramke

Robert S. Gramke Chief, Regulatory Branch

Attachments

NOTICE TO POSTMASTERS:

The Corps requests that this notice be conspicuously and continually placed for 21 days from the date of this issuance of this notice.



Mitico, LLC. Two City Place Dr. #200 St. Louis, MO 63141 – (314)-882-6623 Page 26



Mulching	Native Grass Seeding	Temporary Seeding	Live Stakes	Bare Root Trees	Soil Moving	Rock	ltem
Acres	Acres	Acres	Each	Each	C.Y.	Tons	Unit
7.63	7.63	7.63	4700	3460	10029	15374	Total





SE 1/3 SE

UIVIE RIVER

Lincoln County, Missouri /4, Sec. 12, NE 1/4, Sec. 13, NE 1/4, Sec. 14, NW 1/4, Sec. 18, T49N, R1W

Details Sheet	Cross Sections - Sites 2 & 3	Plan View - Sites 2 & 3	Plan View - Site 2	Cross Sections - Site 1	Plan View - Site1	Cover Sheet	<u>Sheet Title</u>	<u>Sheet Index</u>	
---------------	------------------------------	-------------------------	--------------------	-------------------------	-------------------	-------------	--------------------	--------------------	--





Water Resources Suite 208, Prairie Village 913–302–1030 Solutions 66208









TBM-1 NE 16-2 IP 0.3 D Sta. 3+1 74.45 Rt 74.45 Rt N 11570 EL 468.4

BENCHM

Structure

Before any con: 800-344-7483

Accepted Erosion Control practices will be applied to all disturbed areas.

All applicable permits will be obtained by others prior to project construction.

The information shown in these plans concerning type and location of underground utilities is not guaranteed to be accurate or all inclusive. Existing utilities and their locations, as shown on the plans, represent the best information obtained for the design. Location information has been obtained from the various utility companies and is either from company record drawings or company provide field locations. The plans locations shown are not guaranteed. Additional existing utilities may also be encountered. The contractor is responsible for making the determinations as to the type and location of underground utilities as may be necessary to avoid damage thereto.

Contractor shall maintain construction limits within the existing and/or proposed rights-of-way and easements.

The engineer has not performed property or right-of-way surveys for any of the locations shown on this project. Right-of-way or property lines shown on the plans are approximate and are shown for general orientation only. Property corners or other survey markers have not been located, unless specifically called out on the plans.

Coordinates for this project are not associated with any known survey or coordinate system.

Do not remove Engineer. any trees larger than 12" DBH or over 50' in height without permission of the

Soil moving calculations are based on available information. Contractor shall inspect the site and make an evaluation of existing conditions.

Contractor shall shape top of bank such that the gradient slopes away from the graded bank.

4	4	ō
483 (80	construc	cations
Ĩ	tio	ę
50	2	be
-RITE)	ctivity	field
q	.~ ⊄	loco
<u>ø</u>	le o	ıtec
-	contro	and
	icto	sto
	r is	Iked
	responsi	by Cont
	ble	ract
	for	Ör.
	calling	
	Missouri	
	One	
	Call	

đ



Lincoln County, Missouri

Plan View

СЛ

SEE SEE

-S



















Details	Cuivre River Lincoln County, Missouri	SECTION B-B	Key Height Height	CROSS SECTION B-B
12號 13				







Mitico, LLC. 701 D Crown Industrial Ct Chesterfield, MO 63005 – (314)-882-6623 Page 37



Mitico, LLC. 701 D Crown Industrial Ct Chesterfield, MO 63005 – (314)-882-6623 Page 38

