11-23-15

Temperature

affected by 2 things: velocity (how quickly it moves; faster water is colder) and depth

thermocline- occurs in deep pools of water (warmer on top, colder on bottom)

amount of vegetation

season changes

natural springs

changes in temperature affect the wildlife

carp and catfish

current and velocity

current is unidirectional

exerts a force on the animal

mollusks – pseudopods

fish – streamlined

velocity decreases with decreased slope, the widening of the river causes the velocity to slow down

velocity is low at the water’s surface (it brushes up against the air) and also at the bed (it brushes against the rocks)

velocity is quickest in the middle of the stream because water is flowing over water

substrate – the material that lines in and around the stream

sunlight

turbidity – clarity of the water

suspended materials, erosion, warm temperatures affect it

dissolved solids – magnesium, calcium, potassium, iron, sodium, sulfur, silicon, nitrogen, and phosphorus

dissolved gases – O2 and CO2

faster moving waters contain more oxygen than slower waters

colder waters contain more oxygen than warmer waters

organic matter – algae, plankton, wood, leaves, decaying organisms

pH – in PA its about 6.5 rain pH is about 5.5

acid mine drainage – yellow boy (reddish orange coloration), usually heavy metals like iron

1. much of PA receives some of the most acidic precipitation in the US

2. rocks of the state contain minerals that contribute to acidification

3. the coal mines – natural buffer