



ULC Course Description

[E-mail this page](#) [Print this page](#)**Control Number:** 285**Streambank Erosion and Protection****Length:**36**Course Number:** 35SBP01A**CEUs:** 3.3 **PDHs:** 33.0 **LUs:** 0.0 **PDUs:** 0.0 **CMs:** 0.0 **ACE:** 0.0 **CEHs:** 0.0**Purpose:**

This course provides guidance to enable personnel involved in streambank erosion and protection projects to prepare for, organize, and conduct a field analysis of a streambank erosion problem; and design appropriate channel stabilization measures, including develop of alternatives and selection of the most appropriate designs.

Description:

This course provides project managers, planners, technicians, engineers, biologists, designers, regulators, and personnel involved in Section 14, 1135, and 206 projects the latest practical knowledge and design criteria for streambank protection and associated erosion control methods. Through a series of interactive lectures and field exercises the student will be introduced to the following subjects: fundamentals of fluvial geomorphology and river mechanics; streambed degradation protection measures; geotechnical consideration and design; environmental considerations when designing protection works; overview and design criteria of streambank protection measures (e.g., trench fill and windrow revetments, dikes, retards, longitudinal peaked stone toe, bendway weirs, and multiple biotechnical methods, among others); methods to analyze and select appropriate protection methods (or combination of methods); erosion control in dynamic environments; construction, monitoring, maintenance, and repair of streambank protection projects; and how to conduct reconnaissance of a streambank erosion problem. In conducting field exercises, students are taught how to plan for a stream reconnaissance, gather gage data and perform aerial photographic analyses, determine personal protection equipment and safety requirements, and how to gather and measure stream data. In this course, student teams are required to analyze, prepare, and present a streambank erosion problem, develop several alternative bank protection treatments, choose the most effective (or combination) treatment while taking into consideration the expected engineering performance, environmental ramifications, and cost effectiveness of the project.

Prerequisites:

The target audience for this course is employees in (a) Occupational Series: 0000-0100, 0400, 0800, 1300, and (b) Grade GS-05 or above, but the course is open to employees in any grade or occupational series. SPECIAL INSTRUCTIONS: An important part of the class is a half-day field trip to investigate a local stream. Students will be required to climb streambanks and wade approximately one mile of stream over a period of 3 to 4 hours. ERDC-WES will provide needed field equipment. Students should bring appropriate field clothes, a windbreaker, and rain gear.

Notes:

[If you would like to enroll in a class, click here for more information.](#)

If you are already enrolled and have questions about a class see links below.

[For course dates, locations, and enrollment information, click here.](#)

[For course content, purpose, description or prerequisites, click here.](#)

Sessions: This information is updated nightly and may be up to 24 hours old.

Session	Location	Start Date	End Date	Seats Open
2	Vicksburg, MS	3/24/2025	3/28/2025	0

SCHEDULE OF INSTRUCTION-PROSPECT #285

COURSE TITLE: Streambank Erosion and Protection			LOCATION (CITY/STATE): Vicksburg, Mississippi		
INCLUSIVE DATES: March 24-28, 2025			GROUP: U.S. Army Corps of Engineers		CONFERENCE ROOM: ERDC Coastal & Hydraulics Lab Curtiss Conf Rm
DAY/TIME	TO	FROM	SUBJECT	REFERENCE	INSTRUCTOR
Monday 24 March	8:00	9:00	I. <u>ORIENTATION AND GENERAL INFORMATION</u> A. Opening Announcements B. Registration C. After-Class Activity D. Course Objectives & Overview E. PRETEST F. BREAK G. Biographical Sketches of Instructors H. Sources of Info & Web Sites I. Student & Teacher Introductions	Tab A/Tab B	Haring Carrillo
			II. <u>OVERVIEW OF STREAM PROCESSES</u>		
	9:00	9:45	A.) Fundamentals of Fluvial Geomorphology & Channel Stability	Tab C & WES STREAM MANUAL, Ch. 2, P. 3-30	Biedenbarn
	9:45	10:00	BREAK		
	10:00	10:45	B.) Channel Evolution Model (CEM)	Tab D & WES STREAM MANUAL, Ch. 2-3, CEM Ref	Haring
	10:45	11:30	C.) Geomorphic Assessments	Tab E & WES STREAM MANUAL, Ch. 2	Biedenbarn
	11:30	12:30	LUNCH		
			II. <u>STREAM PROCESSES - Continued</u>		
	12:30	1:00	D.) Bayou Pierre Field Sites: Introduction	TBD	Haring
	1:00	2:00	E.) Travel to Bayou Pierre Field Site		All
	2:00	5:00	F.) Field Site Investigation and return to ERDC-CHL		All