	Net Benefit 1	Net Benefit 2	Net Benefit 3	Net Benefit 4	Net Benefit 5	Net Benefit 6
Stream Type	Perennial 0.4	Perennial 0.4	Perennial 0.4	Perennial 0.4	Perennial 0.4	Perennial 0.4
Priority Waters	Primary – 0.40	Primary – 0.40	Primary – 0.40	Primary – 0.40	Primary – 0.40	Primary – 0.40
Net Benefit Side A (Left- Descending Bank)	0.85 (175' restoration)	0.85 (175' restoration)	0.85 (175' restoration)	0.85 (175' restoration)	0.85 (175' restoration)	0.42 (175' enhancement)
Side B (Right- descending bank)	0	0.21 (175' preservation)	0.42 (175' enhancement)	0.21 (175' preservation)	0.85 (175' restoration)	0.85 (175' restoration)
Supplemental Credit Buffer	0	0.53	0.64	0.53	0.85	0.64
Site Protection	LLF Easement 0.2	LLF Easement 0.2	LLF Easement 0.2	LLF Easement 0.2	LLF Easement 0.2	LLF Easement 0.2
Credit Schedule	0 - Schedule 3	0 - Schedule 3	0 - Schedule 3	0 - Schedule 3	0 - Schedule 3	0 - Schedule 3
Side B	0	0	0	0	0	0
Temporal Lag	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2

Table 2. Riparian Corridor Net Benefit Methodology



Figure 1A. Riparian and Wetland Net Benefit Map

Note: riparian buffers extending 175 feet from the high bank will be measured at the time of construction.



Figure 1B. In-Stream Net Benefit Map

Factors	Bank Stabilization 1	Grade Control 1	Bank Stabilization 2
Stream Type	Perennial – 0.40	Perennial – 0.40	Perennial – 0.40
Priority Waters	Primary – 0.40	Primary – 0.40	Primary – 0.40
Net Benefit	Excellent – after consulting with the USACE and the IRT, it was determined that excellent net benefits were appropriate for areas benefiting from both grade control and bank stabilization 3.5	Good – engineered rock riffle and hardened grade control structures will prevent headcutting and channel incision while protecting the bank stabilization efforts. 2.4	Excellent – after consulting with the USACE and the IRT, it was determined that excellent net benefits were appropriate for areas benefiting from both grade control and bank stabilization 3.5
Site Protection	Land Learning Foundation will serve as the grantee of a conservation easement 0.4	Land Learning Foundation will serve as the grantee of a conservation easement 0.4	Land Learning Foundation will serve as the grantee of a conservation easement 0.4
Credit Schedule	In-Lieu Fee sites qualify for Schedule 3	In-Lieu Fee sites qualify for Schedule 3	In-Lieu Fee sites qualify for Schedule 3
	0	0	0

Table 3. In-Stream Net Benefit Methodology

Table 3A. In-Stream Net Benefit Methodology

Factors	Bank Stabilization 3	Grade Control 2
Stream Type	Perennial – 0.40	Perennial – 0.40
Priority Waters	Primary – 0.40	Primary – 0.40
Net Benefit	Excellent – after consulting	Good – engineered rock
	with the USACE and the	riffle and hardened grade
	IRT, it was determined that	control structures will
	excellent net benefits were	prevent headcutting and
	appropriate for areas	channel incision while
	benefiting from both grade	protecting the bank
	control and bank	stabilization efforts. 2.4
	stabilization 3.5	
Site Protection	Land Learning Foundation	Land Learning Foundation
	will serve as the grantee of	will serve as the grantee of
	a conservation easement	a conservation easement
	0.4	0.4
Credit	In-Lieu Fee sites qualify for	In-Lieu Fee sites qualify for
Schedule	Schedule 3	Schedule 3
	0	0

These areas were applied to the In-Stream Credit Worksheet included in **Table 5** and identified on **Figure 1B.**

