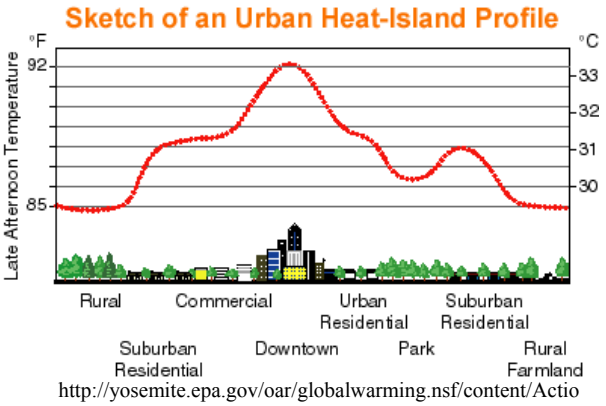
CE 326 Principle of Environmental Engineering
Air Pollution Meteorology

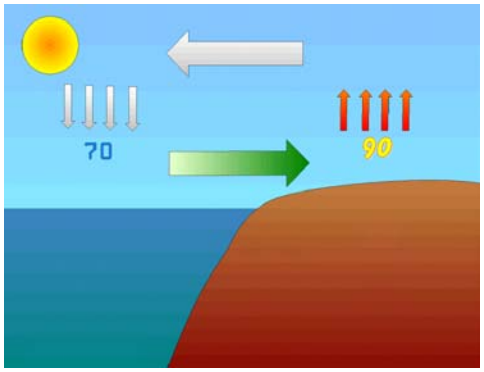
I. Atmospheric Engine
– atmospheric s_____ (and weather) is a function of t_____ and p_____
– wind flows from h_____ pressure areas to l____ pressure areas
– in absence of earth's rotation, wind would be p_____ to constant pressure lines (i_____)
– earth's rotation creates C_____ effect

II. Atmospheric Stability
– tendency of atmosphere to r_____ or e_____ vertical air movement is termed s_____
– there are three categories of stability depending on the l_____ r_____ – rate of temperature change as a function of elevation
  a. neutral – d____ a_____ l_____ r_____
  b. unstable – s_____ lapse rate
  c. stable – s_____ lapse rate
    i. isothermal – no change in t_____ with e_____
    ii. i_____ – temperature increases with elevation

III. Terrain Effects
  A. H_____ I_____ E_____
    – mass of material that a_____ and e_____ heat at a greater rate than surrounding area
      – stability over heat islands is l_____
        – good for g_____ l_____ sources
        – bad for t_____ s_____
  B. Land/Sea Breeze
    – land c_____ more rapidly at night than sea – l_____ breeze
    – land h_____ faster during day – s_____ b_____
  C. Valleys
    – valleys at an a_____ a_____ to the prevailing wind will direct a portion of wind into the valley
    – valleys oriented in the n_____-s_____ direction are more susceptible to inversions than east-west direction
    – during daytime sun heats valley floor – v_____ breeze
    – during night – h_____ breeze
    – early day – i_____ possible

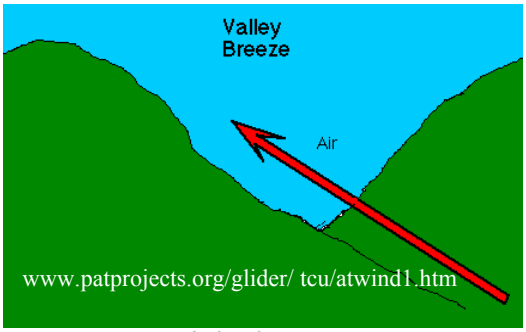


http://yosemite.epa.gov/oar/globalwarming.nsf/content/ActionsLocalHeatIslandEffect.html?OpenDocument

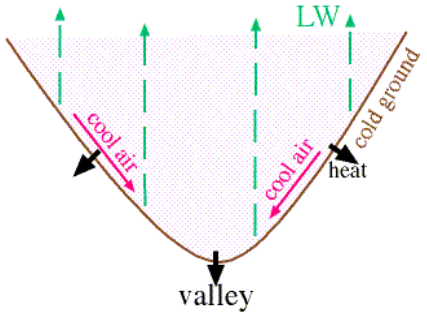


http://flame.fl-dof.com/fire_weather/info/misc/sb.html


http://www.atdd.noaa.gov/ETOS/program.html



night time



http://apollo.lsc.vsc.edu/classes/met130/notes/chapter10/mtn.html