Unit 6 Objectives

1. Recognize how much of the United States is owned by the people (Public Lands).
2. Recognize where most of our public lands are located.
3. List and describe three types of Public land.
4. Describe four principles that should be used to manage our Public lands.
5. List at least five uses of forests.
6. Discuss four goals of forest management.
7. List four serious environmental problems associated with logging.
8. List and describe five types of logging methods.
9. Describe five ways surface fires are beneficial to forests.
10. Recognize how extensive forest service roads are as compared to paved highways.
11. Describe public rangelands and what impact over grazing has on these lands.
12. Describe five sustainable use policies that would benefit Public rangelands.
13. Recognize how many major national parks are in the US.
14. Describe how are National Parks are under assault.
15. Describe how the two main tenants of park management are in conflict with one another.
16. Describe ten ways to improve the National Park system.
17. Recognize the purpose of the Scenic and Wild Rivers act.
18. Compare the percentage of protected river miles verses the percentage of river miles tamed by levees and dams.
19. Describe what can be done to protect large animal populations and wide ranging animals such as grizzly bears.
20. Describe the importance of Wildlife corridors.

Public Lands In the United States

1. Nearly 1/3 of the United States is owned by the people and managed by the Federal Government.
2. 73 % of our Public Lands are in Alaska and 22 % lies in the Western States.
3. Public Lands are classified as (a.) multiple-use, (b.) moderately restricted-use, and (c) restricted-use.
4. Multiple-Use Lands include
   1. 156 National Forests and 20 Grasslands
   2. National Resource Lands managed by the Bureau of Land Management (BLM)
5. National Forests are managed for logging mining, livestock grazing, farming, oil and gas extraction, recreation, hunting, fishing and the conservation of water and soil.
6. BLM lands are utilized for energy extraction (oil, coal, natural gas), minerals and for preserving rangeland for livestock under a permit system.
7. Moderately Restricted-Use Lands are mostly comprised of our 508 National Wildlife Refuges and are managed by the U.S. Fish and Wildlife Service. The refuges provide habitat and breeding areas for waterfowl and big game. Hunting, trapping and fishing is all regulated to maintain healthy wildlife populations.
8. **Restricted-Use Lands** include the National Park System and the National Wilderness Reservation System.

9. The **National Park System** includes 54 major parks and 324 National Recreation areas, monuments, memorials, battlefields parkways, seashores, etc.

10. The **National Wilderness Preservation System** consists of 630 road-less areas that reside in National Forest and Parks. **Motorized vehicles and equipment** are not permitted in wilderness areas.

11. To **utilize and preserve** our public lands conservationist believe four principles should be incorporated into their management:

   1. Protection of biodiversity and ecological integrity.
   2. No subsidies or tax breaks should be given for utilizing or extracting resources.
   3. Fair compensation by industry and commercial users of public lands resources.
   4. All users and extractors of resources on public lands should be fully responsible for any and all environmental damage.

12. **Proponents** of environmental integrity (developers, extractors, industry, etc) are collectively lobbying congress to:

   1. **Sell public lands** or their resources at less than market value.
   2. **Slash federal funding** for the administration of [public lands.
   3. **Weaken, waive, or eliminate federal laws** governing public lands.
   4. **Allow highways** to be built through National Parks and Forests.
   5. **Redefine wetlands** so that about 1/2 would lose federal protection.
   6. **Repeal or weaken** the Endangered Species Act.

**Managing Our Forests, Rangelands and Parks**

13. Forests provide:

   1. **Lumber** for housing
   2. **Fuelwood**
   3. **Pulp** for paper products
   4. **Medicines**
   5. Public use (hunting, fishing, camping, etc)
6. **Wildlife habitat**

14. Forests are often managed for various products. Pulp wood for paper products takes the shortest time to grow as trees are harvested before maturity. Wood for furniture and building requires longer growth cycles.

15. **Even-age management** for pulp trees produces "tree farms" with little biological diversity. (e.g. the decline in Diamond-back rattlesnakes)

16. **Uneven-age management** allows for a variety of trees and at different ages. The goals of such management are:

   1. Biological diversity
   2. Long-term sustainability of high-grade lumber
   3. Reasonable but not huge economic return
   4. Multiple use of the forest for wildlife, watershed protection and recreation.

17. **Timber** is a valuable resource to be harvested in a sustainable manner. However logging can have serious environmental consequences, even when done properly. These include:

   1. Increased erosion and sedimentation of waterways.
   2. Habitat **fragmentation** and loss of biodiversity
   3. Exposure of forest to exotic pests, diseases and wildlife.
   4. Opening of inaccessible areas to hunters, farmers, ATVs, miners, etc.