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DAY/TIME	TO	FROM	SUBJECT	REFERENCE	INSTRUCTOR
Tuesday 25 March	8:00	8:10	Announcements & Field trip schedule		Haring
			III. <u>STREAMBANK PROTECTION MEASURES:</u>		
	8:10	9:00	A.) Streambank Protection Measures Pt-1	Tab G & WES STREAM MANUAL, Ch. 6, 7 & 8	Haring
	9:15	10:00	B.) Streambank Protection Measures Pt 2	Tab G	Haring
	10:00	10:15	BREAK		
	10:15	11:00	C.) Natural Energy Dissipation in Streams	Tab I	Haring
	11:00	11:45	D.) Bioengineering Stabilization Methods	Tab J & WES STREAM MANUAL, Ch. 5, P 107-140	Haring
	11:45	12:45	LUNCH		
			IV. <u>FIELD SITE ANALYSIS</u> -"Get to know your stream through field visits"		
	12:45	1:15	A.) Problem Statements & Team Breakouts		All Team Leaders
	1:15	5:00	B.) Teams Travel to Field Site, Work on Assigned Field Problem Exercise		
			Team 1: System-Wide Stabilization with Emphasis on Regional Sediment Management	Tab K	Biedenbarn
			Team 2: Section 14 Project	Tab K	MVK Haring
			Team 3: Low-Cost, Innovative, NNBF Channel Stabilization	Tab K	
			Team 4: Geotechnical Considerations Project	Tab K	

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DAY/TIME	TO	FROM	SUBJECT	REFERENCE	INSTRUCTOR
Wednesday 26 March	8:00	8:10	Announcements, Session Critique, Questions		Haring
			III. <u>STREAMBANK PROTECTION MEASURES</u> (Continued)		
	8:10	9:00	C.) General Bank Stabilization & Riprap Design	Tab L & WES STREAM MANUAL- App A, EM 1110-2-1601	Haring
	9:00	9:15	BREAK		
	9:15	10:15	D.) Modeling Methods	Tab M	Sharp
			V. <u>GENERAL CONSIDERATIONS FOR STREAMBANK PROTECTION</u>		
	10:15	11:15	E) The Shape of the Channel	Tab N & WES STREAM MANUAL Ch.2	Haring
	11:15	12:15	LUNCH		
			IV. <u>FIELD SITE ANALYSIS</u> (Continued)		
	12:15	12:30	All Teams meet in CHL Conference Room		All Team Leaders
	12:30	5:00	Teams Work on Assigned Field Problem Exercise and Prepare Presentation		

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DAY/TIME	TO	FROM	SUBJECT	REFERENCE	INSTRUCTOR
Thursday 27 March	8:00	8:10	Announcements, Session Critique, Questions		Haring
			III. <u>STREAMBED PROTECTION MEASURES</u>		
	8:10	9:15	E.) Grade Control Alternatives	Tab O & WES STREAM MANUAL, Chapter 12	Haring
	9:15	10:00	F.) Watershed Sediment Continuity & Introduction to the SIAM 1-D Sediment	Tab P	Biedenbarn
	10:00	10:15	BREAK		
	10:15	11:30	G.) Dikes, Retards, Windrow, and Trenchfill Revetment Designs	Tab Q & WES STREAM MANUAL, Ch. 7, Pg. 185-191 Ch. 8, Pg. 233-237 & 257-263	Berrios-Williamson
	11:30	12:15	H.) Goal & Function Based Designs	Tab R	Haring
	12:15	1:15	LUNCH		
			VII. <u>TEAM PRESENTATIONS AND DISCUSSION</u>		
	1:15	1:45	A.) Team Presentation General Rules-Teams Organized		Haring Team Leads
	1:45	2:15	B.) Team Presentation		
	2:15	2:30	C.) Comments & Open Discussion		
	2:30	3:00	D.) Team Presentation		
	3:00	3:15	E.) Comments & Open Discussion		
	3:15	3:45	F.) Team Presentation		
	3:45	4:00	G.) Comments & Open Discussion		
	4:00	4:15	BREAK		
	4:15	5:00	H.) All Team Discussion		

