Is There Hardpan Underfoot?

Worksheet

A. Average annual precipitation -

AAP _____ inches X 2.5 = _____ centimeters or _____ meters

B. Area of location: _____ Square meters

C. Volume of rainfall A. _____ X B. _____ = C. _____ Cubic meters

Weight of rain 1000kg/m3 X C. _____ = _____ Kilograms

D. Area of impervious surfaces _____ Square meters

E. % impervious surfaces: D. _____ X 100 =

divided by B. _____ = _____ %

F. % impervious surfaces E. _____ X C. _____ Total rainfall =

runoff potential _____ Cubic meters

Runoff potential F. _____ Cubic meters X 1000 kg/m3 = kg X 2.2 =

_____ lbs. Or _____ tons of runoff per year.

Discussion Questions:

Do you think there is too much runoff from your site?

How do human activities increase surface runoff?

OVER

Are there ways to change this amount or to improve the quality of runoff?

What are the consequences to habitats and wildlife populations when runoff is excessive?

What is the relationship between the volume and speed of runoff and the erosion?

Why is infiltration of water into soil after a rain event important?

How might this runoff affect this site and surrounding areas?

What are some possible pathways of this runoff?

How might temperature affect water absorption?

Impervious Surfaces:

- Sidewalks
- Roadways
- Buildings
- Parking Areas
- Compacted soil in footpaths