DISCUSSION QUESTIONS

SESSION 5: GROUNDWATER

EARTH SCIENCE

1. Explain
   1. Evaporation
   2. Condensation
   3. Precipitation
   4. Runoff
   5. Infiltration
   6. Evapotranspiration
2. Explain the Hydrologic Cycle
3. The oceans have 97.3 percent of the salty water on earth
4. The remaining 2.7% of fresh water is in
   1. Groundwater: 21% of fw
   2. Rivers: 0.3% of fw
   3. Atmosphere: .003% of fw
   4. Lakes: .62% of fw
   5. Ice: 76% of fw
5. Overland flow + Stream flow = Surface Runoff
6. Sediment transportation is influenced by
   1. Load
   2. Gradient
   3. Discharge
7. How does gradient influence the transportation of various types of loads?
8. Compare gentle with steep gradients in terms of bed load, suspended load and dissolved load
9. Explain a velocity – diameter graph
10. Explain the difference between capacity and competence
11. Explain flow velocity: a stream’s competence increases proportionately to the square of its velocity.
12. Where a river bends, velocity is highest at the outside curve and results in erosion. Velocity is lowest on the inside curve and deposition occurs there.
13. Compare “V:” shaped and “U” shaped valleys
14. What is a meandering stream. Draw a diagram with main channel, pint bars and cut banks
15. What are braided stream channels?
16. Stream deposits include
    1. Floodplains
    2. Oxbow lakes
    3. Alluvial fans
    4. Delta deposits
17. Floods are natural, somewhat predictable
18. What will happen if the Lake Isabella dam breaks?
19. Define porosity and permeability
20. Draw a diagram of perched water bodies, unsaturated zone and saturated zone
21. Distinguish between confined and unconfined aquifers
22. What is artesian flow?
23. What is a “cone of depression”?
24. Describe how groundwater can become contaminatied.
25. What is a toxic plume?

SUBBASINS WITH SEVERE OVERDRAFT FOR PPT PRESENTATION

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| SUBBASIN | STUDENT |
| PAJARO VALLEY | Antonio Rodriguez |
| PASO ROBLES | Cindy Benites |
| LOS OSOS VALLEY | Cristion Brown |
| CUYAMA VALLEY | Desiree Ramirez |
| OXNARD VALLEY | Elizabeth Sanchez |
| EASTERN SAN JOAQUIN VALLEY | Gisele Gomez |
| MERCED | Hiwet " Layla" Zerom |
| MADERA | Jasmehar Dhillon |
| DELTA-MENDOTA | Kimberly Christmas |
| KINGS | Krystyn Moore |
| WESTSIDE | Matthew Pierce |
| KAWEAH | Ochun Morris |
| KERN COUNTY | Ocean Valdez |
| INDIAN WELLS VALLEY | Paige Petrungaro |
| BORREGO SPRINGS | Sarah Hernandez Smith |
| SANTA CRUZ | Shon Stephen |
| PLEASANT VALLEY | Tony Rodrequez |
| TULARE LAKE | Tye Hammond |

Use information in California Department of Water Resources Bulletin 118

Available at <https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118>. Click on PDF to download the report