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DAY/TIME	TO	FROM	SUBJECT	REFERENCE	INSTRUCTOR
Friday 28 March	7:50	8:00	Announcements		Haring
			<u>V. GENERAL CONSIDERATIONS FOR STREAMBANK PROTECTION</u>		
	8:00	8:45	A.) Model Reservoirs, Sediment, and System-wide Considerations	Tab S	Dahl
	8:45	9:15	B.) Proprietary Bank Stabilization Methods	Tab T	Haring
	9:15	9:30	Break		
	9:30	10:00	D.) District Projects: Questions/Case Studies		All
	10:00	12:00	IX. <u>CLOSING</u> A. Instructor Critiques B. Post Test C. Post Test Review D. Closing Remarks	2-Pocket Folder 2-Pocket Folder	Haring

Janecek, Jeffrey

To: Andel, Danelle
Subject: RE: March 24th Streambank Restoration Course in Vicksburg, MS

Good morning Danelle,

Following up on our discussion regarding the out-of-state travel on March 24th. Additional details on the course we will be attending can be accessed at this link and are also shown in the attachment:

<https://ulc.usace.army.mil/CourseListDetail?CtrlNbr=285>

The training is being conducted by the U.S. Army Corps of Engineers at their Engineer & Research Development Center (ERDC) Coastal & Hydraulics Lab (CHL) in Vicksburg, MS. The course will be taught by Christopher Haring and the email chain below has additional background regarding course requirements including confirmation that there is no formal registration required by the USACE and there is no cost for us to participate.

To provide some additional background should it be relevant, we have worked closely with the USACE-ERDC personnel through the years as part of a Fort Bend County Flood Risk Management (FRM) Study that provided USACE recommendations and direction on how best to address on-going erosion concerns in many Fort Bend County waterways including the Brazos River. We are currently working in the design phase in the implementation of a number of the recommended USACE-FRM bank stabilization measures and the training will be important to increase our local knowledge and ensure that the projects are successfully designed and completed.

Please let me know if anything else is needed to support/supplement the agenda item for out-of-state travel.

Thanks,

Jeffrey T. Janecek, P.E., C.F.M.
Fort Bend County Drainage District
(281) 342-2863

From: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>
Sent: Thursday, February 20, 2025 6:34 AM
To: Janecek, Jeffrey <Jeffrey.Janecek@fortbendcountytexas.gov>
Cc: Clayton, Jacob <Jacob.Clayton@fortbendcountytexas.gov>; May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>
Subject: RE: March 24th Streambank Restoration Course in Vicksburg, MS

Hi Jeff,

It might be best for a quick call but I can answer your questions and see where that leads.

- 1) No formal registration needed for you and the group.
- 2) There is no cost for your groups participation.
- 3) That is the correct ULC 285 link for the course.

I could provide an official email to you stating you and the others are accepted into the training if that would help. Also, I can provide PDH/PDU certificate for the course once completed that can be used to meet continuing education requirements for your individual professional registrations (PE, PG, CFM, etc.).

Let me know if this will work and if you need anything else..

Thanks,

Christopher Haring, PhD
River Engineering Branch
Coastal and Hydraulics Lab
Engineer Research and Development Center
815-985-6372 (cell)

From: Janecek, Jeffrey <Jeffrey.Janecek@fortbendcountytx.gov>
Sent: Wednesday, February 19, 2025 4:47 PM
To: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>
Cc: Clayton, Jacob <Jacob.Clayton@fortbendcountytx.gov>; May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>
Subject: [Non-DoD Source] RE: March 24th Streambank Restoration Course in Vicksburg, MS

Thanks Chris!

In order to get approval for out-of-state travel from our Commissioners Court they ask for proof of course registration. A couple questions that'll help us sort through:

1. Is there a way to formally register for the course through CHL?
2. Is there any cost we'll need to pay for attending the course?
3. Can you confirm the ULC 285 Link I sent is the right course? <https://ulc.usace.army.mil/CourseListDetail?CtrlNbr=285> If so I may see if that will be sufficient for the backup we need since it lists the correct dates and location.

