

Lab Homework Assign. #3: Applied Geology and Research Assignment

Assigned: Week of Mar. 31-Apr. 4

DUE: Week of Apr. 21-25

This assignment will highlight the practical or applied use of geological principles in a potential ‘*real-life*’ scenario. You are required to write a 1-2 page paper in a structured format (sample format provided) to explain how to solve a geology-related problem using skills from the course, but more importantly, realizing where to go to gather information or resources to “solve your problem”. This assignment is comprised of a total of 30 points. As always, information and multiple related links are available on the UWM Geosciences website at www.geology.uwm.edu.

DIRECTIONS: Choose **ONE** of the three scenarios below, and write a *concise* paper (not to exceed two pages - format explained below) that addresses or answers the directives listed after the scenarios. (**See also the sample assignment on the last page.**)

Scenario No. 1 OIL DISCOVERY

Since the government is always trying to find more oil within US borders, your 40-acre property in central Michigan is suddenly regarded as a hotbed for domestic oil production. Before signing a contract presented to you by Exxon/Mobil to allow drilling, and eventual oil production on your property, you decide to do your own homework to research the expectant environmental affects on your property, as well as the ‘fair market’ value of royalties due to you for the oil that they expect to recover from beneath your property.

Scenario No. 2 LAKEFRONT EROSION

The shoreline of your lakefront property in northern Wisconsin is eroding more and more every year. The lake property association is seeking ideas and eventually shared costs from all property owners to install shoreline protection measures. Before deciding whether or not to share these potential costs, you decide to do your own research on how to solve this problem.

Scenario No. 3 VOLCANIC HAZARDS

You decide to move to Tacoma, WA and after finding your dream home, you come across a map depicting the *lahar* hazards in Tacoma from Mt. Rainier. Looking up the term *lahar*, you find out that it is a volcanic mudflow, so you decide to investigate further what other volcanic hazards your new house may be at risk for. After determining these hazards, you are faced with a choice. Can you protect your house from the volcanic hazards, or should you sell your house and move to a different area?

FORMAT: 1-2 pages, typed, line spacing not greater than 1.5x, margins not greater than 1', font size not greater than 12 pt.

DIRECTIVES:

A. (12 pts.) NARRATIVE: Prepare a brief narrative (or detailed outline) to describe how you might research, and eventually solve your problem. (NOTE: You are NOT required to solve the problem, and with the information given, you can't really solve the problem.) You may (and should) include some of the information required for Parts B-D, but do not simply repeat what you will be listing in parts B-D. Your narrative should be clearly written, concise, organized and logical. Grammar, spelling and sentence structure will be considered in grading. Your text should include a statement of the problem, supporting details, arguments or questions, and a concluding statement. Your text may even conclude with questions or comments pertaining to what additional information you need to solve your problem.

B. (5 pts.) DATA OR INFORMATION: List the types of geologic data, information or maps (e. g., groundwater elevation data) you would try to obtain to solve your problem. (*list a min. of 5 for full credit*)

C. (5 pts.) PROFESSIONALS: List the types of geologists (e. g., hydrogeologist), other professionals (e. g., civil engineer) or officials (e. g., city planner) that you would consider hiring or asking for help with your problem (*list a min. of 5 for full credit*)

D. (5 pts.) RESOURCES OR AGENCIES: List the resources or agencies (e. g., Wisconsin Department of Natural Resources) you would use to locate information to help solve your problem. (*list a min. of 5 for full credit*)

E. (3 pts.) REFERENCES: List the references (e. g., www.geology.uwm.edu) you used to complete this assignment. (*list a min. of 3 for full credit*) (No, *Google* is not a reference, and no *Wikipedia* doesn't count either - that's too easy!)

Name _____
 TAs name _____
 Lab day/time _____
 Date _____

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SAMPLE FORMAT

Part A: Narrative

(Narrative must be concise and organized, with a statement of the problem, supporting arguments, and a conclusion, and perhaps personal opinions.)

The problem that I researched was Scenario No. 5: How to win the World Series in less than 88 year intervals. To solve this problem I would first identify players that I definitely cannot give up in free agency, then search a database of good players available on the free agency market. I would also find out Based on these findings I might also try I would also contact the best available professional baseball players and ask them if they wanted to play for my team. Agencies I might contact for more information include Major League Baseball (MLB).... I might ask the agencies if about I'd also call my good friend Bud Selig, the Commissioner of MLB, and ask him

After I compiled all the information and sources, I would to actually solve my problem....

In conclusion, Based on my findings,I would expect to win another pennant next year ...OR... I think 88 years is a perfectly acceptable interval in between World Championships in the same city !!!

Part B: Data or information I would obtain to solve my problem include...

1. map of cities with winning baseball teams
2. statistics of players available in free agency
3. ...
4. ...
5. ...

Part C: Professionals I would contact to help solve my problem include...

1. good baseball players
2. college scouts
3. Bud Selig
4. ...
5. ...

Part D: Resources or agencies that I would contact or use to solve my problem include...

1. Major League Baseball
2. NCAA baseball programs
3. ...
4. ...
5. ...

Part E: References I used to locate the information for this assignment included...

1. <http://mlb.mlb.com/NASApp/mlb/index.jsp>
2. <http://espn.go.com/>
3. <http://sportsillustrated.cnn.com/>