Table 4.RIPARIAN BUFFER WORKSHEET

Land	Land Learning Foundation – Cuivre River Mitigation Site – Troy, MO								
Stream Type	Ephemeral	Intern	nittent		Perennial				
	0.15	0	.2	0.4					
Priority Waters	Tertiary	Seco	ndary		Primary				
	0.05	0	.2		0.4				
Net Benefit	R	iparian Restoration	Establishment, Enh	nancement, and P	reservation Factors				
(for each side of			(select values from	om Table 1)					
stream)		(also see	Minimum Buffer V	Width (MBW) pa	age 15)				
Supplemental	Condition: Buffer established, enhanced or preserved on both streambanks								
Buffer Credit	Г	o calculate:(Net Be	enefit Stream Side A	A + Net Benefit S	Stream Side B) / 2				
	Corps approve	d site protection	Corps approved	d site protection recorded with third party grantee,					
Site Protection	without third	party grantee	0	or transfer of title	ansfer of title to a conservancy				
	0.	05		0.	2				
Credit Schedule	Sche	dule 1	Schedu	ule 2	Schedule 3				
	0.	15	0.0	5	0				
Temporal Lag	Over 20	10 to 20	5 to	10	0 to 5				
(Years)	-0.3	-0.2	-0.1	1	0				

Factors		Net Benefit 1	Net Benefit 2	Net Benefit 3	Net Benefit 4	Net Benefit 5	Net Benefit 6
Stream Type		0.4	0.4	0.4 0.4		0.4	0.4
Priority Waters		0.4	0.4	0.4	0.4	0.4	0.4
Net Benefit	Stream Side A	0.85 (175')	0.85 (175')	0.85 (175')	0.85 (175')	0.85 (175')	0.42 (175')
	Stream Side B	0	0.21 (175')	0.42 (175')	0.21 (175')	0.85 (175')	0.85 (175')
Supplemental Buffe (Buffer on both side	er Credit es)	0	0.53	0.64	0.53	0.85	0.64
Site Protection		0.2	0.2	0.2	0.2	0.2	0.2
Credit	Stream Side A	0	0	0	0	0	0
Schedule	Stream Side B	0	0	0	0	0	0
Temporal Lag		-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Sum Factors	(M)=	1.65	2.39	2.71	2.39	3.35	2.71
Linear Feet of Stream Buffered (LF)= (do not count each bank separately or count same channel segment twice)		2502	2310	1225	1568	2114	1363
Credits (C) = MX	LF	4128.30	5520.90	3319.75	3747.52	7081.90	3693.73
Total Credits Generated C X LK Factor * =							
Te	otal Riparia	an Credits (Generated fr	om all Colu	mns = 27,	492.10	

* Location and Kind (LK) Factor only applies to permittee-responsible mitigation projects

Table 5.IN-STREAM CREDIT WORKSHEET

Stream Type	Ephemeral	0.15		Perennial 0.4			
Priority Waters	Tertiary 0.05		S	econdary 0.2			Primary 0.4
Net Benefit (for each side of stream)	Stream Relocation to Accommodate Authorized Project 0.5	M	oderate 1.2	2	Good 2.	4	Excellent 3.5
Site Protection	Corps approved site party gra	rotection antee 0.1	n without 1 l	ut third Corps approved site protection recorded with third party grantee, or transfer of title to a conservancy 0.4			protection recorded tee, or transfer of title rvancy 0.4
Credit Schedule	Schedule 1 0.3		Schedule 2 0.1		Schedule 3 0		

Factors	Bank Stabilization 1	Grade Control 1	Bank Stabilization 2	Bank Stabilization 3	Grade Control 2
Stream Type	0.4	0.4	0.4	0.4	0.4
Priority Waters	0.4	0.4	0.4	0.4	0.4
Net Benefit	3.5	2.4	3.5	3.5	2.4
Site Protection	0.4	0.4	0.4	0.4	0.4
Credit Schedule	0	0	0 0		0
Sum Factors (M)=	4.7	3.6	4.7	4.7	3.6
Linear Feet of Stream Buffered (LF)= (do not count each bank separately or count same channel segment twice)	1400	4090	3100	1600	700
Credits (C) =M X LF	6580	14724	14570	7520	2520
Total Credits Generated C X LK Factor * =					

Total Instream Credits Generated from all Columns = <u>45,914</u>

* Location and Kind (LK) Factor only applies to permittee-responsible mitigation projects

