

CIVE 3331 Environmental Engineering

CIVE 3331 - ENVIRONMENTAL ENGINEERING

Exercise\_001-1

Read the National Environmental Policy Act of 1969, then briefly answer the following questions:

- a) Title I of the act proclaims “national policy” in regards to the environment and contains specific instructions on how Federal agencies shall act. It also contains instructions to individuals. What are the specific responsibilities of individual citizens under the act?
- b) Title II of the act creates an entity in the Executive Office of the President of the United States. What is the title of this entity?
- c) Title II provides examples of environmental classes (essentially defines of what the environment is comprised). List these examples.

A copy of the legislation is attached as a PDF file named: NEPA\_1969.pdf

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Exercise\_001-2

Write a brief essay where you compare and contrast the concepts between effluent/emissions-based standards and quality/ambient-based standards.

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## Exercise\_001-3

Using the world-wide-web find, read, and write one page summaries of

a) PL 92-500

b) Superfund

c) CERCLA

d) Current water quality standards for non-designated streams in Texas.

The water quality standards for Texas are published in the Texas Administrative Code. The relevant portions are TAC Title 30, Part 1, Chapter 307, Subchapter 307.7 (and other sections). A copy of a relevant section is attached below. In this particular table, the lowest allowed DO in Texas is 2.0 mg/L in relatively poor water.

Figure: 30 TAC §307.7(b)(3)(A)(i) - Microsoft Internet Explorer

Figure: 30 TAC §307.7(b)(3)(A)(i)

TABLE 4

Aquatic Life Subcategories

Aquatic Life Use Subcategory	Dissolved Oxygen Criteria, mg/L			Aquatic Life Attributes					
	Freshwater mean/minimum	Freshwater in Spring mean/minimum	Saltwater mean/minimum	Habitat Characteristics	Species Assemblage	Sensitive species	Diversity	Species Richness	Trophic Structure
Exceptional	6.0/4.0	6.0/5.0	5.0/4.0	Outstanding natural variability	Exceptional or unusual	Abundant	Exceptionally high	Exceptionally high	Balanced
High	5.0/3.0	5.5/4.5	4.0/3.0	Highly diverse	Usual association of regionally expected species	Present	High	High	Balanced to slightly imbalanced
Intermediate	4.0/3.0	5.0/4.0	3.0/2.0	Moderately diverse	Some expected species	Very low in abundance	Moderate	Moderate	Moderately imbalanced
Limited	3.0/2.0	4.0/3.0		Uniform	Most regionally expected species absent	Absent	Low	Low	Severely imbalanced

Done Internet

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## Exercise\_001-4

Using the world-wide-web find the current address of the Region 6 headquarters of EPA. Attach a print-out of the Region 6 home page.



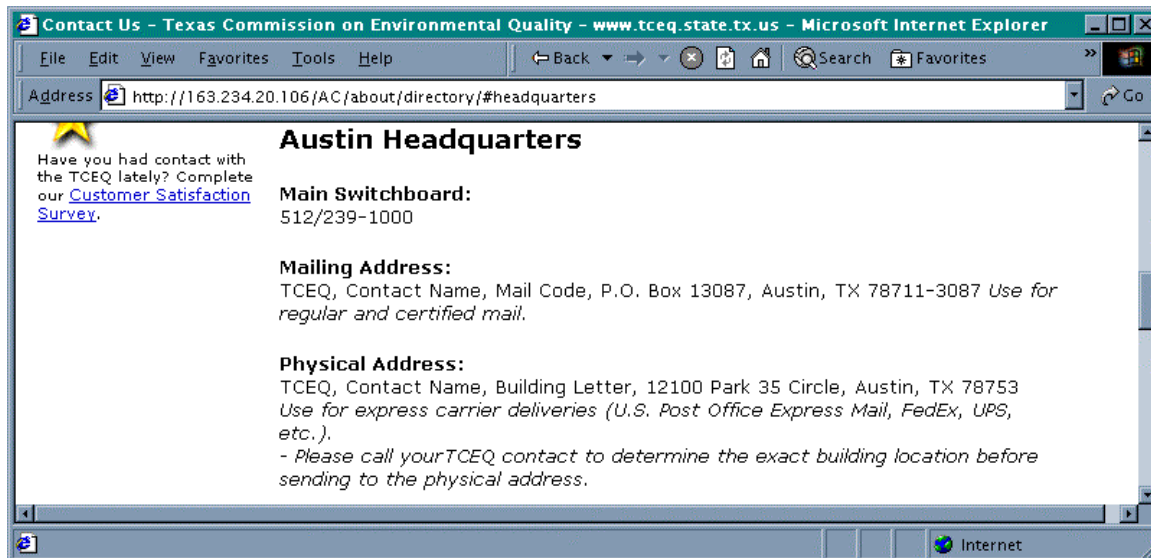
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## Exercise\_001-5

Using the world-wide-web find the current address of the headquarters of the ~~Texas Natural Resources Conservation Commission~~ Texas Commission on Environmental Quality. The strike-through name is the previous name for this State Agency. When was the name changed?

Name was changed in 2000 after sunset review by the legislature.

Attach a print-out of the web page of the state agency (home page only!).



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## Exercise\_001-6

The concept of “commons” is fundamental to environmental law and engineering. Find the article listed below in the library and attach a copy to this exercise.

Hardin, G., 1968. “The tragedy of the commons.” Science, **162**, pp. 1243-1248.

The “Tragedy of the Commons” suggests several methods to allocate limited resources. Find examples from daily life or from the newspaper where resources are allocated in the manner described in the article. Prepare a brief essay where each of the allocation methods in the article is identified and an example from daily life is presented.

<<URL [www.dieoff.com/page95.htm](http://www.dieoff.com/page95.htm) >>

**Document History:**

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