

## **APES – Chapter 10 – Land: Public and Private**

**Intro: Who Owns a Tree** (pp. 261 – 262)

- a) Differentiate clear-cutting from selective cutting of trees.  
What are the pros and cons of each?
- b) If company (Maxxam) owns the land, what rights do they have?
- c) Logging companies often lease US Forest Service Land (often referred to as “the land of many uses”). Who owns that land? What is allowed?

### **I. Human Use Affects the Environment**

A. **A variety of uses**...List them: (see fig. 10.1, p. 263)

#### **B. Tragedy of the Commons (Garrett Hardin)**

The tendency of a shared, limited resource to become depleted/degraded as humans act in self-interest for short-term gains.

Examples of free access resources:

C. **Externalities** - what are they? Give examples:

Ex: **Tragedy of the Commons** = negative externality

Ex: New shopping mall increases property values = positive externality

Negative externalities are those costs associated with some activity that aren't born by the perpetrator...usually they are passed to the average citizen/taxpayer.

Solution: Is private ownership of resources the answer?

Is self-regulation of resource exploitation/extraction the answer?

D. **Maximum Sustainable Yield** - the amount of animals, trees or crops that can be harvested without harming the resource or supporting ecosystem.

Termed the “Intermediate Harvest”...some amount that falls between unchecked harvesting and a prohibition against harvesting. Imprecise and variable.

Use of the Logistic Growth Curve to guide conservation ecologists...

Harvesting managed to keep the population at  $\frac{1}{2} K$  (Carrying Capacity), which is generally considered to be the fastest growth rate.

### **II. Public Lands – Classified by Use (see p. 266-267)**

A. **International** – see categories

National Parks

Managed Resource Protected Area

Habitat / Species Management Area

Strict Nature Reserve and Wilderness Areas

Protected Landscapes and Seascapes

National Monuments

- B. **United States** – multiple categories, jurisdictions, what is allowed/disallowed?
  - National Parks
  - Wildlife Refuges
  - Wilderness Areas
  - BLM Rangelands
  - US Forest Service Lands

### III. **Land Management on Public Lands**

#### A. **Rangelands**

Grazing on public lands

Considerations:

- Water use and water rights

- Soil conservation

- Plant and animal species protection

- Mineral extraction on BLM lands (recall: Mining Act of 1872)

#### B. **Forests**

1. Timber harvesting practices

- Clear-cutting

- Selective cutting

- Ecologically sustainable forestry

Considerations:

- Plant and animal species protection

- Soil conservation / River and stream protection

- Monoculture tree plantations

2. Fire Management

- Prescribed or controlled burns

- Fire suppression – finding the right balance

#### C. **Federal Regulation**

NEPA = National Environmental Protection Act (creates EPA's)

- EIS = Environmental Impact Statement on development projects

- Mitigation Plans...how will loss of habitat and services be handled?

ESA = Endangered Species Act

Public Impact hearings

CWA = Clean Water Act, including section 404 which establishes rules for

- Dredge/fill of wetlands...US Corps of Engineers responsibilities.

### IV. **Expansions of Residential / Development** (where private meets public)

#### A. **Urban development**

- Urban sprawl

- Urban blight

- Use of Zoning and other gov't regulation

B. **Suburban growth and development** – stems from urban sprawl

Environmental Impact:

C. **Changes in Exurban environments:**

**D. Smart Growth – 10 Basic Principles** (see p. 276-278)

**WORKING TOWARD SUSTAINABILITY**

**The Dudley Street Neighborhood**

- a) What problems had to be dealt with?
- b) How was eminent domain used?
- c) What are some of the achievements?
- d) Identify a local neighborhood where similar steps have been used.