Answer Key for Environmental Geology Lab 4

1. Non-renewable

2. It will begin to decline

3. It will also decline at a 1/ 10 ratio relative to the decline of the water table

4. 457.2 mm

5.

Jan	62 mm	July	372 mm
Feb	70 mm	Aug	397 mm
Mar	93 mm	Sept	135 mm
Apr	129 mm	Oct	124 mm
May	189 mm	Nov	72 mm
June	273 mm	Dec	46 mm

6. 1962 mm

7. Non-renewable

8. September $Q (m^3) = 2,265,300 \ m^3$

9. September $Q (m^3) = 2,265,300,000$ liters

10. 187,500,000 liters

11. 12 days

12. No it could only serve as a short-term emergency supply.

13. 432,000 m^3

14. 432,000,000 liters

15. % of Water Consumed by Laredo = $\dfrac{\text{Water Consumption}}{\text{Total Water in River}}$ X 100%

    = $\dfrac{210,000,000 \text{ liters}}{432,000,000 \text{ liters}}$ X 100%

    = 49 %

16. Since 10,000,000 liters of sewage is added to 432,000,000 liters of river water during the severe drought the sewage is not sufficiently diluted to prevent downstream areas of the river from becoming contaminated.

17. Aquitard

18. Unconfined

19. Confined

20. Unconfined

21. The water will evaporate in the river during its trip to Laredo.

22. In the northwestern Webb County area water can be transport by using the Rio Grande River and through a pipeline. The construction of a pipeline from this remote part of the county would be very expensive.

In the Laredo area the water is too salty

23. This salt is also too salty

24. The salt needs to be removed from the water through the process of desalination.

25. The Edwards Aquifer has high permeabilities and is freshwater unlike the water around Laredo