

REMINDERS

EXAM II – New Date is Tuesday, April 17.
 Get study guide from course home page.

TEXTBOOK READING FOR EXAM II
 WEATHER and CLIMATE: Ch. 2
 LITHOSPHERE: chapter 3
 BIOSPHERE: chapter 4
 EARTH RESOURCES: chapter 5

❖ Two required essays (10%) were due March 27. Late penalty now applies.

❖ Extra Credit: “Think Geographically” Essays
 from any five of Chapters 4-12 chapters or the 3rd topic from required essay list plus 4 chapter essays .
 – Last day to submit is May 15 but it is best to do them as you finish reading a chapter.

➤ Any essay may be submitted before the deadline.
 ➤ Don't wait for the night before to write them!!

GEOG 101 Part II
People and their Physical Environment

17: Earth Habitat
Human Impact and Natural Processes (aka Hazards)

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 Hunter College Geography

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PART II: People and their Physical Environment

- ✓ I. Introduction to the Physical Environment
- ✓ II. Earth-Sun Relationship
- ✓ III. Earth Systems
 - ✓ A. The Hydrosphere: Oceans
 - ✓ B. The Atmosphere: Weather and Climate
 - ✓ C. The Lithosphere: Geologic Influences
- IV. Earth Habitat**
 - ✓ A. Biosphere
 - ✓ B. Natural Controls and Cycles
 - **C. Human Impact**
 - **D. Natural Hazards**
 - E. Resources

LANDSCAPES

- ✓ **Physical landscape** = natural conditions
- ✓ **Cultural landscape** = imprint of human activity
- The physical landscape **influences the development of** cultural landscape:
 - economic activity
 - architecture/clothing
 - technology/inventions

LANDSCAPES

- ❖ Throughout human history people **cope with** their environment and **deal with** natural processes.
- The natural processes that are harmful to them are called “**hazards**.”
- Actions of **people impinge on nature** and can be disruptive – pollution; agricultural methods; importing non-native plants, insects and animals; killing/extinction of species
- People must be aware of their actions and anticipate consequences.
- At the same time they must be cognizant on ways to protect the environment.

HUMAN IMPACT

Humans have had an impact on the natural environment from the beginning of their existence.


- Interfered with natural cycles
- Disrupted natural controls
- In spite of technological advancements, cannot control natural processes which are then referred to as **NATURAL HAZARDS**

<https://www.youtube.com/watch?v=6VUPiX7yEOM> Greenhouse Effect, 4 min


https://www.youtube.com/watch?v=G4H1N_yXBIA Climate change and People, 4 min

HUMAN IMPACT

Normal conditions at the junction of the Missouri and Mississippi Rivers.



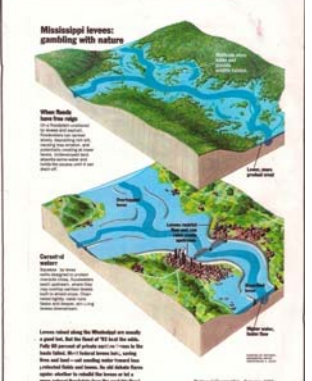
"Great flood" of 1993 at St. Louis, Missouri. How did this happen?



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HUMAN IMPACT

The building of levees to protect St. Louis and St. Charles **increased flooding** both upstream and downstream of the protected areas!




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HUMAN IMPACT

A. Levees constrict stream flow and prevent water from spreading laterally, so it backs up further upstream.


B. The constricted stream channel now accelerates the flow of water moving past the protected areas, creating a more powerful current downstream.



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NATURAL PROCESS / NATURAL HAZARD

- They are atmospheric, geologic and oceanic in nature.
 - The list is long.
- Every continent has them.
- They become **hazards** when **people** are **adversely affected** by them.



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NATURAL PROCESS/NATURAL HAZARD

The chief natural process killers of people over the last 100 years are ... ?

1. drought (10 million people)
2. floods (6.8 mil)
3. earthquakes (1.8 mil)
4. wind (1.2 mil)
5. volcanoes (0.9 mil)
6. mass movements – land and snow (0.5 mil)

Heat waves and cold spells are silent killers.

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NATURAL PROCESS/NATURAL HAZARD

We must learn to live with the "hazards."

- ✓ Learn to avoid them
- ✓ Have selective land use
- ✓ Predict their occurrences
- ✓ Develop technology to protect ourselves

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HURRICANE





Wind, rain and storm surge


Hurricane Katrina, 2005

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Urban Flooding Potential



Flood risk in the NYC area



Flood risk in Houston, TX



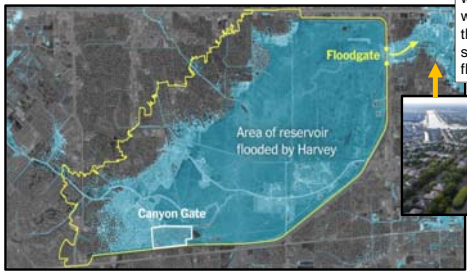
Flood risk in Tampa, FL

<https://youtu.be/y3FgAJUs1s8>
Baton Rouge, LA flooding


<https://www.click2houston.com/news/water-to-be-released-from-addicks-barker-reservoirs>
2017 before and after photos Houston, TX

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Flooding of a Houston Suburb during Hurricane Harvey





Barker Reservoir is a flood control project built to contain excess water, yet housing was allowed along the perimeter outside of "historic flood levels."