Thanks again,
Jeff J.
FBCDD

From: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>
Sent: Wednesday, February 19, 2025 10:02 AM
To: Janecek, Jeffrey <Jeffrey.Janecek@fortbendcountytx.gov>; May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>; Biedenharn, David S ERDC-RDE-CHL-MS CIV <David.S.Biedenharn@erdc.dren.mil>
Cc: Clayton, Jacob <Jacob.Clayton@fortbendcountytx.gov>
Subject: RE: March 24th Streambank Restoration Course in Vicksburg, MS

Hi Jeff,

Great to hear from you and we are good to go with 5 attendees. You do not need to sign up via ULC, we will provide this training in-house through CHL.

Let me know if anyone has questions and looking forward to continued collaboration!

Thanks,

Christopher Haring, PhD
River Engineering Branch
Coastal and Hydraulics Lab
Engineer Research and Development Center
815-985-6372 (cell)

From: Janecek, Jeffrey <Jeffrey.Janecek@fortbendcountytexas.gov>
Sent: Wednesday, February 19, 2025 8:06 AM
To: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>; May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>; Biedenharn, David S ERDC-RDE-CHL-MS CIV <David.S.Biedenharn@erdc.dren.mil>
Cc: Clayton, Jacob <Jacob.Clayton@fortbendcountytexas.gov>
Subject: [Non-DoD Source] March 24th Streambank Restoration Course in Vicksburg, MS

Good morning guys-
We've got a final headcount of 5 attendees hoping to join the March 24th – 28th Streambank Restoration course in Vicksburg. They are:

Jacob Clayton & Jeff Janecek – Fort Bend County Drainage District
Mike Tehrani & Afshin Gazerzadeh – Huitt Zollars (HZ is currently working on the Project Brazos design which includes LSTP at 5 sites on the Brazos and the grade control structures at the lower end of Steep Bank Creek)
Levi Hein - Halff Associates (Halff is one of our primary consultants and their work has included grade control at the lower end of Big Creek. Levi looks to be out of their Fort Worth office)

If all still sounds good on your end we can send an introductory email connecting everyone and making sure we register appropriately. I'd note that the on-line link for the site shows 0 spots left available, let us know if you think that'll be an issue:

<https://ulc.usace.army.mil/CourseListDetail?CtrlNbr=285>

Looking forward to the class and finally making it out to Vicksburg. Let us know if you need anything else on our end.

Thanks!

Jeffrey T. Janecek, P.E., C.F.M.
Fort Bend County Drainage District
(281) 342-2863

From: Janecek, Jeffrey
Sent: Tuesday, January 28, 2025 8:59 AM
To: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>
Cc: May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>
Subject: RE: Jones PER - First Submittal

Hey Chris, thanks for checking in-

Yes, there's a few folks that expressed interest in attending when we discussed a few months back. (These include both FBCDD employees and some key personnel from private companies doing bank stabilization work around here.) How many spots do you think you'd have available? I'll work on getting head count and list who may attend.

Also, I'm trying to navigate a few other things going on around here later that week and may need to be back for Thursday/Friday. Would it be an issue if I couldn't make all 5 days?

Hope all is well, good to hear from you!

Thanks,
Jeff J.
FBCDD

From: Haring, Christopher P CIV USARMY CEERD-CHL (USA) <Christopher.P.Haring@usace.army.mil>
Sent: Monday, January 27, 2025 12:14 PM
To: Janecek, Jeffrey <Jeffrey.Janecek@fortbendcountytexas.gov>
Cc: May, David P CIV USARMY CEERD-CHL (USA) <David.P.May@usace.army.mil>
Subject: FW: Jones PER - First Submittal

Hi Jeff,

I hope you and the family had a great Holiday Season!

I hope all is well and I did want to check in with you and see if you are still planning on attending the upcoming Stream Restoration course in Vicksburg, MS the week of March 24th. Let me know if you are still planning on coming and if any others will be joining you.

Thanks, and have a great day!

Christopher Haring, PhD
River Engineering Branch
Coastal and Hydraulics Lab
Engineer Research and Development Center
815-985-6372 (cell)

CAUTION: This email originated from **outside** of the organization. 'Christopher.P.Haring@usace.army.mil' **Do not click** links, open attachments, or respond unless you recognize the sender and know the content is safe. Please forward suspicious emails to the **IT Service Desk**.