

# Field Trip #2 – Coastal Waves, Currents, and Shoreline Features

**Blacks Beach - Sunday, October 7, 2018**

**9:00 am for Surf/Beach trash pick-up; 10:00 am for Beach hike**

## Introduction

This fieldtrip assignment involves participating in a field trip to Black's Beach. The focus of this fieldtrip is on coastal wave and current activity, including wind waves, longshore and rip currents, breaking surf, and beach system dynamics. Shoreline features, including beaches and bluffs will also be studied. Students must complete a field trip worksheet during the fieldtrip, and write a reflection, both of which will be due at the beginning of the next scheduled class meeting. Below is more detailed information. 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.

## **The In-Person Black's Beach Fieldtrip (13 E.C. points)**

**When:** Sunday, October 7, 2018 at 10:00 am (9:00 am for pre-surf/trash activity)

**Where:** Black's Beach, San Diego. We will meet on the bluff overlooking the ocean due south of the glider port facility. Park in the dirt parking lot directly south of the glider port facility. Don't be late!

**How to Get There:** go to this site for maps and directions to the meeting place -

### [Directions to the Meeting Area](#)

**How long?:** Trash pick-up will take 1 hour (9:00am to 10:00 am); the hike will probably take about 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:** To familiarize students with coastal waves and currents along our San Diego County shores. More specifically, we will get a better understanding of the origin and nature of wind waves, swell, surf, tides, tsunami, longshore and rip currents, and beach movement processes and morphology..

## **Activities:**

### **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** with your won supplied 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.

### **Activity 2: Official Fieldtrip Activity**

Show up at 10:00 am sharp to observe, study, and discuss the local ocean wave, current and beach conditions from the high bluff top and later down on the beach. Note that the hike down to the beach is quite strenuous, and that there may unclothed people on the sand and in the water. 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.

**Field Assignment:** Students will be required to complete a short 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.

**Grade Points:** Students will receive up to 10 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 the worksheet, a clipboard, writing tools, water, sunscreen, and a camera.

**Also bring a copy of the in-person fieldtrip worksheet.**

**Download a copy from this link:**

[http://www.seascisurf.com/inperson\\_fieldtrip2\\_worksheet.pdf](http://www.seascisurf.com/inperson_fieldtrip2_worksheet.pdf)

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

## **Alternative Extra Credit Ocean Wave and Current Assignment**

(5 E.C. points)

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.

**General Purpose:** To familiarize students with offshore swell conditions and ocean currents, and to better understand the concepts of formation, monitoring, predicting and effects of ocean waves and currents.

**Activities:** Complete a worksheet consisting of a two-part set of online ocean wave and current exercises.

**Field Assignment:** Students will be required to complete a set of questions using information found at the following two different websites:

### **PART I. CDIP SWELL MODELS OF SOUTHERN CALIFORNIA**

<http://www.palomar.edu/oceanography/waves/index.htm>

### **PART II. CURRENTS OF THE WORLD OCEAN**

<http://www.montereyinstitute.org/noaa/lesson08.html>

**A copy of the alternative fieldtrip assignment worksheet is found at these links:**

[http://www.seascisurf.com/virtual\\_fieldtrip2\\_worksheet.htm](http://www.seascisurf.com/virtual_fieldtrip2_worksheet.htm)

**Correct way for online students to submit the assignment:** Submit an attached word doc or .rtf file document into the assignment center. Do not past your assignment into the submission text box. You must include the question along with your answer.

**Grade Points:** Students will receive extra credit points for completion and submittal of the completed written questionnaire worksheet.