Table 6A. Wetland Mitigation Factors

Factors				Opt	ions				
Aquatic Resource Type	Туре 0.2	2	Туре В 0.4				Type A 0.8		
Priority Category	Tertiar 0	Secondary 0.5				Primary 1.0			
Control	Corps approved site protection without third party grantee 1.0 Corps approved site protection party grantee, or transfer of conservancy 2.0					tection ed third f title to a			
Temporal Loss	>20 Years -0.3	10-2	20 Years 5-10 Ye -0.2 -0.1		0 Yea -0.1	ears 0-5 Years 0			
Credit Schedule	Schedule 0.2	e 3		Scheo 0	Schedule 2 0.4		Schedule 1 0.6		
Kind	Category 5 -0.1	Categor 0	y 4	Categ 0.	ory 3 2	Ca	Category 2 0.4		tegory 1 0.8
*Location	Location 5 0	Location 0.1	n 4	Locat 0	tion 3 .3	Lo	Location 2 0.4		ocation 1 0.8
Vegetation	**N.A 0			Natural 0.1		Planted 0.2			

RESTORATION TABLE - MITIGATION FACTORS FOR WETLANDS - CREDITS

*Location Factor only applies to permittee-responsible mitigation **N.A. = Not Applicable

Factor	Credits Generated
Aquatic Resource Type	0.4
Priority Category	0.5
Control	2.0
Temporal Loss	0.0
Credit Schedule	0.2
Kind	0.8
Location*	
Vegetation	0.2
Sum of Factors (M)	4.1
Mitigation Area (A)	0.635 acres
M×A (Total Credits Generated)	2.6

*Location factor applies only to permittee responsible mitigation

Factors	Options								
Aquatic Resource Type	*Upland Buff 0.05	er	Туре С 0.1		Туре В 0.2		3	Туре А 0.4	
Priority	Tertiar	у	Secondary				Primary		
Category	0		0.3				0.6		
Control	Corps approved third	site protection without party grantee 0.5			oprov opprov nsfer (oved site protection record with roved third party grantee, or er of title to a conservancy 1.0			
Temporal	*N/A	>20 Yea	ars 10-20		Years 5-1		10 Years	5	0-5 Years
Loss	0	-0.3		-0.2			-0.1		0
Credit	Schedul	e 3	Schedule 2		Schedule 1		nedule 1		
Schedule	0.1		0.3		0.5		0.5		
Kind	Category 5 -0.1	Category 0	y 4	4 Category 3 0.1		gory 3 Categ			Category 1 0.5
**I ocation	Location 5	Location	14 Locat		Location 3		Location 2		Location 1
Location	-0.1	0	0		0.1		0.3 0.4		
Vegetation	Vagatation ***N.A.		Natural		Planted				
vegetation	0			0		0.1			

Table 6B. Grassed Buffer Mitigation Factors

ENHANCEMENT TABLE - MITIGATION FACTORS FOR WETLANDS - CREDITS

*The upland buffer cannot exceed more than twice the size of the mitigation site it is enhancing **Location Factor only applies to permittee-responsible mitigation ***N.A. = Not applicable

Factor	Credits Generated		
Aquatic Resource Type	0.05		
Priority Category	0.3		
Control	1.0		
Temporal Loss	0.0		
Credit Schedule	0.1		
Kind	0.5		
Location*			
Vegetation	0.1		
Sum of Factors (M)	2.05		
Mitigation Area (A)	0.404 acres		
M×A (Total Credits Generated)	0.83		

*Location factor applies only to permittee responsible mitigation

Table 7. CREDIT SUMMA<u>RY</u>

	Credits Generated				
	Net Benefit 1	4128.3			
Riparian	Net Benefit 2	5520.9			
	Net Benefit 3	3319.75			
	Net Benefit 4	3747.52			
	Net Benefit 5	7081.9			
	Net Benefit 6	3693.73			
In-Stream	Bank Stabilization 1	6580			
	Grade Control 1	14724			
	Bank Stabilization 2	14570			
	Bank Stabilization 3	7520			
	Grade Control 2	2520			
	73,406.1				
Wetland	Emergent Wetland	2.6			
	Grassed Buffer	0.83			
	3.43				