18. Methods of logging include:

   1. **Selective** cutting
   2. **Shelter-wood** cutting
   3. **Seed-tree** cutting
   4. **Clear-cutting**
   5. **Strip-cutting**

19. Forest fires are naturally occurring events that **help** maintain healthy forests. Surface fires help forests by:

   1. Burning away flammable ground material
   2. Release valuable **mineral** nutrients
   3. Increase activity of **nitrogen-fixing** bacteria
   4. Stimulate the **germination** of tree seeds (e.g. Ponderosa Pine)
5. Help control **pathogens** and insects

20. Subsidies to logging companies (via below market costs and creating roads) have cause the Federal Gov't to make a profit only three times in the past 100 years.

21. There are more forest services roads for logging then there are **paved** roads in the entire United States!

22. **Rangelands** are grasslands in arid or semiarid areas that are too dry for nonirrigated crops.

23. **42 %** of the world's rangeland is used for grazing livestock.

24. Rangeland grasses have deep root systems and they grow from the base so they can be grazed and then regrow.

25. Rangelands not only provide forage for wildlife and livestock but they also act to absorb water and replenish groundwater.

26. Overgrazing destroys native vegetation, reduces ground cover, and leads to less absorption of rainwater and increase erosion to wind. Overgrazing is the leading cause of **desertification** worldwide.

27. 23,000 U.S. Ranchers hold permits to graze on 4 million livestock on BLM lands.

28. Public subsidies to western ranchers amount to $2 billion, which averages out to $70,000 per rancher. Collectively these ranchers only produce 2% of our countries beef!!

29. Sustainable use of Public Rangeland should include:
   
   1. Allow no or only limited grazing on **riparian** areas.
   
   2. **Ban** grazing on rangeland in poor condition.
   
   3. Use **competitive bidding** for grazing permits.
   
   4. Allow individuals or **environmental** groups to bid for grazing permits and not graze.
   
   5. Raise grazing fees to **fair** market values.

30. The U.S National Park System is dominated by **54** national parks.

31. National parks are now under **threat** because they cannot keep up with the increased demands of a growing population of visitors.

32. National parks are now **choked with cars** and trailers, **plagued by noise**, traffic jams, **vandalism**, **poaching**, **deteriorated trails**, **polluted water** and **run down visitors centers** and facilities.

33. The number of Park rangers has not been increased since 1975 yet the number of visitors has increased by 86 million. There is now just one park ranger per **84,200** visitors.

34. The average pay for a park ranger is less then **$35,000**.
35. Large carnivores at most parks have been extirpated due to hunting, poaching, poisoning by ranchers and the limited size of the parks.

36. Ever park is under assault by invasive plants and insects.

37. The scenic and ecological value of most parks is also threatened from outside their borders by mining, logging, livestock grazing, coal-burning plants, water diversion and urban development.

38. Air pollution in the national parks now affects scenic views over 90% of the time.

39. Everglades National Park is in danger of drying out if steps to divert water back into the park are unsuccessful.

40. Nesting birds have declined by 90% since the 1950's and the remaining vertebrate classes have declined by 75-90%.

41. National parks are managed under the misguided principle of natural regulation, that is, they are treated as if they are self-sustaining wilderness ecosystems. Nearly all parks (including Yellowstone) are too small for this approach.

42. The U.S. Park Service has two goals that are increasingly in conflict:
   1. To preserve nature in the park
   2. Make nature more available to the public

43. Because national parks operate on a limited budget they have come under increasing threat of privatization. Allowing parks to be run by subcontractors threatened to turn them into theme parks rather than reserves of nature and ecological learning.

44. Suggestions by environmental groups and the National Parks and Conservation Association to improve the National Park System include:
   1. Have all user fees go to management, upkeep and repair or the parks (currently they go to the general treasury)
   2. Require integrated management plans for parks and nearby federal lands.
   3. Increase the budget for parks
   4. Increase the budget to buy private lands near parks
   5. Require private concessionaires at the parks (1) compete for contracts, (2) pay franchise fees equal to 22% of their gross receipts (currently they pay less than 7% and as little as 0.75%)
   6. Provide more funds for maintenance and repairs.
   7. Raise fees for park visitors
   8. Restrict the number of park visitors to crowded parks.
9. Increase the number of and pay of park rangers

10. Encourage more volunteers to help with the parks.

45. In 1968 Congress passed the National Wild and Scenic Rivers Act. It allows rivers and river segments with scenic, recreational, geological, wildlife, historical or cultural to be protected.

46. Currently only 0.2% of the country's 3.5 million miles of river length is protected by this act. In contrast, more than 17% of the country's river lengths have been tamed by dams, levees, and reservoirs.

47. Worldwide only 6% of the Earth's land mass is partially protected by nature preserves, parks, wildlife refuges and the like. Conservation biologists believe that a minimum of 10% is needed to maintain Earth's biodiversity.

48. Large wild reserves are needed to maintain viable populations of large, wide ranging species such as panthers, grizzly bears or elephants.

49. Large reserves also

   (1) sustain more species,
   (2) minimize edge effects
   (3) provide greater habitat diversity.

50. If many smaller reserves are created they would help to protect a greater variety of habitats and more populations of rare species. Habitat corridors between reserves would help to increase gene flow and allow for seasonal migrations between areas.