

Institute of Natural Resource Management National Taipei University Class Handout of the Fall Semester, 2013

Lectures 8: Introduction to Hydrology

- FUNDAMENTALS OF HYDROLOGY

- Hydrologic Cycle
- Watershed or River Basin
- Hydrograph: IDF
- Return Period and Flood Frequency

- HYDROLOGIC PHENOMENA

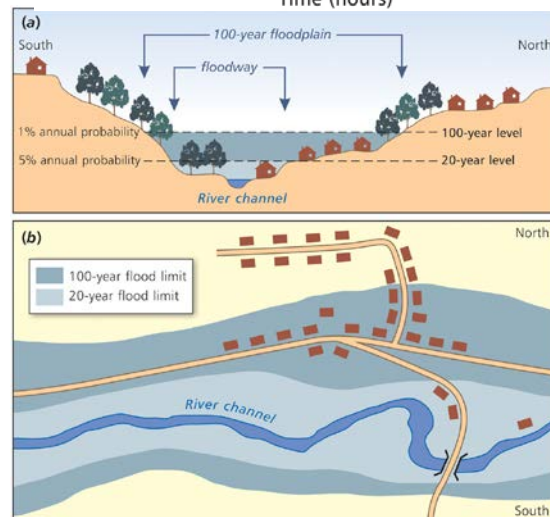
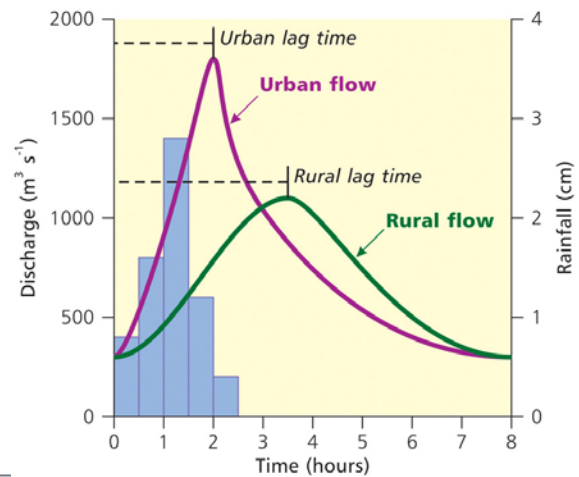
- Precipitation: 雨(Rain)、雪(Snow)、霜(Frost)、露(Dew)、雹(Hail)、霰(Sleet)、濛(Drizzle)、冰雨(Glaze)等
- Evaporation and Evapotranspiration
- Infiltration => Groundwater
- Streamflow => Open Channel

- FLOOD AND DEBRIS FLOW

- Return Period and Frequency Year
- Flood Plain and Hazard Zone
- Flood Control/Mitigation Measures
蓄洪(蓄水庫/池)、滯洪(滯洪池、游水池)、疏洪(水道疏浚)、分洪(分水道或疏洪道)、束洪(河堤)、抗洪(水閘、插板、墊高)及避洪(疏散)。
- References (科學發展月刊)
⇒ [水文循環與洪水; 豪雨造成的土石流](#)
⇒ [台灣豪雨洪水的古往今來](#)
⇒ [災害潛勢資料; 面對水患新思維](#)
⇒ [百年滄桑話水利—從何處來向何處去](#)
- [國家災害防救科技中心-災害潛勢地圖](#)
⇒ 坡地災害潛勢地圖、淹水潛勢地圖

- OTHER CONSIDERATIONS

- Extremes, Exceedance of Violation
⇒ Statistics of Extremes
⇒ Order Statistics
- Debris Flow, Land Subsidence, Coastal Flood, Wetland and Constructed Wetland



Jemez River System Flood Frequency

