

Voluntary Extra Credit Field Trip #3

Coastal Erosion and Shoreline Processes

Saturday, April 11, 2020

Moonlight Beach, Encinitas – 10:00 am

Introduction

This voluntary, extra credit fieldtrip assignment involves participating in a field trip from Moonlight Beach to Beacons Beach. The focus of the fieldtrip is on coastal erosion, beach dynamics, and bluff stability remediation. Note that this fieldtrip includes a mile-long hike up the beach. Students can earn up to 13 extra credit points for this fieldtrip. Those who choose to complete the field trip online will receive full credit when they respond to this assignment by answering (correctly, of course) the Alternate Assignment to the Fieldtrip Question Worksheet file included on this assignment page. Below is information for both, the in-person, and online alternative fieldtrips.

In-Person Coastal Geology Fieldtrip

When: Saturday, April 11, 2020 at 10:00 am

Where: Moonlight Beach, Encinitas

How to Moonlight Beach: A number of road maps are posted at this site that should be sufficient for finding all the field trip stops. If there still is uncertainty, then check with a good road map. It would be a good idea to download and print-out the road maps for this fieldtrip found at this site. Below is a link having directions and general information about Moonlight Beach:

<http://www.dreamtimedolphin.com/beaches/beaches-moonlight-beach.html>

The Moonlight Beach parking lot is at the corner of 2nd Street and “C” Street. We'll meet near the food concession stand near the volleyball courts at the northwest corner of the beach park. Don't be late! Below are links to road maps to get to Moonlight Beach.

How long?: The trip will take about two to three hours to complete (10:00 am to 1:00 pm).

Cancellation due to Weather: The field trip will be cancelled if it rains (very unlikely!!).

General Purpose: The purpose is for students to get a better understanding of the concepts concerning shoreline features and processes, including beach transport, weathering and erosion, with an emphasis on the recent bluff failures and seawall construction.

Activity 1: Pre-trip Extra Credit Activity

Show up one hour early (9:00 am) and either spend **one total hour in the ocean with the instructor** (doing whatever surf zone activity you prefer) **OR** **spend one total hour collecting trash off the beach.** **Please bring your own trash bag.**

Note: To earn the 3 extra points, you must find and check in with the professor at 9:00 am sharp at the beach, **AND** then check back in with him at 10:00 am for points approval. You need to spend at least 50 minutes to earn the 3 E.C. points.

2) Official Fieldtrip Activity

Show up at 10:00 am sharp to observe, study, and discuss beach and bluff erosion, and related shoreline features and processes, including recent bluff failures and seawall construction along local beaches, with consideration of the nature and origin of the beaches, ocean waves and currents, and bluff geology. Also note that this 3-hour activity will earn you up to 10 extra points, but you must find and check in with the professor at 10 am sharp at the beach and sign the attendance sheet. Then you must also resign the attendance sheet at the very end of the fieldtrip for complete credit. If you have to leave early, you must first check in the instructor to let him know that you are leaving, and you will get prorated points for how much you attended. (10 E.C. points)

Field Assignment: Students will be required to complete a field trip question handout, which includes answering fill-in questions, observing ocean and bluff conditions, and writing a short reflection on the field trip experience to be turned in via the online classroom assignment portal. The required worksheet that you must bring with you is found at the following link:

Required Worksheet Download link:

http://www.seascisurf.com/inperson_fieldtrip3_worksheet.pdf

Grade Points: Students will receive up to 10 extra credit grade points for completed the field trip, which includes attendance and the completion and submittal of a written reflection.

What to Bring: Students should bring a clipboard, writing tools, water, and sunscreen. A towel, Frisbee, and surfboard are optional.

What to Wear: Loose, comfortable clothes (T-shirt and shorts is good) along with a sweatshirt or windbreaker. Beach weather may could range from sunny and warm to overcast and cool. So it is a good idea to be prepared either way.

Virtual Fieldtrip Alternate Assignment – Beach, Bluff and Dune Virtual Fieldtrip (6 E.C. points)

Field Assignment: Students who do not go on the in-person fieldtrip may complete the online alternative assignment must answer the exercise questions that are included in the online Worksheet file included on this assignment page below. You need to return your written answers to those questions by the schedule deadline in order to receive credit. This “virtual” fieldtrip focuses on coastal processes, including wave action, beach and dune dynamics, and bluff erosion.

This assignment can be completed online, and is composed of two parts:

I. Shoreline features and processes along San Diego North County, including beach and bluff erosion.

II. Shoreline features and processes along Northeastern Florida, including beach and dune deposition and erosion.

A copy of the complete virtual fieldtrip information and worksheet is found at this link:

Worksheet link: http://www.seascisurf.com/virtual_fieldtrip3_info.htm