<https://www.nytimes.com/interactive/2018/03/22/us/houston-harvey-flooding-reservoir.html>

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TORNADO

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VOLCANIC ERUPTION


<https://www.youtube.com/watch?v=IhU6jm6NY4> Mt St Helens 1980 (2.5 min)



<https://www.youtube.com/watch?v=Cvjw9nnwXY> Pyroclastic flow, Mt Unzen, Japan (1 min)

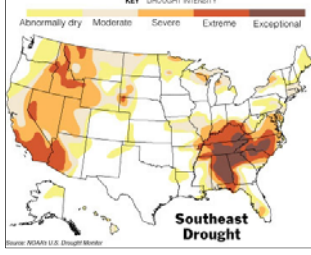
Mt. St. Helens, Washington



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DROUGHT




KEY DROUGHT INTENSITY

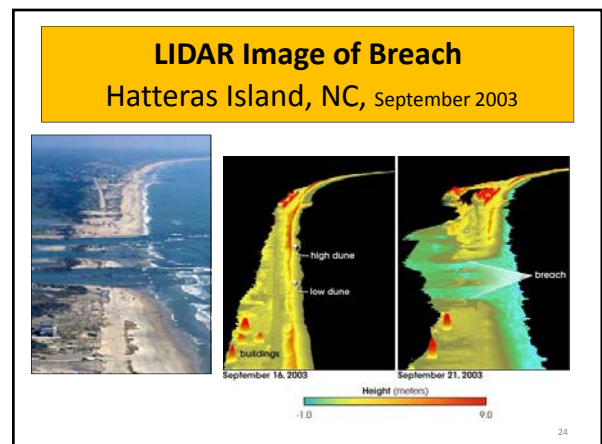
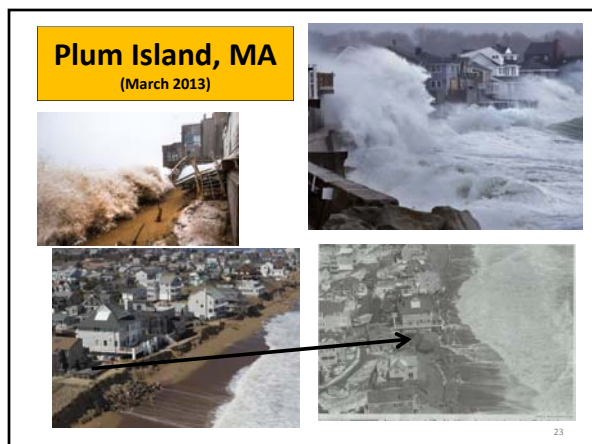
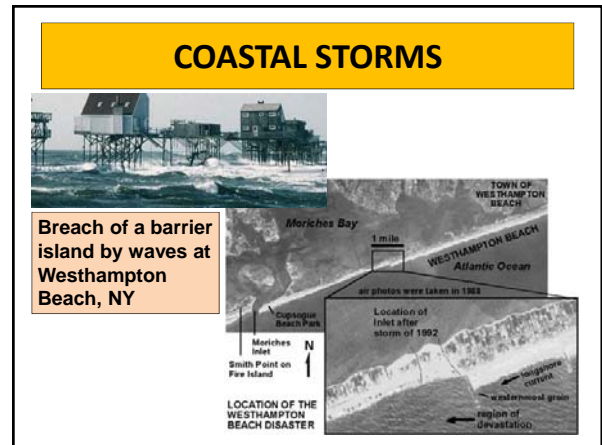
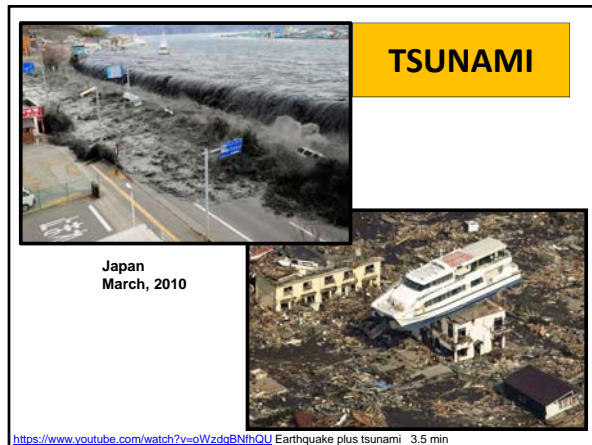
Abnormally dry Moderate Severe Extreme Exceptional

Southeast Drought

<http://droughtmonitor.unl.edu/>



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Part II: Exam Topics

- I. Intro. to the Physical Environment
- II. Earth-Sun Relationship
- III. Earth Systems
 - The Hydrosphere: Oceans
 - The Atmosphere: Weather and Climate
 - The Lithosphere: Geologic Influences
- IV. Earth Habitat and Environmental Protection
 - Biosphere
 - Natural Controls and Cycles
 - Human Impact
 - Natural Hazards
 - Resources

**EXAM 2 is on
Tues, Apr. 17 and
will cover all the
topics in Part II.
See Study Guide II
on the course home
page for definitions
and place names
for North America,
South America and
Antarctica.**

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