

## **CIVE 717 RIVER MECHANICS**

Pierre Y. Julien –*Spring 2011*

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### **Field Trip to the South Platte River**

Target Date: Mid-March

#### **Objective:**

Observe various structures in the river environment

#### **Team Work:**

Teams of two for the field trip and the report.

Organize car pooling with teammate and/or other teams.

#### **Proposed Schedule:**

8:00 am	Leave Ft. Collins (Engineering Building)
9:15 am	Arrival at Parking P1 (shown on map)
9:30 am	Follow the biking trail downstream and spend 3 hours up and down the South Platte
1:30 pm	Spend about 1 hour South of the Parking P2 area
2:30 pm	Departure from Denver
4:15 pm	Arrival in Ft. Collins

#### **What to look for:** (observations are by no means limited to the list below)

There are numerous alluvial river features and hydraulic structures in this area. Observe fluvial processes such as flow in bends, alternate bars, point bars, islands, floodplain, meandering and braiding, vegetation, etc. Comment on the stability of various river reaches. Sketches and photographs can well illustrate your observations. A wide variety of man-made structures can be found including piers, riprap, drop structures, concrete blocks, gabions, designed (wood, concrete, steel, riprap...). Notice the size, extent, geometry and shape of these structures and draw your personal conclusions as to whether some structures are underdesigned, fit or overdesigned. Few structures seem to experience difficulties. Identify the problems and determine what could be remedial solutions.

#### **Things to remember:**

- You and your teammate are responsible for the success of this field trip.
- Bring your backpack, sack lunch, water and hiking shoes or boots.
- Appropriate clothes, raincoats, hats and sunscreen may also be needed.
- Do not drink the river water, but feel free to walk on the riverbanks.
- Air quality can deteriorate depending on wind conditions, avoid the vicinity of the Denver Metro wastewater treatment plant, you may prefer to drive to Parking P2 rather than walk!

#### **Report content:**

Submit one report per team. You should report on your own observations relative to material covered in the course River Mechanics. You should illustrate your observations with about 10 sketches or photographs. The maximum length of the report is 12 pages.

**Due date for report:** Tuesday March 31, 2011.

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LE-717 FIELD TRIP TO THE SOUTH PLATTE RIVER

INSTRUCTOR: P.V. JULIEN

